




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

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

BASIC INFORMATION

Title and UNFCCC reference number of the programme of activities (PoA)	PoA Title: MicroEnergy Credits – Microfinance for Clean Energy Product Lines - India UNFCCC Reference Number: 9181
Number and duration of the next PoA period	Number: 2 Duration: 27/12/2019 to 26/12/2026
Version number of the validation report	2.1
Completion date of the validation report	22/04/2021
Version number of PoA-DD to which this report applies	10
Coordinating/managing entity (CME)	Micro Energy Credits Corporation Private Limited
Host Parties	India
Applied methodologies and standardized baselines	Applied methodology: 1. AMS-III.A.R “Substituting fossil fuel-based lighting with LED/CFL lighting systems” (Version 6.0) 2. AMS-II.G “Energy efficiency measures in thermal applications of non-renewable biomass” (Version 11.1) 3. AMS-III.AV “Low greenhouse gas-emitting safe drinking water production systems” (Version 08.0) Standardized baseline(s) – N/A.
Mandatory sectoral scopes	1: Energy industries (renewable - / non-renewable sources), 3: Energy demand
Conditional sectoral scopes, if applicable	N/A
Name and UNFCCC reference number of the DOE	Name: TÜV NORD CERT GmbH (TÜV NORD) UNFCCC reference number: E-0022
Name, position and signature of the approver of the validation report	Alexandra Nuske Final approver 

SECTION A. Executive summary

TÜV NORD CERT GmbH (TÜV NORD) has been contracted by Micro Energy Credits Corporation Private Limited (CME) to perform a validation of the CDM registered programme of activities “**MicroEnergy Credits – Microfinance for Clean Energy Product Lines – India**” for renewal of the PoA period.

Scope of the validation:

As per the §283 of Project Standard for PoA and §282 Project Cycle Procedure for PoA, the coordinating/managing entity shall renew the PoA period of the registered CDM PoA every seven years counting from the date of its registration. The programme of activities was registered on 27/12/2012 under the UNFCCC registration No. 9181 and 1st crediting period ended on 26/12/2019, hence according to the EB100 meeting report, for the renewal of PoA period, “*A DOE shall submit a renewal request to the secretariat no earlier than 270 days prior to the expiry of the PoA period*”¹, hence now the time for this PoA renewal is in line with the EB requirement.

The objective of this renewal validation is the review by an independent entity whether the project is still compliant with the applicable sections of:

- the CDM project standard for programmes of activities,
- the CDM project cycle procedure for programmes of activities,
- the updated applied UNFCCC Methodology AMS-III.A.R “Substituting fossil fuel-based lighting with LED/CFL lighting systems” (Version 6), AMS-II.G “Energy efficiency measures in thermal applications of non-renewable biomass” (Version 11.1), AMS-III.AV “Low greenhouse gas-emitting safe drinking water production systems” (Version 08), and
- the methodological tool “Assessment of the validity of the original / current baseline and update of the baseline at the renewal of the crediting period” (version 03.0.1).

As per the requirements of the CDM validation and verification standard for programmes of activities (version 02.0)^{VVS/} (section 11) the validation is based on

- the registered and latest updated version of the PoA-DD (including revisions of the monitoring plan)^{PoA-DD-R/},
- further supporting documents made available to the validator as well as
- information collected through performing interviews and during the on-site assessment (if applicable).
- The impact of new relevant national and/or sectoral policies and circumstances on the original baseline

Furthermore publicly available information, such as the host country legislation, was considered as far as available and required.

The PoA aims to reduce the GHG emission through distribution of Clean Energy Products (CEP), including efficient stoves, water purifiers and solar electric lights, to households in India.

1. The Efficient stoves will reduce the combustion of non-renewable biomass for the purposes of cooking.
2. Water purifiers will eliminate the combustion of non-renewable biomass and fossil fuels for the purpose of treating drinking water.
3. Solar electric lights will replace the combustion of kerosene for lighting purposes.

In addition, by reducing households’ energy consumption, the programme creates reductions of GHG emissions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that CPAs under the PoA are not a likely baseline scenario. Emission reductions attributable to the PoA are hence additional to any that would occur in the absence of the project activity.

¹ Refer para 32 (b), page 8 of 16 ([Meeting report](#))

The scope of the validation is defined as an independent and objective review of the revised PoA-DD, the baseline, monitoring plan and other relevant documents. The information in these documents is reviewed against the CDM Validation and Verification Standard for PoA (version 02)^{/VVS/}, CDM Project Cycle Procedure for PoA (version 02)^{/PCP/} and CDM Project Standard for PoA (version 02)^{/PS/}, Kyoto Protocol requirements Checklist in Request for renewal of programme of activities period (version 2.0)^{/RUL/} and UNFCCC rules.

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

Purpose, general description and location:

The purpose of the PoA is to use carbon finance for the introduction of low greenhouse gas emitting technologies for lighting, cooking applications and clean drinking water to low income households. The technologies employed by the SSC-CPAs are all small-scale, low cost clean energy products to cater the basic needs of India's low income demographic. The PoA aims to disseminate the technologies in homes and small businesses, as well as, to a small degree, local institutions such as schools, clinics, and microfinance institution branches. All of the technologies employed by the CPAs provide development benefits as well as environmental benefits.

The PoA serves as an open platform for

- SSC-CPAs will deploy Low greenhouse gas-emitting safe drinking water production systems to achieve water quality defined in a relevant national standard or guideline for drinking water quality, as per the AMS-III.AV "water production systems" (Version 08.0),
- SSC-CPAs will deploy solar electric/photovoltaic systems that provide a renewable source of lighting by replacing fossil-fuel based lighting. Various solar lighting technologies which are eligible under AMS-III.A.R "Substituting fossil fuel-based lighting with LED/CFL lighting systems" (Version 6.0) will be included.
- SSC-CPAs will deploy improved cook stoves (ICS) of specified thermal efficiency of at least 20% at the time of CPA inclusion, as per the applicability condition of the AMS-II.G., ver. 11.1. Various cookstove technologies which are eligible under AMS-II.G "Energy efficiency measures in thermal applications of non-renewable biomass" (Version 11.1) will be included.

The VT confirms that the provisions of para 378 are complied as the valid version of the applied methodologies are applied by the CME. The assessment is stated as below:

Title and version of methodology	Validity	In line with para 378 of VVS? (Y/N)
AMS-III.AV.: Low greenhouse gas emitting safe drinking water production systems , version 08	Valid from 12 Jun 20 onwards	Y
AMS-III.AR.: Substituting fossil fuel based lighting with LED/CFL lighting systems , version 6	Requests for registration can be submitted until 02 Jun 2021 23:59:59 GMT	Y
AMS-II.G.: Energy efficiency measures in thermal applications of non-renewable biomass , Version 11.1	Requests for registration can be submitted until 10 Aug 2021 23:59:59 GMT	Y
TOOL 11: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period , version 3.0.1	Most recent version available at UNFCCC website	Y
Tool 20: Assessment of debundling for small-scale project activities , Version-4	Most recent version available at UNFCCC website	Y
TOOL30: Calculation of the fraction of non-renewable biomass , version 3.0	Most recent version available at UNFCCC website	Y

Recent Version of Tools that will be applied at CPA level		
TOOL03: Tool to calculate project or leakage CO2 emissions from fossil fuel combustion	Not applicable at this stage as the same will be applied at later stage	-
TOOL 05: Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation		

During the renewal, the PoA continues to apply the combination of Solar lighting systems and efficient cookstoves or Solar lighting systems and water purifiers. The CPA under PoA will not have combination of cook stove and water purification thus no cross effects exist between the technologies or methodologies included in this PoA.

This PoA will lead to various Sustainable Development Benefits which cover topics of

- Impact on the Environment (Climate Change, Local Environment, Natural Resource Use)
- Impact on Society (Poverty Alleviation, Equity, Health, Improving Ecological Education)
- Impact on Economy and Technology (Efficient Resource Utilization, Transfer of Technology and knowhow)

The PoA reduces the use and demand for fossil fuels and non-renewable biomass that would have been used for cooking and boiling water, use of fossil fuel for lighting, use of as a means of water purification in the absence of the Programme of Activities. This directly leads to reduced greenhouse gas emissions.

Validation process:

TÜV NORD follows a rule based validation approach, wherein, as a first step, the contract review is undertaken as per latest version of CDM Accreditation Standard. After the contract is signed, a desk review of the programme of activities documentation is undertaken. The validation protocol is completed by the validation team that is based on standard auditing practices and version 02.0 of CDM VVS for PoA, to capture the assessment of applicable CDM requirements viz., version 02.0 of CDM Project Standard for PoA, applied methodologies, applied standardized baseline and tools and recent decisions. The validation protocol provides transparent means to record the observations and compliances by the validation team members and the nonconformities, if any. The validation protocol is an internal document, and is available on request.

Following are the major milestones for the Validation under consideration.

Validation contract	07/10/2019
Draft Validation Report	18/12/2019
Final Validation Report	22/04/2021

Conclusion:

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

☒ The CDM programme of activity will be recommended to the CDM Executive Board with a request for renewal of the PoA period.

☐ The CDM programme of activity is not recommended for renewal of the PoA period

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

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader	EI	Mishra	Prakash	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical Reviewer	EI	Lubanga	David	-
2.	Approver	IR	Nuske	Alexandra	TÜV NORD CERT GmbH

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

During the desk review all documents initially provided by the client and publicly available documents relevant for the validation were reviewed. The main documents are listed below:

- the updated PoA-DD using the valid version of the applicable PoA-DD FORM^{/PoA-DD/},
- the registered PoA-DD including the monitoring plan^{/PoA-DD-R/},
- the last revision of the validation report for PoA^{/VAL-PoA/},
- the generic CPA-DD and included CPA DD^{/CPA-DD/},
- the last revision of the validation reports for included CPA^{/VAL-PoA/}.

Other supporting documents, such as publicly available information on the UNFCCC website and background information were also reviewed.

The validation is performed primarily as a document review of the available PoA-DD version 06 dated 05/10/2019^{/PoA-DD/} and the intermediate versions up to final version 10 dated 18/04/2021^{/PoA-DD/}. The report is based on the assessment of the PoA-DD, application of standard auditing techniques including but not limited to desk review, follow up actions (e.g., electronic (telephone or e-mail) interviews) and also the review of the applicable approved methodological and relevant tools, guidance and CDM decisions.

The cross checks between information provided in the PoA-DD and information from sources other than those used, if available, the validation team's sectoral or local expertise and, if necessary, independent background investigations.

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

C.2. On-site inspection

A complete desk review of the submitted PoA-DD (version 06, dated 05/10/2019) ^{/PoA-DD/} and supportive evidences have been checked by the Validation team.

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

Based on the calls/interviews, PoA-DD review, as well as the review of UNFCCC procedures and guidelines, TÜV NORD Validation team has proceeded to skip the site visit. As per para 184 of CDM validation and verification standard for programmes of activities version 02^{/VVS/}, Validation team has used the following alternative means for its assessment and to justify that they are sufficient for the purpose of validation.

- By review of PoA-DD;
- By taking follow up actions by conducting interview with CME, to gather information about knowledge of project design, current situation via telephonic call and e-mail communication. Cross- checked evaluation under the scope of all information and references provided in PoA-DD. Details of interviewees, topics covered and additional information presented in the below section “C.3 - Interviews”.

Validation team has also checked the site visit requirements mentioned in the VVS for PoA Version 02^{/VVS/} and concluded that no-site visit is required. The justification for the site visit requirements of VVS PoA Version 02^{/VVS/} have been mentioned below.

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

Duration of on-site inspection ² : 20/04/2020				
No.	Activity performed on-site	Site location	Date	Team member ¹⁾
1.	Meeting with CME: <ul style="list-style-type: none"> - Kick-off meeting - General set-up of the PoA - Status of program - Check of supporting documents - Check of CME Database and Information Management System 	Remote	20/04/2020	Prakash Mishra
2	Remote Assessments <ul style="list-style-type: none"> - Check of baseline situation including baseline scenario and baseline - Crosscheck of supporting documents esp. <ul style="list-style-type: none"> o Technical data/description of the program and related technologies o Supporting documents for input values to ER calculation o Interview with CME representative on status and further change in organization structure (if any) o Applicability of most recent versions of applied methodologies, o Addition of new methodology o Eligibility criterion assessment 	Remote	20/04/2020	Prakash Mishra
3	Meeting at CME office: <ul style="list-style-type: none"> - Check of ER calculation and input values - Summary and presentation of findings - Closing meeting 	Remote	20/04/2020	Prakash Mishra

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Subramanian	Sriskandh	MEC (Technical Director)	20/04/2020	<ol style="list-style-type: none"> 1. Eligibility criteria for inclusion of CPAs in the PoA 2. Baseline 3. Estimated emission reductions 4. Monitoring plan 5. Methodology requirements (application of AMS-III.A.R in place of AMS-I.D) 6. Issues in the PoA-DD 7. Roles and responsibilities 	Prakash Mishra

² Remote Visit

					8. Monitoring requirements 9. Monitoring procedure 10. Data collection 11. Procedural aspects of the RCP Validation 12. QA and QC 13. Training history and records 14. The impact of new relevant national and/or sectoral policies and circumstances on the baseline 15. Project related legal issues 16. Changes since 1 st CP validation	
2.	Rajagopalan	Anantha Karthik	MEC (Global Manager)	20/04/2020	1. Eligibility criteria for inclusion of CPAs in the PoA 2. Baseline 3. Estimated emission reductions 4. Monitoring plan 5. Methodology requirements (application of AMS-III.A.R in place of AMS-I.D) 6. Issues in the PoA-DD 7. Roles and responsibilities 8. Monitoring requirements 9. Monitoring procedure 10. Data collection 11. Procedural aspects of the RCP Validation 12. QA and QC 13. Training history and records 14. The impact of new relevant national and/or sectoral policies and circumstances on the baseline 15. Project related legal issue 16. Changes since 1 st CP validation	Prakash Mishra

C.4. Sampling approach

<input checked="" type="checkbox"/>	No sampling approach has been used by the VT to verify the monitored parameters				
<input type="checkbox"/>	A sampling approach has been applied by the VT for the following monitored parameter(s):				
	Parameter	Sampling approach ¹⁾	Sampling Type ²⁾	Population	Sample Size

¹⁾ Sampling Approaches:

SiRS: Simple Random Sampling
 StRS: Stratified Random Sampling
 SS: Systematic Sampling
 CS: Cluster Sampling
 MSS: Multi-stage Sampling

²⁾ Sampling Types:

AS: Acceptance Sampling
 PS: Parameter Sampling
 COM: Full data check at higher data aggregation levels and sampling at original data levels

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

Area of validation findings	No. of CL	No. of CAR	No. of FAR
Programme of activities	-	-	-
Compliance with PoA-DD form	-	1	-
Programme of activities period	-	-	-
Coordinating/managing entity and the project participants	-	1	-
Post-registration changes	-	-	-
Generic component project activities	2	1	-
Application and selection of methodologies and standardized baselines	2	5	-
Validity of original baseline or its update	-	1	-
Estimated emission reductions or net anthropogenic removals	-	1	-
Validity of monitoring plan	-	2	-
Eligibility criteria for inclusion of CPAs	-	1	-
Others (please specify)	-	1	-
Total	4	14	0

SECTION D. Validation findings**D.1. Programme of activities****D.1.1. Compliance with PoA-DD form**

Means of validation	<p>A draft revised PoA-DD was submitted to the validation team by the project participants.</p> <p>By means of the UNFCCC website it has been checked whether the latest applicable PoA-DD template CDM-PoA-DD-FORM has been used.</p> <p>Further it has been checked whether the latest instructions for filling out the PoA-DD template have been followed. Every section has been checked against the respective guidance.</p>
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	The following sources of information have been used in this context: <ul style="list-style-type: none"> • /PoA-DD/ • /unfccc/ 	
Findings	<input checked="" type="checkbox"/>	The latest reporting template CDM-PoA-DD-FORM as listed on the UNFCCC website has been used for the PoA-DD.
	<input type="checkbox"/>	The latest instructions for filling out the PoA-DD have been followed. No adverse finding has been identified in the course of this validation.
	<input checked="" type="checkbox"/>	The respective requirements have widely been complied with; however; the following issues needed to be addressed in this context: CAR 04, CAR 13
Conclusion	<input type="checkbox"/>	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	<input checked="" type="checkbox"/>	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	<p>The PoA-DD has been completed using the latest version of the template. After corrections, the validation team can confirm that latest instructions for filling out the PoA-DD have been followed.</p> <p>Besides, the DOE can confirm that the information transferred from the previous version of the PoA-DD to this latest version is materially the same but the changes applied in the course of updating the PoA-DD for renewal of the programme of activities period.</p>	

D.1.2. Programme of activities period

Means of validation	<p>The PoA was registered on 27/12/2012 and the therefore the previous first Programme of activities period is from 27/12/2012 to 26/12/2019.</p> <p>The 2nd programme of activities period starts on 27/12/2019 and last until 26/12/2026.</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /PoA-DD/ • /unfccc/ • /PCP/ • /PS/ 	
Findings	<input type="checkbox"/>	-
	<input type="checkbox"/>	The respective requirements have widely been complied with; however; the following issues needed to be addressed in this context:
		-
Conclusion	<input checked="" type="checkbox"/>	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	<input type="checkbox"/>	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
	<p>The 2nd programme of activities period starts immediately after the expiration date of the current, previous period.</p> <p>It is further confirmed that the start date (27/12/2019) and the length of the programme period (7 years) are in compliance with the project standard.</p>	

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

Means of validation	<p>The validation team has checked the revised PoA-DD/^{PoA-DD/} and the UNFCCC website esp. the latest version of the Modalities of Communication and host & Annex 1 country approvals to check whether the listed CME and project participants have duly been authorized and if communication requirements are met. Further, the DOE has checked whether the names of the CME and project participants are consistent between PoA-DD, MoC and UNFCCC PoA webpage.</p> <p>As per the updated PoA-DD/^{PoA-DD/}, the coordinating/managing entity, project participant and parties involved in the programme of activity is:</p> <ul style="list-style-type: none"> • Micro Energy Credits Corporation Private Limited (CME) • Climate Cent Foundation (Project Participant)
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	<p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /PoA-DD/ • /MoC/ • /unfccc/
Findings	CAR 13
Conclusion	<p>The Validation team confirm the following:</p> <p>The updated PoA-DD consistently stated the name of the CME (MicroEnergy Credits – Microfinance for Clean Energy Product Lines - India) which stated under the registered PoA-DD and the MoC available on the PoA webpage.</p> <p>It could be concluded that the names of the CME and project participants are consistent with the names stated at the project page in UNFCCC, MoC, Host and Annex 1 Country Approvals.</p>

D.1.4. Post-registration changes

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

D.2. Generic component project activities

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

Means of validation	At the time of registration, the CME applied the methodology –		
	At the time of registration	At the time of Renewal	Validation Assessment Team
	AMS-II.G “Energy efficiency measures in thermal applications of non-renewable biomass” (Version 3.0)	AMS-II.G “Energy efficiency measures in thermal applications of non-renewable biomass” (Version 11.1)	New version of the methodology valid at time of PoA renewal is applied
	AMS-III.AV “Low greenhouse gas-emitting safe drinking water production systems” (Version 02)	AMS-III.AV “Low greenhouse gas-emitting safe drinking water production systems” (Version 08.0)	New version of the methodology valid at time of PoA renewal is applied
	AMS-I.A “Electricity generation by the user” (Version 14.0)	AMS-III.A.R “Substituting fossil fuel-based lighting with LED/CFL lighting systems” (Version 6.0)	The applied version of the methodology was no more applicable. Please refer closure of CL 01.
	-	TOOL30: Calculation of the fraction of non-renewable biomass	New version of the tools valid at time of PoA

“Guidance for determining the occurrence of debundling under a Programme of Activities (PoA)”, Annex 32 to the EB47	TOOL20: Assessment of debundling for small-scale project activities, version 4.0	renewal is applied
-	TOOL 11: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period, version 3.0.1	
Standard For Sampling And Surveys for CDM Project Activities and Programme of Activities EB 69 Annex 4	Standard for sampling and surveys for CDM project activities and programme of activities, version 08.0	

The applicability of the methodology for is assessed below for all the generic CPA- Solar +Cookstoves Combination under Part II. of Generic CPA-DD) and Generic CPA- Solar +Waterpurifier Combination under Part III. of Generic CPA-DD

At the time of registration, the CME applied the methodology –

Combination	Applied methodologies
Solar lamps +Cookstoves Combination	AMS-III.A.R “Substituting fossil fuel-based lighting with LED/CFL lighting systems” (Version 6.0) AMS-II.G “Energy efficiency measures in thermal applications of non-renewable biomass” (Version 11.1)
Solar lamps +Waterpurifier Combination	AMS-III.A.R “Substituting fossil fuel-based lighting with LED/CFL lighting systems” (Version 6.0) AMS-III.AV “Low greenhouse gas-emitting safe drinking water production systems” (Version 08.0)

The assessment of the applicability conditions is stated as below:

AMS-III.AR. version 6		
Applicability condition	Justification of applicability by CME	DOE Assessment
2) This category comprises activities that replace portable fossil fuel based lamps (e.g. wick-based kerosene lanterns) with battery-charged light-emitting diode (LED) or compact fluorescent lamps (CFL) based lighting	Since the CPA undertakes distribution of solar lighting systems (LED or CFL) to replace wick based kerosene lamps, thus this meet this applicability condition	The CPAs under the PoA will include dissemination of the efficient lighting systems (LED or CFL) which are powered by battery charged

	systems ³ in residential and/or non-residential applications (e.g. ambient lights, task lights, portable lights).		by solar panels.
	3) This methodology is applicable only to project lamps whose batteries are charged using one of the following options ⁴ : a) Charged by a renewable energy system included as part of the project lamp (e.g. a photovoltaic system or mechanical system such as a hand crank charger); b) Charged by a standalone distributed generation system (e.g. a diesel generator set) or a mini-grid, i.e. that is not connected to a national or regional grid; c) Charged by a grid that is connected to regional/national grid.	Since the CPA involves the lights that are charged by solar energy using solar PV which is a renewable source of energy, hence this applicability criterion is met	Project lamps will be charged by solar PV panels, which is a renewable energy system as per option a) and in line with relevant eligibility criteria and other sections of the generic CPA-DD
	4) At a minimum project lamps shall be certified by their manufacturer to have a rated average operational life of at least: a) 5,000 hours for Option 1, paragraph 4(a); b) 10,000 hours for Option 2, paragraph 4(b).	Before inclusion, each CPA will choose to apply either option 1 or option 2. If the CPA chooses to apply option 1, the manufacturer's specification for the lighting devices under the CPA would demonstrate that rated average operational life is above 5,000 hours based on the appropriate testing results. If the CPA chooses to apply option 2, and the manufacturers specification for the lighting devices under the CPA would demonstrate that rated average operational life is above 10,000 hours based on the appropriate testing results.	The provisions are accepted and in line with the methodological requirements. The sample models which are included under the PoA meet these requirements.
	5) Rated average life is the life certified by the	This condition will be fulfilled by the all the models of the	The Rated life which is duly

³ A LED or CFL based lighting system is defined as one or more individual LED or CFL lamps connected to a single rechargeable battery system. These systems may be portable or fixed. LED lamps may consist of one or more diodes. For the purposes of this methodology, a single LED or CFL based lighting system is referred to as the 'project lamp' throughout this document.

⁴ Project lamps may be charged by any of the listed options, however each individual project lamp shall be charged by only one of the charging options (for example 10,000 project lamps may be charged by photovoltaic (PV) systems and 10,000 may be charged by a grid, but none of the individual project lamps may be charged by both a grid and a PV system).

	<p>manufacturer or responsible vendor as being the time at which the lamp's initial light output will decline by no more than 30 per cent. In addition, for project lamps charged using Option 3(c) as provided for in paragraph 3 above, the manufacturer shall certify that the battery-charging-circuit efficiency of the project lamps, at the time of the purchase, is at least 50 per cent. For project lamps charged under option indicated in paragraph 3(b), if the mini-grid or distributed generation system is not entirely powered by renewable energy generation unit(s), the manufacturer shall certify that the project lamp's battery charging circuit efficiency, at the time of purchase, is at least 50 per cent.</p>	<p>lamps distributed under this PoA. Rated life would be certified by the lamps manufacturer in accordance with the requirement of this condition. All the technical criterion would also be checked as per CPA inclusion criterion number 14 at the time of inclusion. The project lamps are not charged either using 3(c) of 3(b) options in the methodology.</p> <p>All the project lamps are charged using 3(a) option.</p>	<p>certified by the lamps manufacturer will be assessed at time of the CPA inclusion. The eligibility criterion 14 is also developed in line with the requirements of the rated average life.</p>
	<p>6) Project lamps shall meet warranty requirements of the Lighting Global Minimum Quality Standard. The project lamps shall have a warranty of a minimum of one year from the time the end-user takes ownership or begins using the lamp. At a minimum, the warranty shall cover free replacement or repair of any failed lamps, batteries, and where applicable solar panels. The warranty shall be clearly communicated and supported through the supply chain and available to end-users of the project lamps during the warranty period. In a situation where the project lamps are distributed through intermediaries, the one year warranty shall commence from the time that the project lamps are distributed to end-users. The full warranty terms shall be available in writing, in a regionally</p>	<p>This condition is fulfilled by the project lamps. The project lamps carry warranty of 24 months (more than 1 year) and meet the warranty requirements of the lighting global minimum quality standards. Same can be verified from the manufacturer's product specification/warranty card (in a regionally appropriate language) available with each project lamp.</p> <p>The manufacturer's product specification/warranty cards are available with each project lamp and hence the end-users are communicated about their warranty on the product.</p>	<p>The requirement for Technical specification are inline with the applied methodology. The technical specification / warranty terms will be assessed at time of CPA inclusion. A relevant eligibility criterion has been set by CME.</p>

	appropriate language and included with each unit.		
	<p>7) Project lamps shall meet or exceed the following minimum performance characteristics, which should be proven by third-party test results:</p> <p>(a) Light Output - luminous flux of 25 lumens or illuminance of 50 lux over an area ≥ 0.1 m² when suspended at a distance of 0.75 meters or self-supported. The light output over a 2,000 hour lumen maintenance test should not decline by more than 15%;</p> <p>(b) Run Time and Battery Capacity - Daily Burn Time (DBT) shall meet the following requirements:</p> <p>(i) DBT shall be equal to or greater than 4 hours;</p> <p>(ii) For charging Option 3(a) with solar PV, the DBT is defined by the Solar Run Time for the project lamp (as determined per paragraph 9(g));</p> <p>(iii) For other technologies in Option 3(a), the DBT is defined based on typical expected patterns of use;</p> <p>(iv) For charging Options 3(b) and 3(c):</p> <p>a. The maximum claimed DBT shall be less than or equal to the typical capabilities of the regional or local energy system at delivering reliable power sufficient for recharging;</p> <p>b. The autonomous (full battery) run-time of the project lamps shall be equal to or greater than 200 per cent of the DBT of the project lamps;</p> <p>c. The project lamp shall be fully recharged from a discharged state after eight hours of charging.</p>	<p>Models under distribution meets and the performance exceeds these eligibility criteria based on manufacturer's product specification.</p> <p>DBT for the project lamps is XXX hours (equal to or greater than 4 hours) based on manufacturer's product specification. This is also covered under the eligibility criteria 14 and will be checked at the time of CPA inclusion.</p> <p>Charging option used by project lamps is 3(a) and DBT is defined as the Solar Run Time for the project lamp.</p> <p>Charging options 3(b) and 3(c) have not been used in the project.</p>	<p>Models under distribution will have to meet and the performance of the eligibility criteria based on manufacturer's product specification.</p> <p>The manufacturer's product specification/warranty cards are available with each project lamp and hence the end users are communicated about their warranty on the product.</p> <p>Specifications can also be verified from the lighting global website.</p> <p>The charging option 3(a) is chosen as elaborated above. DBT for the project lamps should be least 4 hours or above, based on manufacturer's product specification</p>
	8) The project design document shall explain the proposed distribution	The CPA proposed to distribute the solar lamps through micro finance	The PoA-DD explains the Distribution

	<p>method of the project lamps. It shall also explain how the proposed project activity shall:</p> <p>(a) Ensure that the replaced baseline lamps are those that directly consume fossil fuel. This can be done through documentation of the common practice of fuel usage for lighting in the project region (e.g. based on representative sample surveys, official data or peer reviewed literature) that demonstrates that fossil fuel is a commonly used fuel for lighting;</p> <p>(b) Encourage the consumers, targeted by the project activity, to use the project lamps and discourage hoarding;</p> <p>(c) Eliminate potential double counting of emission reductions that could occur, for example, if more than one entity (e.g. lamp manufacturers, suppliers of solar and/or battery equipment, etc.) claims credit for emission reductions for the project lamps. At a minimum, project lamps shall be marked as CDM project lamps;</p> <p>(d) Ensure compliance with prevailing regulations pertaining to the use and disposal of batteries.</p>	<p>institutions sales channel or through manufacturer sales channel.</p> <p>1. (a) Fossil fuel based lighting is a common practice in India. This has been well documented in the generic CPA-DD based on the peer reviewed literature, demonstrating that fossil fuel is the commonly used fuel for lighting. Also, for all the lamps distributed under the CPA, type of baseline lamps and fuel used in the lamps would be recorded at the time of distribution. Only those sales would be recorded as project lamps where the baseline is identified as consumption of fossil fuel for lighting.</p> <p>(b) Consumers are explained about the salient features of the product and are encouraged to use the products through disseminating the knowledge of the savings on fossil fuel. Consumers spend large proportion of their income on fossil fuels and the project lamps helps them avoid this expenditure. So there is a built in incentive for users to use the project lamps.</p> <p>(c) Each project lamps distributed under the project is uniquely identified. For each of the lamps, records pertaining to three or more of the following identifiers: Purchaser name, household address, phone number, bank ID number, national ID number, product unique identifier</p>	<p>method of lamps. At CPA level below requirements will be complied</p> <p>(a) Ensuring that the replaced lamps are utilizing fossil fuel in base line with common practice in India. The CPA-DD will demonstrate based on the peer reviewed literature, that fossil fuel is the commonly used fuel for lighting. At time of distribution, baseline lamps and fuel used in the lamps would be recorded</p> <p>(b) The CME and PO explain to the consumers about the salient features of the product and are encouraged to use the products through disseminating the knowledge of the savings on fossil fuel which help the consumers to save proportion of their income on fossil fuels attributable to lighting. So there is a built in incentive for users to use the project lamps. This is verified based on the interviews and the database</p>
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		<p>number, are captured and stored in the online product database. This is also covered under eligibility condition number 2 under the CPA. In addition each of the lamp distributed under the project would be physically marked as CDM project lamp. A legally binding contract between CME and manufacturer/micro finance institution/POs would be established to ensure that all carbon title is transferred to the CME.</p> <p>(d) There are no prevalent regulations in Indian region. However, the CME and CPA implementer would follow any regulations that come up during the crediting period of the CPA.</p>	<p>and technical specifications of Impa available in the public domain.</p> <p>(c) A dedicated database is maintained which monitors atleast 03 parameters viz three or more of the following identifiers: Purchaser name, household address, phone number, bank ID number, national ID number, product unique identifier number, are captured and stored in the online product database. This is also an eligibility condition under the CPA. In addition each of the lamp distributed under the project would be physically marked as CDM project lamp.</p> <p>(d) As of now, there are no prevalent regulations in India. However, the applicable regulations needs to be followed by the CME.</p>
	9) The project design document shall include the minimum requirements for the design specifications of project lamps including the following specifications:	All the requisite details for each model of the solar lamp have been mentioned in the CPA DD. In addition, these requirements are also covered under the eligibility criteria number 14.	All the requisite details for each model of the solar lamp will have to be demonstrated in the relevant Section of the

	<ul style="list-style-type: none"> a) Lamp wattage (in Watts) and luminous flux output (in lumens); b) Rated lamp life (in hours); c) Where applicable, the type and rated capacity of the renewable energy equipment used for battery-charging (in Watts); d) Type (e.g. NiMH, Lead-Acid, Li-ion, Lithium-iron-phosphate, etc.), nominal voltage, and rated capacity of the batteries (in Ampere hours); e) Type of charge controller (e.g. active or passive); f) Autonomous time and DBT; g) Solar Run Times(s) (SRT) for products with solar energy charging systems. If regional solar data are available, the maximum, minimum and average estimated SRT values for each month of a typical year shall be provided. If regional solar data are not available the standard solar day (5 kWh/m²) shall be used to estimate SRT; h) Where applicable, the amount of time to fully charge the product using mechanical means or a centralized charging system (e.g. the national grid); i) Physical protection against environmental factors (e.g. rain, heat, insect ingress). 		CPA-DD.
	10. Measures are limited to those that result in emissions reductions of less than or equal to 60 kt CO ₂ equivalent annually.	As demonstrated in the CPA-DD, the total emission reductions are less than the small scale threshold of 60,000 t CO ₂ equivalent annually, as demonstrated in the ER sheet.	Accepted, as it is inline with the threshold for type III project category.

AMS-II.G. Version 11.1		
Applicability Condition	Justification of applicability	DOE Assessment
2) This methodology comprises efficiency improvements in thermal applications of non-renewable biomass. Examples of applicable technologies and measures include the introduction of high efficiency biomass fired project devices (cook stoves or ovens or dryers) to replace the existing devices and/or energy efficiency improvements in existing biomass fired cook stoves or ovens or dryers.	The purpose of the CPA is to introduce efficient cookstove technology involving the efficiency improvements in the thermal applications of non-renewable biomass in households. The activity involves replacement of old and inefficient cook stoves with improved cook stoves.	Based on the assessment of PoA-DD along with checking manufacturers specification, the CPA will entail dissemination of efficiency improvements in thermal applications of non-renewable biomass. In addition, The PP was able to show that non-renewable biomass has been used since 31 December 1989.
3) In the case of cookstoves, the methodology is applicable to the introduction of single pot or multi pot portable or in-situ cookstoves with rated efficiency of at least 20 per cent.	All the cookstoves will have a minimum efficiency of 20% as recommended by the meth and eligibility criterion "18"	The provisions of applicability are accepted. The same needs to be checked at the CPA inclusion stage.
4) The aggregate energy savings of a single project activity shall not exceed the equivalent of 60 GWh per year or 180 GWh thermal per year in fuel input.	Each CPA (single project activity) shall result in aggregate energy savings no more than 180 GWh thermal per year in fuel input.	Accepted, as it is in line with the threshold for type II SSC project category.
5) Non-renewable biomass has been used in the project region since 31 December 1989, using survey methods or referring to published literature, official reports or statistics.	The decline of forest in India has been identified supporting the claim that the biomass usage in the baseline scenario is non-renewable and that non-renewable biomass (NRB) has been used since 31 December 1989. The decline of forest in India has been identified ⁵ supporting the claim that the biomass usage in the baseline scenario is non-renewable and that non-renewable biomass (NRB) has been used since 31 December 1989. India has lost over 1.6 million	The PP was able to show that non-renewable biomass has been used since 31 December 1989. The Forest Survey of India/ ^{FSI} / was reviewed to confirm the same. Therefore, all CPAs within the PoA boundary meet this condition.

⁵ http://www.corecentre.co.in/Platform/Docs/DocFiles/population_pressure.pdf (Page 5)

		<p>hectare of tree cover area between 2001 to 2018. The loss of tree cover has contributed to 172 MT of carbon emissions during this period⁶.</p> <p>Since forest cover has been decreasing steadily since 1990 it can be concluded that non-renewable biomass has been used in India since 31 December 1989.</p>	
	6) For cases where the biomass is sourced from renewable sources, the project participants should use a corresponding Type I methodology.	Not applicable, as biomass is not sourced from renewable sources	Accepted as "Not applicable"
	7) If the project device requires a specific fuel for this device (e.g. briquettes, pellets, woodchips), the consumption of the fuel should be monitored during the crediting period.	The project devices do not require a specific fuel type. The devices can operate on any type of Biomass.	Not applicable. Proposed project devices will not require a specific fuel
	8) The CDM-PDD or CDM-PoA-DD/CPA-DD shall explain the proposed method for distribution of project devices including the method to avoid double counting of emission reductions such as unique identifications of product and end-user locations (e.g. programme logo).	The distribution of project devices is carried out with the help of various local partners and microfinance institutions. The unique identification of the project devices is mentioned as one of the inclusion criteria for the CPAs and would be followed for all the project devices.	The eligibility criteria 2 clearly mandates the requirement of the unique numbering or identification system for the CEP installed under the CPA. This will ensure that stoves can be identified as belonging to this PoA and not to a PoA managed by any other CME. In addition, there is a provision of a legally binding contract between CME and manufacturer/micro finance institution/POs to ensure that all carbon title is transferred to the CME. This shall ensure that POs, stove manufacturers and

⁶ <https://www.hindustantimes.com/india-news/india-s-forest-cover-loss-in-17-years-is-four-times-the-size-of-goja/story-IY2OpSPLA7kRutBy8CXhyN.html>

		<p>distributors do not claim ERs separately.</p> <p>The eligibility criteria 3 mandates the endusers to contractually cede their rights to claim and own emission reductions under the Clean Development Mechanism of the UNFCCC to the CME of the PoA, which is captured under the Default Booking Record.</p> <p>The eligibility criterion 4 has been reviewed. A declaration from the CME on its letterhead would be provided that the specific CPA will not be part of another single CDM project activity or CPA under another PoA. In addition, declaration from CPA operators as part of their contract with the CME, stating that they activities are not registered as part of another single CDM project activity of CPA under another PoA.</p> <p>Evidence Check on UNFCCC website with date of access and contract between the CME and MFI.</p> <p>Furthermore, eligibility criterion 2 mandates the unique numbering and PoA logo stamped on each CEP supported by the individual distribution record matching such information is included in the</p>
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			<p>specific CPA-DD and consistent with the PoA-DD</p> <p>For all subsequent CPAs, in addition to the sales receipt the programme logo shall be displayed on the CEPs and verifiable by the DOE.</p> <p>Endusers contracts to cede their rights to claim and own emission reductions under the Clean Development Mechanism of the UNFCCC to the CME of the PoA, which is captured under the Default Booking Record</p>					
	9) The CDM-PDD or CDM-PoA-DD/CPA-DD shall also explain how the proposed procedures prevent double counting of emission reductions, for example to avoid that project stove manufacturers, wholesale providers or others claim credit for emission reductions from the project devices.	The eligibility criteria 2,3, 4 and 5 covers the requirement. Please refer the same.	Accepted. The eligibility criteria 2, 3, 4, 5 has been reviewed. For detailed assessment, please refer to corresponding assessments of Validation Team.					
	<p align="center">AMS-III.AV. version 8</p> <table border="1"> <thead> <tr> <th>Applicability condition</th><th>Justification of applicability</th><th>DOE Assessment</th></tr> </thead> <tbody> <tr> <td>2) This methodology comprises introduction of Low greenhouse gas-emitting safe drinking water production systems to provide safe drinking water (SDW). Water purification technologies that involve point-of use (POU) or point-of-entry (POE) treatment systems for residential or institutional applications such as systems installed at a school or a community centre are included. The examples include, but are not limited to, water filters (e.g. membrane, activated carbon, ceramic filters), solar energy powered ultraviolet (UV) disinfection devices, solar disinfection techniques, photocatalytic</td><td>The program will introduce Point of Use (POU) or point-of-entry (POE) devices for residential and institutional applications, such as gravity based water purifiers, RO/UV based water purifiers and water kiosks.</td><td>The program will introduce Point of Use (POU) or point-of-entry (POE) devices for residential and institutional applications. The provisions of the applicability conditions are well addressed and appropriately captured for the CPA's (to be included under the PoA.</td></tr> </tbody> </table>			Applicability condition	Justification of applicability	DOE Assessment	2) This methodology comprises introduction of Low greenhouse gas-emitting safe drinking water production systems to provide safe drinking water (SDW). Water purification technologies that involve point-of use (POU) or point-of-entry (POE) treatment systems for residential or institutional applications such as systems installed at a school or a community centre are included. The examples include, but are not limited to, water filters (e.g. membrane, activated carbon, ceramic filters), solar energy powered ultraviolet (UV) disinfection devices, solar disinfection techniques, photocatalytic	The program will introduce Point of Use (POU) or point-of-entry (POE) devices for residential and institutional applications, such as gravity based water purifiers, RO/UV based water purifiers and water kiosks.
Applicability condition	Justification of applicability	DOE Assessment						
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	<p>disinfection equipment, pasteurization appliances, chemical disinfection methods (e.g. chlorination), combined treatment approaches (e.g. flocculation plus disinfection). The methodology is also applicable to water kiosks that treat water using one or more of the following technologies: chlorination, combined flocculant/disinfection powders and solar disinfection. In case the water kiosk is using solar disinfection, project proponents need to implement measures to prevent recontamination (e.g. disinfecting containers, sealing containers and hygiene training).</p>		
	<p>3) Soil filtration schemes (boreholes, wells) that include container disinfection (e.g. chlorination) may be applied. Project proponents shall demonstrate ex ante that rehabilitation and/or construction of the wells complies with relevant national and/or international standards and that measures are taken to ensure that water and well are not contaminated.</p>	<p>This PoA would not involve soil filtration systems (boreholes, wells). Hence, this condition is not applicable.</p>	<p>Not applicable</p>
	<p>4a) Prior to the implementation of the project activity, a public distribution network supplying SDW to the project boundary does not exist⁷.</p>	<p>Each CPA shall demonstrate this condition at the CPA level in the command region of the water distribution system. This condition would also be checked annually during the monitoring period by each CPA.</p>	<p>This will be assessed at the CPA level.</p>
	<p>It shall be demonstrated based on laboratory testing⁸ or official notifications (for example notifications from the national authority on health) that the application of the project technology/equipment achieves compliance either with: (i) the Comprehensive Protection performance target as per "Evaluating household</p>	<p>Each CPA will ensure compliance as per the CPA eligibility criteria 20.</p>	<p>This will be assessed at the CPA level.</p>

⁷ This methodology is also applicable in case a public distribution network exists, but is not supplying SDW.

⁸ The testing should be undertaken under conditions that are representative of the operation conditions of the project site(s) including feed water.

	water treatment options: Health based targets and microbiological performance specifications” (WHO, 2011) and “International Scheme to Evaluate Household Water Treatment Technologies” (WHO, 2014); or (ii) an applicable national standard or guideline. Applicable national standard should be based on laboratory efficacy testing that, at a minimum, includes quantitative microbial measures of pre- and post-treatment challenge waters ⁹ that are representative of potential drinking water sources, and that includes measured reductions based on at least one pathogen class (bacteria, viruses, protozoa).		
	In cases where the life span of the water treatment technologies is shorter than the crediting period of the project activity, there shall be documented measures in place to ensure that end users have access to replacement purification systems of comparable quality.	Yes, in case lifespan is shorter than the crediting period, the CPA would undertake following measures to ensure this condition is met: <ul style="list-style-type: none">- Though education of using appropriate water treatment system- By making available the replacement devices- By making available the replacement filtration media	This will be assessed at the CPA level.
	It should be demonstrated that the project appliances use technologies that meet the technology standards as per paragraph 4(b), and that they deliver microbiologically safe drinking water.	Each CPA will ensure compliance as per the CPA eligibility criteria 20.	This will be assessed at the CPA level.
	TOOL30: Calculation of the fraction of non-renewable biomass, Version 2.0		
Applicability Condition	Justification of applicability	DOE Assessment	
This tool may be used by: (a) DNAs to submit region/country-specific default f _{NRB} values, following the procedures for	Since the DNA calculated/approved values for f _{NRB} are not available, CME proposes to apply this tool to calculate project specific (CPA-Specific)	The parameter f _{NRB} will be determined at the CPA Level as per the TOOL 30.	

⁹ Challenge water" is synonymous with "test water" – this is the experimental water that has been spiked with microbes (a "microbial challenge") in order to demonstrate the potential for the technology to reduce microbes.

	development, revision, clarification and update of standardized baselines (SB procedures); or	fNRB values. Hence this condition is fulfilled	
	(b) project proponents to calculate project or PoA-specific fNRB values.		
	For project or PoA specific fNRB values, project proponents shall assess the area where biomass is sourced and justify the selection of the area in CDM project design documents.	The fNRB values shall be demonstrated at the CPA level. The CPA-DD shall assess the area from where biomass is sourced and the area chosen shall be specific to the boundary of the CPA, and shall be justified at the CPA-DD level.	The applicability condition will be assessed at CPA level.
TOOL20: Assessment of debundling for small-scale project activities Version 4.0			
	Applicability Condition	Justification of applicability	DOE Assessment
	This methodological tool is applicable to proposed small-scale project activities and small-scale CPAs in order to check whether they are debundled components of largescale project activities.	Since the PoA involves addition of small scale project (CPAs), hence this tool is applicable. Hence this condition is fulfilled	Applicable to assess possibility of debundling.
Findings	<input checked="" type="checkbox"/>	The updated generic CPA-DD included in the PoA-DD (Part II and Part III is completely in accordance with all the requirements in the selected approved methodology, methodological tool(s) and/or standardized baseline (SB) applicable for the CDM PoA, except for additionality demonstration.	
	<input checked="" type="checkbox"/>	The CME did not request a deviation from the valid version of the methodology (including a consolidated methodology thereof) and/or methodological tool applied in the registered PoA-DD, or from any other selected methodology and/or methodological tool for the purpose of renewal of the registered CDM PoA.	
	<input type="checkbox"/>	The CME requested a deviation from the valid version of the methodology (including a consolidated methodology thereof) and/or methodological tool applied in the registered PoA-DD, or from any other selected methodology and/or methodological tool for the purpose of renewal of the registered CDM PoA. A related PRC request is submitted along with this renewal of CP/has been submitted prior to this submission and has been approved on DD/MM/YYYY via approval number PRC-XXXX.	
	<input checked="" type="checkbox"/>	The DOE at validation did not identify that the updated PoA-DD deviated from the valid version of the methodology and/or methodological tool applied in the registered PoA-DD or from any other selected methodology and/or methodological tool.	
	<input type="checkbox"/>	The DOE at validation identify that the updated PoA-DD deviated from the valid version of the methodology and/or methodological tool applied in the registered PoA-DD or from any other selected methodology and/or methodological tool. A related PRC request is submitted along with this renewal of CP/has been submitted prior to this submission and has been approved on	

		DD/MM/YYYY via approval number PRC-XXXX.		
	<input checked="" type="checkbox"/>	The breakdown of generic CPA-DD accordance of the referenced tools is as follows:		
		1	Title (of the tool)	Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period ^{/TVB/}
			Version	03.0.1
			MP compliance	<input checked="" type="checkbox"/> full compliance <input type="checkbox"/> findings have been raised <input type="checkbox"/> N/A
		2	Title (of the tool)	Guideline on the Demonstration of Additionality of Small-Scale Project Activities ^{10, /TDASS/}
			Version	13
			MP compliance	<input type="checkbox"/> full compliance <input type="checkbox"/> findings have been raised <input checked="" type="checkbox"/> N/A
		3	Title (of the tool)	"Tool to calculate project or leakage CO2 emissions from fossil fuel combustion" [/]
			Version	Valid version will be applied at CPA Level
			MP compliance	<input type="checkbox"/> full compliance <input type="checkbox"/> findings have been raised <input checked="" type="checkbox"/> N/A
		4	Title (of the tool)	"Tool to calculate baseline, project and/or leakage emissions from electricity consumption".
			Version	Valid version will be applied at CPA Level
			MP compliance	<input type="checkbox"/> full compliance <input type="checkbox"/> findings have been raised <input checked="" type="checkbox"/> N/A
		5	Title (of the tool)	Calculation of the fraction of non-renewable biomass ^{/NRB/}
			Version	02.0
			MP compliance	<input checked="" type="checkbox"/> full compliance <input type="checkbox"/> findings have been raised <input type="checkbox"/> N/A
		6	Title (of the tool)	Assessment of debundling for small-scale project activities ^{/TAD/}
			Version	04.0
		MP compliance	<input checked="" type="checkbox"/> full compliance <input type="checkbox"/> findings have been raised <input type="checkbox"/> N/A	
	<input type="checkbox"/>	The breakdown of generic CPA-DD accordance of the applicable SB is as follows:		
		1	Title (of the SB)	N/A
			Version	-
			MP compliance	-
	<input checked="" type="checkbox"/>	In this context the following CARs, CLs, FARs have been raised:		
CL 01, CL 04, CAR 01, CAR 02, CAR 04, CAR 05, CAR 06, CAR 07, CAR 14				

¹⁰ [EB105_repan_TOOL21 \(unfccc.int\)](http://unfccc.int/EB105_repan_TOOL21)

Conclusion	<input type="checkbox"/>	No CARs / CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	<input checked="" type="checkbox"/>	The raised CARs / CLs have been addressed appropriately. The CME has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 4.
		<p>By means of checking the UNFCCC website it is confirmed that the selection of the applied methodology and methodological tools has been done correctly in line with the applicable requirements for the PoA renewal. The latest version of the applied methodologies are used by the updated PoA-DD.</p> <p>All applicability conditions of the updated latest methodology and tool versions are still met. Thus the methodologies and applied tool are deemed fully applicable for the new PoA period and no request for deviation with regards to the applicability of the methodology is required.</p> <p>No standardised baseline established by the host country.</p>

D.2.2. Validity of original baseline or its update

Means of validation	<p>In according to para 382 of VVS for PoA version 02.0, the assessment team reviewed the updated PoA-DD and evaluated whether CME has assessed and incorporated the impact of new national and/or sectoral policies and circumstances existing at the time of requesting renewal of PoA period on the modalities to estimate baseline GHG emissions for the subsequent crediting period of each corresponding CPA, without reassessing the baseline scenario.</p> <p>Whether data and parameters used for determining the original baseline, that were determined ex ante and not monitored during the PoA period, are no longer valid, the assessment team identified whether coordinating/managing entity has updated such data and parameters in accordance with the “Methodological tool: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period” version 03.0.1 ^{/TOOL/}.</p> <p>The steps from the Methodological Tool “Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period” Version 03.0.1 ^{/TOOL/} as per CDM VVS for PoA version 02.0.0 were applied to assess the continued validity of the baseline and/or to update the baseline at the renewal of the PoA period:</p> <p>Step 1: Assess the validity of the current baseline for the next crediting period</p> <p>The CDM Project Standard for PoA, version 2.0 ^{/PS/} requires assessing the impact of new relevant national and/or sectoral policies and circumstances on the baseline. The validity of the current baseline is assessed in the following sub-steps:</p> <p>Step 1.1: Assess compliance of the current baseline with relevant mandatory national and/or sectoral policies</p> <p>Solar Lighting- AMS-III.A.R Substituting fossil fuel-based lighting with LED/CFL lighting systems, version 06</p> <p><i>§§ 2 This category comprises activities that replace portable fossil fuel based lamps (e.g. wickbased kerosene lanterns) with battery-charged light-emitting diode (LED) or compact fluorescent lamps (CFL) based lighting systems in residential and/or non-residential applications (e.g. ambient lights, task lights, portable lights).</i></p> <p>The PoA continues the dissemination of LED/CFL lighting systems (run by solar panels) and the baseline scenario is continued use of wick-based kerosene lanterns. Also refer the eligibility criteria in detail.</p> <p>The baseline is still in line with the latest version of the applied methodology AMS-III.A.R (version 6.0) compared to the AMS-I.A (version 17.0).</p>
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	Baseline the AMS-I.A (version 14.0)	Baseline the AMS-I.A (version 17.0)	Baseline AMS-III.A.R (version 6.0)
	<p>The energy baseline is the fuel consumption of the technology in use or that would have been used in the absence of the project activity to generate the equivalent quantity of energy¹¹, estimated using one of the following three options:</p> <p>(Options are not written intentionally)</p>	<p>The baseline emissions are calculated based on the fuel consumption of the technology in use or that would have been used to generate the equivalent quantity of energy¹² in the absence of the project activity, using one of the following three options:</p> <p>(Options are not written intentionally)</p>	<p>The project activity involves the introduction of solar lighting systems into households throughout India. Solar lighting systems replace the main baseline fuel, kerosene.</p>
	<p>From the comparison of the above table, it is safely determined that the change in the methodology is not causing any change in the baseline. The baseline is still continuation of the kerosene based lamps. As per the project standard baseline scenario is not subject to re-assessment and is thus deemed to be applicable for the next crediting period.</p> <p>Improved cookstoves- AMS-II.G Energy efficiency measures in thermal applications of non-renewable biomass, Version-11.1</p> <p><i>§§ 1 Introduction of efficient thermal energy generation units utilizing non-renewable biomass (e.g. complete replacement of existing biomass-fired cookstoves or ovens or dryers with more efficient appliances), or retrofitting of existing units reducing the use of non-renewable biomass for combustion</i></p> <p><i>§§ 2 This methodology comprises efficiency improvements in thermal applications of nonrenewable biomass. Examples of applicable technologies and measures include the introduction of high efficiency biomass fired project devices (cookstoves or ovens or dryers) to replace the existing devices and/or energy efficiency improvements in existing biomass fired cookstoves or ovens or dryers.</i></p> <p>The PoA continues the dissemination of Improved cookstoves (with rated efficiency of at least 20 per cent or higher) and the baseline scenario is continued use of conventional three-stone stoves.</p> <p>The baseline is still in line with the latest version of the applied methodology AMS-II.G (version 11.1) compared to the AMS-II.G (version 3.0). As per the project standard this scenario is not subject to re-assessment and is thus deemed to be applicable for the next crediting period. Also refer the eligibility criteria in detail.</p> <p>Safe drinking water production</p> <p>As per AMS-III.AV., version 08.0 §§ 13, “It is assumed that fossil fuel and/or non-renewable biomass (NRB) is used to boil water as means of water purification in the absence of the project activity.”</p> <p>Therefore the baseline scenario is the use of fossil fuel and/or NRB to boil water and only purified water consumed for drinking purposes shall be used in the baseline calculation.</p> <p>As per the registered PoA-DD /PoA-DD/, “Sample surveys or reference literature will be used to determine the type of stoves and fuel used. The weighted average by</p>		

¹¹ Renewable energy lighting applications shall consider the equivalent level of lighting service instead of energy (See annex 1 of EB 08).

¹² Renewable energy lighting applications shall consider the equivalent level of lighting service instead of energy (See annex 1 of EB 08).

total fuel consumption shall be used if more than one type of stove/fuel is used in the project area.

CPA-DD shall present the key parameters for the baseline determination in Part II, section B.6.3, which shall be validated by the DOE during inclusion process.

Also in the case of displacement NRB, the baseline emissions are corrected for the fraction of the biomass that can be demonstrated to be non-renewable. There is a Ex-ante parameter (f_i) for each generic part of the PoA, which would be calculated at the time of CPA crediting renewal and CPA inclusion.

Hence, the baseline for each generic CPA remains the same as that in the registered PoA-DD. Since this is an national PoA, the baseline demonstration will be done at the CPA level at the time of CPA crediting period renewal and the CPA inclusion in compliance with the relevant mandatory national and/or sectoral policies. The information presented in the generic part of CPA of PoA-DD has been validated by an initial document review and further confirmation has been made based on the interview.

Hence the same baseline as identified in the previous crediting period is still valid for the for the generic CPA part of PoA. There are no new relevant national and/or sectoral policies and circumstances ever since the PoA was registered that have an impact on the baseline.

Thus, the baseline identified during the validation is still compliance with the relevant mandatory national and/or sectoral policies.

The baseline of the PoA-DD has been assessed to be compliant with the national legislation and policies applicable for the project activity at the time of validation. During the first crediting period, the CME has frequently reviewed the legal requirements and policies relevant for the baseline of the project. On the basis of this the PP has arrived at the conclusion that the baseline is still in line with all applicable legislations and policies.

The validation team has independently reviewed the host country legislation as well as current policies, such as

- MoEF Website/[dna/](#)
- Indian Laws and regulations database

For ICS, Water purification systems and Solar based lighting; there is no relevant mandatory policies, laws and regulations issued by national government after the PoA was registered. The baseline of is still the common practice in India, thus this comply with all relevant mandatory national and/or sectoral policies.

On the basis of this analysis the validation team confirms that the baseline is still in compliance with the currently applicable national legislation and other national and/or sectoral policies.

Step 1.2: Assess the impact of circumstances

There are no new national/sectoral policies or circumstances that could affect the baseline scenario during the PoA renewal period. The validation team confirmed that the current baselines identified in the registered PoA-DD is still valid for the second PoA renewal period.

As the baseline scenarios might be affected by changed circumstances, e.g. market conditions, alternative fuels, cheaper electricity and fuel prices etc. the CME has checked the baseline against such changes that have occurred since validation. This is of special importance if the baseline scenario is the continuation of the pre-project scenario. The validation team has independently checked whether there are changes in circumstances which have had an impact on the baselines. The PoA-DD has appropriately provided detailed explanations against this step for both the combinations generic "CPA (Solar lamps + Cookstoves)" and generic "CPA- Solar lamps + Water purifiers". The arguments

are accepted.

The baseline for each generic CPA remains the same as that in the registered PoA-DD. Since this is an national PoA, the baseline demonstration will be done at the CPA level at the time of CPA crediting period renewal and the CPA inclusion in compliance with the relevant mandatory national and/or sectoral policies. The information presented in the generic part of CPA of PoA-DD has been validated by an initial document review and further confirmation has been made based on the interview.

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

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

Based on the step 1.1 assesment, it is confirmed that there is no mandatory laws and regulations to request energy efficient equipments thus, the continuation of use of the current equipment without any investment would be the baselines and continuous without the project implementation.

Thus the validation team confirms the conclusion that no changes to the baseline are required due to the likeliness of investments in equipment which impacts the baseline, this is not applicable.

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

Validation team confirms that data and parameters that were only determined at the start of the crediting period and not monitored during the crediting period are still valid except the ex-ante parameter $EF_{\text{projected_fossilfuel},i}$ which is updated in accordance with applied methodology i.e. AMS-III.AV Version 08.0

Ex-ante parameter	During the 1 st crediting Period	During the 2 nd crediting Period
Cook Stove		
$EF_{\text{projected_fossilfuel},i}$	81.6 tCO ₂ /TJ	64.4 tCO ₂ /TJ
$f_{\text{NRB},y}$ (Fraction)	0.8726	To be calculated at CPA level
$B_{\text{old},i,j}$ (tons/HH/year)	Varied by state to state in the range from 0.65 to 2.39	2.45 applied as national value based on methodology per capita defaults
Solar Lamps		
Due to change in the monitoring methodology, there are new ex-ante parameters that have been added to the monitoring plan. <ul style="list-style-type: none"> Lamp Emission Factor Fuel use rate Utilization rate Leakage factor 		
Ex-ante parameter	During the 1 st crediting Period	During the 2 nd crediting Period
Water Filters		
f_i (Fraction)	0.8726	Calculated at CPA level
$EF_{\text{projected_fossilfuel}}$ (tCO ₂ /TJ)	81.6 tCO ₂ /TJ	64.4 tCO ₂ /TJ

Since the value of the ex-ante parameter has been reduced, hence the same is accepted to the validation team. Since the DNA calculated/approved values for

	<p>fNRB are not available, The same will be assessed at CPA level</p> <p>Step 2: Update the current baseline and the data and parameters</p> <p>Step 1.4 shows that ex-ante parameter needs to be updated.</p> <p>Step 2.1: Update the current baseline</p> <p>The baseline remains unchanged as discussed above.</p> <p>Step 2.2: Update the data and parameters</p> <p>The ex-ante parameter $EF_{\text{projected_fossilfuel},i}$ is updated in accordance with applied methodology i.e. AMS-III.AV Version 06.0 and the linked methodology AMS-I.E. Version 10.0, table 02 and other parameters as stated below:</p> <table border="1" data-bbox="451 640 1442 965"> <thead> <tr> <th>Ex-ante parameter</th><th>During the 1st PoA crediting Period</th><th>During the 2nd PoA crediting Period</th></tr> </thead> <tbody> <tr> <td>$EF_{\text{projected_fossilfuel},i}$</td><td>81.6 tCO₂/TJ</td><td>64.4 tCO₂/TJ</td></tr> <tr> <td>fNRB,y (Fraction)</td><td>0.8726</td><td>To be calculated at CPA level</td></tr> <tr> <td>Bold,i,j (tons/HH/year)</td><td>Varied by state to state in the range from 0.65 to 2.39</td><td>2.45 applied as national value based on methodology per capita defaults</td></tr> <tr> <td>fi (Fraction)</td><td>0.8726</td><td>Calculated at CPA level</td></tr> </tbody> </table> <p>Since the Value of the Ex-ante parameter has been reduced, hence the same is accepted to the validation team. The value is correctly applied for the emission reduction calculation.</p>	Ex-ante parameter	During the 1 st PoA crediting Period	During the 2 nd PoA crediting Period	$EF_{\text{projected_fossilfuel},i}$	81.6 tCO ₂ /TJ	64.4 tCO ₂ /TJ	fNRB,y (Fraction)	0.8726	To be calculated at CPA level	Bold,i,j (tons/HH/year)	Varied by state to state in the range from 0.65 to 2.39	2.45 applied as national value based on methodology per capita defaults	fi (Fraction)	0.8726	Calculated at CPA level	
Ex-ante parameter	During the 1 st PoA crediting Period	During the 2 nd PoA crediting Period															
$EF_{\text{projected_fossilfuel},i}$	81.6 tCO ₂ /TJ	64.4 tCO ₂ /TJ															
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Bold,i,j (tons/HH/year)	Varied by state to state in the range from 0.65 to 2.39	2.45 applied as national value based on methodology per capita defaults															
fi (Fraction)	0.8726	Calculated at CPA level															
Findings	CAR 06																
Conclusion	<p>The original baseline scenarios of the generic CPA-DDs as per the latest approved PoA-DD are still valid for the 2nd crediting period.</p> <p>Baseline Parameters</p> <table border="1" data-bbox="451 1299 1458 2074"> <thead> <tr> <th>Sr. No</th><th>Ex-ante Parameter</th><th>Value</th><th>Assessment of appropriateness</th></tr> </thead> <tbody> <tr> <td colspan="4">Efficient Cook Stoves</td></tr> <tr> <td>1</td><td>fNRB,y - Fraction of woody biomass saved by project activity during year y that can be established as non-renewable biomass</td><td>To be determined at CPA Level</td><td>Value will be determined at the time inclusion of CPA as per TOOL30 version 2 "Calculation of fraction of non-renewable biomass". This approach is accepted as it is in line with the applied methodology.</td></tr> <tr> <td>2</td><td>$EF_{\text{projected_fossilfuel},i}$ - Emission factor for the fossil fuels projected to be used for substitution of non-renewable woody biomass by similar consumers.</td><td>64.4 tCO₂/TJ</td><td>Applied value is inline with AMS-II.G Version 11.1.</td></tr> </tbody> </table>	Sr. No	Ex-ante Parameter	Value	Assessment of appropriateness	Efficient Cook Stoves				1	fNRB,y - Fraction of woody biomass saved by project activity during year y that can be established as non-renewable biomass	To be determined at CPA Level	Value will be determined at the time inclusion of CPA as per TOOL30 version 2 "Calculation of fraction of non-renewable biomass". This approach is accepted as it is in line with the applied methodology.	2	$EF_{\text{projected_fossilfuel},i}$ - Emission factor for the fossil fuels projected to be used for substitution of non-renewable woody biomass by similar consumers.	64.4 tCO ₂ /TJ	Applied value is inline with AMS-II.G Version 11.1.
Sr. No	Ex-ante Parameter	Value	Assessment of appropriateness														
Efficient Cook Stoves																	
1	fNRB,y - Fraction of woody biomass saved by project activity during year y that can be established as non-renewable biomass	To be determined at CPA Level	Value will be determined at the time inclusion of CPA as per TOOL30 version 2 "Calculation of fraction of non-renewable biomass". This approach is accepted as it is in line with the applied methodology.														
2	$EF_{\text{projected_fossilfuel},i}$ - Emission factor for the fossil fuels projected to be used for substitution of non-renewable woody biomass by similar consumers.	64.4 tCO ₂ /TJ	Applied value is inline with AMS-II.G Version 11.1.														

	3	$N_{p,HH}$ - Average number of persons served per household prior to project implementation	4.9 (number)	The value is sourced from the publically available reference- "India in figures 2018" Report published by Government of India, Ministry of Statistics and Programme Implementation and traceable over the below stated web link: http://mospi.nic.in/sites/default/files/publication_reports/India_in_figures-2018_rev.pdf
	4	$B_{old,p}$ - Annual quantity of woody biomass that would have been used per person in the household in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project devices	0.5 tonnes/capita per year	Default value has been used as prescribed by methodology, AMS.II.G Version 11.1, table 2
	5	$B_{old,i,j}$ - Annual quantity of woody biomass that would have been used in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project device type i and batch j	2.45 tonnes/year	Calculated based on the above default values of $B_{old,p}$ and $N_{p,HH}$, $B_{old,HH}$ divided by $N_{d,HH}$
	6	LAF - Net to gross adjustment factor	0.95 (fraction)	Default value as prescribed by methodology, AMS.II.G Version 11.1, para 48 (c)
	Water			
	7	f_i - Factor to determine amount of non-renewable fuels	To be determined at CPA Level	Value will be determined at the time of inclusion of CPA as per TOOL30 version 2.0 "Calculation of fraction of non-renewable biomass". This approach is accepted as it is in line with the applied methodology.
	8	η_{wb} - Efficiency of water boiling system being replaced	0.10	Default value as per table 3 of applied methodology. The baseline is considered as three stone fire.
	9	$EF_{projected_fossilfuel}$ Emission factor of the fuel(s) type i	64.4 tCO ₂ /TJ	As per applied AMS.III.A.V. version 08.0

		substituted			
	10	WH - Specific heat of water	4.186 kJ/L °C	As per methodology AMS-III.AV	
	11	Tf – Final temperature of water	100 °C	As per methodology AMS-III.AV	
	12	Ti – Initial temperature of water	20 °C	As per methodology AMS-III.AV	
	13	WHE - Latent heat of water evaporation	2260 kJ/L	As stated in AMS-III.AV, this is the boiling point of water at standard conditions (page 8 of 20)	
	14	L _{NRB} - Net-to-gross adjustment factor for NRB Leakage	95%	Sourced from AMS-II.G Version 11.1	
	15	LS - Life span of water treatment technologies	To be determined at CPA Level	The value will be determined based on the manufacturers specifications	
	16	BL _{fuel,i} - Proportions of baseline fuel type i (NRB and fossil fuel).	To be determined at CPA Level	Estimated ex ante through a survey or official data or peer reviewed literature or local expert opinion	
	17	X _{boil} - Fraction of the population serviced by the project activity for which the common practice of water purification is or would have been water boiling	To be determined at CPA Level	Fraction of the population serviced by the project activity for which the common practice of water purification is or would have been water boiling	
	18	q _i - Capacity of the equipment type i	To be determined at CPA Level	Manufacturer's specifications	
<p>The Ex-ante parameters for solar will be determined at CPA Level.</p> <p>All the data and parameters determined ex-ante are still valid for the baseline emission calculation except for the parameters in above that were re-determined or the ones that will be determined at CPA level, for the baseline emission calculation which is verified as more accurate and conservative.</p>					

D.2.3. Estimated emission reductions or net anthropogenic removals

Means of validation	<p>For validation of the estimated GHG emission reductions the CME has provided the following documentation:</p> <ul style="list-style-type: none"> - Updated PoA-DD including generic CPA-DD - Sample ex-ante emission reduction calculations <p>Further, the validation team has downloaded from the UNFCCC website the applicable version of the CDM methodologies and all referenced methodological tools.</p>
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The ER calculation process has been duly checked. Further, it has been checked whether the formulae have been correctly transferred to the updated PoA-DD and generic CPA-DD for determination of ex-ante ER. The validation team has further checked the updated PoA-DD and generic CPA-DD against the latest version of the applicable methodologies incl. the referenced methodological tools for consistency. Special focus was laid on the possible changes against the previous crediting period.

In the updated PoA-DD and generic CPA-DD, the version of methodology

- AMS-III.A.R “Substituting fossil fuel-based lighting with LED/CFL lighting systems” (Version 6.0)
- AMS-II.G “Energy efficiency measures in thermal applications of non-renewable biomass” (Version 11.1)
- AMS-III.AV “Low greenhouse gas-emitting safe drinking water production systems” (Version 8.0)

Via checking the latest version of the generic CPA-DD, it is confirmed that there are some changes related to the ER calculations from the change of methodology from AMS-I.A to AMS-III.AR for solar lamps.

Thus, in the updated PoA-DD including generic CPA-DD, there are changes to the formulae and parameters for the estimated GHG emission reductions which will be used by the specific CPAs for ER calculations in line with the applied latest versions of the applied baseline and monitoring methodologies.

The calculation of ERs is done as per below:

For solar lighting:

The methodology AMS-III.AR provides for a default annual baseline emissions factor for the project lamps. The following assumptions are made about the equivalent baseline lighting system:

$$DV = FUR \times O \times U \times EF + 1000 \times LF \times n \times NTG$$

Where:

<i>DV</i>	=	Lamp Emission Factor (default is 0.092 t CO ₂ e per project lamp)
<i>FUR</i>	=	Fuel use rate (0.03 liters/hour)
<i>O</i>	=	Utilization rate (3.5 hours/day)
<i>U</i>	=	Annual utilization (365 days/year)
<i>EF</i>	=	Fuel emissions factor (2.4 kgCO ₂ /liter)
<i>LF</i>	=	Leakage factor (1.0)
<i>n</i>	=	Number of fuel-based lamps replaced per project lamp (1.0)
<i>NTG</i>	=	Net-to-gross adjustment factor (1.0)

Baseline emissions are calculated as follows:

$$BE_y = DV \times GF_y \times DB_y$$

Where:

<i>BE_y</i>	=	Baseline emissions per project lamp in year y (t CO ₂ e)
<i>GF_y</i>	=	Grid Factor in year y, Equal to 1.0 since charging option defined in paragraph 3(a) is u

DB_y = Dynamic Baseline Factor (change in baseline fuel, fuel use rate, and/or utilization during crediting period) in year y . Calculated as either:
 Option 1: default of 1.0 in the absence of relevant information;
 Option 2: value of $1.0 + FFg$ where FFg is the documented national growth rate of Kerosene fuel use in lighting from the preceding years (use the most recent available data for a three or five years average (fraction))

As per the methodology AMS-III.AR, there are no project emissions for the projects involving solar PV as the charging option. Hence in this case the project emissions are zero.

The per-lamp baseline emissions are calculated in Baseline Step above. To calculate total emission reductions, these must be aggregated across all lamps in use in the period under consideration. This is done using the following equations:

Project Emissions:

As per the methodology, in case of lamps charging options of Solar PV, the project emissions would be considered as zero. Hence $PE_y = 0$

Emission Reductions:

Annual emission reductions are calculated as:

$$ER_y = \sum_{i,j} N_{i,j} \times (BE_{y,i} - PE_{y,i,j}) \times (OF_{y,i,j})$$

Where:

ER_y = Emission reductions in year y (t CO₂e)
 $N_{i,j}$ = Number of project lamps distributed to end users of type i with charging method j
 $OF_{y,i,j}$ = Percentage of project lamps distributed to end users that are operational and in service in year y , for each lamp type i and charging method j . Assumed to be equal to 100 per cent for years 1, 2 and 3, and equal to the value determined in paragraph 36 of methodology, for years 4 and 5¹³

For Improved cookstove:

The methodological approach for improved cookstoves is as follows –

In the absence of the project activity, the baseline scenario is the use of higher amounts of non-renewable biomass in the inefficient baseline stoves.

Emission reductions are calculated as:

$$ER_y = \sum_i \sum_j ER_{y,i,j} - LE_y$$

Where:

i = Indices different types of project device is introduced to replace the project devices¹⁴
 J = Indices for the situation where there is more than one batch of project device.

¹³ The years refer to the operational years of project lamps (e.g. for project lamps distributed in year 3 of the crediting period years 1, 2 and 3 relate to the years 3, 4 and 5 of the crediting period and so forth).

¹⁴ In case of this CPA, two type of devices are being used, and further device type may get added during the course of CPA implementation

ER_y	=	Emission reductions during year y in t CO ₂ e
$ER_{y,i,j}$	=	Emission reductions by project device of type i and batch j during year y in t CO ₂ e
LE_y	=	Leakage emissions in the year y

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

Where:

$B_{y,savings,i,j}$	=	Quantity of woody biomass that is saved in tonnes per cook stove of type i and batch j during year y
$f_{NRB,y}$	=	Fraction of woody biomass that can be established as non-renewable biomass using survey methods or government data or default country-specific fraction of non-renewable woody biomass (f_{NRB}) values as on the CDM website ¹⁵
$NCV_{biomass}$	=	Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 0.0156 TJ/tonne, based on gross weight of the wood that is 'air-dried').
$EF_{projected,fossil\ fuel}$	=	Emission factor for the fossil fuels projected to be used for substituting non-renewable woody biomass/charcoal by similar consumers. Use a value of 64.4 t CO ₂ /TJ
$N_{y,i,j}$	=	Number of project devices of type i and batch j operating during year y
μ_y	=	Adjustment to account for any continued use of pre-project devices in the year y , when applying equations 7 and 9 (fraction) as per methodology. Use 1.0 in other cases

$B_{y,savings,i,j}$ due to implementation of efficient thermal devices is estimated as per the Option 3 provided in AMS-IIG version 11.1: water boiling test (WBT):

$$B_{y,savings,i,j} = B_{old,i,j} \times \left(1 - \frac{\eta_{old,i,j}}{\eta_{new,i,j}}\right)$$

Where:

$B_{old,i,j}$	=	Annual quantity of woody biomass that would have been used in absence of the project activity to generate useful thermal energy equivalent to that provided by the project device type i and batch j
$\eta_{old,i,j}$	=	Efficiency of the old devices being replaced by project devices of type i and batch j
$\eta_{new,i,j}$	=	Efficiency of the device of each type i and batch j implemented at the project activity

1) Determination of the Share of Non-Renewable Biomass

The f_{NRB} approach as per TOOL30 ver 2.0 "Calculation of the fraction of non-renewable biomass" will be followed at the CPA level.

3) Leakage

$B_{y,savings,i,j}$ is multiplied by a net to gross adjustment factor of 0.95 to account for leakages, in which case surveys are not required as per the para 39 of applied methodology AMS-II.G Version 11.1.

¹⁵ Default values endorsed by designated national authorities and approved by the Board are available at <http://cdm.unfccc.int/DNA/fNRB/index.html> or http://cdm.unfccc.int/methodologies/standard_base/index.html.

For water purifiers:**Baseline emissions**

$$BE_y = QPW_y \times m \times X_{boil} \times SEC \times \sum_i (BL_{fuel,i} \times f_i \times EF_{projected_fossil\ fuel,i} \times 10^{-9})$$

Variable	Unit	Type
BE _y	t CO ₂ e	Calculated
QPW _y Quantity of water	Litres	Monitored
m : Fraction of functional appliances that are meeting the SDW standards (%)	%	Monitored
X _{boil} : Fraction of the population served by the project activity for which the common practice of water purification is or would have been water boiling.	Fraction	Default value of 1
SEC: Specific energy consumption required to boil one litre of water (kJ/L)	kJ/litre	calculated
BL _{fuel,i} : Proportions of baseline fuel type i (NRB and/or fossil fuels) used in the absence of the project activity (%)	%	Calculated
f _i : Fraction of fuel type i used in the absence of the project activity in year y. For biomass it is the fraction of woody biomass that can be established as non-renewable biomass (fNRB). If the baseline fuel is fossil fuel, the value to be applied is 1.	Fraction	To be determined at CPA level
EF _{projected_fossilfuel,i} Emission factor of the fuel type i substituted	t CO ₂ e	IPCC default values

Each CPA would calculate value of QPW on the basis of option 1, in para 16(a) of the methodology AMS-III.AV version 8, which is:

- 1) Directly monitor the quantity

$$SEC = \frac{WH}{n_{wb}} * (T_f - T_i) + 0.01 * WHE / n_{wb}$$

Variable	Definition	Unit	Type
WH	Specific heat of water	kJ/L °C	AMS-III.A.V default value of 4.18 kJ/L °C
T _f	Final temperature	°C	AMS-III.A.V default value of 100 °C
T _i	Initial temperature of water	°C	AMS-III.A.V default
WHE	Latent heat of water evaporation	kJ/L	AMS-III.A.V default 2260 kJ/L
n _{wb}	Efficiency of the water boiling systems being replaced, estimated ex ante	Fraction	Established for different baseline situations based on referenced literature values or AMS-III.A.V default
SEC	Specific energy consumption required to boil one litre of water (kJ/L), to be calculated according to paragraphs below	kJ/L	Calculated

Project emissions

The operation of the project water purification system may involve consumption of fossil fuels and/or electricity. CO₂ emissions from on-site consumption of fossil fuels and electricity due to the project activity shall be accounted for as project emissions. The calculation would be done as per the following options:

1. Emissions from fossil fuel combustion (PE_{FF,y})
PE_{FF,y} shall be calculated using the latest version of the "Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion".
2. Emissions from electricity consumption (PE_{EC,y})
PE_{EC,y} shall be calculated using the latest version of the "Tool to calculate

	<p>baseline, project and/or leakage emissions from electricity consumption”.</p> <p>Leakage</p> <p>In line with para 21 and 26 of AMS. III.AV, leakage relating to non-renewable wood biomass is assessed as per relevant procedure of AMS-I.E and AMS-I.E allows for a net to gross adjustment factor of 0.95 to account for leakages related to the non-renewable woody biomass saved by the project activity. Hence, this default adjustment factor would be applied in the calculations.</p> <p>Emissions reductions</p> <p>Emissions reductions will be calculated as:</p> $ER_y = BE_y - PE_y - L_y$
Findings	CAR 14
Conclusion	The calculation formulae in the corresponding calculation tables in the updated generic CPA-DD have been checked and no mistakes have been identified. The estimation of emission reductions for the 2 nd PoA period is deemed correct, plausible, and in line with the applied methodologies.

D.2.4. Validity of monitoring plan

Means of validation	Improved Cookstoves		
	Sr. No	Parameter	Validation Team Remarks
	1	Number of project devices of type i and batch j operating during year y ($N_{y,i,j}$)	The database is maintained by the PO/CME in the MEC credit tracker platform, master data -base which also tracks the entire details of micro financing system, as this CPA technology is reaching to the household through micro financing scheme. A management information system (MIS) is also maintained at PO level as the CME through Micro Energy Officers collects all sets of information of end user/byuers of the CEP and enters the same in credit tracker platform for the purpose of direct monitoring of total number of ICS deployed in the CPA. The emission reductions accounting will be done based on the actual date of distribution to the households or date of inclusion of the CPA whichever is later. However, measurement is done based on a representative sample basis applying the Standard for Sampling and Survey for the project activity and PoA version 08. Sampling standard shall be used for determining the sample size to achieve 90/10 confidence precision. A discount shall be applied based on the percentage of devices operational as determined by the sample survey e.g. if survey shows that 10% of the devices is non-operating, an adjustment factor of 0.9 shall be applied to number of project devices commissioned in a particular batch. Separate samples shall be taken for each batch. (As per applied methodology AMS-II.G version 08). The records are continuous kept but monitoring frequency is biennial in line with the applied methodology.

	2	Number of project devices distributed per household ($N_{d,HH}$)	The value applied is '1', The parameter will be recorded at the time of the distribution of ICS. The results of the ex-post usage/ monitoring surveys will not be used to determine this parameter.
	3	Efficiency of the device of each type i and batch j implemented as part of the project activity. ($\dot{\eta}_{new,i,j}$)	The efficiency of the cook stoves will be monitored applying WBT (water boiling test) in accordance with applied methodology AMS-IIG version 11.1 § 37. All relevant and necessary requirements with regards to monitoring of loss of efficiency due to aging of ICS shall follow § 37 of the applied methodology and standard for sampling and survey for project activity and PoA version 08. The sample size to be calculated as per the confidence / precision of 90/10 for single CPA. Manufacturer specifications for efficiency based on water boiling test (WBT) has been used which is in line with the applied methodology.
	4	Adjustment to account for any continued use of pre-project devices during the year y (μ_y)	This is measured atleast once every two years from a measurement campaign of 10 devices as required by the AMS-II.G. version 11.1 or surveys may be conducted if the use of data loggers to record the continued operation of baseline devices is demonstrated to be not practical, for example when the baseline device is the three stone fire. The surveys should be designed to capture the cooking habits and stove usage of households in the region, including quantification of use of baseline devices, by formulating questions and/or collecting evidences to determine the frequency of usage of both the project devices and baseline devices. For example if there were 3 pre-project devices per household and it was determined during the survey that use of one of them continues during the crediting period then a conservative adjustment factor of 0.66 is applied for the relevant monitoring period. Another example would be the case where there was only one pre-project device per household and its use during the project period continues along with the project stove to meet 25% of the cooking needs of the household in which case the adjustment factor will be 0.75. Where a more precise data is available i.e. the thermal capacity of the project and pre-project devices and respective utilisation hours, a weighted average adjustment factor may be used.
	5	Efficiency of pre-project device, which is a three-stone fire using firewood ($\dot{\eta}_{old,i,j}$)	Default value of 0.1 established prior to start of the implementation based on survey. Fixed for each individual household when included in the project activity database.
	6	Life Span	Number of years of operation. Value of 5 years is applied based on the manufacturer specifications. The parameter will be fixed once at the time of the commissioning/

			distribution. MP is appropriately updated.
	7	Date of commissioning of batch j	To establish the date of commissioning, the Project devices would be grouped in "batches" and the latest date of commissioning of a device within the batch shall be used as the date of commissioning for the entire batch. This is fixed and recorded at the time of commissioning/distribution of the last project device in the batch
	8	Date of commissioning of project device i:	Actual date of commissioning of the project device, which is fixed and recorded at the time of commissioning of the last project device in the batch. Same can be verified from the credit tracker platform.
	8.1	NCV _{biomass}	Net calorific value of non-renewable woody biomass that is substituted is sourced from IPCC default for wood fuel, 0.015 TJ/tonnes.
	Solar Lighting		
	9	Number of lights distributed to end users, i, type ($N_{i,j}$)	The data will be recorded in a web based tracker platform. The data will consist of unique number, number of units sold, to whom and where. Each light installation will be recorded in the MEC Tracker System. Associated data will reside in the MEC Tracker Database, allowing each installation to be monitored on annual basis which is in line with the applied methodology AMS-III.AR.
	10	Grid Factor in year y (GF_y)	This is taken as '1' a default value as verified from the applied methodology for charging option 3 a)
	11	Dynamic baseline factor in year y (DB_y):	Default value under option 1 of applied methodology is taken in accordance with applied methodology AMS-III.A.R. version 06 (option 1), as change in the baseline fuel, fuel use rate, utilization during crediting period may not be available).
	12	The percentage of project lamps distributed to end users that are operating and in service ($f_{i,j}$)	Default value for the first three years of operation of a lamp as per the methodology. Post three years, for years 4-7, this value will be determined on the basis of sampling surveys. Same is in accordance with applied methodology
	Water Purifiers		
	13	Fraction of functional appliances that are providing the SDW (m)	The parameter will be determined annually, based on survey and microbiological testing. According to the monitoring plan, this parameter shall be determined through checking all appliances or a statistically representative sample of the appliances to ensure the following conditions that: a) they only use technologies that are meeting the SDW technology standards as per paragraph 4(b) of

			<p>the methodology;</p> <p>b) they are still operating or are replaced by an equivalent in-service appliance. The use of appliances shall be monitored through self-report measures (survey data from respondents) as well as physical signs that are observable (e.g. wetness of the unit, water in storage receptacle, functionality of parts) as per "Objective measures of functionality and use of project appliances" described in the Appendix.</p> <p>c) they are delivering microbiologically safe drinking water. Appliances shall deliver treated water verified to be <1 cfu / 100 ml E. coli, using methods for measurement with a lower detection limit (LDL) of 1 cfu E. coli per 100 ml sample. Emission reductions cannot be claimed if over 10% of appliances in the project activity fail to meet the final water quality requirements mentioned above</p> <p>In addition, the MP has provision under the sampling plan to include provisions (mandatory) to collect information for records of replacement of appliances, filters and maintenance.</p> <p>Sampling follows the "Standard for sampling and surveys for CDM project activities and programme of activities" with 90% confidence interval and a 10% margin of error requirement (shall be achieved for the sampled parameters)</p>
	14	Population who consumes the purified water serviced by the project activity in year y (P_y)	The parameter is estimated annually based on the surveys as per requirements of the methodology
	16	Check for for a SDW public distribution network	This is an annual check to determine whether a new public distribution system providing SDW has been introduced in the proposed SSC- CPA area. In case the SDW is made available through the public distribution network, no claim for emission reduction can be made for the CPA area.
	16	Quality of safe drinking water	This parameter is to be monitored atleast once in two year. Emission reductions cannot be claimed if project activity fails to meet SDW standards as per paragraph 4(b) of the methodology, this is in accordance with applied methodology AMS-III.AV version 08.
	17	Quantity of purified water in year y (QPW_y)	As per the monitoring plan, the quantity of purified water in year y is determined for appliances and water kiosks as per below provisions to determine baseline emissions:

		<p>(a) For distributed appliances, as per the following options:</p> <ul style="list-style-type: none"> Monitoring of a statistically valid sample of the distributed appliances during a period that is representative of the monitoring period. <p>(b) For water kiosks, as per the following options:</p> <ul style="list-style-type: none"> Monitoring on continuous basis using a standard vessel. For monitoring by standard vessel, sales receipts will be utilized for cross verification. <p>The amount of water treated will be monitored on representative sample following the requirements of the "Standard: Sampling and surveys for CDM project activities and programme of activities".</p> <p>The provisions of the para 16 a), option 1 of the methodology are availed.</p>
Findings	CAR 14	
Conclusion	All the raised findings are addressed.	

D.2.5. Eligibility criteria for inclusion of CPAs

Means of validation	Solar Lighting & Cook Stoves described under Part II. Generic component project Activity (CPA), Section K				
	No.	Eligibility criterion - Category	Eligibility criterion - Required condition	Supporting evidence for inclusion	Means of validation/Findings/Conclusion
	1	Boundary and location of the CPA	The CPA is located within India.	<p>Location and boundary is specified in the specific CPA-DD stating that the location is limited to India and supported with GPS coordinates.</p> <p>Document: Statement of CME that the location and boundary is within India and supported with GPS coordinates (XXX°N XXX°E).</p>	<p>The geographical boundary of each CPA, shall be consistent with the geographical boundary of the PoA, i.e. India.</p> <p>This eligibility criterion has been sufficiently set for all CPAs.</p> <p>Additionally, statement of CME that the location and boundary is within the host country India submitted by the PP which is assessed to be in appropriate.</p>

	2	No Double counting of CEP	<p>A unique numbering or identification system for the CEP installed is applied. This shall ensure no double counting of CEPs within the same CPA, same PoA and ensure that stoves and solar lamps can be identified as belonging to this PoA and not to a PoA managed by any other CME.</p> <p>A legally binding contract between CME and manufacturer/micro finance institution/POs would be required to ensure that all carbon title is transferred to the CME. This shall ensure that POs, stove/lamp manufacturers and distributors do not claim ERs separately.</p>	<p>The unique numbering and PoA logo stamped on each CEP supported by the individual distribution record matching such information is included in the specific CPA-DD and consistent with the PoA-DD</p> <p>A legally binding contract between CME and manufacturer/micro finance institution/POs would be established to ensure that all carbon title is transferred to the CME.</p> <p>Document: Credit Tracker stove sales receipt showing CME and PO information, end user details including name and address and CEP ID number.</p> <p>In addition to the sales receipt the programme logo shall be displayed on the CEPs and verifiable by DOE</p> <p>A legally binding contract between CME and manufacturer/micro finance institution/POs would be required to ensure that all carbon title is transferred to the CME.</p>	<p>The unique numbering or identification system can be verified with the product database available on the online record keeping system called online credit tracker platform. For each of the CEP/project appliance (Improved cook stoves and Solar lamps) under the PoA, CME has set a provision to maintain the records including; name of the buyer of the clean energy product, location address, their contact number, bank ID number, national ID number, product unique identification number.</p> <p>The Validation Team noted that there is provision for a legally binding contract between CME and manufacturer/micro finance institution/POs to ensure that all carbon title is transferred to the CME. This arrangement ensures that POs, stove/lamp manufacturers and distributors do not claim ERs separately.</p> <p>Validation team has observed the same during remote</p>
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				<p>assessment and procedure for maintaining the record was also found to be in line.</p> <p>During remote assessments and interview all the above said detail was also cross verified.</p> <p>Double counting of CERs can sufficiently be avoided by the credit tracker system, and agreements with stakeholders such as MFIs, POs, and manufacturers will ensure that no emission reductions are claimed under a different program.</p> <p>Based on above validation team conclude that this eligibility criteria is appropriately set out for all the potential CPAs under the proposed PoA.</p>
3	CER ownership	End users receiving CEP under the specific CPA contractually cede their rights to claim and own emission reductions under the Clean Development Mechanism of the UNFCCC to the CME of the PoA	<p>The default CEP Booking Record is including the provision that emission reductions generated by the CEP are transferred from the end-user to the PO and ultimately owned by the CME.</p> <p>The receipts will clearly specify that carbon rights are ceded in favour of CME.</p> <p>Documents: 1. Default Booking Record</p>	<p>CME has established a procedure for sale of clean energy products under the proposed PoA where the end user/buyer of the products transfer the ownership of emission reduction out of the usage of the CEP.</p> <p>Person responsible for the sale of the CEP (MEO's) collects the signed Booking Record from the</p>

				end users/buyers. MEO (Micro Energy Officers) was also interviewed and sample Booking record was also verified. Based on above validation team conclude that this eligibility criteria is appropriately set out for all the potential CPAs under the proposed PoA
4	No Double counting of CPA	The CPA is exclusively bound to the PoA. Confirmation that the programme activity has not been and will not be registered either as a single CDM project activity or as a CPA under another PoA	A declaration from the CME on its letterhead would be provided that the specific CPA will not be part of another single CDM project activity or CPA under another PoA. In addition, declaration from CPA operators as part of their contract with the CME, stating that they activities are not registered as part of another single CDM project activity of CPA under another PoA. Evidence: Check on UNFCCC website with date of access and contract between the CME and MFI.	A statement by the CME will be included in the CPA-DD that the specific CPA will not be part of another single CDM project activity or CPA under another PoA. In addition, declaration from CPA operators as part of their contract with the CME, stating that these activities is not registered as part of another single CDM project activity of CPA under another PoA.
5	Awareness and Agreement of those operating a CPA on PoA subscription	Contractual provisions to ensure that those operating the CPA are aware and have agreed that their activity is being subscribed to the PoA. In the case that the CME is not responsible for implementing the CPA, the organization responsible for CPA implementation, known as the Partner Organisation (PO), has signed a contractual agreement with the CME to participate in the PoA. This agreement:	Contractual agreement for CPA operators, stating that they are aware and have agreed that their activity is being subscribed to the PoA	Contractual agreement for CPA operators as part of their contract with the CME, stating that they are aware and have agreed that their activity is being subscribed to the PoA. This requirement is sufficient to avoid legal issues and potential double-counting of

		<ul style="list-style-type: none"> - Defines the ownership of the carbon emission reduction rights - Covers the PO's distribution and monitoring related responsibilities - Confirms that the CEPs to be distributed under the CPA have not and will not be distributed under any other carbon project (CDM project, PoA or voluntary carbon market project) - Cedes the PO's rights to the carbon credits generated from CPAs under the PoA to the CME 		emission reductions.
6	Non-diversion of ODA in case of Public funding	The CME and the CPA operator (in case of being different from the CME) shall confirm that there is no public funding or in the case of public funding, the Annex 1 party will confirm that funding is not a diversion of Official Development Assistance.	Statement of CME and the CPA operator (in case of being different from the CME) that there is no public funding Or In the case that there is public funding, an Annex 1 party will confirm that funding is not a diversion of ODA.	Statement of CME and the CPA operator (in case of being different from the CME) that there is no public funding OR In the case that there is public funding, an Annex 1 party will confirm that funding is not a diversion of ODA.
7	CPA Start Date	CPA start date shall not be before PoA webhosting date, i.e. 18/01/2012. Please note that not all CEP installations may have been deployed at CPA inclusion stage, however the CEP start date can also be checked during verification. In the event that any deployed CEP is found not in line with CPA start date, those CEP will not be counted in the emission reduction calculation	Starting date as stated in the CPA-DD section J is after 18/01/2012. Document: 1. Statement from CME that no CEP under the CPA was sold before the PoA webhosting date, i.e. 18/01/2012. 2. First CEP Booking Record of CPA	Starting date shall be clearly stated in the CPA-DD which should be after the PoA start date of 18/01/2012 i.e. date of intimation to UN. The same has been verified from the UNFCCC website by the validation team.
8	CPA Crediting Period	CPA starting date of the crediting period is date of inclusion or any date thereafter and crediting period not to exceed the PoA	A statement is included in the CPA-DD that the crediting period starting date is date of inclusion into registered PoA i.e. XXXX and the CPA crediting period will not exceed	A statement included in the CPA-DD that the crediting period starting

		end date	PoA end date.	date is date of CPA inclusion into registered PoA and crediting period shall not exceed the PoA life time. The statement as indicated in the CPA-DD is sufficient to ensure that crediting period of a CPA is within the PoA lifetime.
		Each CPA shall provide verifiable evidence		
9	Approval of CPA by CME	CME approved each CPA to be included into its registered PoA.	A letter by CME giving approval for the CPA to be included into its registered PoA.	Statement of CME giving approval for the CPA to be included into its registered PoA.
10	Additionality of CPAs	<p>Additionality will be demonstrated in accordance with Tool 21 Demonstration of additionality of small scale project activities version 13.1</p> <p>The additionality would be demonstrated at the individual CPA level.</p> <p>Additionality of the CPA would be demonstrated by using either one of the options as per para 10 of Tool 21, version 13.1</p> <p>10. Project participants shall provide an explanation to show that the project activity would not have occurred anyway due to at least one of the following barriers :</p> <p>(a) Investment barrier: a financially more viable alternative to the project activity would have led to higher emissions;</p> <p>(b) Technological barrier: a less technologically advanced alternative to the project activity involves lower risks due to the performance</p>	<p>Documentation:</p> <p>1. Description of CPA activity as documented in CPA-DD</p> <p>2. Explanation to show that the project activity would not have occurred anyway due to at least one of the following barriers :</p> <p>1. Investment barrier: a financially more viable alternative to the project activity would have led to higher emissions;</p> <p>2. Technological barrier: a less technologically advanced alternative to the project activity involves lower risks due to the performance uncertainty or low market share of the new technology adopted for the project activity and so would have led to higher emissions;</p> <p>3. Barrier due to prevailing practice: prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions;</p> <p>4. Other barriers: without the project activity, for another specific reason identified by the project participant, such as institutional barriers or limited information,</p>	<p>The additionality will be demonstrated based at time of inclusion.</p> <p>The additionality will be demonstrated one of the options as per para 10 of Tool 21, version 13.1 (following one or combination of 04 barriers) at time of inclusion in line with the provisions of the PoA-DD.</p>

		<p>uncertainty or low market share of the new technology adopted for the project activity and so would have led to higher emissions;</p> <p>(c) Barrier due to prevailing practice: prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions;</p> <p>(d) Other barriers: without the project activity, for another specific reason identified by the project participant, such as institutional barriers or limited information, managerial resources, organizational capacity, financial resources, or capacity to absorb new technologies, emissions would have been higher.</p>	<p>managerial resources, organizational capacity, financial resources, or capacity to absorb new technologies, emissions would have been higher.</p>	
1	1	<p>Application of Methodologies</p> <p>The methodologies that can be applied to a CPA include:</p> <ul style="list-style-type: none"> - AMS-III.AR (version 6) - AMS-II.G (version 11.1) - AMS-III.AV (version 08) <p>Each CPA can implement these methodologies in isolation. In addition, the following combinations of methodologies are eligible under the PoA:</p> <ul style="list-style-type: none"> - AMS-III.AR (version 6) and AMS-II.G (version 11.1) - AMS-III.AR (version 6) and AMS-III.AV (version 8) 	<p>As stated in section D1. above, this CPA shall deploy AMS-III.AR (version 6) and AMS-II.G (Version 11.1)</p>	<p>The applied versions of the methodologies are the valid versions of AMS-III.AR and AMS-II.G. The requirements of the applicable methodology/ies will be assessed for each CPA inclusion.</p>
1	End	The CPA is either aimed at	The CPA-DD describes the target	The CPA-DD

	2	User Group	households, community organisations (e.g. schools) or small/medium enterprises.	end-user group and the appropriate baseline in CPA-DD	specifies the target end-user group and the appropriate baseline. This can also be cross verified with the sales database of the existing CEPs under the PoA. The same was assessed by the validation team during remote assessments and interviews.
	1 3	LSC	Local stakeholder consultation for CPA to be conducted prior to inclusion at the CPA level.	Document: LSC is conducted at the CPA level	At inclusion stage the relevant documents viz. - LSC report - Record of invitations sent to the stakeholders - Attendance sheet of the LSC meeting Will be crosschecked with the CPA inclusion date to establish if LSC was conducted before CPA starting date.
	1 4	Technical Requirement of solar lamps	All the lamps under the CPA would meet the following conditions as required by the methodology AMS-III AR version 6: 1) All the lamps shall be charged by Renewable energy system 2) All solar lamps would also meet the Rated average life requirement as per the methodology. This would be the life certified by the manufacturer or responsible vendor as being the time at which the lamp's initial light output will decline by no more than 30 per cent. 3) Project lamps shall meet warranty requirements as per para 6 of the methodology AMS-III AR,	As per the technical specification of solar lamps, each lamp distributed under the CPA, meets the following conditions: 1) Lamps is charged by renewable energy system 2) Rated average life is certified to be above xxxx hours, life is certified as the time at which the lamp's initial light output will decline by no more than 30 per cent. 3) Lamps meet the warranty requirement as per para 6 of the methodology AMS-III AR, version 6 4) Lamps meet the quality requirement as per para 7 of the methodology AMS-III AR, version 6 5) All minimum technical requirements are available and added in CPA DD as per para 9 of the methodology AMS-III AR version 6.	Specification of solar lighting system type and compliance with the technological requirements of AMS-III AR, version 6 will be described in the CPA-DD. The Solar lighting system to be deployed is an appliance involving the renewable electricity generation that supply individual households/users or groups of households/users as per

		<p>version 6</p> <p>4) Project lamps shall meet the quality requirements as per para 7 of the methodology AMS-III AR, version 6</p> <p>5) The CPA-DD shall include the minimum requirements for the design specifications of project lamps including all the specifications as per para 9 of the methodology AMS-III AR version 6.</p> <p>Please note that not all solar lighting systems may have been deployed at CPA inclusion stage, the 'type and number of solar lighting systems deployed' will however also be checked during verification, and in case any deployed solar lighting systems type will be found not in line with the methodology requirement, those solar lighting systems will not be counted for emission reduction calculation</p>	<p>Document:</p> <p>Product data sheets or specification or product information sheets from manufacturer.</p>	<p>AMS-III. AR, ver. 6. At the CPA level the evidences may include:</p> <p>Product data sheets or specification or product information sheets from manufacturer.</p> <p>Validation team has assessed the submitted technical specification sheet^{TECH/} from the CME for the solar light and found it in line with the EC set</p>
15	Technical Requirements of Solar Lamps	<p>The PO must prove that fossil fuel, specifically kerosene, is used in the absence of the project activity as demonstrated by: documentation of the common practice of fuel usage for lighting in the project region (e.g. based on representative sample surveys, official data or peer reviewed literature) that demonstrates that fossil fuel is a commonly used fuel for lighting.</p> <p>A representative sample survey (90% confidence interval, $\pm 10\%$ error margin) of target households; or</p> <p>Official statistics from the host country government agencies Or Peer reviewed literature in case government literature is not available.</p>	<p>CPA DD would demonstrate that fossil fuel is commonly used fuel for lighting. This would be described through documentation of the common practice of fuel usage for lighting in the project region (e.g. based on representative sample surveys, official data or peer reviewed literature).</p> <p>Evidence: At least one of the below:</p> <ol style="list-style-type: none"> 1) Peer reviewed literature 2) Official data statistics 3) Sample survey the prevalence of Kerosene as the lighting fuel in the baseline and establish on the basis of the publicly available documents and statistics. 	<p>This requirement will be checked at CPA Level to ensure that the defined baseline is still valid. The evidences set are sufficient to confirm the same.</p>
16	SSC Limit of CPAs	<p>The installed capacity of the CPA will not increase beyond 60kt CO₂ emission</p>	<p>The estimated maximum number of solar lighting systems is to be defined in the CPA-DD according to</p>	<p>The estimated maximum number of solar</p>

	(Solar Lamps)	<p>reductions per year (threshold as per EB 104 Annex 05 and applied methodology AMS-III.AR. version 6) throughout the crediting period of the CPA.</p> <p>If a CPA exceeds the applicable limit in any year, the claimable emission reduction shall be capped based on the estimated GHG reductions in the CPA-DD¹⁶).</p> <p>Please note that not all solar lighting systems may have been deployed at CPA inclusion stage, the SSC limit for CPAs can however also be checked during verification, and in case any deployed solar lighting systems will be found not in line with CPA SSC Limit for CPAs requirement, those solar lighting systems will not be counted for emission reduction calculation</p>	the SSC threshold limit of 60kt CO ₂ equivalent emission reductions per year.	lighting systems is to be defined in the CPA-DD according to the SSC threshold limit of 60 kt CO ₂ equivalent emission reductions per year.
17	Technical Requirement for improved cookstoves	<p>The CPA consists of distribution of domestic ICS, stove type defined in the CPA-DD and hence appliances involving the efficiency improvements in the thermal applications of non-renewable biomass as per AMS-II. G, ver. 11.1.</p> <p>Please note that not all ICS may have been deployed at CPA inclusion stage, the 'type and number of ICS deployed' will however also be checked during verification, and in case any deployed ICS type will be found not in line with the methodology requirement, those ICS will not be counted for emission reduction calculation.</p>	<p>Specification of ICS type and compliance with the technological requirements of AMS-II G will be described in the CPA-DD.</p> <p>Document: Certification by a national standards body or an appropriate certifying agent recognized by it or manufacturer specifications.</p>	<p>Certification by a national standards body or an appropriate certifying agent recognized by it or manufacturer specifications. This criterion is in compliance with applied methodology.</p>
18	Efficiency of the improved cookstoves	The ICS disseminated under the CPA will be single pot, multi pot or in-situ cookstoves that have a specified efficiency of at least 20%	All ICS disseminated under CPAs to be included in this PoA shall have an efficiency of at least 20% which will be substantiated through technical specification from manufacturer or certificate from a national standards body or a	Certification by a national standards body or an appropriate certifying agent recognized by it or manufacturer

¹⁶ As per EB 101, Annex 03

			certifying agent recognized by it. Document: Efficiency specification from manufacturer or certificate from a national standards body or a certifying agent recognized by it.	specifications. This criterion is in compliance with applied methodology. Only ICS above 20 % efficiency will be included in line with the methodology.
19	Technical Requirements for improved cookstoves	The PO must monitor the baseline stove that is being replaced to ensure that only the displacement of traditional unimproved stoves is credited.	As stated in section I.7.1, the baseline stove of each end-user will be recorded at the point of sale.	CPA shall have the provision to monitor the stoves being replaced in order to ensure that displacement of inefficient traditional cook stoves is taking place.
20	Technical requirement for improved cookstoves	Only new ICS will be disseminated	Specification of stove type and compliance with the technological requirements of AMS-II G will be described in the specific CPA-DD. Document: 1. Statement from CME that only new stoves will be disseminated under the CPA	Specification of stove type and compliance with the technological requirements of AMS-II G will be described in the specific CPA-DD. Evidence: 1. Statement from CME that only new stoves will be disseminated under the CPA
21	Non-renewability of biomass	In accordance with methodology AMS-IIG: Project participants are able to show that non-renewable biomass has been used since 31 December 1989, using survey methods	Document: https://www.sciencedirect.com/science/article/pii/S1364032104000632 (Table 1, page 381) The report shows that historical record of fuel wood usage in India. The report shows that historical record of fuel wood usage in India.	Survey results or referring to published literature, official reports or statistics. This criterion set in line with the applied methodology
22	SSC Limit for CPAs for improved cookstoves	The CPA will remain under the thermal threshold of 180 GWh/a thermal energy savings (threshold as per clarification request SSC_233) throughout the crediting period of the CPA. If a CPA exceeds the applicable limit in any year, the claimable emission reduction shall be capped	The estimated maximum number of ICSs is to be defined in specific CPA-DD according to the equation provided in PoA-DD Section I.6.3	The estimated maximum number of improved cook stove is to be defined in the CPA-DD according to the SSC threshold limit of 180 GWh thermal energy saving per year.

		<p>based on the estimated GHG reductions in the CPA-DD¹⁷).</p> <p>Please note that not all ICS may have been deployed at CPA inclusion stage, the SSC limit for CPAs can however also be checked during verification, and in case any deployed ICS will be found not in line with CPA SSC Limit for CPAs requirement, those ICS will not be counted for emission reduction calculation.</p>		
<p>Solar Lighting & Water Purifier described under Part III. Generic component project Activity (CPA), Section K</p>				
N o.	Eligibility criterion - Category	Eligibility criterion - Required condition	Supporting evidence for inclusion	Means of validation/Findings /Conclusion
1	Boundary and location of the CPA	The CPA is located within India.	<p>Location and boundary is specified in the specific CPA-DD stating that the location is limited to India and supported with GPS coordinates.</p> <p>Document: Statement of CME that the location and boundary is within India and supported with GPS coordinates (XXX°N XXX°E).</p>	<p>The geographical boundary of each CPA, shall be consistent with the geographical boundary of the PoA, i.e. India.</p> <p>This eligibility criterion has been sufficiently set for all CPAs.</p>
2	No Double counting of CEP	<p>A unique numbering or identification system for the CEP installed is applied. This shall ensure no double counting of CEPs within the PoA and ensure that stoves can be identified as belonging to this PoA and not to a PoA managed by any other CME.</p> <p>A legally binding contract between CME and manufacturer/micro finance institution/POs would be required to ensure that all carbon title is transferred to the CME. This shall ensure that POs, stove/lamp manufacturers and distributors do not claim ERs separately.</p>	<p>The unique numbering and PoA logo stamped on each CEP supported by the individual distribution record matching such information is included in the specific CPA-DD and consistent with the PoA-DD</p> <p>A legally binding contract between CME and manufacturer/micro finance institution/POs would be established to ensure that all carbon title is transferred to the CME.</p>	<p>The unique numbering or identification system can be verified with the product database available on the online record keeping system called online credit tracker platform. For each of the CEP/project appliance (Water purifier and Solar lamps) under the PoA, CME has set a provision to maintain the records including; name of</p>

¹⁷ As per EB 65, Annex 5, paragraph 83.

				<p>Document: Credit Tracker stove sales receipt showing CME and PO information, end user details including name and address and CEP ID number.</p> <p>In addition to the sales receipt the programme logo shall be displayed on the CEPs and verifiable by DOE</p> <p>A legally binding contract between CME and manufacturer/micro finance institution/POs would be required to ensure that all carbon title is transferred to the CME.</p>	<p>the buyer of the clean energy product, location address, their contact number, bank ID number, national ID number, product unique identification number.</p> <p>The Validation Team noted that there is provision for a legally binding contract between CME and manufacturer/micro finance institution/POs to ensure that all carbon title is transferred to the CME. This arrangement ensures that POs, stove/lamp manufacturers and distributors do not claim ERs separately</p> <p>Validation team has observed the same during remote assessment and procedure for maintaining the record was also found to be in line.</p> <p>During remote assessments and interviews all the above said detail was also cross verified.</p> <p>Based on above the validation team concludes that this eligibility criterion is appropriately set out for all the potential CPAs under the proposed PoA</p> <p>. Double counting of CERs can sufficiently be avoided by the credit tracker system, and</p>
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				<p>agreements with stakeholders such as MFIs, POs, and manufacturers will ensure that no emission reductions are claimed under a different program.</p> <p>Based on above validation team conclude that this eligibility criteria is appropriately set out for all the potential CPAs under the proposed PoA.</p>
3	CER ownership	End users receiving CEP under the specific CPA contractually cede their rights to claim and own emission reductions under the Clean Development Mechanism of the UNFCCC to the CME of the PoA	<p>The default CEP Booking Record is including the provision that emission reductions generated by the CEP are transferred from the end-user to the PO and ultimately owned by the CME. The receipts will clearly specify that carbon rights are ceded in favour of CME.</p> <p>Documents: 1. Default Booking Record</p>	<p>CME has established a procedure for sale of clean energy products under the proposed PoA where the end user/buyer of the products transfer the ownership of emission reduction out of the usage of the CEP.</p> <p>Person responsible for the sale of the CEP (MEO's) collects signed Booking Record from the end users/buyers. MEO (Micro Energy Officers) was also interviewed and sample PCF was also verified. Based on above validation team conclude that this eligibility criteria is appropriately set out for all the potential CPAs under the proposed PoA</p>
4	No Double counting of CPA	The CPA is exclusively bound to the PoA. Confirmation that the programme activity has not been and will not be registered either as a single CDM project activity or as a CPA under another PoA	A declaration from the CME on its letterhead would be provided that the specific CPA will not be part of another single CDM project activity or CPA under another PoA. In addition, declaration from CPA operators as part of their contract with the CME, stating that their activities are not	A statement by the CME is to be included that the specific CPA will not be part of another single CDM project activity or CPA under another PoA. In addition, declaration from CPA operators as part of their contract

			<p>registered as part of another single CDM project activity of CPA under another PoA.</p> <p>Evidence: Check on UNFCCC website with date of access and contract between the CME and MFI.</p>	<p>with the CME, stating that these activities is not registered as part of another single CDM project activity of CPA under another PoA.</p>
5	<p>Awareness and Agreement of those operating a CPA on PoA subscription</p>	<p>Contractual provisions to ensure that those operating the CPA are aware and have agreed that their activity is being subscribed to the PoA.</p> <p>In the case that the CME is not responsible for implementing the CPA, the organization responsible for CPA implementation, known as the Partner Organisation (PO), has signed a contractual agreement with the CME to participate in the PoA. This agreement:</p> <ul style="list-style-type: none"> - Defines the ownership of the carbon emission reduction rights - Covers the PO's distribution and monitoring related responsibilities - Confirms that the CEPs to be distributed under the CPA have not and will not be distributed under any other carbon project (CDM project, PoA or voluntary carbon market project) - Cedes the PO's rights to the carbon credits generated from CPAs under the PoA to the CME 	<p>Contractual agreement for CPA operators, stating that they are aware and have agreed that their activity is being subscribed to the PoA</p>	<p>Contractual agreement for CPA operators as part of their contract with the CME, stating that they are aware and have agreed that their activity is being subscribed to the PoA. This requirement is sufficient to avoid legal issues and potential double-counting of emission reductions.</p>
6	<p>Non-diversion of ODA in case of Public funding</p>	<p>The CME and the CPA operator (in case of being different from the CME) shall confirm that there is no public funding or in the case of public funding, the Annex 1 party will confirm that funding is not a diversion of Official Development Assistance.</p>	<p>Statement of CME and the CPA operator (in case of being different from the CME) that there is no public funding Or In the case that there is public funding, an Annex 1 party will confirm that funding is not a diversion of ODA.</p>	<p>Statement of CME and the CPA operator (in case of being different from the CME) that there is no public funding OR In the case that there is public funding, an Annex 1 party will confirm that funding is not a diversion of ODA.</p>
7	<p>CPA Start Date</p>	<p>CPA start date shall not be before PoA webhosting date, i.e. 18/01/2012.</p>	<p>Starting date as stated in the CPA-DD section D is after 18/01/2012.</p>	<p>Starting date shall be clearly stated in the CPA-DD which</p>

		Please note that not all CEP installations may have been deployed at CPA inclusion stage, however the CEP start date can also be checked during verification. In the event that any deployed CEP is found not in line with CPA start date, those CEP will not be counted in the emission reduction calculation	Document: 1. Statement from CME that no CEP under the CPA was sold before the PoA webhosting date, i.e. 18/01/2012. 2. First CEP Booking Record of CPA	should be after the PoA start date of 18/01/2012 to ensure it is not before PoA start date.
8	CPA Crediting Period	CPA starting date of the crediting period is date of inclusion or any date thereafter and crediting period not to exceed the PoA end date Each CPA shall provide verifiable evidence	A statement is included in the CPA-DD that the crediting period starting date is date of inclusion into registered PoA i.e. XXXX and the CPA crediting period will not exceed PoA end date.	A statement included in the CPA-DD that the crediting period starting date is date of CPA inclusion into registered PoA or any date thereafter and crediting period shall not exceed the PoA life time. The statement as indicated in the CPA-DD is sufficient to ensure that crediting period of a CPA is within the PoA lifetime.
9	Approval of CPA by CME	CME approved each CPA to be included into its registered PoA.	A letter by CME giving approval for the CPA to be included into its registered PoA	Statement of CME giving approval for the CPA to be included into its registered PoA.
10	Additionality of CPAs	<p>Additionality will be demonstrated in accordance with Tool 21 Demonstration of additionality of small scale project activities version 13.1</p> <p>The additionality would be demonstrated at the individual CPA level.</p> <p>Additionality of the CPA would be demonstrated by using either one of the options as per para 10 of Tool 21, version 13.1</p> <p>10. Project participants shall provide an explanation to show that the project activity would not have occurred anyway due to at least one of the following barriers :</p> <p>(a) Investment barrier: a financially more viable alternative to the project activity would have led to</p>	<p>1. Documentation: Description of CPA activity as documented in CPA-DD</p> <p>2. Explanation to show that the project activity would not have occurred anyway due to at least one of the following barriers :</p> <ol style="list-style-type: none"> Investment barrier: a financially more viable alternative to the project activity would have led to higher emissions; Technological barrier: a less technologically advanced alternative to the 	<p>The additionality will be demonstrated based at time of inclusion.</p> <p>The additionality will be demonstrated one of the options as per para 10 of Tool 21, version 13.1 (following one or combination of 04 barriers) at time the of inclusion in line with the provisions of the PoA-DD.</p>

			<p>higher emissions;</p> <p>(b) Technological barrier: a less technologically advanced alternative to the project activity involves lower risks due to the performance uncertainty or low market share of the new technology adopted for the project activity and so would have led to higher emissions;</p> <p>(c) Barrier due to prevailing practice: prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions;</p> <p>(d) Other barriers: without the project activity, for another specific reason identified by the project participant, such as institutional barriers or limited information, managerial resources, organizational capacity, financial resources, or capacity to absorb new technologies, emissions would have been higher.</p>	<p>project activity involves lower risks due to the performance uncertainty or low market share of the new technology adopted for the project activity and so would have led to higher emissions;</p> <p>3. Barrier due to prevailing practice: prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions;</p> <p>4. Other barriers: without the project activity, for another specific reason identified by the project participant, such as institutional barriers or limited information, managerial resources, organizational capacity, financial resources, or capacity to absorb new technologies, emissions would have been higher.</p>	
1 1	Applicati on of Methodol ogies	The methodologies that can be applied to a CPA include: <ul style="list-style-type: none">- AMS-III.AR (version 6)- AMS-II.G (version 11.1)- AMS-III.AV (version 08)	As stated in section D1. above, this CPA shall deploy AMS-III.AR (version 6) and AMS-III.AV (Version 8)	The applied versions of the methodologies are the valid versions of AMS-III.AR and	

		Each CPA can implement these methodologies in isolation. In addition, the following combinations of methodologies are eligible under the PoA: <ul style="list-style-type: none"> - AMS-III.AR (version 6) and AMS-II.G (version 11.1) - AMS-III.AR (version 6) and AMS-III.AV (version 8) 		AMS-III.AV. The specific requirements of the applicable methodology/ies will be assessed for each CPA inclusion.
1 2	End User Group	The CPA is either aimed at households, community organisations (e.g. schools) or small/medium enterprises.	The CPA-DD describes the target end-user group and the appropriate baseline in CPA-DD	The CPA-DD specifies the target end-user group and the appropriate baseline. This can also be cross verified with the sales database of the existing CEPs under the PoA.
1 3	LSC	Local stakeholder consultation for CPA to be conducted prior at the CPA level.	Document: LSC is conducted at the CPA level	At inclusion stage the relevant documents viz. <ul style="list-style-type: none"> - LSC report - Record of invitations sent to the stakeholders - Attendance sheet of the LSC meeting Will be crosschecked with the CPA inclusion date to establish if LSC was conducted before CPA starting date.
1 4	Technical Requirement for solar lamp	All the lamps under the CPA would meet the following conditions as required by the methodology AMS-III AR version 6: <ol style="list-style-type: none"> 1) All the lamps shall be charged by Renewable energy system 2) All solar lamps would also meet the Rated average life requirement as per the methodology. This would be the life certified by the manufacturer or responsible vendor as being the time at which the lamp's initial light output will decline by no more than 30 per cent. 3) Project lamps shall meet warranty requirements as per para 6 of the methodology AMS-III AR, version 6 4) Project lamps shall meet the quality requirements as per para 7 of the methodology AMS-III AR, version 6 	As per the technical specification of solar lamps, each lamp distributed under the CPA, meets the following conditions: <ol style="list-style-type: none"> 1) Lamps is charged by renewable energy system 2) Rated average life is certified to be above xxxx hours, life is certified as the time at which the lamp's initial light output will decline by no more than 30 per cent. 3) Lamps meet the warranty requirement as per para 6 of the methodology AMS-III AR, version 6 4) Lamps meet the 	Specification of solar lighting system type and compliance with the technological requirements of AMS-III AR, version 6 will be described in the CPA-DD. The Solar lighting system to be deployed is an appliance involving the renewable electricity generation that supply individual households/users or groups of households/ users as per AMS-III. AR, ver. 6. At the CPA level the evidences may include:

		<p>5) The CPA-DD shall include the minimum requirements for the design specifications of project lamps including all the specifications as per para 9 of the methodology AMS-III AR version 6.</p> <p>Please note that not all solar lighting systems may have been deployed at CPA inclusion stage, the 'type and number of solar lighting systems deployed' will however also be checked during verification, and in case any deployed solar lighting systems type will be found not in line with the methodology requirement, those solar lighting systems will not be counted for emission reduction calculation</p>	<p>quality requirement as per para 7 of the methodology AMS-III AR, version 6</p> <p>5) All minimum technical requirements are available and added in CPA DD as per para 9 of the methodology AMS-III AR version 6.</p> <p>Document: Product data sheets or specification or product information sheets from manufacturer.</p>	<p>Product data sheets or specification or product information sheets from manufacturer.</p> <p>Validation team has assessed the prescribed requirements and found them sufficient to ensure compliance with the methodology minimum technical performance proofs to fulfil this criterion.</p>
15	Technical Requirements of Solar Lamp	<p>The PO must prove that fossil fuel, specifically kerosene, is used in the absence of the project activity as demonstrated by: documentation of the common practice of fuel usage for lighting in the project region (e.g. based on representative sample surveys, official data or peer reviewed literature) that demonstrates that fossil fuel is a commonly used fuel for lighting.</p> <p>A representative sample survey (90% confidence interval, $\pm 10\%$ error margin) of target households; or</p> <p>Official statistics from the host country government agencies Or</p> <p>Peer reviewed literature in case government literature is not available.</p>	<p>CPA DD, would demonstrate that fossil fuel is commonly used fuel for lighting. This would described through documentation of the common practice of fuel usage for lighting in the project region (e.g. based on representative sample surveys, official data or peer reviewed literature).</p> <p>Evidence: At least one of the below: 1) Peer reviewed literature 2) Official data statistics 3) Sample survey the prevalence of Kerosene as the lighting fuel in the baseline and establish on the basis of the publicly available documents and statistics.</p>	<p>This requirement will be checked at CPA Level.</p>
16	SSC Limit of CPAs for solar amp	<p>The installed capacity of the CPA will not increase beyond 60kt CO₂ emission reductions per year (threshold as per EB 104 Annex 05 and applied methodology AMS-III.AR. version 6) throughout the crediting period of the CPA.</p> <p>If a CPA exceeds the applicable limit in any year, the claimable emission reduction shall be</p>	<p>The estimated maximum number of solar lighting systems is to be defined in the CPA-DD according to the SSC threshold limit of 60kt CO₂ equivalent emission reductions per year.</p> <p>Since this CPA has both technology (solar and water purifier) under</p>	<p>The estimated maximum number of solar lighting systems is to be defined in the CPA-DD according to the SSC threshold limit of 60kt CO₂ equivalent emission reductions per year. The number of solar lamps and</p>

		<p>capped based on the estimated GHG reductions in the CPA-DD¹⁸).</p> <p>Please note that not all solar lighting systems may have been deployed at CPA inclusion stage, the SSC limit for CPAs can however also be checked during verification, and in case any deployed solar lighting systems will be found not in line with CPA SSC Limit for CPAs requirement, those solar lighting systems will not be counted for emission reduction calculation</p>	<p>Type III combined emission reduction will not increase beyond 60kCO₂e/y.</p>	<p>calculations are sufficient to ensure compliance with the SSC limit requirement of the applied methodology.</p>
17	Technology Requirement for water purifier	<p>The CPA consists of distribution of water purifiers, product type defined in the CPA-DD, and hence appliances that are Low greenhouse gas-emitting safe drinking water production systems to achieve water quality defined in a relevant national standard or guideline for drinking water quality and involve point-of use (POU) or point-of-entry (POE) treatment systems for residential or institutional applications, as per AMS-III. AV, ver.8.</p> <p>Please note that not all water purifiers may have been deployed at CPA inclusion stage, the 'type and number of water purifiers deployed' will however also be checked during verification, and in case any deployed water purifiers type will be found not in line with the methodology requirement, those water purifiers will not be counted for emission reduction calculation.</p>	<p>Specification of water purifier type and compliance with the technological requirements of AMS-III A.V will be described in the specific CPA-DD. The water purifier deployed is the name of water purifier and hence is an appliance that are Low greenhouse gas-emitting safe drinking water production systems to achieve water quality defined in a relevant national standard or guideline for drinking water quality and involve point-of use (POU) or point-of-entry (POE)² treatment systems for residential or institutional applications, as per AMS-III. AV, ver. 8</p> <p>Document: Product data sheets or specification or product information sheets from manufacturer.</p>	<p>Specification of water purifier type and compliance with the technological requirements of AMS-III A.V will be described in the specific CPA-DD.</p> <p>Evidence: Product data sheets or specification or product information sheets from manufacturer along with remote verification by the DOE.</p>
18	Technical Requirements for water purifier	<p>The PO must ensure the baseline system that is replaced utilizes the traditional unimproved systems</p>	<p>Document: This will be checked during distribution of water purifiers and by survey</p>	<p>The baseline systems will be checked and recorded during deployment of the water solutions to confirm baseline validity of the traditional unimproved systems before</p>

¹⁸ As per EB 101, Annex 03

				actual use.
19	Methodological criteria for AMS-III.AV	As per SSC methodology AMS-III.AV v08 paragraph 4(a), prior to the implementation of each CPA project activity, it must be determined that Prior to the implementation of the project activity, a public distribution network supplying SDW to the project boundary does not exist. ¹⁹	Document: A monitoring parameter to check this condition has been added to the CPA-DD - <i>Check for public distribution system providing SDW</i>	Each SSC-CPA under the PoA shall determine "...a public distribution network of safe drinking water does not exist within the total project area and safe drinking water (SDW) if any is produced by the consumers by only using point-of-use or point of entry water purifiers. If during the crediting period SDW is made available in (parts of) a project area through a public distribution network, this methodology cannot be applied anymore to this project area (or part of the project area) from that point in time and the emission reductions pertaining to this project area cannot be claimed from that point onwards. This condition should be checked annually during the crediting period." Provision of putting Parameter- "Check for public distribution system providing SDW" as the monitoring parameter in accordance with the applied methodology and hence this criterion is set out to be appropriate.
20	Technology performance criteria for water purifier	As per SSC methodology AMS.III.A.V. v8 paragraph 4(b), prior to the implementation of project activity, It shall be demonstrated based on laboratory testing ²⁰ or official notifications (for example notifications from the national authority on health) that	Performance specification from manufacturer or certificate from a national standards body or a certifying agent recognized by it shows the water purifier type	Specification of water purifier type and compliance with the provision of safe water performance requirements of AMS-III.AV will be described in the

¹⁹ This methodology is also applicable in case a public distribution network exists, but is not supplying SDW.

²⁰ The testing should be undertaken under conditions that are representative of the operation conditions of the project site(s) including feedwater.

		the application of the project technology/equipment achieves compliance either with: (i) the Comprehensive Protection performance target as per "Evaluating household water treatment options: Health based targets and microbiological performance specifications" (WHO, 2011) and "International Scheme to Evaluate Household Water Treatment Technologies" (WHO, 2014); or (ii) an applicable national standard or guideline. Applicable national standard should be based on laboratory efficacy testing that, at a minimum, includes quantitative microbial measures of pre- and post-treatment challenge waters ²¹ that are representative of potential drinking water sources, and that includes measured reductions based on at least one pathogen class (bacteria, viruses, protozoa)	achieves compliances as per certifying agency	specific CPA-DD. Evidence: Performance specification from manufacturer or certificate from a national standards body or a certifying agent recognized by it .
2 1	Methodological criteria of AMS-III.AV	As per SSC methodology AMS-III.AV v8 paragraph 4(c), prior to the implementation of project activity, it must be determined that: "In cases where the life span ²² of the water treatment technologies is shorter than the crediting period of the project activity, there must be documented measures in place to ensure that end users have access to replacement purification systems of comparable quality."	For water purifiers, the project will make available to end users replacement parts including new filter, and/or access to a new model technology of comparable quality. These filters will be available through the MFI offices or their retailers. Specifically, the PO field staff typically meets with the users of the improved water filters on a weekly or monthly basis, either in group meetings, or when they come to a bank branch. At group meetings the PO will make regular announcements about the availability of replacement filters, including where to buy them, and discounts available due to the carbon funds. At bank branches as well, knowledgeable staff and written	There is a dedicated outreach to end users promoting access to replacement purification systems of comparable quality. As stated by th CME, at the CPA stage, the end users will have access to replacement parts including new filter, and/or access to a new model technology of comparable quality. The Validation Team during the interviews noted that, there is a dedicated network to percolate the necessary information to end users regarding the same, which ensures that measures in place to safeguard end users and confirm that they have

²¹ "Challenge water" is synonymous with "test water" – this is the experimental water that has been spiked with microbes (a "microbial challenge") in order to demonstrate the potential for the technology to reduce microbes.

²² The rated average life of each system type shall be known ex ante using manufacturer specifications and documented in the PDD/PoA-DD.

				announcements will enable households to get information about these water filter replacements.	access to replacement purification systems of comparable quality.
2	2	SSC Limit of CPAs for water purifier	<p>The emissions reduction of the CPA will not increase beyond 60 ktCO₂e/y over the entire crediting period, as per the AMS-III.AV</p> <p>If a CPA exceeds the applicable limit in any year, the claimable emission reduction shall be capped based on the estimated GHG reductions in the CPA-DD²³).</p> <p>Please note that not all water purifiers may have been deployed at CPA inclusion stage, the SSC limit for CPAs can however also be checked during verification, and in case any deployed water purifiers will be found not in line with CPA SSC Limit for CPAs requirement, those water purifiers will not be counted for emission reduction calculation</p>	The estimated maximum number of water purifiers to be defined in the CPA-DD according to the equation provided in Section I.6.3 (Part III of generic CPA). This CPA has both technology (solar and water purifier) under Type III, CME shall ensure that the individual emission reduction for each component will not increase beyond 60 kt CO ₂ e/y. This will be checked during validation before the inclusion	The estimated maximum number of water purifiers to be defined in the CPA-DD Since this CPA has both technology (solar and water purifier) under Type III combined emission reduction will not increase beyond 60 ktCO ₂ e/y
Findings	CL 01, CAR 02, CAR 03, CAR 05, CAR 06, CAR 07, CAR 10, CAR 11, CAR 12 and CAR 14				
Conclusion	The eligibility criteria for inclusion of CPAs in the PoA-DD is updated comparing with the latest approved PoA-DD according to the relevant requirements in the "CDM project standard for programmes of activities" version 02.0. Thus the updated PoA-DD has complied with the latest applicable version of the methodology and tools.				

SECTION E. Internal quality control

Before the submission of the final verification report a technical review of the whole verification procedure was carried out. The technical reviewers are competent GHG auditors where at least one is being appointed for the scope this project falls under. The technical reviewers are not considered to be part of the verification team and thus not involved in the decision making process up to the technical review.

As a result of the technical review process the verification opinion and the topic specific assessments as prepared by the verification team leader may have been confirmed or revised. Furthermore reporting improvements might have been achieved.

After the successful technical review an overall (esp. procedural) assessment of the complete verification has been carried out by a senior assessor located in the accredited premises of TÜV NORD.

After this step the submission for requesting for issuance is conducted.

²³ As per EB 101, Annex 03

SECTION F. Validation opinion

Micro Energy Credits Corporation Private Limited (CME) has contracted TÜV NORD CERT GmbH (TÜV NORD) to perform a validation of the CDM registered programme of activity, "MicroEnergy Credits – Microfinance for Clean Energy Product Lines - India" (PoA-9181) for renewal of the PoA period.

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

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

The review of the PoA-DD and the subsequent follow-up interviews have provided validation team with sufficient evidence to determine the validity of the original baseline and/or its update through an assessment. The PoA-DD (version 10, dated 18/04/2021) correctly applies small scale methodologies AMS-III.AV.: Low greenhouse gas emitting safe drinking water production systems - version 08.0, AMS-III.A.R: Substituting Fossil Fuel Based Lighting With LED/CFL Lighting Systems-version 06.0, and AMS-II.G: Energy efficiency measures in thermal applications of non-renewable biomass –version 11.1.

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

In summary, it is validation team's opinion that the CDM programme of activity "MicroEnergy Credits – Microfinance for Clean Energy Product Lines - India" (PoA-9181) meets all relevant UNFCCC requirements for the renewal of the PoA period. Hence TÜV NORD requests the renewal of CDM programme of activity period.

New Delhi, 22/04/2021




Prakash Mishra
TÜV NORD JI/CDM Certification Program
Validation Team Leader

Appendix 1. Abbreviations

Abbreviations	Full Texts
AQL	Acceptable Quality Level
BAU	Business as usual
CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CEP	Clean Energy Products
CME	Coordinating / Managing Entity
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
CP	Certification Program
CPA	Component Project Activity
CPA-DD	Component Project Activity Design Document
DNA	Designated National Authority
DOE	Designated Operational Entities
EC	Eligibility Criteria
EB	CDM Executive Board
EIA	Environmental Impact Assessment
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GKK	Germ kill kit
JMP	Joint Monitoring Programme
LSHC	Local Stakeholder Consultation
HH	Households
HCA	Host Country Approval
IPCC	Intergovernmental Panel on Climate Change
LoA	Letter of Approval
LSC	Local Stakeholder Comments
MEC	Micro Energy Credits Corporation Private Limited
MFIs	Micro Finance Institutions
MS	Management System
NABL	National Accreditation Board for Testing and Calibration Laboratories
ODA	Official Development Assistance
PA	Project Activity
PO	Partner Organisations
PoA-DD	CDM Programme of Activities Design Document
PoA-DDs	(CDM PoA and CPA) Design Documents
POU	Point of use
POE	Point of Entry
PP	Project Participant

PS	Project Standard
PSD	Project Start date
QC/QA	Quality control/Quality assurance
SD	Sustainable Development
SDW	Safe drinking water
SHGs	Self Help Groups
SLS	Solar Lighting System
SSS	Standard for Sampling and Survey
UNFCCC	United Nations Framework Convention on Climate Change
USEPA	United States Environmental Protection Agency
UQL	Unacceptable Quality Level
VVS	Validation and Verification Standard
WPS	Water Purification system
WHO	World Health Organization

Appendix 2. Competence of team members and technical reviewers



Statement of Competence
Appointment and authorization according to the procedures of the TUV NORD J/CDM Certification Program

Mr. David Lubanga


SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification)	2021-10-20
VCS / ISO 14064-2	Senior Assessor	2021-10-20
	Technical Reviewer	

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewables
3.1	Energy demand
13.2	Manure

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Statement of Competence
Appointment and authorization according to the procedures of the TUV NORD J/CDM Certification Program

Mr. Prakash Kumar Mishra

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification)	2023-12-17
VCS / ISO 14064-2	Senior Assessor	2023-12-17

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewables
3.1	Energy demand

146 - Rev. 7, Date: 2020-12-17

146_S01-VA060-F20_2020-12-17_v07

Appendix 3. Documents reviewed or referenced

No.	Reference	Author	Title	References to the document	Provider
1.	/CPADD-T/	UNFCCC	Generic CPA-PoA-DD form	https://cdm.unfccc.int/Reference/PDs_Forms/index.html	Other
2.	/GOT/	UNFCCC	Glossary “CDM terms” – version 10.1	https://cdm.unfccc.int/Reference/index.html	Other
3.	/IPCC/	IPCC	1. 1996 IPCC Guidelines for National Greenhouse Gas Inventories: work book 2. 2006 IPCC Guidelines for National Greenhouse Gas Inventories: work book	www.ipcc-nggip.iges.or.jp	Other
4.	/KP/	UNFCCC	Kyoto Protocol (1997)	http://unfccc.int/kyoto_protocol/items/2830.php	Other
5.	/MA/	UNFCCC	Decision 3/CMP. 1 (Marrakesh – Accords)	http://cdm.unfccc.int/Reference/CO-PMOP/index.html	Other
6.	/METH/	UNFCCC	AMS-III.A.R “Substituting fossil fuel-based lighting with LED/CFL lighting systems” (Version 6.0) AMS-II.G “Energy efficiency measures in thermal applications of non-renewable biomass” (Version 11.1) AMS-III.AV “Low greenhouse gas-emitting safe drinking water production systems” (Version 08.0)	https://cdm.unfccc.int/methodologies/SSCmethodologies/approved	Other
7.	/MT/	UNFCCC	Methodological Tools: - Tool 20 “Assessment of Debundling for SSC Project Activities, version 04.0, - TOOL30: Calculation of the fraction of non-renewable biomass - TOOL 11: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period	http://cdm.unfccc.int/Reference/tools/index.html	Other
8.	/PS/	UNFCCC	CDM project standard for programmes of activities - version 2.0	http://cdm.unfccc.int/Reference/Standards/index.html	Other
9.	/SAMPLE/	UNFCCC	- Guidelines for Sampling and Surveys for CDM Project Activities and Programme Activities – version 04.0 - Sampling and surveys for CDM project activities and programmes of activities – version 8.0	https://cdm.unfccc.int/Reference/Guidelines/index.html http://cdm.unfccc.int/Reference/Standards/index.html	Other
10.	/VVS/	UNFCCC	CDM validation and verification standard for programmes of activities – version 2.0	http://cdm.unfccc.int/Reference/Standards/index.html	Other

No.	Reference	Author	Title	References to the document	Provider
11.	/SUR/	FSI	Forest Survey India report 2011 ^{/SUR/} Forest survey of India's , State of Forests report 2011	-	MEC
12.	/LoA/	India DNA	Host Country Approval ^{/HCA/} Host Country Approval, issued on 2012-08-22 by India DNA.	-	UNFCCC Website
13.	/OC/	MEC	Organization Chart ^{/OC/}		MEC
14.	/DD/	UNFCCC	CPA DDs of CPA included ^{/CPA-DD-/} CPA DDs of CPA included in the PoA" MicroEnergy Credits-Microfinance for Clean Energy Product Lines-India" with Reference No. from 9181-0001 to 9181-0023	-	UNFCCC
15.	/PoA-DD/	UNFCCC	Title of PoA-DD's: MicroEnergy Credits – Microfinance for Clean Energy Product Lines – India - version 5, dated 06/01/2016 - version 06 dated 01/08/2019 - version 07 dated 15/09/2020 - version 8.0, dated 05/11/2020 - version 09, dated 21/12/2020 - version 10, dated 18/04/2021	-	UNFCCC
16.	/VAL/	DOEs	CPA Inclusion Validation Reports of CPA included in the PoA MicroEnergy Credits-Microfinance for Clean Energy Product Lines-India Response to Incompleteness Notification regarding the - info and reporting check incomplete Request for period renewal of PoA 9181" (UNFCCC Ref. no. 9181), notification received on 17/02/2021 (also refer closure of CAR 14)	-	UNFCCC
17.	/GM/	Google	Google Map ^{/GM/}	-	Google website
18.	/PVAL/	DNV	POA Validation Report ^{/POA-VAL/} MicroEnergy Credits- Microfinance for Clean Energy Product Lines-India, PoA Validation report dated 30/11/2012. Validation report on PRC " 9181-0016: Micro Energy Credits PoA - CPA 16", version 2, dated 25/05/2019	http://cdm.unfccc.int/ProgrammeOfActivities/poa_db/B46TH0V2GLIZK1UPWJ3SMNA8Q_RX7FY/view	UNFCCC
19.	/TECH/	Manufacturers	Product Specification sheet ^{/TECH/ /PTR/} • Manufacturer specification by Hindustan Unilever for Pure IT 23l • Manufacturer specification by Eureka Forbes for Aquasure Nakshatra Technical specification of multiple solar lighting systems Technical specification of the water purification systems		MEC
20.	/ipcc/	-	IPCC publications	www.ipcc-nggip.iges.or.jp	Other
21.	/unfccc/	-	UNFCCC	http://cdm.unfccc.int	Other
22.	/unfccc/	-	Assessment of the validity of the	http://cdm.unfccc.int	Other

No.	Reference	Author	Title	References to the document	Provider
			original/current baseline and update of the baseline at the renewal of the crediting period	nt	
23.	/TDASS/	-	Tool 21 Demonstration of additionality of small scale project activities version 13.1 ²⁴	http://cdm.unfccc.int	Other
24.	/TAD/	-	Assessment of debundling for small-scale project activities	http://cdm.unfccc.int	Other
25.	/NRB/	-	Calculation of the fraction of non-renewable biomass	http://cdm.unfccc.int	Other

²⁴ [EB105_repan_TOOL21 \(unfccc.int\)](#)

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

Table 1. CL from this validation

CL ID	01	Section no.	Front page, A.3	Date:	21/09/2019
Description of CL					
The CME has applied AMS.III.A.R in place of AMS.I.A, however the PoA-DD does not explain the changes following the requirements as per the provisions of para 284 of PS and para 378, 381 and 388 of VVS version 02.0.					
Project participant response					Date: 15/09/2020
As per the applicability conditions added to the latest version of the existing methodology AMS-I.A version 17, the methodology was not longer applicable to the activities under the PoA.					
<p>The new applicability condition added to the version 17 of the methodology, as per para 4c: A group of households or users are connected to a grid prior to the start date of the project activity (or the start date of validation with due justification), however the electricity from the grid is available for the households and users for less than 36 hours in any given calendar month during the crediting period or the grid connected household coverage in the host country is less than 50%.</p> <p>The above condition does not apply to the activities under the PoA, as the grid penetration in the host country is larger than 50%. Hence, CME has chosen an alternate methodology AMS.III.AR version 6 in place of AMS.I.A.</p> <p>All the applicability conditions of the methodology AMS. III AR. Version 6, are being met by the PoA and these have been explained in the revised version of the PoA-DD.</p>					
Documentation provided by project participant					
-					
DOE assessment					Date: 12/10/2020
<p>Appropriateness of the application of newer version of methodology:</p> <ul style="list-style-type: none"> The PS para 284 (c) (i) allows the CME to apply the “other applicable approved methodologies”. Thus, application of AMS.III.A.R in place of AMS.I.A is deemed as appropriate. This fact is also further consolidated based on the para 286 of XX which confirms that <i>“If the new version of the PoA-DD cannot apply the methodologies or methodological tools applied in the registered PoA-DD because the registered CDM PoA does not meet the applicability conditions of the valid version of the methodologies or methodological tools at the time of the submission of the request for renewal of the PoA period, or, if applicable, of the consolidated methodologies, the coordinating/managing entity may select other methodologies or, request, through the DOE, a deviation from the selected methodologies or methodological tools for the purpose of the renewal of the PoA period in accordance with section 4.6 above, mutatis mutandis”</i>. In this case the PP has applied the “other applicable methodology” which has been assessed by the Validation Team. <p>Appropriateness of the Version of AMS.III.A.R, Version 06</p> <ul style="list-style-type: none"> The version 06 of AMS.III.A.R is now updated by the UNFCCC to version 07. Please refer below assessment. The PS para 284 (a) clearly states that the “the latest version at the time of the submission of the request for renewal of PoA period or the previous version if the submission of the request for renewal of the PoA period is still within the grace period of the previous version for use”. The Validation Team has verified and confirms that under the applied version of AMS.III.A.R, Requests for registration can be submitted until 02 Jun 2021 23:59:59 GMT. Thus, applied version is deemed as appropriate as RCP will be submitted within the grace period. <p>Demonstration of the applicability conditions</p> <ul style="list-style-type: none"> The applicability conditions of the applied methodology, AMS.III.A.R, Version 06 is demonstrated appropriately. Refer demonstration of applicability conditions under FVR for details. <p>Baseline Description:</p> <ul style="list-style-type: none"> The baseline description is not transparently determined. What is the baseline fuel, how the 					

baseline fuel is determined, statistics applicable at the time of submission to RCP are not mentioned. Finding remains open.

Emission Reduction Calculations:

The applied approach of the emission reduction calculation is not in line with the AMS.III.A.R, Version 06 (refer section . The new methodology AMS-III.A.R provisions and its demonstration along with formula etc are missing throughout the PoA-DD (Generic CPA-DDs). Please double check the entire PoA-DD relevant sections with regards to applicaation of methodologies which is not more applicable. Finding is open.

CME Response

Baseline Description:

Baseline description has been revised to include the recent references. In addition, the CME has made use of the methodology default values for Solar and Cookstove technologies. The CME has also included a detailed explanation regarding the confirmation of existing baseline by using the Tool – 11, Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period (Version 03.0.1).

ER calculations:

ER calculation was erroneously left same as previous methodology. ER calculation approach and the entire formula sections has been revised in the PoA-DD and made in line with the AMS-III A.R. provisions.

DOE assessment

Date: 11/12/2020

Baseline Description:

- The baseline description is now transparently determined. The baseline fuel will be kerosene based lamps, substantiated with publically available, statistics at the time of submission to RCP. Finding has been CLOSED.

Emisison Reduction Calculations:

- The applied approach of the emission reduction calculation is inline with the AMS.III.A.R, Version 06. Finding has been closed.

CL 01 has been CLOSED

Conclusion

Tick the appropriate checkbox

- ☐ Additional action should be taken (finding remains open)
☒ The finding is closed

CL ID	02	Section no.		Date:	21/09/2019
Description of CL					
Photovoltaic Systems: The PoA-DD provides details of solar photovoltaic systems which includes: <ul style="list-style-type: none"> Greenlight Planet Sunking Home Lighting system 120 (Sunking HLS120) Greenlight Planet Sunking BOOM (Sunking BOOM) However, Greenlight Planet Sun King series and other prevalent lamps included already during last CPA's are not reported.					
Project participant response					Date: 15/09/2020
The previous CPAs would continue to apply the existing registered and approved version of the PoA-DD. For the future CPA inclusions, as of now CME proposes to utilise these two models mentioned in the revised version of the PoA-DD. Hence, the previous models have not been added to the PoA-DD.					
Documentation provided by project participant					
Revised PoA-DD					
DOE assessment					Date: 12/10/2020
Explanation is accepted. However, the new added models (d. Light S20, d. Light S320, d. Light S100) are not transparently providing the specification of the ccorresponding solar panels (refer eligibility criteria 15 for inclusion). CL 02 has been reopened.					
Project participant response					Date: 14/12/2020
There were certain old solar lighting system models that had been there in the previous version of the PoA. The technical details of two of the solar lighting system models that are planned for distribution in the future CPAs have been added to the revised PoA-DD, including the details of battery and solar panels..					
DOE assessment					Date: 15/12/2020

Accepted. The technical specifications are verified and found in line with the methodological requirements.	
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

CL ID	03	Section no.	H.3	Date: 21/09/2019
Description of CL				
Below statement is not referenced Section H.3- "... 400,000 lives per year in India"..				
Project participant response				Date: 15/09/2020
The corresponding statement has been revised as per the latest publicly available data around impacts of indoor air pollution in India. Appropriate reference has also been added to the revised PoA-DD.				
Documentation provided by project participant				
Revised PoA-DD				
DOE assessment				Date: 12/10/2020
Applicable reference is now utilized. The stated statement is verified and deemed as appropriate. CL03 has been closed.				
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed			

CL ID	04	Section no.	I.6.1 (Stove, water purifier)	Date: 21/09/2019
Description of CL				
Clarification is requested as "Baseline Data Analysis" utilizes reference to AMS-I.A for calculation of baseline emissions and later utilizes AMS-III.AR under section I.6.1.				
Project participant response				Date: 15/09/2020
Incorrect reference had been left from the previous version of the PoA-DD. This incorrect reference has been corrected at all places in the revised PoA-DD.				
Documentation provided by project participant				
Revised PoA-DD				
DOE assessment				Date: 12/10/2020
Still there is mention of the AMS-I.A (section I.5). Finding has been KEPT OPEN.				
CME Response				
The mention of AMS-I.A has been revised and checked through out the PoA-DD. The reference to previously applied methodology has been deleted from the revised PoA-DD.				
DOE assessment				Date: 12/12/2020
Accepted. CL 04 has been CLOSED.				
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed			

Table 2. CAR from this validation

CAR ID	01	Section no.	H.4	Date: 21/09/2019
Description of CAR				
The technical details as required following the applied methodology AMS-III.AR. applicability condition under para 9 are missing, example Warranty, Rated lamp life (in hours), type of charge controller (e.g. active or passive), autonomous time and DBT, Solar Run Times(s) (SRT) for products with solar energy charging systems, Physical protection against environmental factors (e.g. rain, heat, insect ingress) are missing under section H.4 of PoA-DD.				
Project participant response				Date: 15/09/2020
All the relevant technical specification of each of the Solar Lamps has been added to the revised version of the CPA-DD. The revisions follow the technical details required by the para 9 of methodology AMS-III.AR.				
Documentation provided by project participant				
Revised PoA-DD				

DOE assessment		Date: 12/10/2020
<p>The missing para is not included in PoA-DD. The finding is KEPT OPEN.</p> <p>Furthermore, the version of the AMS-III.AV is updated to version 08, the relevant applicability condition are found inconsistent. After corrections, the other sections of the PoA-DD will be checked in same regards. Additional finding has been raised.</p>		
Project participant response		Date: 04/12/2020
<ul style="list-style-type: none"> - The missing para for AMS-III.A.R applicability has been added to the revised PoA-DD - Applicability condition has been adjusted as per AMS-III.A.V version 8 in the revised PoA-DD 		
Documentation provided by project participant		
<i>Revised PoA-DD</i>		
DOE assessment		Date: 12/12/2020
<p>The applicability conditions are verified. The applicability criteria for AMS-III.AR. is still not attended appropriately. Finding is KEPT OPEN</p> <p>The applicability condition of the AMS-III.A.V version 8.0 are appropriately captured under the revised PoA-DD. Finding is CLOSED.</p>		
Project participant response		Date: 12/12/2020
<p>All the applicability conditions of the AMS-III.A.R. have now been added to the revised PoA-DD and justification for each applicability condition has been added.</p>		
Documentation provided by project participant		
<i>Revised PoA-DD</i>		
DOE assessment		Date: 12/12/2020
<p>The applicability conditions is addressed appropriately for AMS-III.AR, version 06 under section I.2 of PoA-DD, version 08. Detailed assessment against each applicability criterion is stated under section D.2.1 of this revalidation report.</p>		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed	

CAR ID	02	Section no.	B, C	Date: 21/09/2019
Description of CAR				
<ul style="list-style-type: none"> • The section B of PoA-DD refers to "paragraph 9 of Annex 32 to the EB47 Report" however it is not the recent applicable reference (not utilizing the Tool 20: Assessment of debundling for small-scale project activities) • Furthermore, under Section C the description for para 11.c is specifying small-scale CDM threshold which is not in line with EB 99 Annex 3 Paragraph 11.c Version 12. • Under Section C, the reference to para 10,14,20 and 24 of Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities are not appropriate. 				
Project participant response				Date: 15/09/2020
<ul style="list-style-type: none"> • Reference to Annex 32 of EB47 report has been revised and changes to the latest version of Tool 20. • References to Methodological tools for establishing additional have been revised. • These references have been removed. Additionality demonstration in line with last PoA-DD is reinstated. 				
Documentation provided by project participant				
<i>Revised PoA-DD</i>				
DOE assessment				Date: 12/10/2020
<ul style="list-style-type: none"> • The latest applicable references are now included. • The CDM threshold is now appropriately defined, also refer CAR 13 closure • Additionality substantiation is reinstated, which is inline with PS para 285 and VVS para 385. <p>Following the information and reporting check incomplete received on date 17/02/2021, CAR 14 has been added and the provisions of the additionality sunstantiation are reassessed following the provisions of Tool 21: Demonstration of additionality of small scale project activity, Version 13.1.</p>				
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed			

CAR ID	03	Section no.	F	Date: 21/09/2019
Description of CAR				
Section F of PoA-DD states details of local stakeholder consultation in year 2018, however the requirements as per the PoA-DD filling form are not transparently stated. Refer PoA-DD filling form F.2, para 3.				
Project participant response				Date: 15/09/2020
Local stakeholder consultation requirements has been revised and CME wishes to carry out LSC at CPA Level. Accordingly section F of the PoA-DD has been revised.				
Documentation provided by project participant				
<i>Revised CPA-DD</i>				
DOE assessment				Date: 12/10/2020
The finding has lost its relevance as the section is restored to the last PoA version. However the section F.3 is not updated with the directives set at PoA level which will be subsequently observed at the CPA Level. Finding has been KEPT OPEN.				
Project participant response				
The directives for conducting the Local Stakeholder Consultation at CPA level have been added to the revised PoA-DD. Each CPA will conduct the local stakeholder consultation prior to the inclusion and report would be shared with the DOE at the time of inclusion of the respective CPAs.				
DOE assessment				Date: 12/12/2020
The VT has checked the Section F1, F2 and F3. The sections are appropriately updated to confirm tha the stakeholder consultation will be undertaken prior to the CPA inclusion. The VT also checked the eligibility criteria 14, which confirm that the LSC will be conducted before inclusion of CPA into PoA.				
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

CAR ID	4	Section no.	I	Date: 21/09/2019
Description of CAR				
The departure from the PoA-DD Filling Form as below: <ul style="list-style-type: none"> • The section I.1 does not state the applied methodological tools to which the applied methodologies refer to. Furthermore, the section lacks the exact UNFCCC website reference. • Furthermore, the section I.2 does not demonstrate conformance to the applicability conditions of the applied tools as referred under the applied methodologies. • The PP is also requested to confirm if the warranty of lamp is fixed as 2 years (refer applicability criteria 4 of AMS-III.A.R) refer section I.2 of PoA-DD. • The eligibility criteria of AMS-II.G as stated under the para 3 of methodology is not completely reflected under the section I.2 of PoA-DD. 				
Project participant response				Date: 15/09/2020
<ul style="list-style-type: none"> • Applied methodological tools have been added to the revised CPA-DD. UNFCCC website reference has also been added as a footnote. • As per PoA-DD form filling guidelines, conformance of applicability conditions of the methodologies have been demonstrated. The tools applicability is not required to be demonstrated as per Form filling guidelines. • Warranty is defined as per the applicability criteria 6 of the methodology AMS-III.AR. Methodology requires the warranty to be minimum of one year. The project lamps under the POA, carry the warranty of 24 months, thus, achieving the applicability condition. The warranty is not fixed, but would vary as per the other lamps that could be included in the future. However, the warranty shall be at minimum one year. • The eligibility criteria table has been revised to include all the applicability criteria of AMS-II.G. 				
Documentation provided by project participant				
<i>Revised CPA-DD</i>				
DOE assessment				Date: 12/10/2020
<ul style="list-style-type: none"> • Exact UNFCCC website reference for methodological tools and the UNFCCC references are not appended. Finding is KEPT OPEN. • Applicability of the tools is not demonstrated. Finding is KEPT OPEN. • The applicability condition is updated to confirm the warranty period as 24 months (more that one year). The same is confirmed from the applied models proposed under PoA. Finding has been CLOSED. • Eligibility criterial is not appropriately updated inline with the applicability conditions of the AMS-II.G. Finding is KEPT OPEN. 				

CME Response	
<ul style="list-style-type: none"> - UNFCCC web reference has been added to section I.1 as a footnote - Applicability conditions of the applied tools has been added and demonstrated in I.2 of the revised PoA-DD - The eligibility criteria of AMS-II.G as stated under the para 3 of methodology has now been added to the section I.2 of revised PoA-DD. 	
DOE assessment	Date: 12/12/2020
<ul style="list-style-type: none"> - The exact web reference is updated. Finding is CLOSED. - Accepted, The applicability conditions of the tools is transparently justified under the section I.2 of PoA-DD. The VT identified that all the applicability conditions of the applied methodology are transparently stated. Finding is CLOSED. - The eligibility criteria for the AMS-II. G is transparently demonstrated. Finding has been CLOSED. - Conformance to the applicability criteria of AMS-II.G is now included under eligibility criteria, 11. 	
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

CAR ID	5	Section no.	I	Date: 21/09/2019
Description of CAR				
Section I.3 of the PoA-DD is not found provided with the usage of "Guidelines for the Consideration of Interactive Effects for the Application of Multiple CDM Methodologies for a Programme of Activities", EB 68, Annex-3, which is not in accordance with the applicable requirement of PoA-DD filling guidelines.				
Project participant response				Date: 15/09/2020
Section I.3 has been revised to add the detailed explanation around applicability of Guidelines for the Consideration of Interactive Effects for the Application of Multiple CDM Methodologies for a Programme of Activities", EB 68, Annex-3.				
Documentation provided by project participant				
<i>Revised PoA-DD</i>				
DOE assessment				Date: 12/10/2020
There is only mention of the "Guidelines for the consideration of interactive effects for the application of multiple CDM methodologies for a programme of activities", Ver01.0, EB68 Annex03. The section appropriately explains the outcomes conforming that "there is no possibility of cross effects as there is no exchange of energy or mass transfer between different measures within the CPA."				
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed			

CAR ID	06	Section no.	I	Date: 21/09/2019
Description of CAR				
The submitted PoA-DD under section I.5 lacks the demonstration of validity of original baseline following the "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period" Version 03.0.1, EB 66, Annex 47 also refer PS 289 and 290 and Procedures for the renewal of the crediting period of a registered CDM project activity version 02.0.				
In addition, the submitted PoA-DD does not clearly assess and incorporate the impact of national and/ or sectoral policies and circumstances existing at time of requesting renewal of PoA.				
Project participant response				Date: 15/09/2020
The baseline section has been completely reworked and provisions under Tool 11, "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period (Version 03.0.1)" has been applied to the revised PoA-DD.				
Documentation provided by project participant				
<i>Revised PoA-DD</i>				
DOE assessment				Date: 12/10/2020
No response, hence the finding is KEPT OPEN.				
CME response				Date: 12/10/2020
The baseline section has been completely reworked and provisions under Tool 11, "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period (Version 03.0.1)" has been applied to the revised PoA-DD.				
For each of the technologies in the PoA,viz. Solar Lamps, Cookstoves and water filters, a detailed table				

<p>applying Tool 11 has been included in the revised PoA-DD. For each of the technologies and applied methodologies, the existing baseline fuel is still found to be valid and applicable. There are several parameters like F_{NRB} that have also been updated based on the current data or the new methodology default values as per latest version of the applied methodologies.</p> <p>Impact of national policies and circumstances has also been incorporated and elaborated for each of the technologies in the revised PoA-DD.</p>	
DOE assessment	Date: 12/12/2020
<p>Stepwise assessment as per the Tool is transparently stated under section I.5 of PoA-DD. The VT has assessed the same and deems the updates on the requirement related to existence and applicability of baseline situation as appropriate. Detailed Assessment is included under FVR.</p>	
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed

CAR ID	07	Section no.	Various sections	Date: 21/09/2019
Description of CAR				
<ul style="list-style-type: none"> The eligibility criteria under section K of submitted PoA-DD, has lacks the eligibility criteria pertaining to AMS-I.A. This eligibility criteria needs to be in conjunction with CL 01. Justification is requested, for the eligibility criteria 16 under section K of submitted PoA-DD is modified (stoves) The "Eligibility Criteria Category" number 20 under section K of the PoA-DD is inconsistently stated as "Technical Requirement" in place of "Efficiency if ICS", if at all relevant the same is not reflected under the requested PRC Justification is requested, for the eligibility criteria 16 under section K of submitted PoA-DD is modified (water purifier) The eligibility criteria still state the inconsistent references like section B.1, A.3, A.5 of PoA-DD which are not relevant (stove and water purifier). 				
Project participant response				Date: 15/09/2020
<ul style="list-style-type: none"> As justified in CL 1, the methodology AMS-I.A. is not longer applicable to the PoA and hence has been replaced with the methodology AMS-III.AR. Under section K, it deals with the combination where stoves have not been distributed. Section K is referring to water purifier and solar lighting combination. Under section K, it deals with the combination where stoves have not been distributed. Section K is referring to water purifier and solar lighting combination. Eligibility criteria 16 under section K is referring to Solar devices, please clarify the comment The incorrect references has been revised. 				
Documentation provided by project participant				
<i>Revised PoA-DD</i>				
DOE assessment				Date: 12/10/2020
<ul style="list-style-type: none"> Finding has lost its relevance. Finding has been CLOSED. Still the eligibility criteria is unclear. Finding is kept OPEN. No changes. Finding is kept OPEN. Finding is CLOSED. Consistency is now maintained. Findings has been CLOSED. 				
CME response				Date: 12/10/2020
<ul style="list-style-type: none"> The eligibility criteria 20 has been revised to mention 'Efficiency of ICS', as was there in original PoA-DD in section G of the PoA-DD Eligibility criteria 16 has been removed from section K, as that was the requirement under previous methodology AMS-I.A. Since that methodology is no longer applied, hence that eligibility criteria has become irrelevant. 				
DOE assessment				Date: 12/12/2020
<ul style="list-style-type: none"> The change in the applicability criteria is accepted. Finding is CLOSED. The eligibility criteria is updated, at time of inclusion of solar lamps, the lamp baseline will be assessed. Only the solar lamps which replace the fossil fuel based baseline lamps will be included into the CPA. The monitoring parameter <i>Lamp_{baseline}</i> is appropriately included. 				
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed			

CAR ID	08	Section no.	I.6.3 (stove)	Date: 21/09/2019
Description of CAR				
The applied value of the $EF_{\text{projectfossilfuel}}$ (81.6 tCO ₂ /TJ) is inconsistently reported with respect to the applied methodology. Furthermore the same value of 81.6 tCO ₂ /TJ is incorrectly applied for the calculation of emission reductions from efficient cook stoves.				
Project participant response				Date: 15/09/2020
The value of $EF_{\text{projectfossilfuel}}$ has been revised in line with the AMS-II.G version 11.1. The default value has been chosen for the South Asia and new value applied is 64.4 tCO ₂ /TJ				
Documentation provided by project participant				
Revised PoA-DD				
DOE assessment				Date: 12/10/2020
Accepted. The applied value is in line with the table 2 of AMS-I.E version 11.0.				
Conclusion Tick the appropriate checkbox		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

CAR ID	09	Section no.	I.7.1 (stove)	Date: 21/09/2019
Description of CAR				
The monitoring plan stated under section I.7.1 of PoA-DD is referring to version 5 of the AMS-III.AR.				
Project participant response				Date: 15/09/2020
Version number has been revised to latest available and applied methodology AMS-III.AR. version 6.				
Documentation provided by project participant				
Revised PoA-DD				
DOE assessment				Date: 12/10/2020
The incorrect reference is corrected.				
Conclusion Tick the appropriate checkbox		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

CAR ID	10	Section no.	I.6.3 (stove, water purification system)	Date: 21/09/2019
Description of CAR				
The CME refers to the calculation worksheet for sample calculation of the emission reductions under section I.6.3 (stove) of PoA-DD. Similar calculation worksheet is also requested for the Solar lighting and water purification systems.				
Project participant response				Date: 15/09/2020
At PoA Level, the reference to worksheets is written in a generic way. The worksheets are applicable at the CPA Level.				
Documentation provided by project participant				
-				
DOE assessment				Date: 12/10/2020
Explanation is accepted.				
Conclusion Tick the appropriate checkbox		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

CAR ID	11	Section no.	I.5 (cookstove and water purifier)	Date: 21/09/2019
Description of CAR				
The baseline description for the cookstove and water purification systems is still based on the database as applied during the first crediting period. Updated and most recent database to define the baseline shall be utilized.				
Project participant response				Date: 15/09/2020
tbd				
Documentation provided by project participant				
DOE assessment				Date: 12/10/2020
No response, finding has been KEPT OPEN.				

Project participant response		Date: 15/09/2020
The baseline has been reassessed with respect to the provisions under Tool-11 in the revised version of the PoA-DD.		
DOE assessment		Date: 12/12/2020
Accepted. Already assessed under closure of CAR 06.		
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed	

CAR ID	12	Section no.	I.7.1 (water purifiers)	Date: 21/09/2019
Description of CAR				
Source of data is missing for parameter nwb Description of parameter is inconsistent between the PoA-DD and methodology for parameters 'm', 't' Monitoring frequency is inconsistent (not correct) for parameter 't' Measurement methods and procedures is not consistent with applied methodology for parameters "Installation of a SDW public distribution network", "QPWy" Source of Data is not consistent with applied methodology for parameter "Quality of safe drinking water (WQ)" Additional comment is inconsistent with applied methodology for parameter "QPWy"				
Project participant response				Date: 15/09/2020
<ul style="list-style-type: none"> - Source has been added in the revised PoA-DD - Description of the parameters is corrected for parameters m and t - Monitoring frequency has been corrected - Measurement methods and procedures have been revised for parameters "Installation of a SDW public distribution network", "QPWy" - Additional comment has been revised to ensure consistency with applied methodology for parameter "QPWy" 				
Documentation provided by project participant				
<i>Revised PoA-DD</i>				
DOE assessment				Date: 12/10/2020
Above inconsistencies are addressed. Finding has been CLOSED				
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed			

CAR ID	13	Section no.	G, H.3, H.4, I.2	Date: 22/12/2020
Description of CAR				
<ol style="list-style-type: none"> 1. Section G: Not completed as per template requirements 2. Part II, section H.3: Not completed as per template requirement 3. Part II, section H.4: Please clarify why specific technologies are included in a generic document 4. Part II, section H.4: Not completed as per template requirement 5. Part II, section I.2: Not completed as per template requirement 6. Part II, section J: To be completed in line with requirements of the template 7. Part III, section H.3: Not completed as per template requirements. 8. Part III, section H.4: Please clarify why specific technologies are included in a generic document 9. Part III, section H.4: Not completed as per template requirement 10. Part III, section I.2: Not completed as per template requirement 11. Part III, section I.3: Not completed correctly correct as it states "Not applicable" even when more than one methodology is applied under generic CPA 12. Part III, section J: To be completed in line with requirements of the template 13. Appendix 7: To be completed as per template requirements 				
Project participant response				Date: 22/12/2020
<ol style="list-style-type: none"> 1. The section G is now filled following the requirements of the PoA-DD Template. 2. The section H.3 is now filled following the requirements of the PoA-DD Template. 3. The section H.4 is now filled following the requirements of the PoA-DD Template. As per the guidance provided in template under H.4, CME has to provide a list of facilities, equipment and systems that will be installed in the CPA. In addition CME needs to add things like range of age and technical specifications. Hence, this has been explained by providing a few examples of type of components that will be distributed. This is just an indicative list and actual exact equipment distributed will be elaborated in the specific CPA-DDs. Please note that we also followed similar 				

approach in the earlier version of the PoA-DD.

4. Section H.4 has been revised as per the template requirements. Information on technologies/measures existing prior to the implementation of the corresponding CPAs at the same sites and relevant baseline information for all technologies/components have been added.
5. The section I.2 is now filled following the requirements of the PoA-DD Template.
6. The section is updated
7. The section is updated inline with the form requirements
8. Refer point 3 above
9. Refer point 4 above
10. Refer point 5 above
11. The section is updated
12. The section is updated
13. The section is updated.

Documentation provided by project participant

Revised PoA-DD, version 09

DOE assessment

Date: 12/10/2020

1. Above inconsistencies are addressed. Section G is updated with respect to the letter(s) of approval from

- India²⁵
- Switzerland²⁶

Additionally,

- Project participant MicroEnergy Credits Corporation Private Limited has been authorized by India.²⁷
- Project participant Climate Cent Foundation has been authorized by Switzerland²⁸

The section also confirms that, PoA has only one Host Party, i.e. India, and the Host Party has authorized the CME, i.e. MicroEnergy Credits Corporation Private Limited for its coordination of the PoA. ²⁹

2. The section clearly states the applicable SSC threshold limits transparently. The section is updated to clearly the small-scale project type applicable to the generic CPA in accordance with the project standard version 02 is - Type II and Type III. Type II is for Improved cookstoves and Type III is for Solar lighting system. The improved cookstoves component will follow the Type-II small-scale activity threshold of energy savings of 180 GWhth and the solar lamps component will follow the Type-III small-scale activity threshold of emission reductions less than 60,000 tCO₂.
3. Accepted. The list of equipments are references and indicative in nature.
4. The section H.4 of PoA-DD is appropriately updated to address the baseline systems for the cooking systems i.e. three stone fires with use of non-renewable fuels burnt in inefficient cookstoves for meeting the cooking needs of the user group (which are further detailed under section I.5) and baseline for lighting systems which is use of Kerosene wick lamps(which are further detailed under section I.5)
5. The section clearly states the applicable SSC threshold limits transparently. The section appropriately states the small-scale project type applicable to the generic CPA in accordance with the project standard version 02 for Type III project activities. The emission Reduction calculation for Solar Lamps proposed to be deployed, under the proposed SSC-CPA will be below the SSC limit of 60,000 tCO₂ for Type-III project activities.
6. The crediting period is updated as 7years and 0 months.
7. The section H.3 (Part III) is updated appropriately to state that "The small-scale project type applicable to the generic CPA in accordance with the project standard v2 is Type III. The solar lamp and water purifier will collectively follow the Type-III small-scale activity threshold of emission reductions less than 60,000 tCO₂". The statement is inline with the requirements of the PoA-DD form.
8. Accepted, refer the VT assessment under point 3 above.

²⁵ https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/B46TH0V2GLIZK1UPWJ3SMNA8QRX7FY/view

²⁶ https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/B46TH0V2GLIZK1UPWJ3SMNA8QRX7FY/view

²⁷ <https://cdm.unfccc.int/UserManagement/FileStorage/YGV2FSUOXKQM4JCA6E0ID1LZBR8NH9>

²⁸ <https://cdm.unfccc.int/UserManagement/FileStorage/OGVINA26DH9451YQUWBX8TPSL03MZE>

²⁹ <https://cdm.unfccc.int/UserManagement/FileStorage/YGV2FSUOXKQM4JCA6E0ID1LZBR8NH9>

9. Accepted, refer the VT assessment under point 4 above.
10. Accepted, refer the VT assessment under point 5 above.
11. Multiple methodologies are not applied for any particular Technology/Measures. There is no possibility of cross effects as there is no exchange of energy or mass transfer between different measures within the CPA, the VT has assessed the various possibilities as stated under the para 9 of "Guidelines for the consideration of interactive effects for the application of multiple CDM methodologies for a programme of activities", [Ver01.0 EB68 Annex03](#). The CME has appropriately explained in details that none of the conditions as stated under para 9 apply. Thus, the explanation is accepted.
12. Accepted, the VT assessment is same as the one under point 6 above.
13. The appendix is updated inline with the requirements. The section captures the changes during the CP-1 and also the update on account of the Renewal of Crediting Period.

Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed
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CAR ID	14	Section no.	I.2, K (EC 10)	Date: 17/02/2021
Description of CAR				
Following the provisions of the infor and reporting check incomplete on date 17/02/2021 below findings is raised				
<p>1: The coordinating/managing entity did not use the latest version at the time of the submission of the request for renewal of PoA period of the methodologies and methodological tools applied in the registered PoA-DD. Please refer to the paragraph 284(a) of the PS-PoA version 2.0.</p> <p>Specifically, the two generic components make reference to the "Guideline on the Demonstration of Additionality of Small-Scale Project Activities Version 09, EB 68 Annex 27", which is no longer valid.</p>				
<p>2: The CME did not describe correctly how the project boundary of each of the corresponding CPAs was defined. Please refer to paragraph 100 of the PS-PoA version 2.0 The boundaries of the CPAs defined in the generic components are defined as the geographical boundary of India, which is not consistent with the definition of project boundary contained in the applied methodologies.</p>				
<p>3: The coordinating/managing entity did not justify the choices of different options and/or default values from applied methodologies, the applied standardized baselines or other applied methodological regulatory documents. Please refer to paragraph 109 of the PS-PoA version 2.0 The generic component for water and solar states that the parameter QPW (total quantity of water purified by the project in year y) will be determined based on Option 1 of AMS-III.AV (paragraph 16(a)), i.e. directly monitored. However, the monitoring plan contains the monitoring provisions of the parameters used to determine QPW based on Option 2.1 (paragraph 17(a)) and Option 2.2 (paragraph 17(b)).</p>				
<p>4: The CME did not describe how to develop a monitoring plan for each of the corresponding CPAs in accordance with the applied methodologies. Please refer to paragraph 115 of the PS-PoA version 2.0. The generic component for water and solar contains the monitoring provisions of the parameters needed to determine QPW (total quantity of water purified by the project in year y) from Option 1 (paragraph 16(a) of the methodology), Option 2.1 (paragraph 17(a)) and Option 2.2 (paragraph 17(b)). However, the section I.6.1 states only that QPW will be determined based on Option 1 of AMS-III.AV (paragraph 16(a)), i.e. directly monitored.</p>				
<p>5: The updated eligibility criteria for inclusion of CPAs in the PoA does not reflect possible version update or change of applied methodologies or the other applied methodological regulatory documents. Please refer to paragraph 284 of the PS-PoA version 2.0.</p> <p>For both generic components, the additionality of CPAs (eligibility criteria 10) will be demonstrated based on paragraph 2(c) of the "Guideline on the Demonstration of Additionality of Small-Scale Project Activities", version 9.0, i.e. that a barriers analysis is not required to document additionality for projects that are solely composed of isolated units where the users of the technology/measure are households or communities or Small and Medium Enterprises (SMEs) and where the size of each unit is no larger than 5 per cent of the small-scale CDM thresholds. However, this guideline is no longer valid. When demonstrating additionality of CPAs, the CME shall refer and apply the requirements from the valid methodological tools (including its version) and to the other valid methodological regulatory documents.</p>				
Project participant response				Date: 22/04/2021
<p>1. The reference to earlier versions of additionality tool has been removed from the PoA-DD. Latest version of additionality tool has been applied and accordingly PoA-DD has been updated along with the table containing CPA eligibility criterion.</p>				

2. The project boundary of each of the CPAs has been revised and has been made in line with the project boundary definition in each of the three applied methodologies.
3. CME has revised the PoA-DD to include reference to only Option-1, i.e. directly monitored for QPW (total quantity of water purified by the project in year y). Other options (option 2.1 and option 2.2) have been removed from the revised PoA-DD.
4. CME has revised the PoA-DD to include reference to only Option-1, i.e. directly monitored for QPW (total quantity of water purified by the project in year y). Other options (option 2.1 and option 2.2) have been removed from the revised PoA-DD.
However, the requirements of monitoring are not exactly following the "Measurement procedures (if any)" as per requirements of methodology, page 13 of 20.
5. The reference to earlier versions of additionality tool has been removed from the PoA-DD. Latest version of additionality tool has been applied and accordingly PoA-DD has been updated along with the table containing CPA eligibility criterion.

Documentation provided by project participant*Revised PoA-DD, version 10***DOE assessment****Date:** 22/04/2021

1. The DOE has validated the revised PoA-DD. Several sections including section C and section K have been updated. The CME has opted to apply the Tool 21: Demonstration of additionality of small scale project activity, Version 13.1 at the CPA Level, the additionality will be demonstrated following the requirements of para 10 of the Tool 21.
The coordinating/managing entity applied the latest versions of the methodologies and methodological tools for the request for renewal of PoA period.
2. The CME updated the PoA-DD. The generic CPA sections are reflecting the project boundaries in line with the applicable methodologies.
Solar lighting:
The Project Boundary with regards to solar lighting technology is now assessed to be updated appropriately following AMS-III.A.R., version 06. The project boundary includes the project lamps powered the solar energy based charging systems. The reporting is inline with the para 17 of applied methodology.

Improved Cook stoves:
The Project Boundary pertaining to ICS technology is appropriately updated following AMS-II.G., version 11.1. The project boundary includes the physical, geographical site of the efficient devices that utilize biomass. The reporting is inline with the para 15 of applied methodology.

Water Purifiers:
The project boundary includes the physical, geographical sites of the low greenhouse gas emitting technologies for water purification installed by the project activity and the household/institutional buildings where the consumers of safe water provided by the systems are located. The reporting is inline with the para 17 of applied methodology, AMS-III.AV.
3. Based on assessment of revised PoA DD it can be concluded that the CME will monitor parameter QPW_y (total quantity of water purified by the project in year y) following option 1 of the applied methodology. This is consistently applied in the POA-DD. The PoA-DD has been appropriately updated. The POA-DD is in line with para 16 a of the applied methodology.
The FVR has been updated. The Assessment now includes that the monitoring plan, including information on parameter QPW_y, is in line with the applied methodology and that the information in the POA-DD is consistent.
4. The CME will monitor parameter QPW_y (total quantity of water purified by the project in year y) following option 1 of the applied methodology, AMS-III.AV.
The PoA-DD is updated to follow the requirements of para 16 (a) of the methodology, i.e. option1, which avails direct monitoring of the parameter QPW_y (total quantity of water purified by the project in year y). This information is consistently applied in the POA-DD, relevant sections have been appropriately updated.
 - parameter QPW_{pp} has been removed from the ex-ante table, as the CPA is no longer taking this option
 - parameter t from ex-post MP has been removed
 - reference of parameter t has been removed in the sampling section.
 - sampling section, I.7.2 with regards to the parameter QPW_y, has been updated.

The DOE checked the updated POA-DD and confirms that the monitoring plan is in line with the applied methodologies and applicable tools.

5. The DOE has validated the revised PoA-DD. Several sections including C and section. The CME has opted to apply the latest version of Tool 21: Demonstration of additionality of small scale project activity, Version 13.1.

EC 10 now clearly states that the additionality will be demonstrated following the para 10 of the Tool 21 by atleast one of the barriers (Investment, Technological barrier, Barrier due to prevailing practices and Other barriers). The EC for both the combinations “Cookstove and Solar” and “Water and Solar” are verified and confirmed to be appropriate.

Thus, it is concluded that the latest version of the Additionality tool is correctly applied for the additionality demonstration and thus, the POA-DD is in accordance with paragraph 284 of the PS-PoA version 2.0.

The coordinating/managing entity applied the latest versions of the methodologies and methodological tools for the request for renewal of PoA period.

Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open)
	<input checked="" type="checkbox"/> The finding is closed

Table 3. FAR from this validation

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

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Document information

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