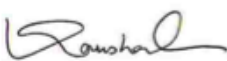




# Validation report form for post-registration changes for component project activities

(Version 02.0)

## BASIC INFORMATION

<b>Title and UNFCCC reference number of the component project activity (CPA)</b>	<b>Title:</b> CPA- NI-003-Nigeria, <b>UNFCCC reference no.:</b> 7359-P1-0052-CP1
<b>Version number of the validation report</b>	03
<b>Completion date of the validation report</b>	09/03/2021
<b>Version number of PoA-DD and CPA-DD applicable to this validation report</b>	CPA- NI-003-Nigeria 7359-P1-0052-CP1: version 10 PoA-DD: Version 23.3
<b>Title and UNFCCC ref. no. of the registered PoA into which the CPA is included</b>	<b>PoA Title:</b> PoA for the Reduction of emission from non-renewable fuel from cooking at household level <b>UNFCCC reference number:</b> 7359
<b>Type(s) of CPA PRCs</b>	<input type="checkbox"/> Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents <input checked="" type="checkbox"/> Corrections <input type="checkbox"/> Changes to the start date of the crediting period <input type="checkbox"/> Inclusion of monitoring plan <input checked="" type="checkbox"/> Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents <input type="checkbox"/> Changes to the project design <input type="checkbox"/> Changes specific to afforestation and reforestation activities
<b>Coordinating/managing entity (CME)</b>	Green Development AS
<b>Host Parties</b>	Nigeria
<b>Applied methodologies and standardized baselines</b>	AMS I.E., Version 04
<b>Mandatory sectoral scopes</b>	<b>Sectoral Scope:</b> 01 Energy industries (renewable - / non-renewable sources)
<b>Conditional sectoral scopes, if applicable</b>	N/A
<b>Name and UNFCCC reference number of the DOE</b>	Name: KBS Certification Services Pvt. Ltd. UNFCCC reference number: E-0051
<b>Name, position and signature of the approver of the validation report</b>	 Kaushal Goyal Managing Director

	KBS Certification Services Pvt. Ltd.
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**SECTION A. Executive summary**

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KBS Certification Services Pvt. Ltd. has been contracted by 'Green Development AS' (CME) to perform a validation of post registration changes to the below stated Component Project Activities under the CDM registered programme of activity 'PoA for the Reduction of emission from non-renewable fuel from cooking at household level' (UNFCCC Ref #7359) in accordance with para 246 of VVS for PoA Version 02 /05/.

**1. CPA- NI-003-Nigeria, 7359-P1-0052-CP1**

The independent validation by the DOE is required to confirm the post registration changes to the CDM CPAs comply with the relevant requirements in the "CDM project standard for programmes of activities" (PS-PoA) Ver. 02 /06/ and CDM Validation and Verification Standard for programmes of activities (VVS-PoA) Ver. 02 /05/. This report summarizes the post registration changes of the CDM CPA with respect to the VVS requirements.

**Objective:**

The objective of a validation is to provide a through and independent third-party assessment of the post-registration changes. In particular, the changes compliance with relevant UNFCCC and host country criteria is validated in order to confirm that the changes meet the applicable CDM requirements and the identified criteria.

**Scope of the validation:**

The scope of the PRC validation is defined as an independent and objective review of the revised CPA-DD to verify the impact of revision of the revised PoA-DD.

The report is based on the assessment of the CPA-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/CPA-DD is to reduce emissions from household cooking stoves. The use of non-renewable fuel such as wood and charcoal for cooking, leads to the emission of greenhouse gases, deforestation and poor indoor climate. The programme will use a number of different technologies to reach this goal.

The solutions are based on two concepts:

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

The SSC-PoA/CPA-DD will contribute to substantial reduction in CO<sub>2</sub> emissions, reduction in deforestation, improved the health by the participating households, create local jobs, and improve the financial situation of the local communities and the households that participate in the program. There are no major negative environmental or social implications by the programme.

The PoA reduces the use and demand for fossil fuels and non-renewable biomass that would have been used in the absence of the PoA. This directly leads to reduced greenhouse gas emissions.

The host parties under the PoA are as follows:

1. Ethiopia, 2. Kenya, 3. Madagascar, 4. Malawi, 5. Mozambique, 6. Nigeria, 7. Uganda, 8. Zambia, 9. Chad, 10. Dominic Republic, 11. Ivory Coast (Côte d'Ivoire), 12. Liberia, 13. Namibia, 14. Rwanda, 15. Sierra Leone, 16. Somalia, 17. Ghana, 18. South Africa, 19. Zimbabwe

#### **Validation process:**

KBS follows a rule based validation approach, wherein, as a first step, the contract review is undertaken as per latest version of CDM Accreditation Standard. Subsequently, after the contract is signed, a desk review of the programme of activity documentation is undertaken. The validation protocol is filled 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 methodology/ies, applied standardized baseline and/or 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	17/11/2020
Draft Validation Report	22/12/2020
Final Validation Report	09/03/2021

The validation has been performed as described in the VVS for PoA (version 02.0) and constitutes the following steps:

- Review of the revised CPA-DD /1/;
- Desk review of the relevant documents related to revised PoA-DD and other documents.
- Interview with representatives of the CME

The following corrections are proposed from the registered CPA-DD, which is summarized as follows:

<b>Post Registration Changes</b>	
<b>Sl. No.</b>	<b>Corrections in the CPA-DD</b>
1.	Editorial changes including minor spelling errors and removing of spaces between words and paragraphs etc.
2.	Change of fonts used in the document where different fonts were initially used.
3.	CPA-DD revised as per the latest template (Version 09) guidelines.
4.	The start date of the crediting period has been indicated based on the date as available on the UNFCCC website for all the CPA-DD.
5.	Updated the value of the ex-ante parameter "NCV <sub>biogas</sub> " of the CPA-DD to be in line with the revised PoA-DD, version 23.3.
6.	Updated the "additional comment" section of the ex-ante parameter "Thermal output of water purification systems" of the CPA-DD to be in line with the revised PoA-DD, version 23.3.
7.	The "Not Applicable" has been included under Appendix 3, 4, 5 and 6 of the revised CPA-DD.
8.	Inclusion of tools that will be used for monitoring.
9.	The example of Monitoring form is revised to be in compliance with the revised PoA-DD /1/.
10.	Additional details added in eligibility for inclusion related to "Description of this CPA in relation to the criterion and supporting evidence". Also, corrected Eligibility Criteria 3.3 to be in compliance with the revised PoA DD.
11.	Included technical specifications of the technologies (hand pumps) installed under the CPA (CPA- NI-003-Nigeria) to comply with paragraph 159 (e) of Project Standard for Programme of Activities (PS-PoA), version 2.0.

Sl. No.	Permanent changes to the monitoring plan in the CPA-DD
1.	Revision in monitoring frequency of all the ex-post parameters from “Annual” to “at least every two years” which is in compliance with the revised PoA-DD, version 23.3 and updation of the required confidence level to 95/10 for biennial sampling.
2.	Following statements have been included to be in compliance with the monitoring form in the latest version of the PoA DD, which specify that it shall be confirmed if the system is operational or not. <ol style="list-style-type: none"> <li>1. “Check that the appliances are still operating or are replaced by an equivalent in service appliance”</li> <li>2. “Households that use purified water will be given clean but empty water container”</li> </ol>
3.	Addition of text to clarify that during 7 days of monitoring period household can alternatively be provided with 12 litres of denatured alcohol in place of 20 litres.

**Conclusion:**

The review of the CPA-DD and the subsequent follow-up interviews have provided KBS with sufficient evidence to determine the programme of activity fulfillment of all the stated criteria.

Furthermore, we confirm that:

- The proposed revision points have been described, and an assessment has been provided to substantiate the reasons for each of the proposed deviation points of the from the registered CPA-DD, using objective evidence;
- The proposed deviation from the registered CPA-DD ensures that the level of accuracy and completeness in the monitoring and verification process is not reduced as a result of the revisions;
- The proposed revision of the monitoring plan is in accordance with the approved monitoring methodology (AMS I.E., Version 04) applicable to the PoA/CPA whilst ensuring the conservativeness of the emission reductions calculation;
- The approval of post-registration changes has been requested together with the request for issuance which is in accordance with para 246 of VVS for PoA Version 02 /05/.

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

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**B.1. Validation team member**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader/Technical Expert (TA 1.1, 13.1, 13.2)	IR	Kandari	Sanjay	Central Office	✓		✓	✓
2.	Validator	IR	Dey	Deboshmita	Central Office	✓			✓
3.	Validator	- IR	Malik	Ananya	Central Office	✓		✓	✓

	Trainee							
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**B.2. Technical reviewer and approver of the validation report on CPA PRCs**

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 (TA 1.1, 13.1, 13.2)	IR	Badaya	Rohit	Central Office
2.	Manager Technical & Certification	IR	Chaudhari	Tushar	Central Office
3.	Authorizer	IR	Goyal	Kaushal	Central Office

**SECTION C. Means of validation****C.1. Document review**

&gt;&gt;

A desk review is undertaken, involving but not limited to,

- A review of the data and information presented to verify their completeness;
- A review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures;
- An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

The list of documents reviewed is included in the section 'Appendix 3' of this report.

**C.2. On-site inspection**

As a result of the COVID-19 pandemic, taking into account the rules of relevant national and local authorities (local to the DOE offices as well as to locality of the site visits), World Health Organization (WHO) recommendations, policies of the DOE and other relevant travel restrictions and guidance (for example, a requirement to self-isolate upon return from specific countries), the DOE has skipped the on-site visit. This is also inline with the decision from CDM Executive Board which has agreed to relax mandatory site visits by DOEs till 30/06/2021 because of COVID-19. In the above regard, the Board agrees to deviate from the requirements in paragraphs 30 and 339 of the VVS-PA and paragraphs 183 and 321 of the VVS-PoA. However as per the CDM EB, the DOE may use other standard auditing techniques for validation or verification as referred to in sections 7.1.3 and 10.1.3 of the VVS-PoA/05/.

As per para 184 of CDM validation and verification standard for programme of activities version 02/05/, Validation team has used the alternative means (desk review, remote audit) for its assessment and to justify that they are sufficient for the purpose of validation.

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 02/05/ and concluded that no-site visit is required at this stage of Validation. The justification for not conducting the on-site visit as per VVS PoA Version 02 /05/ have also been mentioned below:

Validation team has done the follow-up actions by:

1. Telephonic/Skype interviews of CME.

2. Interview questions were filled as per Validation team interview checkEist and also video conferencing was done.
3. Cross checks between information provided by interviewed personnel (i.e. by checking sources) to ensure that no relevant information has been omitted.

Duration of on-site inspection:-				
No.	Activity performed on-site	Site location	Date	Team member

### C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Norstebo	Havard	CME, Green Development	16/12/2020	Project implementation and operation, monitoring procedure, data and information flow, Roles and responsibility, Quality Assurance – Management and operating system, Sales/Distribution records, Survey records, Qualification and Training	Sanjay Kandari [Team Leader/Technical Expert (TA 1.1, 13.1, 13.2)],  Deboshmita Dey [Validator],  Ananya Malik [Validator-Trainee]

### C.4. Clarification requests, corrective action requests and forward action requests raised

Areas of validation findings	No. of CL	No. of CAR	No. of FAR
Compliance with CPA-DD form	-	CAR 01	-
Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents	-	-	-
Corrections	-	CAR 01, CAR 02	-
Changes to the start date of the crediting period	-	-	-
Inclusion of monitoring plan	-	-	-
Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents	-	-	-
Changes to the project design	-	-	-
Changes specific to afforestation and reforestation	-	-	-

activities			
Others (please specify)	-	-	-
<b>Total</b>	<b>00</b>	<b>02</b>	<b>00</b>

## SECTION D. Validation findings

### D.1. Compliance with CPA-DD form

<b>Means of validation</b>	The CME has revised the CPA-DD in latest template version of CPA-DD (version 09) available on CDM EB website. Some editing and restructuring of information has been done by CME, due to change of CPA-DD template /10/ from old version to new version.  Validation team checked and confirmed that revised CPA-DD are in the latest available template version at CDM EB website.
<b>Findings</b>	CAR 01 raised and successfully closed. Refer to appendix 4 for further details.
<b>Conclusion</b>	Validation team confirms that the revised CPA-DD are in compliance with the relevant forms and instructions therein /10/11/. Validation team confirms that, the material included in the new forms is materially the same as the information in the registered CPA-DD.

### D.2. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents

<b>Means of validation</b>	No temporary deviation envisaged during the PRC validation. Therefore, this section is not applicable.
<b>Findings</b>	Not Applicable
<b>Conclusion</b>	Not Applicable

### D.3. Corrections

<b>Means of validation</b>	Some editing and restructuring of information has been done by CME, due to change of CPA-DD template from old version to new version. Further, the following corrections are proposed in the registered CPA-DD in line with the revised PoA-DD, version 23.3/01/ (UNFCCC PoA Reference No. 7359), which is summarized as follows: <table border="1"> <tr> <td>1.</td><td>Editorial changes including minor spelling errors and removing of spaces between words and paragraphs etc.</td></tr> <tr> <td>2.</td><td>Change of fonts used in the document where different fonts were initially used.</td></tr> <tr> <td>3.</td><td>CPA-DD revised as per the latest template (Version 09) guidelines</td></tr> <tr> <td>4.</td><td>The start date of the crediting period has been indicated based on the date as available on the UNFCCC website for all the CPA-DD.</td></tr> <tr> <td>5.</td><td>Updated the value of the ex-ante parameter "NCV<sub>biogas</sub>" of the CPA-DD to be in line with the revised PoA-DD, version 23.3.</td></tr> <tr> <td>6.</td><td>Updated the "additional comment" section of the ex-ante parameter "Thermal output of water purification systems" of the CPA-DD to be in line with the revised PoA-DD, version 23.3.</td></tr> <tr> <td>7.</td><td>The "Not Applicable" has been included under Appendix 3, 4, 5 and 6 of the revised CPA-DD.</td></tr> <tr> <td>8.</td><td>Inclusion of tools that will be used for monitoring.</td></tr> <tr> <td>9.</td><td>The example of Monitoring form is revised to be in compliance with the revised PoA-DD /1/.</td></tr> <tr> <td>10.</td><td>Additional details added in eligibility for inclusion related to "Description of this CPA in relation to the criterion and supporting evidence". Also, corrected Eligibility Criteria 3.3 to be in compliance with the revised PoA DD.</td></tr> <tr> <td>11.</td><td>Included technical specifications of the technologies (hand pumps) installed under the CPA (CPA- NI-003-Nigeria) to comply with paragraph 159 (e) of Project Standard for Programme of Activities (PS-PoA), version 2.0. The borehole system with filters covers under the measure (b)</td></tr> </table>	1.	Editorial changes including minor spelling errors and removing of spaces between words and paragraphs etc.	2.	Change of fonts used in the document where different fonts were initially used.	3.	CPA-DD revised as per the latest template (Version 09) guidelines	4.	The start date of the crediting period has been indicated based on the date as available on the UNFCCC website for all the CPA-DD.	5.	Updated the value of the ex-ante parameter "NCV <sub>biogas</sub> " of the CPA-DD to be in line with the revised PoA-DD, version 23.3.	6.	Updated the "additional comment" section of the ex-ante parameter "Thermal output of water purification systems" of the CPA-DD to be in line with the revised PoA-DD, version 23.3.	7.	The "Not Applicable" has been included under Appendix 3, 4, 5 and 6 of the revised CPA-DD.	8.	Inclusion of tools that will be used for monitoring.	9.	The example of Monitoring form is revised to be in compliance with the revised PoA-DD /1/.	10.	Additional details added in eligibility for inclusion related to "Description of this CPA in relation to the criterion and supporting evidence". Also, corrected Eligibility Criteria 3.3 to be in compliance with the revised PoA DD.	11.	Included technical specifications of the technologies (hand pumps) installed under the CPA (CPA- NI-003-Nigeria) to comply with paragraph 159 (e) of Project Standard for Programme of Activities (PS-PoA), version 2.0. The borehole system with filters covers under the measure (b)
1.	Editorial changes including minor spelling errors and removing of spaces between words and paragraphs etc.																						
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3.	CPA-DD revised as per the latest template (Version 09) guidelines																						
4.	The start date of the crediting period has been indicated based on the date as available on the UNFCCC website for all the CPA-DD.																						
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9.	The example of Monitoring form is revised to be in compliance with the revised PoA-DD /1/.																						
10.	Additional details added in eligibility for inclusion related to "Description of this CPA in relation to the criterion and supporting evidence". Also, corrected Eligibility Criteria 3.3 to be in compliance with the revised PoA DD.																						
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	<p><i>'Community based water purification system with filter technology'</i> as defined in page 7/57 of the registered PoA-DD, version 23 and in revised PoA-DD, version 23.3. Moreover PoA-DD also provides an illustration of multistep process which <b>may</b> be the part of the water purification technology to be installed, but may not be implemented mandatorily. As per the footnote 1 of the PoA-DD, <i>"Future CPAs might use slightly different variations of the solutions with different capacity etc. as long as they still remain within the framework described in this document framework described in this document and comply with the methodology"</i>. Hence, the hand-pumps with borehole technology comply within the framework of the technology/measure described for the community based water purification systems. CME has also mentioned that the CPAs were included in the PoA much ahead of introduction of CDM PS for PoAs. The guidelines of filling CPA DD at that point of time were not sufficiently clear therefore the technical descriptions of borehole were not included during the CPA inclusion. In order to comply with the latest CDM PS for PoA, Version 02 and the latest CPA-DD template guidelines, CME has included detailed technical specifications of the technology which was found to be consistent with the technical specification supportives provided by the CME during PRC validation process. Also, the validation team confirms that the information incorporated is in line with the new CPA DD template filling guidelines and the technologies specified are within the framework of PoA.</p>
<b>Findings</b>	CAR 01 and CAR 02 raised and successfully closed. Refer to appendix 4 for further details.
<b>Conclusion</b>	<p>The validation team confirms that, there is no change in the eligibility criteria of CPA for inclusion in the PoA, as can be seen from the revised CPA-DD and PoA-DD (version 23.3).</p> <p>Based on the review of CPA-DD and interview with CME, the validation team has accepted all the proposed corrections in the CPA-DD in accordance with requirements of VVS for PoA (version 02.0). The assessment team confirms that the corrected information is an accurate reflection of actual project information and the corrected parameters are in accordance with the applied methodology, the monitoring plan.</p> <p>The validation team confirms</p> <ul style="list-style-type: none"> <li>✓ The corrected information is an accurate reflection of actual project information;</li> <li>✓ The corrected information are in accordance with the applied methodology and revised monitoring plan.</li> <li>✓ The proposed revision points have been described, and an assessment has been provided to substantiate the reasons for each of the proposed revision points of the registered CPA-DD, using objective evidence;</li> <li>✓ The proposed revision of the CPA-DD ensures that the level of accuracy and completeness in the monitoring and verification process is not reduced as a result of the revisions;</li> <li>✓ The proposed revision of the monitoring plan is in accordance with the approved monitoring methodology (AMS-I.E, Version 04) applicable to the CPA whilst ensuring the conservativeness of the emission reductions calculation;</li> <li>✓ The information included in the latest CPA-DD template is materially the same as the information in the registered CPA-DD. The changes that are subject of the request for approval are in track change.</li> <li>✓ The revised CPA-DD are in line with the revised PoA-DD (version 23.3) and hence acceptable to the validation team.</li> </ul>

#### D.4. Changes to the start date of the crediting period

<b>Means of validation</b>	Not Applicable
<b>Findings</b>	Not Applicable
<b>Conclusion</b>	Not Applicable

**D.5. Inclusion of monitoring plan**

<b>Means of validation</b>	Monitoring plan is already included in registered CPA-DD during validation. Therefore, this section is not applicable.
<b>Findings</b>	Not Applicable
<b>Conclusion</b>	Not Applicable

**D.6. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents**

<b>Means of validation</b>	<p>The following permanent changes are proposed in the registered CPA-DD in line with the revised PoA-DD, version 23.3/01/ (UNFCCC PoA Reference No. 7359), which is summarized as follows:</p> <table border="1"> <tr> <td><b>1.</b></td><td>Revision in monitoring frequency of ex-post parameters “BG<sub>stove, Capacity,y</sub>”, “BG<sub>usage,y</sub>” and “ET<sub>stove, Capacity,y</sub>” from “annual” to “at least once in two years” and update of the required confidence level to 95/10 for biennial sampling for the ex- post parameters “ET<sub>stoves, units,y</sub>”, “ET<sub>usage,y</sub>”, “BG<sub>stoves, units,y</sub>”, “BG<sub>usage,y</sub>” and “QDW<sub>p,y</sub>”. Based on sectoral expertise, the validation team considers that the requirements of 95/05 sampling confidence/precision in version 4 of applied methodology AMSIE are stringent for PoA considering the multi country PoA and the transaction costs involved in surveys. Further, it shall be noted that the sampling requirements were revised to 95/10 in the subsequent version of the methodology (AMS I.E version 5), which became valid on 20<sup>th</sup> July 2012. The requirement is followed in all the latest versions of the registered methodology and considering the time that has elapsed (Almost 8.5 years) since the requirement of 95/10 was revised in the subsequent version (AMS I.E version 5), the CME proposes update of the confidence/precision to 95/10 for the registered PoA, as this will reduce the cost of the monitoring survey and hence reduce the transaction cost. It is also found in line with the revised PoA-DD, version 23.3.</td></tr> <tr> <td><b>2.</b></td><td> <p>Following statements have been included to be in compliance with the monitoring form in the latest version of the PoA DD, which specify that it shall be confirmed if the system is operational or not.</p> <ol style="list-style-type: none"> <li>1. “Check that the appliances are still operating or are replaced by an equivalent in service appliance”</li> <li>2. “Households that use purified water will be given clean but empty water container”</li> </ol> </td></tr> <tr> <td><b>3.</b></td><td>Addition of text to clarify that during 7 days of monitoring period household can alternatively be provided with 12 litres of denatured alcohol in place of 20 litres.</td></tr> </table> <p>In accordance with requirements of §267 of VVS for PoA (version 02.0)/05/, the validation team confirms that these permanent changes are unlikely to lead to a reduction in the accuracy of the calculation of emission reductions.</p> <p>Furthermore, in accordance with §268 of VVS for PoA (version 02.0)/05/, the validation team concludes that the permanent changes comply with the relevant requirements related to the permanent changes from the registered monitoring plan, the applied methodology.</p> <p>In accordance with requirements of §265 of VVS for PoA (version 02.0)/09/, the validation team confirms that the monitoring deviates from the applied methodologies in terms of the required confidence level of <b>95/5</b> for biennial sampling as per the methodology applied (AMS I.E Version 04). The CME has mentioned <b>95/10</b> confidence precision level for biennial sampling since it will reduce the number of households to be selected for monitoring survey which will further reduce the cost of the monitoring survey and hence reduce the transaction cost.</p> <p>In accordance with requirements of §266 of VVS for PoA (version 02.0)/09/, the</p>	<b>1.</b>	Revision in monitoring frequency of ex-post parameters “BG <sub>stove, Capacity,y</sub> ”, “BG <sub>usage,y</sub> ” and “ET <sub>stove, Capacity,y</sub> ” from “annual” to “at least once in two years” and update of the required confidence level to 95/10 for biennial sampling for the ex- post parameters “ET <sub>stoves, units,y</sub> ”, “ET <sub>usage,y</sub> ”, “BG <sub>stoves, units,y</sub> ”, “BG <sub>usage,y</sub> ” and “QDW <sub>p,y</sub> ”. Based on sectoral expertise, the validation team considers that the requirements of 95/05 sampling confidence/precision in version 4 of applied methodology AMSIE are stringent for PoA considering the multi country PoA and the transaction costs involved in surveys. Further, it shall be noted that the sampling requirements were revised to 95/10 in the subsequent version of the methodology (AMS I.E version 5), which became valid on 20 <sup>th</sup> July 2012. The requirement is followed in all the latest versions of the registered methodology and considering the time that has elapsed (Almost 8.5 years) since the requirement of 95/10 was revised in the subsequent version (AMS I.E version 5), the CME proposes update of the confidence/precision to 95/10 for the registered PoA, as this will reduce the cost of the monitoring survey and hence reduce the transaction cost. It is also found in line with the revised PoA-DD, version 23.3.	<b>2.</b>	<p>Following statements have been included to be in compliance with the monitoring form in the latest version of the PoA DD, which specify that it shall be confirmed if the system is operational or not.</p> <ol style="list-style-type: none"> <li>1. “Check that the appliances are still operating or are replaced by an equivalent in service appliance”</li> <li>2. “Households that use purified water will be given clean but empty water container”</li> </ol>	<b>3.</b>	Addition of text to clarify that during 7 days of monitoring period household can alternatively be provided with 12 litres of denatured alcohol in place of 20 litres.
<b>1.</b>	Revision in monitoring frequency of ex-post parameters “BG <sub>stove, Capacity,y</sub> ”, “BG <sub>usage,y</sub> ” and “ET <sub>stove, Capacity,y</sub> ” from “annual” to “at least once in two years” and update of the required confidence level to 95/10 for biennial sampling for the ex- post parameters “ET <sub>stoves, units,y</sub> ”, “ET <sub>usage,y</sub> ”, “BG <sub>stoves, units,y</sub> ”, “BG <sub>usage,y</sub> ” and “QDW <sub>p,y</sub> ”. Based on sectoral expertise, the validation team considers that the requirements of 95/05 sampling confidence/precision in version 4 of applied methodology AMSIE are stringent for PoA considering the multi country PoA and the transaction costs involved in surveys. Further, it shall be noted that the sampling requirements were revised to 95/10 in the subsequent version of the methodology (AMS I.E version 5), which became valid on 20 <sup>th</sup> July 2012. The requirement is followed in all the latest versions of the registered methodology and considering the time that has elapsed (Almost 8.5 years) since the requirement of 95/10 was revised in the subsequent version (AMS I.E version 5), the CME proposes update of the confidence/precision to 95/10 for the registered PoA, as this will reduce the cost of the monitoring survey and hence reduce the transaction cost. It is also found in line with the revised PoA-DD, version 23.3.						
<b>2.</b>	<p>Following statements have been included to be in compliance with the monitoring form in the latest version of the PoA DD, which specify that it shall be confirmed if the system is operational or not.</p> <ol style="list-style-type: none"> <li>1. “Check that the appliances are still operating or are replaced by an equivalent in service appliance”</li> <li>2. “Households that use purified water will be given clean but empty water container”</li> </ol>						
<b>3.</b>	Addition of text to clarify that during 7 days of monitoring period household can alternatively be provided with 12 litres of denatured alcohol in place of 20 litres.						

validation team confirms that the permanent changes to the registered monitoring plan described in the revised CPA-DD does not reduce the level of accuracy of the monitoring compared with the requirements contained in the registered monitoring plan. Based on sectoral expertise, validation team considers that the requirements of 95/05 sampling confidence/precision in version 4 of applied methodology AMSIE are stringent for PoA considering the multi country PoA and the transaction costs involved in surveys it is more relevant to projects rather than the PoA. Validation team would further highlight the para 18 of applied meth which is for leakage accounting:

*'The use of this methodology in a project activity under a programme of activities is legitimate if the following leakages are estimated and accounted for, if required, on a sample basis using a 90/30 precision for the selection of samples.....'.* Though this para is related to leakage but the given confidence/precision gives an idea that the requirements of para 17 in terms of 95/05 confidence/precision are more relevant for projects rather than PoA.

Further, it shall be noted that the sampling requirements were revised to 95/10 in the subsequent version of the methodology (AMS I.E version 5), which became valid on 20<sup>th</sup> July 2012. The requirement is followed in all the latest versions of the registered methodology and considering the time that has elapsed (Almost 8.5 years) since the requirement of 95/10 was revised in the subsequent version (AMS I.E version 5), the CME proposes update of the confidence/precision to 95/10 for the registered PoA, as this will reduce the cost of the monitoring survey and hence reduce the transaction cost. Moreover the 'Standard for sampling and survey for CDM project activities and programme of activities, version 08/12/ also have the 95/10 requirements for CPA monitorings. Therefore, validation team is of the opinion that the change proposed by CME will not lower the accuracy of monitoring.

The validation team checked the requirements of PS PoA, version 02/10/:

PS PoA, Version 02/10/	Justification
Para 235  "If the coordinating/managing entity is unable to implement the registered monitoring plan, or the monitoring would permanently deviate from the applied methodologies, the applied standardized baselines or the other appliedmethodological regulatory documents, the coordinating/managing entity shall describe the nature and extent of the non-conforming monitoring in a revised PoA-DD or CPA-DD and the proposed alternative monitoring for the registered CDM PoA or the included CPA ."	The CME is unable to implement the registered monitoring plan in terms of the required confidence level of <b>95/5</b> for biennial sampling as per the methodology applied (AMS I.E Version 04). Therefore, the CME has mentioned <b>95/10</b> confidence precision level for biennial sampling since it will reduce the number of households to be selected for monitoring survey which will further reduce the cost of the monitoring survey and hence reduce the transaction cost.
Para 236  "The coordinating/managing entity shall apply conservative assumptions or discount factors to the calculations in the proposed alternative monitoring to the extent required to ensure that GHG emission reductions or net anthropogenic GHG removals will not be overestimated as a result of the permanent change or deviation."	Based on sectoral expertise, the validation team considers that the requirements of 95/05 sampling confidence/precision in version 4 of applied methodology AMSIE are stringent for PoA considering the multi country PoA and the transaction costs involved in surveys. Further, it shall be noted that the sampling requirements were revised to 95/10 in

		the subsequent version of the methodology (AMS I.E version 5), which became valid on 20 <sup>th</sup> July 2012. The requirement is followed in all the latest versions of the registered methodology and considering the time that has elapsed (Almost 8.5 years) since the requirement of 95/10 was revised in the subsequent version (AMS I.E version 5), the CME proposes update of the confidence/precision to 95/10 for the registered PoA, as this will reduce the cost of the monitoring survey and hence reduce the transaction cost. CME shall apply the lower bond in case of not meeting the precision.
<b>Findings</b>	No findings raised.	
<b>Conclusion</b>	The validation team confirms that the revised monitoring plan does not reduce the level of accuracy of the monitoring compared with the requirements contained in the registered CPA-DD. The same version of the methodology has been considered by the CME.	

**D.7. Changes to the project design**

<b>Means of validation</b>	Not Applicable
<b>Findings</b>	Not Applicable
<b>Conclusion</b>	Not Applicable

**D.8. Changes specific to afforestation and reforestation activities**

<b>Means of validation</b>	Not Applicable
<b>Findings</b>	Not Applicable
<b>Conclusion</b>	Not Applicable

**SECTION E. Internal quality control**

&gt;&gt;

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

The Technical Reviewer will either accept or reject the recommendation made by the assessment team. The findings can be raised at this stage and CME must resolve them within agreed timeline. The opinion recommended by Technical Reviewer will be confirmed by Manager Technical & Certification and finally authorized by the Managing Director on behalf of KBS as final validation opinion. The Technical Reviewer and Manager T&C may be the same person.

**SECTION F. Validation opinion**

&gt;&gt;

KBS Certification Services Pvt. Ltd. has been contracted by 'Green Development AS' (CME) to perform a validation of post registration changes to the below stated Component Project Activities under the CDM registered programme of activity 'PoA for the Reduction of emission from non-renewable fuel from cooking at household level' (UNFCCC Ref #7359) in accordance with para 246 of VVS for PoA Version 02 /05/.

**1. CPA- NI-003-Nigeria, 7359-P1-0052-CP1**

The report is based on the assessment of the revised CPA-DD undertaken through 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's and CDM decisions.

The validation was performed on the basis of rules and requirements defined by UNFCCC for the CDM PoA/CPA. The review of the revised CPA-DD, supporting documentation and subsequent follow-up actions (including interviews), have provided KBS with sufficient evidence to determine the fulfilment of stated criteria.

The validation confirms that the implementation of the post registration changes is in line with the applied methodology and all other applicable tools and guidance.

The description in the revised CPA-DD meets all relevant UNFCCC requirements for the CDM PoA/CPA and correctly applies the selected baseline and monitoring methodology. The validation team further confirms that the revised CPA-DD are in line with the revised PoA-DD, version 23.3.

This report is the combined assessment opinion for all the changes that are proposed in the CPA-DD and request is submitted for prior approval to CDM EB.

## Appendix 1. Abbreviations

Abbreviations	Full texts
AMS	Approved Methodology Small Scale
BE	Baseline Emission
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CERs	Certified Emission Reductions
CL	Clarification Request
CME	Coordinating/Managing Entity
CO <sub>2</sub> e	Carbon dioxide equivalent
COP/MOP	Conference of Parties/ Meeting of Parties
CPA	Component Project Activity
CPA-DD	Component Project Activity Design Document
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EB	Executive Board
EF	Emission Factor
ERs	Emission Reductions
FAR	Forward Action Request
GHGs	Greenhouse Gas(es)
GWh	Giga Watt Hours
ICS	Improved cooking stoves
ISO	International Organization of Standardization
IPCC	Intergovernmental Panel on Climate Change
KBS	KBS Certification Services Pvt. Ltd.
KP	Kyoto Protocol
kWh	Kilo Watt Hours
MoV	Means of Verification
PoA-DD	Programme of Activities- Design Document
PoA	Programme of Activities
PS	Project Standard
PCP	Project Cycle Procedure
PRC	Post-Registration Changes
RET	Renewable Energy Technologies
QA/QC	Quality Assurance/Quality Control
ToR	Terms of Reference
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation & Verification Standard

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

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

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

Personnel Name:		Ms. Deboshmita Dey	
Qualified to work as:			
Team Leader	<input checked="" type="checkbox"/>	Technical Expert	<input type="checkbox"/>
Validator/Verifier	<input checked="" type="checkbox"/>	Financial Expert	<input type="checkbox"/>
Technical Reviewer	<input type="checkbox"/>	Local Expert	<input type="checkbox"/>
Area(s) of Technical Expertise			
Sectoral Scope		Technical Area	
-		-	
Approved by (Manager C & T)		Sanjay Kandari	
Approval date:		03/11/2020	

Personnel Name:		Rohit Badaya	
Qualified to work as:			
Team Leader	<input checked="" type="checkbox"/>	Technical Expert	<input checked="" type="checkbox"/>
Validator/Verifier	<input checked="" type="checkbox"/>	Financial Expert	<input checked="" type="checkbox"/>
Technical Reviewer	<input checked="" type="checkbox"/>	Local Expert (India)	<input checked="" type="checkbox"/>
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
Energy industries (renewable/non-renewable sources)	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar		
	TA 1.2: Energy generation from renewable energy sources		
Energy distribution	TA 2.1: Energy distribution		
Energy demand	TA 3.1. Energy Demand		
Waste Handling and Disposal	TA 13.1 Solid waste and wastewater TA 13.2 Manure		
Approved By	Manager Competency & Training		

Approval date:	29/12/2018
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<b>Personnel Name:</b>		<b>Ms. Ananya Malik</b>	
<b>Qualified to work as:</b>			
Team Leader	<input type="checkbox"/>	Technical Expert	<input type="checkbox"/>
Validator/Verifier – trainee	<input checked="" type="checkbox"/>	Financial Expert	<input type="checkbox"/>
Technical Reviewer	<input type="checkbox"/>	Local Expert	<input type="checkbox"/>
<b>Area(s) of Technical Expertise</b>			
<b>Sectoral Scope</b>		<b>Technical Area</b>	
-		-	
Approved by (Manager C & T)		Sanjay Kandari	
Approval date:		07/12/2020	

### Appendix 3. Documents reviewed or referenced

No	Author	Title	References to the document	Provider
1.	CME	Revised PoA-DD	Version 23.3, dated 26/02/2021	CME
2.	CME	Specific revised CPA-DD of CPA reference no. (7359-P1-0052-CP1)	Version 10, dated 05/02/2021	
3.	DNV	PoA validation report for the Reduction of emission from non-renewable fuel from cooking at household level in Ethiopia, Kenya, Madagascar, Malawi, Mozambique, Nigeria, Uganda and Zambia dated 30/11/2012	dated 30/11/2012	Publicly available
4.	KBS	PoA Validation report version 02 on the PRC ref PRC-7359-005	-	
5.	Carbon Check	Validation reports for Specific CPA-DD of CPA reference no. (7359-0052).	-	
6.	LGAI	Validation reports for Specific CPA-DD of CPA reference no. (7359-0060 and 7359-0061, )	-	
7.	UNFCCC	AMS-I.E., Switch from Non-Renewable Biomass for Thermal Applications by the User	Version 04	Publicly available
8.	UNFCCC	Kyoto Protocol (1997)	<a href="#">Web link</a>	Publically available
9.	UNFCCC	CDM validation and verification standard for programmes of activities	Version 02.0	Publicly available
10.	UNFCCC	CDM project standard for programmes of activities	Version 02.0	Publically available
11.	UNFCCC	Glossary “CDM terms”	Version 10	Publically



				available
12.	UNFCCC	Standard “Sampling and surveys for CDM project activities and programme of activities”	Version 08.0	Publicly available
13.	UNFCCC	Guidelines for sampling and surveys for CDM project activities and programme of activities	Version 04.0	Publicly available
14.	UNFCCC	Component project activity design document form (CDM-CPA-DD-FORM)	Version 09	UNFCCC
15.	CDM EB	Instructions for completing the CDM-CPA-DD-FORM	Part of CPA-DD template (CDM-CPA-DD-FORM), version 09	CDM EB

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

Table 1. CLs from this validation

CL ID	Section no.	-	Date:
<b>Description of CL</b>			
<b>CME response</b>			<b>Date:</b>
<b>Documentation provided by the CME</b>			
<b>DOE assessment</b>			<b>Date:</b>

Table 2. CARs from this validation

CAR ID	01	Section no.	D.1, D.3	Date: 16/12/2020
<b>Description of CAR</b>				
1. The font style and size shall be consistent throughout in the CPA-DD. 2. Under section B.1 of all the CPA-DD, CME shall mention “Any other methodologies or methodological tools to which the selected methodologies refer”. (As per the CPA-DD Form template instructions.). Also, mention the version of the methodology applied.				
<b>CME’s response</b>				<b>Date: 17/12/2020</b>
1. The font has been corrected. The CPA DD is now using the font “Arial 10” throughout the documents. 2. The methodology does not refer to any methodical tools. The methodology AMS I.E version 04 does however refer to two general guidelines. The CPA DD has been updated to refer to these two general guidelines, which might be perceived as “Methodical tools”.				
<b>Documentation provided by CME</b>				
CPA DDs				
<b>DOE assessment</b>				<b>Date: 18/12/2020</b>

1. The font style and size is now consistent throughout the CPA-DD. Hence, the finding is closed.
2. The version of the methodology applied and the guidelines used have been now mentioned in the revised CPA-DD. Hence, the finding is closed

<b>CAR ID</b>	02	<b>Section no.</b>	D.3	<b>Date:</b> 16/12/2020
<b>Description of CAR</b>				
<ol style="list-style-type: none"> <li>1. Under section A.3 of the CPA-DD titled "CPA- NI-003-Nigeria 7359-P1-0052-CP1", CME shall mention technical specifications of pumps (capacity etc.) that will be installed as per the Project Standard for Programme of Activities (PS-PoA), version 2.0, paragraph 159(e) which requires the CME to provide information about the technologies/measures to be employed and/or implemented by the CPA when describing the CPA.</li> <li>2. Under section B.4.4 of the CPA-DD titled "CPA- NI-003-Nigeria 7359-P1-0052-CP1", CME shall mention the total estimated baseline emissions.</li> </ol>				
<b>CME's response</b>				<b>Date:</b> 22/12/2020
<ol style="list-style-type: none"> <li>1. The guidelines for filling out Section A.3 of the CPA DD specify that "Do not provide information that is not essential to understanding the purpose of the CPA and how it reduces GHG emissions." How the water is purified, the installed capacity etc, is of course not relevant to understand the purpose of the CPA and how the CPA reduces GHG emissions.  Some additional information has however been provided so as to make the qualified reader understand how the CPA reduce GHG emissions. This included the technical description of the hand pump used for the community based water supply solutions.</li> <li>2. Section B.4.4 has been updated /corrected to provide total estimated baseline emission</li> </ol>				
<b>Documentation provided by CME</b>				
PoA DD CPA DD Technical descriptions of the deployed hand pump for the community based water supply systems.				
<b>DOE assessment</b>				<b>Date:</b> 22/12/2020
<ol style="list-style-type: none"> <li>1. The validation team confirms that the technical specifications of hand pumps have been now mentioned in section A.3 of the revised CPA-DD. Hence, the finding is closed.</li> <li>2. The total baseline emissions have been now mentioned in the revised CPA-DD. Hence the finding is closed.</li> </ol>				

Table 3. FARs from this validation

<b>FAR ID</b>	Xx	<b>Section no.</b>		<b>Date:</b> DD/MM/YYYY
<b>Description of FAR</b>				
<b>CME's response</b>				<b>Date:</b> DD/MM/YYYY
<b>Documentation provided by CME</b>				
<b>DOE assessment</b>				<b>Date:</b> DD/MM/YYYY

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**Document information**

<i>Version</i>	<i>Date</i>	<i>Description</i>
02.0	31 May 2019	Revision to: <ul style="list-style-type: none"><li>• Ensure consistency with version 02.0 of the “CDM validation and verification standard for programmes of activities” (CDM-EB93-A08-STAN);</li><li>• Make editorial improvements.</li></ul>
01.0	29 December 2017	Initial publication.

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Decision Class: Regulatory  
Document Type: Form  
Business Function: Registration  
Keywords: post-registration change, component project activity, validation report

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