

# SSC CPA VALIDATION REPORT

**atmosfair gGmbH**

**CPA Number and Title:**

**CPA # 1 IMPROVED COOKING STOVES FOR NIGERIA**

**PoA Title:**

**IMPROVED COOKING STOVES FOR NIGERIA  
PROGRAMME OF ACTIVITIES**

**Report No: 8000389449 – 10/501 – CPA001**

**Date: 2011-11-07**

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<b>Validation Report:</b>	<b>Report No.</b>	<b>Rev. No.</b>	<b>Date of 1<sup>st</sup> issue:</b>	<b>Date of this rev.</b>
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<b>Client:</b>	<b>atmosfair gGmbH</b>	<b>Client ref.:</b>	Mr. Florian Zerzawy	
<b>Project: PoA-DD</b>	<b>Title:</b>	<b>Initial Version:</b>	<b>Final Version</b>	
	Improved Cooking Stoves for Nigeria Programme of Activities	1	2.3	
<b>Generic CPA-DD</b>	CPA # [xxx] Improved Cooking Stoves for Nigeria	1	2.1	
<b>Real Case CPA-DD</b>	CPA # 1 Improved Cooking Stoves for Nigeria	1	2.1	
<b>Involved Parties</b>	<b>Host party:</b>	<b>Other involved parties:</b>		
	Nigeria	-		
<b>CME and Project Participants</b>	<b>Involved Entities/ Roles</b>	<b>CME:</b>	<b>Project Participant:</b>	
	Atmosfair gGmbH	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Applied methodology(ies):</b>	<b>Title:</b>	<b>Version No.:</b>	<b>Scope:</b>	<b>Approved for PoA:</b>
	AMS II.G – Energy efficiency measures in thermal applications of non-renewable biomass	Version 03	3	<input checked="" type="checkbox"/>
<b>Validation team / Technical Review and Final Approval</b>	<b>Validation Team:</b>	<b>Technical review:</b>	<b>Final approval:</b>	
	Jun Wang (TL), Ulrich Walter (TE),	Stefan Winter Christina Stöhr	Stefan Winter	
<b>Real Case Details</b>	<b>Expected emission reductions over the first crediting period:</b>	<b>CPA Crediting Period:</b>	<b>Expected PoA starting date:</b>	
	89,123 t CO <sub>2e</sub>	10 years	2012-01-01	
<b>Summary</b>	<input checked="" type="checkbox"/> <i>Positive validation opinion</i>	<input type="checkbox"/> <i>Negative validation opinion</i>		
<b>Summary of Validation Opinion:</b>	<p>Atmosfair gGmbH has commissioned the TÜV NORD JI/CDM Certification Program (CP) to validate the CPA “CPA # 1 Improved Cooking Stoves for Nigeria”, under the corresponding programme of activities (PoA): “Improved Cooking Stoves for Nigeria Programme of Activities” with regard to the relevant requirements of the UNFCCC for CDM project activities, as well as criteria for consistent project operations, monitoring and reporting. UNFCCC criteria include article 12 of the Kyoto Protocol, the modalities and procedures for CDM (Marrakech Accords) and the relevant decisions by COP/MOP and CDM Executive Board.</p> <p>In the course of the validation 4 Corrective Action Requests (CARs) and 1 Clarification Requests (CLs) were raised and all have been successfully closed.</p> <p>The review of the CPA-DD and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and review of comments by parties, stakeholders and NGOs have provided TÜV NORD JI/CDM CP with sufficient evidence to validate the fulfilment of the stated criteria. In detail the conclusions can be summarised as follows:</p> <ul style="list-style-type: none"> <li>- The project is in line with all relevant host country criteria (Nigeria) as well as all relevant eligibility criteria of the PoA to which it shall be included. The CPA approvals have been obtained from DNA of Nigeria vide the Letter of Approval (HCA) dated 2010-12-18.</li> <li>- The baseline has been appropriately identified as per the applied methodology.</li> <li>- The framework for determination project additionality is sufficiently justified in the CPA-DD in line with POA-DD and generic CPA-DD.</li> <li>- All eligibility criteria established for CPA inclusion in the PoA-DD have been sufficiently fulfilled with appropriate evidence.</li> <li>- The monitoring plan is transparent and adequate.</li> <li>- The calculation of the emission factors and CPA emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 89,123tCO<sub>2e</sub> are most likely to be achieved within the crediting period.</li> <li>- Information on the local stakeholders’ consultation by the project participants is done at PoA level.</li> <li>- Information on the environmental impact analysis is done at PoA level.</li> <li>- The CPA “CPA # 1 Improved Cooking Stoves for Nigeria” shall be included in the PoA “Improved Cooking Stoves for Nigeria Programme of Activities”.</li> </ul>			
<b>Document information:</b>	Filename: 2011-10-17 CPA FVR_Nigeria			No. of pages: 80

## Abbreviations

<b>BAU</b>	Business as usual
<b>CA</b>	Corrective Action / Clarification Action
<b>CAR</b>	Corrective Action Request
<b>CDM</b>	Clean Development Mechanism
<b>CER</b>	Certified Emission Reduction
<b>CL</b>	Clarification Request
<b>CME</b>	Coordinating and Managing Entity
<b>CO<sub>2</sub></b>	Carbon dioxide
<b>CO<sub>2e</sub></b>	Carbon dioxide equivalent
<b>CP</b>	Certification Program
<b>CPA</b>	CDM Programme Activity
<b>CPA-DD</b>	CDM programme Activity Design Document
<b>DD</b>	Design document
<b>DNA</b>	Designated National Authority
<b>DOE</b>	Designated Operational Entities
<b>EB</b>	CDM Executive Board
<b>EC</b>	Eligibility criteria
<b>EIA</b>	Environmental Impact Assessment
<b>FAO</b>	Food and Agriculture Organization
<b>FAR</b>	Forward Action Request
<b>GHG</b>	Greenhouse gas(es)
<b>GPS</b>	Global Positioning system
<b>HH</b>	Household
<b>ICS</b>	Improved cooking stove
<b>ID</b>	Identification
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>LGA</b>	Local Government Area
<b>NRB</b>	Non-renewable biomass
<b>ODA</b>	Official Development Assistance
<b>PDDs</b>	(CDM PoA and CPA) Design Documents
<b>PoA</b>	Programme of Activities
<b>PoA-DD</b>	CDM Programme of Activities Design Document
<b>QC/QA</b>	Quality control/Quality assurance
<b>SSC</b>	Small-scale program
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>VVM</b>	Validation and Verification Manual
<b>WBT</b>	Waterboiling Test

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## 1 OBJECTIVE / SCOPE

The purpose of a CPA validation is to have an independent third party / Designated Operational Entity (DOE) assess the specific CPA-DD to be included in a PoA. In particular, the DOE shall scrutinize the information in the CDM-CPA-DD to assess compliance with the eligibility criteria and criteria for demonstrating additionality established by the PoA, to check the correct application to the applied methodology(ies) and to check compliance with documentation requirements for CPAs. If consistency/integrity is confirmed, it includes the proposed CPA in the registered PoA.

Besides, the DOE shall always take into consideration the project's baseline, the monitoring plan (MP), and the project's compliance with

- the requirements set forth in the most recent versions of the CDM Rules, including the requirements of Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords under decision 3/CMP.1 the subsequent decisions by the CMP, and any relevant documents released by the CDM Executive Board (the “**EB**”) and available on the UNFCCC CDM website at <http://unfccc.int> (the aforementioned requirements together the “CDM Requirements”);
- Clean Development Mechanism Validation and Verification Manual (current version 01.2; EB55 Annex 1, esp. para 165 – 168) (the “VVM”)
- Procedures for registration of a programme of activities as a single CDM project activity and issuance of certified emission reductions for a programme of activities (current version 04.1, EB 55 Annex 38) (the “PoA Procedures”);
- Procedures for review of erroneous inclusion of a CPA (current version 02, EB 55 Annex 37) (the “CPA Review Procedures”)
- Guidance for determining the occurrence of de-bundling under a programme of activities (PoA) (current version 03, EB54 Annex 13) (the “De-bundling Guidance”)
- Procedures for approval of the application of multiple methodologies to a programme of activities (current version 01; EB 47 Annex 31) (the “Multi-Meth Approval Procedures”);
- General guidelines for sampling and surveys for SSC project activities (current version 01, EB50 Annex 30) (the “Sampling Guidelines”)
- Guidelines on Project Design Documents (PDDs) on <http://cdm.unfccc.int/Reference/Guidclarif/pdd/index.html>
- the host country legislation and sustainability criteria as applicable under the CDM-related laws and regulations of the country in which the PoA and CPAs

are physically located;

are validated in order to confirm that the CDM programme activity design as documented is sound and reasonable and meets the stated requirements and identified eligibility criteria in the corresponding PoA-DD and generic CPA-DD. Validation is seen as necessary to provide assurance to stakeholders on the quality of the CPA and its intended generation of certified emission reductions (CERs).

The validation scope is given as a thorough independent and objective assessment of the CPA design, information that are included in the PDDs and other relevant supporting documents, to ensure that the proposed CDM programme activity meets all relevant and applicable CDM and PoA criteria.

As per the PoA procedures, TÜV NORD will validate the following documentation as provided by the client:

- a completed CDM-CPA-DD which is to be based on the application of the PoA to real case (the "**CPA-DD**").

TÜV NORD validates the CPA-DD with regard to

- consistency with the PoA-DD;
- consistency with the generic CPA-DD;
- additionality;
- eligibility criteria fulfilment;
- emission reduction calculation;
- monitoring plan;
- environmental impacts;
- local stakeholder commenting process.

The information included in the CPA-DD and the supporting documents were reviewed against the requirements as set out by the UNFCCC. The validation team has, based on the requirements in the Validation and Verification Manual<sup>VVM</sup>, carried out a full assessment of all evidence to assess the compliance of the CPA with the key areas as outlined in section V.E. and V.F. of the VVM (version 1.2, EB 55 Annex 1).

The validation is based on the information made available to TÜV NORD JI/CDM CP and on the contract conditions. TÜV NORD JI/CDM CP cannot be held liable by any entity for making its validation opinion based on any false or misleading information supplied to it during the course of validation.

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

## 2 GHG CPA DESCRIPTION

### 2.1 CPA Characteristics

Essential data of the project is presented in the following Table 2-1.

**Table 2-1:** CPA Characteristics

Item	Data	
CPA number and title (version and date)	CPA # 1 Improved Cooking Stoves for Nigeria (version 2.1, 2011-10-24)	
PoA title (version and date)	Improved Cooking Stoves for Nigeria Programme of Activities (version 2.3, 2011-10-24)	
PoA registration number (if applicable):	Not applicable	
Generic CPA title (version and date)	CPA # [xxx] Improved Cooking Stoves for Nigeria (Version 2.1., 2011-10-24)	
CPA size	<input type="checkbox"/> Large Scale <input checked="" type="checkbox"/> Small Scale	
CPA Scope (according to UNFCCC sectoral scope numbers for CDM)	<input type="checkbox"/> 1 Energy Industries (renewable- /non-renewable sources)	
	<input type="checkbox"/> 2 Energy distribution	
	<input checked="" type="checkbox"/> 3 Energy demand	
	<input type="checkbox"/> 4 Manufacturing industries	
	<input type="checkbox"/> 5 Chemical industry	
	<input type="checkbox"/> 6 Construction	
	<input type="checkbox"/> 7 Transport	
	<input type="checkbox"/> 8 Mining/Mineral production	
	<input type="checkbox"/> 9 Metal production	
	<input type="checkbox"/> 10 Fugitive emissions from fuels (solid, oil and gas)	
	<input type="checkbox"/> 11 Fugitive emissions from production and consumption of halocarbons and hexafluoride	
	<input type="checkbox"/> 12 Solvents use	
	<input type="checkbox"/> 13 Waste handling and disposal	
	<input type="checkbox"/> 14 Afforestation and Reforestation	
	<input type="checkbox"/> 15 Agriculture	
Applied Methodology(ies) and version	AMS II.G: Energy efficiency measures in thermal applications of non-renewable biomass Version. 03	
PoA Duration	28 years	
Start date of the PoA (or registration date)	2012-01-01 (or on the date of registration, whichever is later)	
End date of the PoA	2039-12-31 or PoA registration date plus 28 years, whichever is later	
PoA-DD GSCP date	2010-11-20	
Starting date of the CPA	2011-03-29	
CPA Crediting period	<input type="checkbox"/> Renewable Crediting Period (7 y) <input checked="" type="checkbox"/> Fixed Crediting Period (10 y)	
Start of crediting period of the CPA	2011-03-29 or the date of inclusion whichever is later	
End of 1 <sup>st</sup> crediting period of the CPA	2021-03-28 or Inclusion date plus 10 years whichever is later	
Estimated metric tCO <sub>2e</sub> reductions of the CPA over the first crediting period	Annual average	8,912 tCO <sub>2e</sub>
	Total estimation over the 1 <sup>st</sup> crediting period	89,123 tCO <sub>2e</sub>

## 2.2 Involved Parties, Coordinating / managing entity(ies), program participants of the POA and operators of individual CPAs

The following parties to the Kyoto Protocol and project participants are involved in this PoA (Table 2-2).

**Table 2-2-1: Parties, CME and Project Participants of the PoA**

Name of Party Involved ((host) indicates a host party)	Private and/or Public Entity(ies) Project Participants ((CME) indicates the Coordinating and Managing Entity)	Does Party Involved Wish to be Considered as Project Participant (Yes/No)
Nigeria (host)	Atmosfair gGmbH (CME)	No

**Table 2-2-2: Operator(s) of individual CPA(s)**

CPA No.	CPA title	Operator Name	Contact details
CPA 001	CPA # 1 Improved Cooking Stoves for Nigeria	Atmosfair gGmbH	Florian Zerzawy, Address: Zossener Straße 55, 10961 Berlin, Germany Tel.: +49-30-6273550-21 Email: zerzawy@atmosfair.de

## 2.3 CPA Boundary and Location

The details of the CPA location(s) are given in table 2-3:

**Table 2-3-1: CPA Location(s)**

No.	CPA Location(s)
CPA number and title:	CPA # 1 Improved Cooking Stoves for Nigeria
Host Country(ies):	Nigeria
Region(s):	All regions in Nigeria
Geographic reference (in case of stationary CPA)	-
Other means of identification (in case of mobile CPAs, such as registration number, GPS devices)	Codes used for this CPA: 1. atm - Serial number 2. [PoA registration number] - Serial number

## 2.4 CPA Technical Description

Under this CPA, maximum 3,200 stoves will be deployed across Nigeria to households per year.

Validation Report:

**CPA Title:** CPA # 1 Improved Cooking Stoves for Nigeria

**PoA Title:** Improved Cooking Stoves for Nigeria Programme of Activities

TÜV NORD CERT GmbH JI/CDM Certification Program

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The technical key data for the project stoves included in the Specific CPA are provided in table 2-4 below

**Table 2-4:** Technical data of one model of the 1<sup>st</sup> CPA

Model	Parameter	Unit	Value
Save80A	Specified thermal efficiency	%	52
	Large Pot capacity	litre	8
	Small Pot Capacity	litre	5
	Net Weight	kg	4.5
	Height	mm	615
	Material	-	Stainless Steel
	Manufacturer	-	KOCH Anhängerwerke GmbH & Co. KG

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### 3 METHODOLOGY AND VALIDATION SEQUENCE

#### 3.1 Validation Steps

The validation of the CPA consists of the following steps:

- Contract review
- Appointment of team members and technical reviewers
- Publication of the following project documents
  - The completed **CPA-DD**
- A desk review of the finalized PoA-DD, generic CPA-DD and the proposed CPA-DD<sup>/PDDs/</sup> submitted by the client and additional supporting documents with relevant information to be included in the PoA and with the use of customised validation protocol<sup>/CPM/</sup> according to the Validation and Verification Manual<sup>/VVM/</sup>, and all PoA related regulations<sup>/POAR/</sup>
- Validation planning,
- On-Site assessment,
- Background investigation and follow-up interviews with personnel of the project developer and its contractors,
- Draft validation reporting
- Resolution of corrective actions (if any)
- Final validation reporting
- Technical review
- Final approval of the validation.

The sequence of the validation is given in the table 3-1 below:

**Table 3-1:** Validation sequence

Topic	Time
Assignment of validation	2010-08-11
Publication of POA-DDs for GSCP	2010-11-20
On-site visit	2011-03-26 to 2011-04-01
Draft reporting finalised	2011-04-04
Final reporting finalised	2011-11-07
Technical review on final reporting finalised	2011-11-07

#### 3.2 Contract review

To assure that

- the CPA falls within the scopes for which accreditation is held,
- the necessary competences to carry out the validation can be provided,
- Impartiality issues are clear and in line with the CDM accreditation requirements

a contract review was carried out before the contract was signed.

### 3.3 Appointment of team members and technical reviewers

On the basis of a competence analysis and individual availabilities a validation team, consistent of one team leader and 1 additional team members, were appointed. Furthermore also the personnel for the technical review and the final approval were determined.

The list of involved personnel, the tasks assigned and the qualification status are summarized in the table 3-2 below.

**Table 3-2:** Involved Personnel

	Name	Company	Function <sup>1)</sup>	Qualification Status <sup>2)</sup>	Scheme competence <sup>3)</sup>	Technical competence <sup>4)</sup>	Host country Competence	On-site visit
<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Wang, Jun	TÜV NORD CERT GmbH	TL	LA	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Walter, Ulrich	TÜV NORD CERT GmbH	TM <sup>A)</sup>	A	<input checked="" type="checkbox"/>	3.1	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Ellen Goel	TUV NORD Middle East	OT <sup>B)</sup>	T	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Ikokwu, Azuka	TÜV NORD CERT GmbH	-	External Expert	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Stöhr, Christina	TÜV NORD CERT GmbH	TR <sup>B)</sup>	A	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Winter, Stefan	TÜV NORD CERT GmbH	TR/FA <sup>B)</sup>	SA	<input checked="" type="checkbox"/>	3.1	<input type="checkbox"/>	-

<sup>1)</sup> TL: Team Leader; TM: Team Member, TR: Technical review; OT: Observer-Team, OR: Observer-TR; FA: Final approval

<sup>2)</sup> GHG Auditor Status: A: Assessor; LA: Lead Assessor; SA: Senior Assessor; T: Trainee; TE: Technical Expert

<sup>3)</sup> GHG auditor status (at least Assessor)

<sup>4)</sup> As per S01-MU03 or S01-VA070-A2 (such as 1.1, 1.2, ...)

<sup>5)</sup> In case of verification projects

A) Team Member: GHG auditor (at least Assessor status), Technical Expert (incl. Host Country Expert or Verification Expert), not ETE

B) No team member

Certificates of appointment for the above mentioned team members are enclosed in annex 7 of this report.

### **3.4 Consideration of Public (Local and Global) Stakeholder Comments**

#### Global stakeholder consultation process

According to the modalities and procedures the draft CPA-DD, as received from the project participants, has been made publicly available on the dedicated UNFCCC website prior to the validation activity commenced. Stakeholders have been invited to comment on the PDD within the 30 days public commenting period.

In case comments were received, they are taken into account during the validation process. The comments and the discussion of the same are documented in annex 5 of this report.

#### Local stakeholder consultation process

As per Glossary of CDM Terms (version 05), stakeholders mean the public, including individuals, groups or communities affected, or likely to be affected, by the proposed CDM project activity or actions leading to the implementation of such an activity.

According to VVM (version 1.2) para –128 - 130, information on the local stakeholders consultation (if this information is not provided at PoA level) shall be provided to DOE by coordinating/managing entity and participants of PoA prior to submitting the CDM programme activity for inclusion including the timing. By means of document review and interviews with local stakeholders as appropriate, TÜV NORD will describe the steps taken to assess the adequacy of the local stakeholder consultation and state the DOE's opinion.

### **3.5 Validation Protocol**

In order to ensure consideration of all relevant assessment criteria, a validation protocol is used. The protocol shows, in a transparent manner, criteria and requirements, means of validation and the results from pre-validating the identified criteria. The validation protocol reflects the generic CDM requirements as well as PoA and CPA specific issues which have to be met by the PoA and those to be included CPAs. The validation protocol serves the following purposes:

- It organises, details and clarifies the requirements that a CPA is expected to meet;
- It ensures a transparent validation process where the validating entity will document how a particular requirement has been validated and the result of the determination.

The validation protocol as described in Figure 1.

<b>Validation Protocol Table A-1: Requirement checklist</b>				
<b>Checklist Item</b>	<b>Validation Team Comment</b>	<b>Reference</b>	<b>Draft Conclusion</b>	<b>Final Conclusion</b>
<i>The checklist items in Table A-1 are linked to the various requirements the CPA should meet. The checklist is organised in various sections. Each section is then further sub-divided as per the requirements of the topic and the individual project activity.</i>	<i>The section is used to elaborate and discuss the checklist item in detail. It includes the assessment of the validation team and how the assessment was carried out. The reporting requirements of the VVM and PoA relevant Procedures shall be covered in this section.</i>	<i>Gives reference to the information source on which the assessment is based on</i>	<i>Assessment based on evidence provided if the criterion is fulfilled (OK), or a CAR, CL or FAR (see below) is raised. The assessment refers to the draft validation stage.</i>	<i>In case a corrective action or a clarification the final assessment at the final validation stage is given.</i>

**Figure 1:** Validation protocol tables

The completed validation protocol is enclosed in Annex 1 to this report.

### 3.6 Review of Documents

The published CPA-DD (version 1) and supporting background documents related to the CDM programme activity design and baseline were reviewed.

Furthermore, the validation team used additional documentation by third parties like host party legislation, technical reports referring to the CDM programme activity design or to the basic conditions and technical data.

### 3.7 Follow-up Interviews

The validation team has carried out interviews in order to assess the information included in the CPA-DD and to gain additional information regarding the compliance of the CPA with the relevant criteria identified in the corresponding PoA-DD and generic CPA-DD.

During validation the validation team has performed interviews to confirm selected information and to resolve issues identified in the document review. The main topics of the interviews are summarized in table 3-3.

**Table 3-3:** Interviewed persons and interview topics

<b>Interviewed Persons / Entities</b>	<b>Interview topics</b>
Project Participants (PPs), Cooperating Managing Entity (CME),	- Chronological description of the CDM programme activity with documents of key steps of the implementation.

Interviewed Persons / Entities	Interview topics
CPA operators representatives Project consultants	<ul style="list-style-type: none"> <li>- Current status of CPA design</li> <li>- Technical details of the CPA realization, feasibility, designing, operational life time and monitoring</li> <li>- Approval procedures and status</li> <li>- Monitoring and measurement equipment and system</li> <li>- Financial aspects</li> <li>- Crediting period</li> <li>- CPA starting date</li> <li>- CER allocation / ownership</li> <li>- Baseline study assumptions</li> <li>- Additionality</li> <li>- Sustainable development issues</li> <li>- Monitoring of CPAs</li> <li>- Analysis of local stakeholder consultation</li> <li>- Roles &amp; responsibilities of the project participants w.r.t. CPA management, monitoring and reporting</li> <li>- National Legislation</li> <li>- Editorial issues of the CPA-DD</li> </ul>

A comprehensive list of all interviewed persons is part of section 7 'References'.

### 3.8 Project comparison

The validation team has compared the proposed CPA with similar PoA or CDM projects in which technology have similar or comparable characteristics and with similar projects in the host country in order to achieve additional information esp. regarding:

- CPA technology
- Additionality issues

### 3.9 Resolution of Clarification and Corrective Action Requests

#### 3.9.1 Definition

A **Corrective Action Request (CAR)** will be established where:

- mistakes have been made in assumptions, application of the methodology or the CPA documentation which will have a direct influence on the CPA results,
- the requirements deemed relevant for validation of the CPA with certain characteristics have not been met or
- there is a risk that the CPA would not be registered by the UNFCCC or that emission reductions would not be able to be verified and certified.

A **Clarification Request (CL)** will be issued where information is insufficient, unclear or not transparent enough to establish whether a requirement is met.

A **Forward Action Request (FAR)** will be issued when certain issues related to CPA implementation should be reviewed during the first verification of the CPA.

### **3.9.2 Draft Validation**

After reviewing all relevant documents and taken all other relevant information into account, the validation team issues all findings in the course of a draft validation report and hands this report over to the project participants in order to respond on the issues raised and to revise the CPA documentations accordingly.

### **3.9.3 Final Validation**

The final validation starts after receiving the proposed corrective actions (CAs) to the CARs, CLs and FARs from the project participant. The project participant has to reply on all CARs, CLs and FARs and the requests are “closed out” by the validation team in case the response is assessed as sufficient. In case of raised FARs the project participant has to respond on this, identifying the necessary actions to ensure that the topics raised in this finding are likely to be resolved at the latest during the first verification of the CPA. The validation team has to assess whether the proposed action is adequate or not.

In case the findings from CARs and CLs cannot be resolved by the project participant or the proposed action related to the FARs raised cannot be assessed as adequate, no positive validation opinion can be issued by the validation team.

The CAR(s) / CL(s) / FAR(s) are documented in chapter 4.

## **3.10 Technical review / Internal quality control**

Before submission of the final validation report a technical review of the whole validation procedure is carried out. The technical reviewer is a competent GHG auditor being appointed for the scope this CPA falls under. The technical reviewer is 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 validation opinion and the topic specific assessments as prepared by the validation team leader may be confirmed or revised. Furthermore reporting improvements might be achieved.

## **3.11 Final approval**

After successful technical review of the final report an overall (esp. procedural) assessment of the complete validation will be carried out by a senior assessor located in the accredited premises of TÜV NORD.

Only after this step the request for registration can be started (in case of a positive validation opinion).

## 4 VALIDATION FINDINGS

In the following table the findings from the desk review of the published POA-DDs, visits, interviews and supporting documents are summarised:

**Table 4-1:** Summary of CARs, CLs and FARs issued

Validation topic <sup>1)</sup>	No. of CAR	No. of CL	No. of FAR
<b>CPA-DD</b>			
<b>Overall Consistency with the finalized PoA-DD and generic CPA-DD</b>	<b>1</b>	<b>0</b>	<b>0</b>
General description of the CPA (CPA-A) <ul style="list-style-type: none"> <li>- CPA title and description</li> <li>- Entity/individual responsible for the CPA</li> <li>- Technical description of the PoA</li> <li>- CPA boundary and locations</li> <li>- Duration of the CPA</li> <li>- Public funding of the CPA</li> <li>- De-bundling of SSC CPA</li> <li>- Confirmation of no double counting</li> <li>- POA-DD editorial and consistency aspects</li> </ul>	1	1	0
Eligibility of CPA and Estimation of Emission Reductions (CPA-B) <ul style="list-style-type: none"> <li>- Title and Reference of the PoA</li> <li>- Eligibility criteria for CPA inclusion</li> <li>- Additionality demonstration of a CPA</li> <li>- Sources and gases within the CPA boundary</li> <li>- Emission reductions calculation of a CPA</li> <li>- Equations, ex-ante parameters</li> <li>- Emission factors</li> <li>- To be reported CPA data and parameters</li> <li>- Monitoring Methodology and Monitoring Plan</li> <li>- To be monitored CPA data and parameters</li> <li>- CPA monitoring plan</li> </ul>	2	0	0
Environmental Analysis (CPA-C) <ul style="list-style-type: none"> <li>- Level of choice</li> <li>- Environmental impact analysis documentation</li> <li>- EIA requirements</li> </ul>	0	0	0

Validation Report:

**CPA Title:** CPA # 1 Improved Cooking Stoves for Nigeria

**PoA Title:** Improved Cooking Stoves for Nigeria Programme of Activities

TÜV NORD CERT GmbH JI/CDM Certification Program

P-No.: 8000389449 - 10/501 – CPA001



<b>Validation topic <sup>1)</sup></b>	<b>No. of CAR</b>	<b>No. of CL</b>	<b>No. of FAR</b>
Stakeholder Comments (CPA-D) <ul style="list-style-type: none"><li>- Level of choice</li><li>- Means of inviting and compiling local stakeholder comments</li><li>- Summary of comments received</li><li>- Report on due account taken</li></ul>	0	0	0
Annexes (CPA-An) <ul style="list-style-type: none"><li>- Annex 1: Contact information on entity/individual responsible for the CPA</li><li>- Annex 2: Information regarding public funding</li><li>- Annex 3: Baseline information</li><li>- Annex 4: Monitoring plan</li></ul>	0	0	0
<b>Sum</b>	<b>4</b>	<b>1</b>	<b>0</b>

<sup>1)</sup> The letters in brackets refer to the validation protocol

The following tables include all raised CARs, CLs and FARs. For an in depth evaluation of all validation items it should be referred to the validation protocols (see Annex 1).

The findings of validation process are summarized in the tables below.



Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input checked="" type="checkbox"/> generic CPA-DD	<input checked="" type="checkbox"/> real case CPA-DD																																																																																
Finding	rCPA-1	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL <input type="checkbox"/> FAR																																																																																
<p><b>Description of finding</b>  <i>Describe the finding in unambiguous style; address the context (e.g. section)</i></p>	<p>The information in the finalized PoA-DD and the finalized generic CPA-DD are not consistent in regard to the following sections:</p> <table border="1"> <thead> <tr> <th>Real case CPA-DD</th> <th>Generic CPA-DD</th> <th>Finalized PoA-DD</th> </tr> </thead> <tbody> <tr><td>A.1.</td><td>A.1.</td><td>A.1</td></tr> <tr><td>A.2.</td><td>A.2.</td><td>A.2. and A.4.2.1.</td></tr> <tr><td>A.3.</td><td>A.3.</td><td>A.3.</td></tr> <tr><td>A.4.1.1.</td><td>A.4.1.1.</td><td>A.4.1.1.</td></tr> <tr><td>A.4.1.2.</td><td>A.4.1.2.</td><td>A.4.1.2.</td></tr> <tr><td>A.4.2.1.</td><td>A.4.2.1.</td><td>*Not prior to GSP of PoA-DD</td></tr> <tr><td>A.4.2.2.</td><td>A.4.2.2.</td><td>-</td></tr> <tr><td>A.4.3.1.</td><td>A.4.3.1.</td><td>B.1.</td></tr> <tr><td>A.4.3.2.</td><td>A.4.3.2.</td><td>B.2.</td></tr> <tr><td>A.4.4.</td><td>A.4.4.</td><td>-</td></tr> <tr><td>A.4.5.</td><td>A.4.5.</td><td>A.4.5.</td></tr> <tr><td>A.4.6.</td><td>A.4.6.</td><td rowspan="2">A.4.4. and A.4.4.1.</td></tr> <tr><td>A.4.7.</td><td>A.4.7.</td></tr> <tr><td>B.1.</td><td>B.1.</td><td>A.1</td></tr> <tr><td>B.2.</td><td>B.2.</td><td>A.4.2.2.</td></tr> <tr><td>B.3.</td><td>B.3.</td><td>A.4.3. , E.5. , E.5.1. and E.5.2.</td></tr> <tr><td>B.4.</td><td>B.4.</td><td>E.3.</td></tr> <tr><td>B.5.</td><td>B.5.</td><td>E.6.</td></tr> <tr><td>B.5.1.</td><td>B.5.1.</td><td>E.6.3.</td></tr> <tr><td>B.5.2.</td><td>B.5.2.</td><td>E.6.1. and E.6.2.</td></tr> <tr><td>B.5.3.</td><td>B.5.3.</td><td>-</td></tr> <tr><td>B.6.</td><td>B.6.</td><td>E.1. and E.2.</td></tr> <tr><td>B.6.1.</td><td>B.6.1.</td><td>E.7. , E.7.1., E.7.2. and A.4.4.2.</td></tr> <tr><td>C.1. to C.3</td><td>C.1. to C.3</td><td>C.1. to C.3</td></tr> <tr><td>D.1. to D.4.</td><td>D.1. to D.4.</td><td>D.1 to D.4.</td></tr> <tr><td>Annex 1 to Annex 4</td><td>Annex 1 to Annex 4</td><td>Annex 1 to Annex 4</td></tr> </tbody> </table>			Real case CPA-DD	Generic CPA-DD	Finalized PoA-DD	A.1.	A.1.	A.1	A.2.	A.2.	A.2. and A.4.2.1.	A.3.	A.3.	A.3.	A.4.1.1.	A.4.1.1.	A.4.1.1.	A.4.1.2.	A.4.1.2.	A.4.1.2.	A.4.2.1.	A.4.2.1.	*Not prior to GSP of PoA-DD	A.4.2.2.	A.4.2.2.	-	A.4.3.1.	A.4.3.1.	B.1.	A.4.3.2.	A.4.3.2.	B.2.	A.4.4.	A.4.4.	-	A.4.5.	A.4.5.	A.4.5.	A.4.6.	A.4.6.	A.4.4. and A.4.4.1.	A.4.7.	A.4.7.	B.1.	B.1.	A.1	B.2.	B.2.	A.4.2.2.	B.3.	B.3.	A.4.3. , E.5. , E.5.1. and E.5.2.	B.4.	B.4.	E.3.	B.5.	B.5.	E.6.	B.5.1.	B.5.1.	E.6.3.	B.5.2.	B.5.2.	E.6.1. and E.6.2.	B.5.3.	B.5.3.	-	B.6.	B.6.	E.1. and E.2.	B.6.1.	B.6.1.	E.7. , E.7.1., E.7.2. and A.4.4.2.	C.1. to C.3	C.1. to C.3	C.1. to C.3	D.1. to D.4.	D.1. to D.4.	D.1 to D.4.	Annex 1 to Annex 4	Annex 1 to Annex 4	Annex 1 to Annex 4
Real case CPA-DD	Generic CPA-DD	Finalized PoA-DD																																																																																	
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A.3.	A.3.	A.3.																																																																																	
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A.4.1.2.	A.4.1.2.	A.4.1.2.																																																																																	
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A.4.3.2.	A.4.3.2.	B.2.																																																																																	
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<p><b>Corrective Action #1</b>  <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i></p>	<p>Real case CPA-DD was updated according to the finalized PoA-DD, and information kept consistent as outlined above.</p>																																																																																		
<p><b>DOE Assessment #1</b>  <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i></p>	<p>The revised real case CPA-DD has been crosschecked with the finalized PoA-DD and the finalized generic CPA-DD. The conclusion is described in the table below:</p> <table border="1"> <thead> <tr> <th>Real case CPA-DD</th> <th>Generic CPA-DD</th> <th>Finalized PoA-DD</th> <th>Consistent and Appropriate</th> </tr> </thead> <tbody> <tr><td>A.1.</td><td>A.1.</td><td>A.1</td><td><input checked="" type="checkbox"/> Consistent</td></tr> <tr><td>A.2.</td><td>A.2.</td><td>A.2. and A.4.2.1.</td><td><input checked="" type="checkbox"/> Consistent</td></tr> <tr><td>A.3.</td><td>A.3.</td><td>A.3.</td><td><input checked="" type="checkbox"/> Consistent</td></tr> <tr><td>A.4.1.1.</td><td>A.4.1.1.</td><td>A.4.1.1.</td><td><input checked="" type="checkbox"/> Consistent</td></tr> </tbody> </table>			Real case CPA-DD	Generic CPA-DD	Finalized PoA-DD	Consistent and Appropriate	A.1.	A.1.	A.1	<input checked="" type="checkbox"/> Consistent	A.2.	A.2.	A.2. and A.4.2.1.	<input checked="" type="checkbox"/> Consistent	A.3.	A.3.	A.3.	<input checked="" type="checkbox"/> Consistent	A.4.1.1.	A.4.1.1.	A.4.1.1.	<input checked="" type="checkbox"/> Consistent																																																												
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A.4.1.1.	A.4.1.1.	A.4.1.1.	<input checked="" type="checkbox"/> Consistent																																																																																

Related DDs	<input checked="" type="checkbox"/> PoA-DD	<input checked="" type="checkbox"/> generic CPA-DD	<input checked="" type="checkbox"/> real case CPA-DD
Finding	rCPA-1	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL <input type="checkbox"/> FAR
A.4.1.2	A.4.1.2	A.4.1.2.	<input checked="" type="checkbox"/> Consistent
A.4.2.1.	A.4.2.1.	*Not prior to GSP of PoA-DD	<input checked="" type="checkbox"/> Appropriate
A.4.2.2.	A.4.2.2.	-	<input checked="" type="checkbox"/> Appropriate
A.4.3.1.	A.4.3.1.	B.1.	<input checked="" type="checkbox"/> Consistent
A.4.3.2.	A.4.3.2.	B.2.	<input checked="" type="checkbox"/> Consistent
A.4.4.	A.4.4.	-	<input checked="" type="checkbox"/> Appropriate
A.4.5.	A.4.5.	A.4.5.	<input checked="" type="checkbox"/> Consistent
A.4.6.	A.4.6.	A.4.4. and	<input checked="" type="checkbox"/> Consistent
A.4.7.	A.4.7.	A.4.4.1.	<input checked="" type="checkbox"/> Consistent
B.1.	B.1.	A.1	<input checked="" type="checkbox"/> Consistent
B.2.	B.2.	A.4.2.2.	<input checked="" type="checkbox"/> Consistent
B.3.	B.3.	A.4.3, E.5, E.5.1 and E.5.2.	<input checked="" type="checkbox"/> Consistent
B.4.	B.4.	E.3.	<input checked="" type="checkbox"/> Consistent
B.5.	B.5.	E.6.	<input checked="" type="checkbox"/> Consistent
B.5.1.	B.5.1.	E.6.3.	<input checked="" type="checkbox"/> Consistent
B.5.2.	B.5.2.	E.6.1. and E.6.2.	<input checked="" type="checkbox"/> Consistent
B.5.3.	B.5.3.	-	<input checked="" type="checkbox"/> Appropriate
B.6.	B.6.	E.1 and E.2.	<input checked="" type="checkbox"/> Consistent
B.6.1.	B.6.1.	E.7, E.7.1, E.7.2 and A.4.4.2.	<input checked="" type="checkbox"/> Consistent
C.1. to C.3	C.1. to C.3	C.1. to C.3	<input checked="" type="checkbox"/> Consistent
D.1. to D.4.	D.1. to D.4.	D.1 to D.4.	<input checked="" type="checkbox"/> Consistent
Annex 1 to Annex 4	Annex 1 to Annex 4	Annex 1 to Annex 4	<input checked="" type="checkbox"/> Consistent and Appropriate
<p>Thus finding rCPA-1 is successfully closed, all necessary information are consistent between the finalized POA-DD, the finalized Generic CPA-DD and the real case CPA-DD For detailed assessment please see Annex 1 of this report.</p>			
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements		

Related DDs	<input type="checkbox"/> PoA-DD	<input type="checkbox"/> generic CPA-DD	<input checked="" type="checkbox"/> real case CPA-DD
Finding	CPA-A1	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL <input type="checkbox"/> FAR
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The Average number of SAVE80systems deployed during the crediting period needs to be clearly evidenced.		
<b>Corrective Action #1</b> <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The number of SAVE80systems deployed during the crediting period has been adapted after the demonstration of additionality has been revised at PoA-level.		
<b>DOE Assessment #1</b> <i>The assessment shall</i>	The demonstration of additionality has been revised (as per		

Related DDs	<input type="checkbox"/> PoA-DD	<input type="checkbox"/> generic CPA-DD	<input checked="" type="checkbox"/> real case CPA-DD																						
<b>Finding</b>	<b>CPA-A1</b>	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL <input type="checkbox"/> FAR																						
<p>encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</p> <p>CAR PoA-A8 and CL PoA-A9) therefore the following parameters specified at CPA inclusion stage have been applied, using conservative assumptions:  <math>HH\_CAP = 8</math> (as per manufacture specification),  <math>\eta_{specified} = 52\%</math> (as per manufacture specification).            Monitoring parameters have also adopted conservative assumptions:  <math>N_{eaters,appliance} = 8 = HH\_CAP</math>,  <math>N_y</math> is defined as no more than 3,200 stoves for the CPA, and for 2012 only 50% will be deployed, in 2013 the rest 50% will be deployed, from 2013 onwards, every year with 5% drop-out rate of the previous year operational stoves, following table presents the estimated <math>N_y</math> during the monitoring period:</p> <table border="1"> <thead> <tr> <th>Period</th> <th>Average N° of SAVE80 systems deployed</th> </tr> </thead> <tbody> <tr><td>2012</td><td>1,600</td></tr> <tr><td>2013</td><td>3,120</td></tr> <tr><td>2014</td><td>2,964</td></tr> <tr><td>2015</td><td>2,816</td></tr> <tr><td>2016</td><td>2,675</td></tr> <tr><td>2017</td><td>2,541</td></tr> <tr><td>2018</td><td>2,414</td></tr> <tr><td>2019</td><td>2,293</td></tr> <tr><td>2020</td><td>2,179</td></tr> <tr><td>2021</td><td>2,070</td></tr> </tbody> </table> <p><math>DO_y = 5\%</math> (already considered for ex-ante assumption of <math>N_y</math> during the whole crediting period)  <math>\eta_{new} = 52\% = \eta_{specified} = 52\%</math> (as per manufacture specification).            The projects PDDs have been checked against the applied methodology, the UNFCCC-clarification request SSC_233<sup>SSC/</sup> and the simplified modalities and procedures for small scale CDM project activities            The average number of SAVE80 deployed during the crediting period is in line with the eligibility criteria and the demonstration of additionality. Conservative assumptions are used when calculating the emission reduction.            CAR CPA-A1 is closed.</p>	Period	Average N° of SAVE80 systems deployed	2012	1,600	2013	3,120	2014	2,964	2015	2,816	2016	2,675	2017	2,541	2018	2,414	2019	2,293	2020	2,179	2021	2,070			
Period	Average N° of SAVE80 systems deployed																								
2012	1,600																								
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<b>Conclusion</b> Tick the appropriate checkbox	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements																								

Related DDs	<input type="checkbox"/> PoA-DD	<input type="checkbox"/> generic CPA-DD	<input checked="" type="checkbox"/> real case CPA-DD
<b>Finding</b>	<b>CPA-A2</b>	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR

<b>Related DDs</b>	<input type="checkbox"/> PoA-DD	<input type="checkbox"/> generic CPA-DD	<input checked="" type="checkbox"/> real case CPA-DD
<b>Finding</b>	CPA-A2	<input type="checkbox"/> CAR	<input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The information stated in Annex 3 does not explain the Baseline but technical data of the SAVE80 system.		
<b>Corrective Action #1</b> <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	Information in Anne3 has been deleted		
<b>DOE Assessment #1</b> <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The information in Annex has been deleted. The CPA-DD has been checked. CAR CPA-A2 is closed		
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Appropriate action was taken <input type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input type="checkbox"/> The project complies with the requirements		

<b>Related DDs</b>	<input type="checkbox"/> PoA-DD	<input type="checkbox"/> generic CPA-DD	<input checked="" type="checkbox"/> real case CPA-DD
<b>Finding</b>	CPA-B1	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL <input type="checkbox"/> FAR
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The project starting date and the starting date of the crediting period (2010-12-01) is not clearly referenced.		
<b>Corrective Action #1</b> <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	PoA-DD did not provide any information on a typical CPA starting date. CPA starting date criteria were included into eligibility criteria (section A.4.2.2). It was clarified that CPA start date shall not be before PoA webhosting date, i.e. 20/10/2010., and that CPA starting date of the crediting period is date of inclusion into registered PoA or any date thereafter and crediting period not to exceed the PoA end date		
<b>DOE Assessment #1</b> <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>The starting date of the CPA is 2011-03-29, that's the date when the CME submitted the 1<sup>st</sup> stove sales receipt. As this is the first real action regarding the implementation of the project, this is in line with the CDM glossary of terms. The real case CPA-DD was web-hosted for Global Stakeholders' Comments (GSC) on 2010-11-20, which is before the start date of the project activity.</p> <p>The starting date of the crediting period of this CPA is addressed in section A.4.3.1 of the CPA-DD as 2011-03-29, or the date of this CPA inclusion published on the UNFCCC website, whichever is later. This is deemed in line with the PoA Procedures requirements. CAR CPA-B1 is closed.</p>		
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements		

Related DDs	<input type="checkbox"/> PoA-DD	<input type="checkbox"/> generic CPA-DD	<input checked="" type="checkbox"/> real case CPA-DD																																																													
Finding	CPA-B2	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR																																																												
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The emission reduction calculation needs to be adapted after CAR CPA-A1 is closed.																																																															
<b>Corrective Action #1</b> <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The emission reduction calculation has been revised.																																																															
<b>DOE Assessment #1</b> <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	<p>89,123 t CO<sub>2</sub>e Emission reductions will be most likely achieved during the crediting period.</p> <p>The data has been crosschecked with the spreadsheet and all formulas applied are consistent with the ones stipulated in the PoA-DD. In section B.5.3 a table of summary is included which shows in annually steps from 2012 to 2021 for 10 years the estimated amount of emission reductions as follows:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>PE<sub>y</sub>(tCO<sub>2</sub>e)</th> <th>BE<sub>y</sub>(tCO<sub>2</sub>e)</th> <th>LE<sub>y</sub>(tCO<sub>2</sub>e)</th> <th>ER<sub>y</sub>(tCO<sub>2</sub>e)</th> </tr> </thead> <tbody> <tr><td>2012</td><td>0</td><td>5,780</td><td>N/A</td><td>5,780</td></tr> <tr><td>2013</td><td>0</td><td>11,270</td><td>N/A</td><td>11,270</td></tr> <tr><td>2014</td><td>0</td><td>10,707</td><td>N/A</td><td>10,707</td></tr> <tr><td>2015</td><td>0</td><td>10,171</td><td>N/A</td><td>10,171</td></tr> <tr><td>2016</td><td>0</td><td>9,663</td><td>N/A</td><td>9,663</td></tr> <tr><td>2017</td><td>0</td><td>9,180</td><td>N/A</td><td>9,180</td></tr> <tr><td>2018</td><td>0</td><td>8,721</td><td>N/A</td><td>8,721</td></tr> <tr><td>2019</td><td>0</td><td>8,285</td><td>N/A</td><td>8,285</td></tr> <tr><td>2020</td><td>0</td><td>7,870</td><td>N/A</td><td>7,870</td></tr> <tr><td>2021</td><td></td><td>7,477</td><td>N/A</td><td>7,477</td></tr> <tr><td><b>Total</b></td><td><b>0</b></td><td><b>89,123</b></td><td><b>N/A</b></td><td><b>89,123</b></td></tr> </tbody> </table> <p>As per AMS II.G. ver. 3, Leakage emissions are considered in the baseline emissions calculation. CAR CPA-B2 is closed.</p>				Year	PE <sub>y</sub> (tCO <sub>2</sub> e)	BE <sub>y</sub> (tCO <sub>2</sub> e)	LE <sub>y</sub> (tCO <sub>2</sub> e)	ER <sub>y</sub> (tCO <sub>2</sub> e)	2012	0	5,780	N/A	5,780	2013	0	11,270	N/A	11,270	2014	0	10,707	N/A	10,707	2015	0	10,171	N/A	10,171	2016	0	9,663	N/A	9,663	2017	0	9,180	N/A	9,180	2018	0	8,721	N/A	8,721	2019	0	8,285	N/A	8,285	2020	0	7,870	N/A	7,870	2021		7,477	N/A	7,477	<b>Total</b>	<b>0</b>	<b>89,123</b>	<b>N/A</b>	<b>89,123</b>
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<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements																																																															

## 5 VALIDATION ASSESSMENT SUMMARY

### 5.1 General Description of the Project Activity

#### 5.1.1 Participation

##### LOA(s)

The precise title of the project is: Improved Cooking Stoves for Nigeria Programme of Activities.

Host country Approval for the Programme of Activities Improved Cooking Stoves for Nigeria as Clean Development Mechanism Programme of Activities has been issued on 2010-12-18 vide official document by Nigerian DNA.

The HCA states the last part of the title “Programme of Activities” in front of “Improved Cooking Stoves for Nigeria”. However this HCA can be uniquely assigned to the proposed project activity. The referenced Non Governmental Organization “Atmosfair” is the only PP and the proposed PoA is the only one Atmosfair is a party to. Furthermore the HCA refers to a PoA-DD submitted on 2010-11-16. The PDD submitted is the one which is also available on the UNFCCC website for GSP, it is dated 2010-11-12.

The PoA complies with the permission requirements and assists Nigeria in achieving sustainable development.

##### Project Participants, CME and CPA implementer(s)

The PoA CME (Coordinating and Managing Entity) is atmosfair gGmbH, which is authorized as Nigeria’s Project Participant and authorized by the host party Nigerian DNA as the Coordinating and Managing Entity. Information regarding project participants is confirmed as consistent in the PoA-DD, real case CPA-DD and LOA.

The “CPA # 1 Improved Cooking Stoves for Nigeria” implementer is specified as CME. Information regarding CPA implementer is confirmed as consistent in section A.3 and Annex 1 of the real case CPA-DD.

#### 5.1.2 Contribution to Sustainable Development

The Nigerian DNA approves that the PoA complies with the permission requirements provided for in the measures for operation and management of CDM project and assists Nigeria in achieving sustainable development.

#### 5.1.3 CPA-DD editorial Aspects

The real case CPA-DD is using CDM-SSC-CPA template version 01, and is consistent with the generic CPA-DD. They are in compliance with the latest PoA-DD and CPA-DD templates and guidelines.

#### 5.1.4 Technology employed

The description of the CPA is complete, accurate and in compliance with the PoA-DD and CPA-DD templates and guidelines. The CPA is to implement the designed PoA through the managing entity to contract distributors to give them access to technology and/or finance through the programme, and sell, install and maintain improved 3,200 cook stoves in Nigerian households.

#### 5.1.5 Small Scale Projects

The value of annual emission reductions of this first proposed CPA is 8,912 tCO<sub>2</sub>e and annual thermal energy savings equivalence is much less than 180 GWh thermal energy savings equivalent annually (threshold as per UNFCCC-clarification request SSC\_233<sup>/SSC</sup>); therefore, the proposed project is a small scale CPA.

The DOE has also checked and confirms that the CME has substantiated that the CPA is not a de-bundled component of large scale project through application of applicable EB 54, Annex 13 - "Guidelines on Assessment of Debundling for SSC Project Activities" (version 03).

### 5.2 Project Baseline, Additionality and Monitoring Plan

#### 5.2.1 Application of the Methodology

By consultation of the UNFCCC website, it is confirmed that the Approved methodology for small-scale CDM project AMS.II.G.:

**AMS.II.G: Energy efficiency measures in thermal applications of non-renewable biomass** (version 03),

is applicable to the proposed PoA. The version of this CDM Methodology approved by EB is valid during submission for registration.

The methodology and tools are available at:

<http://cdm.unfccc.int/methodologies/SSCmethodologies/approved>

Furthermore, all applicability conditions of the applied methodology have been met and the PoA design is in line with all requirements and stipulations mentioned in all sections of the applied methodology. Besides, the PoA design is not expected to result in significant emissions, related both to project and leakage, other than those listed in the methodology.

#### 5.2.2 PoA Boundary and CPA Boundary

The boundaries (geographically and related to GHG sources / sinks) are correctly given in section A.4.1.2 of the PoA-DD. The geographical boundary of this PoA is the geographical area of Nigeria.

As per AMS.II.G (version 03), the boundary of the CPA of this PoA is "the physical, geographical site area of the efficient systems using biomass". The information has

been also correctly given in section A.4.1.2 of the real case CPA-DD.

The physical delineation of the CPA under the PoA and the description of the emission sources and GHGs that are included in the CPA boundary are appropriate for the purpose of calculating project and baseline emissions for each CPA.

The methodology indicates CO<sub>2</sub> is the GHG sources to be included in the boundary; the DOE confirms that the justification by the PP is reasonable and evidenced. Besides, there are no other sources which are impacted by the project and not addressed by the applied methodology.

### 5.2.3 Baseline Identification

The procedure to identify the most plausible baseline scenario derived from the applied methodology has been applied correctly and is transparently and sufficiently documented and justified in the PoA-DD.

As per applied methodology AMS.II.G version 03, the baseline is pre-defined as “the use of fossil fuels for meeting similar thermal energy needs” provided by the project activities.

Therefore, the CPA baseline scenario is correctly defined as:

*“the use of fossil fuels for meeting similar thermal energy needs. Therefore, emission reductions are calculated by multiplying the thermal energy from annual biomass savings stemming from non-renewable biomass with an emission factor for fossil fuels.”*

The DOE checked and confirms that the CME has correctly applied the AMS.II.G, version 03 to arrive at the baseline determination.

DOE confirms that all plausible alternatives have been identified and the non-plausible alternatives have been properly justified and excluded. It has been assessed that the identified baseline scenario is plausible, conservative and reasonably represents what would occur in the absence of the proposed PoA, and the approved methodology used is applicable to the identified baseline scenario.

### 5.2.4 Calculation of GHG Emission Reductions

The CPA-DD applies steps and equations to calculate emission reductions as per the requirements of the applied methodology.

For the calculation of the GHG emission reductions the correct equations have been used reflecting the methodological choices.

Following equations are used for the calculation of the emission reductions:

$$ER_y = B_{y,savings} \cdot f_{NRB,y} \cdot NCV_{biomass} \cdot EF_{projected\_fossilfuel}$$

Where,

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

$$\eta_{old} = 0.1$$

$$B_{old} = B_{old,appliance} \cdot N_y \cdot (1 - DO_y) \cdot \frac{mp_{length}}{365} \cdot L_{NRB} \cdot L_{PoA}$$

$$L_{NRB} = 0.95,$$

$$L_{PoA} = 0.95,$$

$$B_{old,appliance} = B_{old,capita} \cdot N_{eaters,appliance}$$

$$B_{old,capita} = 0.692 \text{ t/year}$$

$$f_{NRB,y} = \frac{NRB}{NRB + DRB} = 0.77$$

$$NCV_{biomass} = 0.015 \text{ TJ/t}$$

$$EF_{projected\_fossilfuel} = 81.6 \text{ tCO}_2/\text{TJ}$$

Where,

$N_{eaters,appliance}$ ,  $N_y$ ,  $DO_y$  and  $\eta_{new}$  are monitoring parameters.

Parameter	Unit	Description
$ER_y$	tCO <sub>2</sub>	Emission reductions of the project activity in period y
$B_{y,savings}$	t	Quantity of woody biomass that is saved by the CPA
$f_{NRB,y}$	-	Fraction of woody biomass saved by the project activity in period y that can be established as non-renewable biomass (fixed parameter of 0.77) ("FAO (2003): Experience of Implementing National Forestry Programmes in Nigeria" ( <a href="ftp://ftp.fao.org/docrep/fao/005/AC918E/AC918E00.pdf">ftp://ftp.fao.org/docrep/fao/005/AC918E/AC918E00.pdf</a> ))
$NCV_{biomass}$	TJ/t	Net calorific value of the non-renewable woody biomass that is substituted (fixed parameter of 0.015 TJ/t, IPCC default for wood fuel)
$EF_{projected\_fossilfuel}$	tCO <sub>2</sub> /TJ	Emission factor for the substitution of non-renewable woody biomass by similar consumers (fixed parameter of 81.6 tCO <sub>2</sub> /TJ, AMS II.G. Default Value)
$B_{old}$	t	Quantity of woody biomass used in the absence of the project activity
$\eta_{old}$	%	Efficiency of the baseline system being replaced (fixed parameter of 0.1, AMS II.G. Default Value)
$\eta_{new}$	%	Efficiency of the system being deployed as part of the project activity
$B_{old,appliance}$	t/year	Average annual consumption of woody biomass per appliance
$N_y$	-	Adjusted total number of appliances deployed in period y
$DO_y$	%	Statistically adjusted drop out from total population of appliances in period y
$mp_{length}$	days	Length of monitoring period y
$L_{NRB}$	-	Net-to-gross adjustment factor for NRB Leakage (fixed parameter of 0.95, AMS II.G. Default Value)
$L_{PoA}$	-	Net-to-gross adjustment factor for PoA Leakage (fixed parameter of 0.95, AMS II.G. Default Value)

$B_{old, capita}$	t/year	Average baseline fuelwood consumption per capita per year (fixed parameter of 0.692 t/year,
$N_{eaters, appliance}$	-	Average number of eaters per project appliance

For the data and parameters not to be monitored throughout the crediting period (i.e. they are determined only once and thus remain fixed throughout the crediting period), it is assessed that all data sources, assumptions and calculations are correct, reasonable and applicable to the project and contribute to a conservative estimate of the emission reductions. For the data and parameters subject to monitoring, it is confirmed that the ex-ante estimated values for the monitoring parameters are plausible, and the emission reduction estimates provided in the POA-DD are reasonable and conservative.

## 5.2.5 Additionality Determination

### Consideration of CDM in decision making

The starting date of the CPA has been stated as 2011-03-29. In support thereof, the CME submitted the 1<sup>st</sup> stove sales receipt. Since the project developer had not undertaken any construction or any real action on the implementation of the project activity prior to this date, as per Glossary of CDM terms, this date has been appropriately treated as the start date of the project activity.

The real case CPA-DD was web-hosted for Global Stakeholders' Comments (GSC) on 2010-11-20, which is before the start date of the project activity. Thus as per paragraph 7(d) of PoA Procedures (EB55 Annex 38) and paragraph 2 of Annex 22 of EB49, the PoA is in line with the prior consideration requirements.

### Application of methodology / methodological tools

The additionality was justified in accordance with the requirements derived from applied methodology, PoA Procedures, Attachment A to Appendix B of the simplified modalities and procedures for small-scale CDM project activities, and Guidelines for demonstrating additionality of microscale project activities (version 2, EB60 Annex 25).

Approach 1 as listed in the PoA-DD has been chosen to demonstrate CPA additionality, which is the Demonstration of additionality for microscale project activities:

The CPA demonstrates compliance with the applicability condition as shown by the fulfilment of additionality eligibility criteria (criterion 14) as in Section A.4.2.2 in the CPA-DD and as demonstrated under Section E.2 of the PoA-DD: It is clearly stated and evidenced that the CPA remains under the 60 GWh thermal energy savings limit.

For a detailed assessment please see Annex 6 of this report on Eligibility Criteria No. 14.

Furthermore a Landed cost calculation has been prepared by the CME, to adapt simple cost analysis, although approach 1 has been adopted for demonstration of

additionality. The evidence presented to the DOE are agreements with the distributor illustrating the maximum sales prices for the stoves and the landed cost calculation and it documents the real costs of the stove.

Based on the assessment above, the CPA is assessed to be additional.

## Summary

CDM was seriously considered by the CME before the starting of the project activity.

The additionality demonstration has been sufficiently justified.

All the arguments and parameters in the PoA-DD are well evidenced. Therefore, the CPA is additional.

### 5.2.6 Monitoring Methodology

The DOE confirms that the monitoring plan of the CPA is in compliance with the applied monitoring methodology AMS.II.G (version 3).

### 5.2.7 Monitoring Plan

According to the applied methodology, all monitoring parameters required by the applied methodology are contained in the monitoring plan. The monitoring arrangements can be properly implemented, all monitoring arrangements are feasible within the project design. The following parameters are monitored:

- $N_{eaters,appliance}$
- $N_y$
- $DO_y$
- $\eta_{new}$

#### 1. $N_{eaters,appliance}$ - Average number of eaters per appliance

The value will be between 0 and HH\_CAP:

$$0 \leq N_{eaters,appliance} \leq HH\_CAP$$

For ex-ante estimate in the CPA DD, HH\_CAP will be used.

Monitoring of the statistically adjusted average number of eaters involves two steps:

Step 1: Sample survey amongst appliances of the same type deployed under CPAs of the PoA as specified in section E.7.2

Step 2: Calculation of the average number of eaters at confidence level and precision as required by the methodology (AMS II.G. ver. 3) for the inspection frequency chosen, following the statistical standard approach for a homogenous test of independent units that have a standard normal distribution.

The average number of eaters will be determined through interviews performed by a dedicated monitoring team according to the sampling procedure described in section E.7.2 of the PoA-DD. Interviews will be reported in a questionnaire.

All formulas applied to determine the statistical precision used, are standard formula.

Furthermore, according to AMS II.G (ver. 3), par.22 the sampling error has to be deducted (“...the lower bound of a [...] confidence interval of the parameter value may be chosen”) in the event that the required precision could not be achieved because of a small sample size. No deductions have to be made if the precision is achieved by sampling a proper number of appliances.

## 2. $N_y$ - Adjusted total number of appliances deployed until period $y$

The total number of appliances deployed until period  $y$  is calculated based on information monitored through the sales records database.

$$N_y = \sum_{i=1}^y n_i \cdot OT_{adjusted,i,y}$$

$n_i$  Number of appliances deployed in period  $i$  as reported in the sales records database and adjusted to account for delays between sales date and first use. Every appliance starts to operate (deployment date) in the month following the month in which the appliance was sold.

$OT_{adjusted,i,y} = \begin{cases} 1 & , i < y \\ \frac{d_{average,y}}{mp_{length}} & , i = y \end{cases}$  Adjustment factor for reduced operational time of appliances deployed in monitoring period  $y$ , whereas  $i = 1, \dots, y$ . For all appliances deployed in the periods  $i$  prior to Monitoring period  $y$ , the adjustment factor is 1.

$d_{average,y}$  Average number of days that appliances deployed in period  $y$  have been operational in period  $y$  as determined by respective deployment dates of appliances counted for  $n_y$ . Deployment dates are determined mutatis mutandis as in the context of  $n_i$  above.

$mp_{length}$  Length of monitoring period  $y$

## 3. $DO_y$ - %. Statistically adjusted drop out from total population of appliances in period $y$ .

Drop out means that the ICS are either not used, outside of the project boundary (i.e. outside Nigeria) or damaged beyond repair.

Monitoring of the statistically adjusted drop out involves two steps:

Step 1: Sample survey amongst appliances of the same type deployed under CPAs of the PoA as specified in section E.7.2 of PoA-DD.

Step 2: Calculation of the adjusted drop out rate at confidence level and precision as required by the methodology (AMS II.G. ver. 3) for the inspection frequency chosen, following the statistical standard approach for a homogenous test of independent units that have a standard normal distribution.

The Drop outs will be determined through interviews where it will be checked if the appliances are still operational, performed by a dedicated monitoring team according to the sampling procedure described in section E.7.2 of PoA-DD.

## 4. $\eta_{new}$ - Adjusted average efficiency of the system being deployed

To be completed in any specific CPA DD. The value will be between 0 and  $\eta_{specified}$ .

$$0 \leq \eta_{new} \leq \eta_{specified}$$

For ex-ante estimate in the CPA DD,  $\eta_{specified}$  will be used.

Monitoring of the statistically adjusted average efficiency involves two steps:

Step 1: Sample survey amongst appliances of the same type deployed under CPAs of the PoA as specified in section E.7.2 of PoA-DD.

Step 2: Calculation of the average efficiency at confidence level and precision as required by the methodology (AMS II.G. ver. 3) for the inspection frequency chosen, following the statistical standard approach for a heterograde test of independent units that have a standard normal distribution.

$\eta_{new}$  is determined following the Water Boiling Test (WBT), performed by a dedicated monitoring team according to the sampling procedure described in section E.7.2 of PoA-DD. Tests will be reported in spreadsheet templates.

Checks are conducted until the required precision for this parameter is achieved.

It has been confirmed that for all monitoring parameters, conservative approaches have been ensured to derive values to emission reduction calculations during monitoring period.

In section A.4.4.2 of the PoA-DD, PP has clarified that as per EB 55, Annex 38, Footnote 2, "The Board will develop a guideline containing criteria for determining statistically sound verification techniques and methods. Project developers are requested to take note that programmes which may be registered as a single CDM project activity prior to the adoption of this guideline will be required to comply with such criteria at the point of verification." Since this PoA is going to adopt sampling methods to monitor several monitoring parameters, the provision given above will be taken into account.

The monitoring plan can be implemented and all the monitoring arrangements are feasible within the PoA design.

## **5.2.8 Project Management Planning**

Management structure of the monitoring plan is defined in Section A.4.4 of the CPA-DD, and is assessed to be appropriate for the purpose of the projects monitoring. The overall responsibility for the monitoring will be held by the atmosfair gGmbH (CME). CME is responsible to assign the collection work of monitoring data for CPAs of the PoA. All monitoring data will be kept at CME. Emission reduction calculation will be based on data collected and analyzed by CME. The database is confirmed as the data management system designed specifically for the PoA to ensure the data accuracy, to avoid double counting, to addressing uncertainty (QA/QC), and to manage monitoring data storage for the monitoring of all CPAs.

## **5.2.9 Crediting Period**

The start of the fixed crediting period is unambiguously stated in the CPA-DD, i.e. 2011-03-29 or the date of inclusion in to the registered PoA or start date of the CPA whichever is later, and this is deemed appropriate.

## **5.2.10 Environmental Impacts**

Environmental Analysis is chosen to be done at PoA level.

Hence no need for further information at CPA level.

### **5.2.11 Comments by Local Stakeholders**

Stakeholder consultation is chosen to be done at PoA level.

Hence no need for further information at CPA level.

### **5.2.12 CPA Eligibility Criteria**

A complete list of CPA Eligibility Criteria has been set up in section A.4.2.2 of the PoA-DD and section B.2 of the generic CPA-DD, and section B.2 of the real case CPA-DD has demonstrated the compliance and fulfilment on the established CPA inclusion Eligibility Criteria with sufficient justification and evidence. DOE confirms that all Eligibility Criteria are sufficiently fulfilled with appropriate evidence. For detailed assessment, please refer to Annex 6 of this validation report.

## **5.3 Consistency between final PoA-DD, final generic CPA-DD template and this CPA-DD**

After closure of all PoA-DD and generic CPA-DD related findings, the real case CPA-DD has been revised and compared with the final version of the PoA-DD (version 2.2) and generic CPA-DD (version 2.0), all corresponding sections and information are deemed internally consistent and complete.

Finding CAR rCPA-1 was raised and successfully closed.

## **5.4 Summary of findings**

To summarize, in the course of the validation 4 CARs and 1 CL for real case CPA-DD were raised and has been successfully closed.

## 6 VALIDATION OPINION

Atmosfair gGmbH has commissioned the TÜV NORD JI/CDM Certification Program (CP) to validate the CPA “CPA # 1 Improved Cooking Stoves for Nigeria”, under the corresponding programme of activities (PoA): “Improved Cooking Stoves for Nigeria Programme of Activities” with regard to the relevant requirements of the UNFCCC for CDM project activities, as well as criteria for consistent project operations, monitoring and reporting. UNFCCC criteria include article 12 of the Kyoto Protocol, the modalities and procedures for CDM (Marrakech Accords) and the relevant decisions by COP/MOP and CDM Executive Board.

In the course of the validation 4 Corrective Action Requests (CARs) and 1 Clarification Requests (CLs) were raised and all have been successfully closed.

The review of the CPA-DD and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and review of comments by parties, stakeholders and NGOs have provided TÜV NORD JI/CDM CP with sufficient evidence to validate the fulfilment of the stated criteria. In detail the conclusions can be summarised as follows:

- The project is in line with all relevant host country criteria (Nigeria) as well as all relevant eligibility criteria of the PoA to which it shall be included. The CPA approvals have been obtained from DNA of Nigeria vide the Letter of Approval (HCA) dated 2010-12-18.
- The baseline has been appropriately identified as per the applied methodology.
- The framework for determination project additionality is sufficiently justified in the CPA-DD in line with POA-DD and generic CPA-DD.
- All eligibility criteria established for CPA inclusion in the PoA-DD have been sufficiently fulfilled with appropriate evidence.
- The monitoring plan is transparent and adequate.
- The calculation of the emission factors and CPA emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 89,123tCO<sub>2e</sub> are most likely to be achieved within the crediting period.
- Information on the local stakeholders’ consultation by the project participants is done at PoA level.
- Information on the environmental impact analysis is done at PoA level.

The CPA “CPA # 1 Improved Cooking Stoves for Nigeria” shall be included in the PoA “Improved Cooking Stoves for Nigeria Programme of Activities”.

Essen, 2011-11-07



Mrs. Wang, Jun  
TÜV NORD JI/CDM CP  
Validation Team Leader

Essen, 2011-11-07



Mr. Winter, Stefan  
TÜV NORD JI/CDM CP  
Final Approval

## 7 REFERENCES

**Table 7-1:** Documents provided by the project participant

Reference	Document
<b>/BP47/</b>	Using a household energy technology to promote small scale enterprises in rural communities in Nigeria – The egaga stove experience, Joe Obueh, Boiling Point 47 (2001), p. 27f
<b>/BP52/</b>	Methanol stoves for indoor air pollution reduction in Delta State, Nigeria – addressing the needs of people for clean energy, Joe Obueh, Boiling Point 52 (2006), p. 27f
<b>/CHAD/</b>	Report covering the mission „stove Save80“ in refugee camps in eastern Chad (2006), Christian Koch, Hamburg, Germany
<b>/CPAD/</b>	CPA database design for all CPAs in “Improved Cooking Stoves for Nigeria programme of Activites”
<b>/EFW/</b>	IPCC Guidelines for national GHG Inventories (2006), p. 2.23
<b>/FAO/</b>	WISDOM – East Africa, FAO – Forestry Department – Wood Energy, Rudi Drigo, August 2005, p. 57
<b>/HCA/</b>	Letter of approvals from the host party Nigeria issued on 2010-12-18
<b>/HEP/</b>	Boukary Ouedraogo: Household energy preferences for cooking in urban Ouagadougou, Burkina Faso. In: Energy Policy 34 (2006) 3787–3795, p. 3795
<b>/GSMR/</b>	Gold Standard Monitoring Report for UNFCCC project ref. 2711, GS 411
<b>/KOCH/</b>	Operational Lifetime Certificate (Abschätzung der Lebensdauer der Save80-Brennkammer by Koch Anhängerwerke GmbH &Co.KG dated 2009-01-28
<b>/LoE/</b>	Letter of Endorsement for “Improved Cooking Stoves for Nigeria programme of Activites” dated 2010-07-26
<b>/LSCR/</b>	Gold Standard Local Stakeholder Consultation Report , Meeting held on 2010-09-30
<b>/MAC/</b>	Maconachie et al. (2009): Descending the energy ladder? Oil price shocks and domestic fuel choices in Kano, Nigeria. In: Land Use Policy 26, 1090-1099
<b>/MD/</b>	Monitoring Spot Check Database

Reference	Document
<b>/MOC/</b>	Modalities of Communication
<b>/MS/</b>	Manufacturer specification "Save80 cook stove system Model Save80 A"
<b>/ODA/</b>	Statement letter from CME regarding no diversion of ODA is applied to the PoA
<b>/OFA/</b>	Ogunkunle, A.T.J, Oladele, F.A.(2003): "Ethnobotanical study of fuelwood and timber wood consumption and Replenishment in Nigeria", p. 232 ff
<b>/PCF/</b>	Prior Consideration Form for "Improved Cooking Stoves for Nigeria programme of Activites" dated 2010-02-17
<b>/PDDs/</b>	Draft Programme Design Documents hosted from 2010-11-20 to 2010-12-19: 1. "Improved Cooking Stoves for Nigeria Programme of Activities" (version 1.0, 2010-11-12) 2. "CPA # [xxx] Improved Cooking Stoves for Nigeria" version 1.0, 2010-11-12) 3. "CPA # 1 Improved Cooking Stoves for Nigeria version 1.0, 2010-11-12) Final Programme Design Documents : 1. Improved Cooking Stoves for Nigeria Programme of Activities (version 2.3, 2011-10-24) 2. CPA # [xxx] Improved Cooking Stoves for Nigeria (version 2.1, 2011-10-24) 3. CPA # 1 Improved Cooking Stoves for Nigeria (version 2.1, 2011-10-24)
<b>/PIN/</b>	Project Idea Note for "Efficient Wood Fuel Stoves for Nigeria Programme"–
<b>/PIS/</b>	Product Information Sheet of Save80 and Wonderbox by manufacturer
<b>/SD/</b>	Sample Database for a sub-fraction of appliances deployed
<b>/SLA/</b>	Statement letter from CME regarding approval of this CPA
<b>/SLB/</b>	Statement of CME that the 1 <sup>st</sup> CPA location and boundary is within Nigeria
<b>/SLN/</b>	Statement letter from CME regarding all stoves will be deployed under the CPA are new
<b>/SLS/</b>	Statement letter from CME regarding awareness of the CPA being subscribed to the PoA
<b>/SLSD/</b>	Statement letter from CME regarding the starting date of CPA
<b>/SLU/</b>	Statement letter from CME regarding Check on UNFCCC website, date of access: 19/09/2011

Reference	Document
/SR/	1 <sup>st</sup> sold SAVE80 stove User Agreement Sales Receipt, dated 2011-03-29
/SRD/	Sales Records and Receipts Database
/SRT/	Default ICS sales receipt template
/TGN/	Trends in Greenhouse Gas Emissions in Nigeria: 1988-2000, Obioh, Imoh (2003)
/TUM/	Material Testing Certificate (Prüfungszeugnis Nr. MT 20604 by Staatliches Materialprüfamt für den Maschinenbau der TU München dated 26.01.2009 ) – technical lifetime is 13 years if use 2.5 hours per day, and it is 17 years if use 1.9 hours per day.
/VAR/	M. Narasimha Rao, B. Sudhakara Reddy: Variations in energy use by Indian households: An analysis of micro level data. In: Energy 32 (2007) 143–153; p. 149
/WB/	Leakage factor as proposed by the World Bank in response to the Ebs call for public input
/WFS/	Wood Fuel Survey, Aggregates Sources as evidence for PDD Section E.4 p. 28
/WFS1/	WOOD FUEL IN KANO - Final Report of the Rural Energy Research Project, Bayero University, Kano (1987) by R.A.Cline-Cole, J.A. Falola, H.A.C.Main, M. J. Mortimore, J.E.Nichol, F.D.O'Reilly
/WFS2/	Evaluation of cooking energy cost, efficiency, impact on air pollution and policy in Nigeria, Anozie (2004)
/WRS3/	Fuel Substitution and Efficient Woodstoves: Are They the Answers to the Fuelwood Supply Problem in Northern Nigeria?, Hyman (1994)
/XLS/	Emission reduction calculation spreadsheet (ER)

Table 7-2: Background investigation and assessment documents

Reference	Document
/AMS.II.G/	Energy efficiency measures in thermal applications of non-renewable biomass version 02 and version 03
/CPM/	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)

Reference	Document
<b>/DDs-T/</b>	<b>CDM-SSC-PoA-DD</b> - Small-Scale CDM Programme of Activities Design Document form (version 01, EB 33 Annex 43) <b>CDM-SSC-CPA-DD</b> - Small-Scale CDM Programme Activity Design Document form (version 01, EB 33 Annex 44)
<b>/EB63/</b>	Attachment A to Appendix B of the simplified modalities and procedures for small scale CDM project activities (EB 63, Annex 24)
<b>/GCP/</b>	UNFCCC: Guidelines for completing CDM-PDD and CDM-NM
<b>/GDB/</b>	Guidelines for objective demonstration and assessment of barriers (EB 50, Annex 13)
<b>/GMSC/</b>	Guidelines for demonstrating additionality of microscale project activities, ver. 2
<b>/GSSC/</b>	General Guidelines to the SSC CDM methodologies (EB 61, Annex 21)
<b>/IM/</b>	List of interviewed persons , see table Table 7-4 for details
<b>/IPCC/</b>	2006 IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual
<b>/IPCC-GP/</b>	IPCC Good Practice Guidance & Uncertainty Management in National Greenhouse Gas Inventories, 2000
<b>/KP/</b>	Kyoto Protocol (1997)
<b>/LC/</b>	Landed Cost Calculation xls- sheet
<b>/MA/</b>	Decision 3/CMP. 1 (Marrakesh – Accords & Annex to decision (17/CP.7))
<b>/NBBP/</b>	Non-binding best practice examples to demonstrate additionality for SSC project activities (EB 35, Annex 34)
<b>/POAR/</b>	<ol style="list-style-type: none"> <li>Clean Development Mechanism Validation and Verification Manual (v01.2; EB55 Annex 1, esp. para 165 – 168)</li> <li>“Procedures for registration of a programme of activities as a single CDM project activity and issuance of certified emission reductions for a programme of activities” (current version 04.1, EB 55 Annex 38) (the “PoA Procedures”);</li> <li>“Procedures for review of erroneous inclusion of a CPA” (current version 02, EB 55 Annex 37) (the “CPA Review Procedures”)</li> <li>Guidance for determining the occurrence of de-bundling under a programme of activities (PoA) (v03, EB54 Annex 13)</li> <li>“Procedures for approval of the application of multiple methodologies to</li> </ol>

Reference	Document
	<p>a programme of activities” (current version 01; EB 47 Annex 31) (the “Multi-Meth Approval Procedures”);</p> <p>6. “General guidelines for sampling and surveys for SSC project activities” (current version 01, EB50 Annex 30) (the “Sampling Guidelines”)</p> <p>7. “Guidance on the registration of project activities under a programme of activities as a single CDM project activity (EB32, annex 38)</p> <p>8. Guidelines on Project Design Documents (PDDs) on <a href="http://cdm.unfccc.int/Reference/Guidclarif/pdd/index.html">http://cdm.unfccc.int/Reference/Guidclarif/pdd/index.html</a></p>
<b>/TA/</b>	Tool for the demonstration and assessment of additionality (Ver. 4 – Ver. 5.2)
<b>/VVM/</b>	Validation and Verification Manual (Version 1, Annex 3; EB 44 and Version 01.2, Annex 1, EB 55)

Table 7-3: Websites used

Reference	Link	Organisation
<b>/cd4cdm/</b>	<a href="http://www.cd4cdm.org">www.cd4cdm.org</a>	UNEP Riso Centre
<b>/efw/</b>	<a href="http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf">http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf</a>	Emission Factor Wood, 2006 IPCC Guidelines for National Greenhouse Gas Inventories, p. 2.17
<b>/env/</b>	<a href="http://unfccc.int/resource/docs/natc/nignc1.pdf">http://unfccc.int/resource/docs/natc/nignc1.pdf</a>	NIGERIA'S FIRST NATIONAL COMMUNICATION UNDER THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, p.4, Ministry of Environment of the Federal Republic of Nigeria (2003)
<b>/fao1/</b>	<a href="http://www.fao.org/DOCREP/ARTICLE/WFC/XII/0182-A1.HTM">http://www.fao.org/DOCREP/ARTICLE/WFC/XII/0182-A1.HTM</a>	FAO: Contributions of selected Non-Timber Forest Products to Household Food Security in Osun State, Nigeria, Stella O. Odebode
<b>/fao2/</b>	<a href="ftp://ftp.fao.org/docrep/fao/003/X6818E/X6818E00.pdf">ftp://ftp.fao.org/docrep/fao/003/X6818E/X6818E00.pdf</a>	Federal Department of Forestry (2001): The forest revenue system and government expenditure on forestry in Nigeria, p.46
<b>/fao3/</b>	<a href="ftp://ftp.fao.org/docrep/fao/005/AC918E/AC918E00.pdf">ftp://ftp.fao.org/docrep/fao/005/AC918E/AC918E00.pdf</a> ,	FAO (2003): Experience of Implementing National Forestry Programmes in Nigeria
<b>/fao4/</b>	<a href="http://www.fao.org/forestry/20262-1-1.pdf">http://www.fao.org/forestry/20262-1-1.pdf</a>	FAO (2010): Global Forest Resources Assessment 2010, Country Report Nigeria, p.18 ,26,35

Reference	Link	Organisation
<b>/ipcc/</b>	<a href="http://www.ipcc-nggip.iges.or.jp">www.ipcc-nggip.iges.or.jp</a>	IPCC publications
<b>/nfccn/</b>	<a href="http://www.carbonpositive.net/viewarticle.aspx?articleID=1036">http://www.carbonpositive.net/viewarticle.aspx?articleID=1036</a>	“Nigerian’s Forest could go by 2020”, National Forest Conservation Council of Nigeria, 01.04.2008
<b>/pop/</b>	<a href="http://www.population.gov.ng/index.php?option=com_content&amp;view=section&amp;layout=blog&amp;id=8&amp;Itemid=95">http://www.population.gov.ng/index.php?option=com_content&amp;view=section&amp;layout=blog&amp;id=8&amp;Itemid=95</a>	Population and Housing Census of the Federal Republic of Nigeria , National Population Commission (2006), p.67
<b>/remp/</b>	<a href="http://www.iceednigeria.org/REMP%20Final%20Report.pdf">http://www.iceednigeria.org/REMP%20Final%20Report.pdf</a>	REMP (2005): Renewable Energy Master Plan, Final Draft Report, Energy Commission of Nigeria, UNDP, Section 2.3.3a, 2, p. 15 and 92
<b>/sscl/</b>	<a href="http://cdm.unfccc.int/filestorage/A/M/AM_CLAR_VIIC5MT_UUWR9PRPJL0EXOT3G2C_KSFQ/Response%20SSC%20WG%20provided.pdf?t=MjN8bHRtMmY2fDD5U0KkWyckizfOMpYNGRaV">http://cdm.unfccc.int/filestorage/A/M/AM_CLAR_VIIC5MT_UUWR9PRPJL0EXOT3G2C_KSFQ/Response%20SSC%20WG%20provided.pdf?t=MjN8bHRtMmY2fDD5U0KkWyckizfOMpYNGRaV</a>	UNFCCC-clarification request SSC_233
<b>/undata/</b>	<a href="http://data.un.org/Data.aspx?d=EDATA&amp;f=cmlID%3aFW%3btrID%3a1231">http://data.un.org/Data.aspx?d=EDATA&amp;f=cmlID%3aFW%3btrID%3a1231</a> ,	UN Data, Energy Statistics Database, United Nations Statistics Division, Fuelwood consumption by households in Nigeria from 1990 - 2007
<b>/unfccc/</b>	<a href="http://cdm.unfccc.int">http://cdm.unfccc.int</a>	UNFCCC
<b>/unfccc_2711/</b>	<a href="http://cdm.unfccc.int/Projects/DB/RWTUV1245685309.5/view">http://cdm.unfccc.int/Projects/DB/RWTUV1245685309.5/view</a>	CDM Project No. 2711 “Efficient Fuel Wood Stoves for Nigeria“
<b>/wbt/</b>	<a href="http://ehs.sph.berkeley.edu/hem/hem/protocols/WBT_Version_3.0_Jan2007a.pdf">http://ehs.sph.berkeley.edu/hem/hem/protocols/WBT_Version_3.0_Jan2007a.pdf</a> ,	Bailis et al. (2007): Water Boiling Test Protocol, V 3.0, last accessed 11.02.2010
<b>/wikimap/</b>	<a href="http://upload.wikimedia.org/wikipedia/commons/d/d2/Nigeria_political.png">http://upload.wikimedia.org/wikipedia/commons/d/d2/Nigeria_political.png</a>	The physical boundary of the PoA- the Federal Republic of Nigeria, Wikipedia

Table 7-4: List of interviewed persons **/IM/**

Reference	Mol 1	Date		Name	Organisation / Function
/IM01/	V	2011-03-26 to 2011-03-31	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Ahmed, Yahaya	D.A.R.E, Chairman
/IM01/	V	2011-03-26 to 2011-03-31	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Zerzawy, Florian	Atmosfair gGmbH, CDM Project Developer
/IM01/	V	2011-03-27	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Razak, Abdul	D.A.R.E, Technician
/IM01/	V	2011-03-27	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Mamman, Sufyan	D.A.R.E, Technician
/IM01/	V	2011-03-28	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Bayero, Ahmed K.	D.A.R.E, Sales person
/IM01/	V	2011-03-28	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Mohid, Lami	D.A.R.E, Sales person
/IM01/	V	2011-03-28	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Habiba, Umami Mohid	D.A.R.E, Sales person
/IM01/	V	2011-03-28	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Shamsiya, Buhani	D.A.R.E, Sales person
/IM01/	V	2011-03-31	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Aucon, Brodriac Michael	D.A.R.E, Distributor
/IM01/	V	2011-03-31	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Baran, Zainab Umar	D.A.R.E, Distributor
/IM02/	V	2011-03-28	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Fagge, Alih Salihn	Mai Nasara Firewood Sellers, Union Judge
/IM02/	V	2011-03-28	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Sabiu, Ammam	Mai Nasara Firewood Sellers, Treasurer
/IM02/	V	2011-03-28	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Goma, Idi Dan	Mai Nasara Firewood Sellers, Union member
/IM02/	V	2011-03-28	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Tela, Garba Dan	Mai Nasara Firewood Sellers, Union member
/IM02/	V	2011-03-28	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Yusuf, Nasallah	Mai Nasara Firewood Sellers, Union member
/IM02/	V	2011-03-28	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Sule, Danladi	Mai Nasara Firewood Sellers, Union member

Reference	Mol 1	Date		Name	Organisation / Function
/IM02/	V	2011-03-28	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Mohammed, Kuralle	Mai Nasara Firewood Sellers, Union member
/IM03/	V	2011-03-28	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Ibrahim, Alhaji Sarki	Makaman Kano, Representative of the Emir of Kano State
/IM04/	V	2011-03-28	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Tanko, Adamu	Head of Geography Department, University of Kano
/IM04/	V	2011-03-29	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Yariadua, Dr. Abdullahi Ahmed	Director of college of Agriculture, Huk Polytechnic
/IM05/	V	2011-03-31	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms	Christine K.	Director, Heinrich Böll Foundation
/IM06/	V	2011-03-31	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Armouski, Sophia	First Secretary, German embassy
/IM07/	V	2011-03-31	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Abubakar	Federal Ministry of Environment, National Coordinator Renewable Energy Programme
/IM08/	V	2011-03-27	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	salamatu Ibrahim	3 stone fire user, Baseline interview
/IM08/	V	2011-03-27	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Amina Ibrahim v.t	3 stone fire user, Baseline interview
/IM08/	V	2011-03-27	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Abubakar Yakuba	3 stone fire user, Baseline interview
/IM08/	V	2011-03-27	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Jimila Yakuba	3 stone fire user, Baseline interview
/IM08/	V	2011-03-27	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Sariya Hamisu Umar	3 stone fire user, Baseline interview
/IM08/	V	2011-03-27	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Zainab jibrin	3 stone fire user, Baseline interview
/IM08/	V	2011-03-27	<input type="checkbox"/> Mr.	Zulai Yakubu	3 stone fire user, Baseline

Reference	Mol 1	Date		Name	Organisation / Function
			<input checked="" type="checkbox"/> Ms.	Murjanatu Yakuba	interview
<b>/IM08/</b>	V	2011-03-27	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Hajara Hamisu Umar	3 stone fire user, Baseline interview
<b>/IM08/</b>	V	2011-03-27	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Zaharau Aminu Aisha Aminu ahmed Rahmatu Aminu Ahmed Halimatu Aminu Ahmed	3 stone fire user, Baseline interview
<b>/IM08/</b>	V	2011-03-27	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Maimuna Saidu	3 stone fire user, Baseline interview
<b>/IM08/</b>	V	2011-03-27	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Innocent Okwe	Kerosene and gas stove, Baseline interview
<b>/IM08/</b>	V	2011-03-27	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Sati Owillisi	3 stone fire user, Baseline interview
<b>/IM08/</b>	V	2011-03-27	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Hajara Salihu	3 stone fire user, Baseline interview
<b>/IM08/</b>	V	2011-03-27	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Aisha Mohamad	Kerosene stove, Baseline interview
<b>/IM08/</b>	V	2011-03-27	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Jamila Mohamed	Kerosene stove, Baseline interview
<b>/IM08/</b>	V	2011-03-28	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Mariam Zara Umar Zara Rufai	3 stone fire user, Baseline interview
<b>/IM08/</b>	V	2011-03-28	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Maria Abdullahi Naria Abdullahi Saadutu Abdullahi	3 stone fire user, Baseline interview
<b>/IM08/</b>	V	2011-03-28	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	hauwa Ahmed Zainab Ahmed Binte Ahmed	3 stone fire user, Baseline interview
<b>/IM08/</b>	V	2011-03-28	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Bilkisu Ismael	3 stone fire user, Baseline interview
<b>/IM08/</b>	V	2011-03-28	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Halme Abubakar, 1st wife Halme Abubakar, 2nd wife	3 stone fire user, Baseline interview

Reference	Mol 1	Date		Name	Organisation / Function
/IM08/	V	2011-03-28	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Aisha Dahiru Alhr. Abubalsar Hadiya Mahama Mariya	3 stone fire user, Baseline interview
/IM08/	V	2011-03-29	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Ramatu Lawal Asmau Lawal Abu Lawal	3 stone fire user, Baseline interview
/IM08/	V	2011-03-29	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Bilkisu Nura Aisha Nura	3 stone fire user, Baseline interview
/IM08/	V	2011-03-29	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Zulehatu Nuttu Sofia Nuttu	3 stone fire user, Baseline interview
/IM08/	V	2011-03-29	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Adisa Maaruf Barai Maaruf	3 stone fire user, Baseline interview
/IM08/	V	2011-03-29	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Mariam Hamidu Raibi Hamidu Berai Hamidu Aisha Hamidu	3 stone fire user, Baseline interview
/IM08/	V	2011-03-29	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Umma Abdulmunin Saude Abdulmunin	3 stone fire user, Baseline interview
/IM08/	V	2011-03-29	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Aisha Ibrahim Fatima Ibrahim Fadila Ibrahim	3 stone fire user, Baseline interview
/IM08/	V	2011-03-29	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Havi Maeriya Saraiu Audu Halima Augu	3 stone fire user, Baseline interview
/IM08/	V	2011-03-29	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Balaraba Sulaiman Maryama Sulaiman Bilkisu Sulaiman	3 stone fire user, Baseline interview
/IM08/	V	2011-03-29	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Bulta Musa Aisha Musa	3 stone fire user, Baseline interview
/IM08/	V	2011-03-29	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Biatha Ibrahim Talaize Ibrahim Biatha Ibrahim	3 stone fire user, Baseline interview

Validation Report:

**CPA Title:** CPA # 1 Improved Cooking Stoves for Nigeria

**PoA Title:** Improved Cooking Stoves for Nigeria Programme of Activities

TÜV NORD CERT GmbH JI/CDM Certification Program

P-No.: 8000389449 - 10/501 – CPA001



Reference	Mol <sub>1</sub>	Date		Name	Organisation / Function
/IM08/	V	2011-03-29	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Laure Ibrahim Laritu Ibrahim Sakina Ibrahim Abiba Ibrahim	potstove user, Baseline interview
/IM08/	V	2011-03-29	<input type="checkbox"/> Mr. <input checked="" type="checkbox"/> Ms.	Binta Jibrin	3 stone fire user, Baseline interview
/IM09/	T	2011-04-11	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Daneil Farchy	CQuestCapital
/IM09/	T	2011-04-11	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Jonathan Rouse	Hed consulting
/IM09/	T	2011-04-11	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Don Feil	Earthmatters llc
/IM09/	T	2011-04-11	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Zerzawy, Florian	Atmosfair gGmbH, CDM Project Developer
/IM09/	T	2011-04-11	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Xaver Kitzinger	Atmosfair gGmbH, CDM Project Developer
/IM09/	T	2011-04-11	<input checked="" type="checkbox"/> Mr. <input type="checkbox"/> Ms.	Shruthi Poonacha	DNV

<sup>1)</sup> Means of Interview: (Telephone, E-Mail, Visit)

# ANNEX

- A1:** Validation Protocol
- A2:** Assessment of Baseline Identification
- A3:** Assessment of Financial Parameters
- A4:** Assessment of Barrier analysis
- A5:** Outcome of the GSCP
- A6:** Eligibility Criteria Compliance
- A7:** Appointment certificates of the team members

## ANNEX 1: VALIDATION PROTOCOL

Table A-1: Specific CDM-CPA-DD Requirements Checklist

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidence)	Ref.	Draft Concl.	Final Concl.
<b>Consistency and specific CPA issues</b>	<i>This Checklist has been filled by comparing the final version of real case CPA-DD rather than the draft version published for GSCP as per the finalized PoA-DD, i.e., when all PoA related findings have been successfully closed, in order to close the consistency check finding rCPA-1.</i>			
<b>A. General Description of small scale CDM project activity (CPA)</b>				
<b>A.1. Title of the CPA</b>				
<b>A.1.1.</b> Are title, current version number and the date of document completion given in section A.1 of the real case CPA-DD?	<p><i>Description:</i> Title, version number and date of the document completion have been given in section A.1 of the real case CPA-DD as follows:  “CPA # 1 Improved Cooking Stoves for Nigeria  Version: 2.0  Date of completion: 06/09/2011”</p> <p><i>Justifications of evidence:</i> by means of document review.</p> <p><i>Conclusion:</i> Requirements are fulfilled</p>	/PDDs/ /POAR/	OK	OK
<b>A.1.2.</b> Has the exact name/title of the PoA been included in the header of the CPA-DD form?	<p><i>Description:</i> The exact name/title of the PoA has been included in the header of the CPA-DD form as  “Improved Cooking Stoves for Nigeria Programme of Activities”.</p>	/PDDs/ /POAR/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidence)	Ref.	Draft Concl.	Final Concl.
	<i>Justifications of evidence:</i> by means of document review. <i>Conclusion:</i> The exact name/title of the PoA been included			
<b>A.1.3.</b> Has the latest version of the CDM-SSC-CPA-DD form been applied?  (EB 55 Annex 1 § 55)	<i>Description:</i> The latest version, i.e. version 01 of the CDM-SSC-CPA-DD form been applied. <i>Justifications of evidence:</i> UNFCCC website has been checked <a href="http://cdm.unfccc.int/Reference/PDDs_Forms/PoA/index.html">http://cdm.unfccc.int/Reference/PDDs_Forms/PoA/index.html</a> and compared with the real case CPA-DD form. <i>Conclusion:</i> Requirements are fulfilled	/PDDs/ /POAR/ /unfccc/	OK	OK
<b>A.2. Description of the CPA</b>				
<b>A.2.1.</b> Is the description of a CPA consistent between POA-DD (section A.2 and A.4.2.1) and the generic CPA-DD (section A.2)?  (EB 55 Annex 38, §15(d))	<i>Description:</i> The description of this CPA consistent between POA-DD (section A.2 and A.4.2.1) and the generic CPA-DD (section A.2). <i>Justifications of evidence:</i> by means of comparing the description of this CPA consistent between POA-DD (section A.2 and A.4.2.1) and the generic CPA-DD (section A.2). <i>Conclusion:</i> Requirements are fulfilled	/PDDs/ /POAR/	OK	OK
<b>A.3. Entity/individual responsible for the CPA</b>				
<b>A.3.1.</b> Does the real case CPA-DD include information, e.g., name/contact details of the entity/individual responsible for the operation of the CPA, hence forth referred as CPA	<i>Description:</i> The real case CPA-DD include information incl. name/contact details of the entity/individual responsible for the operation of the CPA, hence forth referred as CPA implementer(s) as follows: Name of entity: atmosfair gGmbH	/PDDs/ /POAR/ /IM/	OK	OK

<b>Checklist Item</b> (incl. guidance for the validation team)	<b>Validation Team Comments</b> (justification and substantiation of information, data and evidence)	<b>Ref.</b>	<b>Draft Concl.</b>	<b>Final Concl.</b>
implementer(s)?  (EB 55 Annex 38, §7 (a))  <i>Please describe this entity/individual responsible for the CPAs and steps taken to verify the information.</i>	Contact details: Florian Zerzawy, Atmosfair gGmbH, Zossener Straße 55, 10961 Berlin, Germany, Tel. +49-30-627355021, zerzawy@atmosfair.de  <i>Justifications of evidence:</i> by means of document review and onsite visit in the Ministry of Finance.  <i>Conclusion:</i> The real case CPA-DD includes information incl. name/contact details of the entity / individual responsible for the operation of the CPA.			
<b>A.3.2.</b> In case the CPA implementers are also project participants of the PoA, are their names included in the PoA?  (EB 55 Annex 38, §8)  <i>The operators of individual CPAs are not required to be project participants. CDM programme participation is only recorded at the PoA level.</i>	<i>Description:</i> The CPA implementer is also the project participants of the PoA, and its name has been included in the PoA-DD section A.3 and Annex 1.  <i>Justifications of evidence:</i> by means of document review and onsite interview.  <i>Conclusion:</i> Requirements are fulfilled	/PDDs/ /POAR/ /IM/	OK	OK
<b>A.4. Technical description of the CPA</b>				
<b>A.4.1. Identification of the CPA</b>				
<b>A.4.1.1. Host Party</b>				
A.4.1.1.1. Are all host parties included in the real case CPA-DD and consistent with section A.4.1.1 of the PoA-DD?	<i>Description:</i> The host party of this CPA is Federal Republic of Nigeria and is consistent with section A.4.1.1 of the PoA-DD.  <i>Justifications of evidence:</i> by means of document review and onsite visit.	/PDDs/ /POAR/ /IM/	OK	OK

<b>Checklist Item</b> (incl. guidance for the validation team)	<b>Validation Team Comments</b> (justification and substantiation of information, data and evidence)	<b>Ref.</b>	<b>Draft Concl.</b>	<b>Final Concl.</b>
(EB 55 Annex 38, §7 (b))	<i>Conclusion:</i> Requirements are fulfilled			
<b>A.4.1.2. Geographic reference or other means of identification allowing the unique identification of the CPA</b>				
A.4.1.2.1. Does the real case CPA-DD include geographical reference or other means of unique identification of a CPA?  (EB 55 Annex 38, §7(a))  <i>In case of stationary CPA, geographic reference should be used; in case of mobile CPAs, registration number, GPS devices, etc. should be used.</i>	<i>Description:</i> This CPA has included unique identification of a CPA in section A.4.1 of the CPA-DD by giving the CPA information as following: “All appliances disseminated under this CPA shall have a unique serial number, allowing to doubtlessly identify the appliance. Serial numbers are transferred to the corresponding CPA electronic record keeping system.”  The information is as per the requirement stipulated in the generic CPA-DD section A.4.1.  <i>Justifications of evidence:</i> by means of document review and database check.  <i>Conclusion:</i> Requirements are fulfilled	/PDDs/ /POAR/ /XLS/	OK	OK
A.4.1.2.2. Has it been demonstrated that the CPA is within the geographical borders of the PoA?  (EB 55 Annex 38, §7(a))	<i>Description:</i> It has been demonstrated that the CPA is within Nigeria, which is within the geographical border of the PoA – Nigeria.  It has been evidenced by CME’s statement in fulfilling eligibility criteria No.3.  <i>Justifications of evidence:</i> by means of document review, database review and onsite visit.  <i>Conclusion:</i> It has been demonstrated that the CPA is within	/PDDs/ /POAR/ /IM/	OK	OK

Validation Report:

**CPA Title:** CPA # 1 Improved Cooking Stoves for Nigeria

**PoA Title:** Improved Cooking Stoves for Nigeria Programme of Activities

TÜV NORD CERT GmbH JI/CDM Certification Program

P-No.: 8000389449 - 10/501 - CPA001



<b>Checklist Item</b> (incl. guidance for the validation team)	<b>Validation Team Comments</b> (justification and substantiation of information, data and evidence)	<b>Ref.</b>	<b>Draft Concl.</b>	<b>Final Concl.</b>
	Nigeria-			
<b>A.4.2. Duration of CPA</b>				
<b>A.4.2.1. Starting date of the CPA</b>				
A.4.2.1.1. Does the real case CPA-DD include provisions that the start date can be clearly defined and evidenced?  (EB 55 Annex1, §99) Apply the definition as per the "Glossary of CDM terms".	<i>Description:</i> The project starting date (2010-12-01) is not clearly referenced.  <i>Justifications of evidence:</i> by means of document review, database review and evidence check.  <i>Conclusion:</i> CAR CPA-B1 was raised.	/PDDs/ /POAR/ /XLS/ /IM/ /SR/	CAR CPA- B1	OK
A.4.2.1.2. Does the real case CDM-CPA-DD include a confirmation that the start date of any CPA is not, or will not be, prior to the PoA validation commencement, i.e. the date on which the CDM-POA-DD is first published for global stakeholder consultation?  (EB 55 Annex 38, §7(d))  Please consider the following: The CDM Executive Board decided to grant an exemption to PoAs that have commenced validation prior to 31 December 2009. Therefore such PoAs may include CPAs with a starting date between 22 June 2007 and the commencement of validation of the PoA, if a list of such specific CPAs is provided to validating DOE and UNFCCC secretariat prior to 31 January 2010. (EB47	<i>Description:</i> The project starting date (2010-12-01) is not clearly referenced.  <i>Justifications of evidence:</i> by means of document review, database review and evidence check.  <i>Conclusion:</i> CAR CPA-B1 was raised.	/PDDs/ /POAR/ /XLS/ /IM/ /SR/ /SLSD/	CAR CPA- B1	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidence)	Ref.	Draft Concl.	Final Concl.
<i>Report Para72)</i>				
<b>A.4.2.2. Expected operational lifetime of the CPA</b>				
<p>A.4.2.2.1. Does the the CPA include provisions to ensure that the operational lifetime can be clearly defined and evidenced? (EB55 Annex 38 para7(d))</p> <p><i>Check whether the project lifetime can be clearly defined. Consider the guidance on the assessment of investment analysis (annex to the additionality tool).</i></p> <p><i>Check in case of phased implementation this has been reflected throughout the whole PDD incl. the financial assessment, if applicable.</i></p>	<p><i>Description:</i> The life time of the CPA is defined as 13 years as per the test report on burning chamber of the deployed ICS SAVE80, which is deemed appropriate.</p> <p><i>Justifications of evidence:</i> by means of document review.</p> <p><i>Conclusion:</i> Requirements are fulfilled</p>	/PDDs/ /IM/	OK	OK
<b>A.4.3. Choice of the crediting period</b>				
<b>A.4.3.1. Starting date of the crediting period</b>				
<p>A.4.3.1.1. Does the real case CPA-DD address the appropriate starting date of the crediting period of the CPA? (EB 55 Annex 38, §7(c))</p> <p><i>The starting date of a crediting period of the CPA shall be the date of its inclusion in the registered PoA or any date thereafter.</i></p>	<p><i>Description:</i> The starting date of the crediting period of this CPA is addressed in section A.4.3.1 of the CPA-DD as March 29<sup>th</sup> 2011, or the date of this CPA inclusion published on the UNFCCC website, whichever is later.</p> <p><i>Justifications of evidence:</i> by means of document check.</p> <p><i>Conclusion:</i> CAR CPA-B1 was raised.</p>	/PDDs/ /POAR/	CAR CPA- B1	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidence)	Ref.	Draft Concl.	Final Concl.
<b>A.4.3.2. Length of the crediting period</b>				
<p>A.4.3.2.1. Does the real case CPA-DD include the option to choose the type (fixed or renewable) and duration of the crediting period of the CPA?</p> <p>(EB 55 Annex 38, §7(c))</p> <p><i>Taking into account that the duration of the crediting period shall not exceed the end date of the PoA.</i></p>	<p><i>Description:</i> The CPA chose the fixed crediting period of 10 years.</p> <p><i>Justifications of evidence:</i> by document check.</p> <p><i>Conclusion:</i> Requirements are fulfilled</p>	<p>/PDDs/ /POAR/</p>	OK	OK
<b>A.4.4. Estimated ER over the chosen crediting period</b>				
<p>A.4.4.1. Does the real case CPA-DD include the estimated amount of emission reductions over the chosen crediting period of the CPA?</p> <p>(EB 55 Annex 38, §7)</p>	<p><i>Description:</i> The emission reduction calculation needs to be adapted after CAR CPA-A1 is closed.</p> <p><i>Justifications of evidence:</i> by means of document review, crosschecking the spreadsheet. The data has been crosschecked with the spreadsheet and all formulas applied are consistent with the ones stipulated in the PoA-DD.</p> <p><i>Conclusion:</i> The real case CPA-DD includes the estimated amount of emission reductions over the chosen crediting period of the CPA. However CAR CPA-B2 was raised.</p>	<p>/PDDs/ /XLS/</p>	CAR CPA- B2	OK
<b>A.4.5. Public Funding of the CPA</b>				
A.4.5.1. Does the real case CPA-DD include	<i>Description:</i> Section A.4.5 of the CPA-DD has included information	/PDDs/	OK	OK

<b>Checklist Item</b> (incl. guidance for the validation team)	<b>Validation Team Comments</b> (justification and substantiation of information, data and evidence)	<b>Ref.</b>	<b>Draft Concl.</b>	<b>Final Concl.</b>
information regarding public funding of the CPA, and consistent with section A.4.5 of the PoA-DD?  (EB 55 Annex 38, §6(n))  <i>In the real case CPA-DD, a table template without exact ER amount shall be included, nonetheless, fixed information throughout the entire PoA duration/.CPA crediting period can be also included.</i>	regarding public funding that as confirmed by the CME, no ODA money was used for implementation of the project activity.  <i>Justifications of evidence:</i> by means of document review, evidence check. It has been also confirmed by the official confirmation letter issued by the CME.  <i>Conclusion:</i> Requirements are fulfilled	/POAR/ /ODA/		
<b>A.4.6. Information to confirm the CPA is not a de-bundled component</b>				
A.4.6.1. Does the real case CPA-DD include information to confirm that the proposed small-scale CPA is not a de-bundled component?  <i>Refer to the guidance for determining the occurrence of de bundling under a programme of activities (EB 54, Annex 13)</i>	<i>Description:</i> Section A.4.6 of the CPA-DD has included information to confirm that the proposed small-scale CPA is not a de-bundled component as follows: The de-bundling performance has been prepared in the POA-DD and “proposed small-scale CPA is exempted from performing de-bundling check and therefore shall not be considered a de-bundled component, as each of the independent subsystem/measures included in the CPA of the PoA is smaller than 1% of the small scale threshold defined by the methodology, AMS II.G. This is confirmed by eligibility criterion 7, Section B.2, through the manufacturer specification.”  The validation team has crosschecked the manufacturer specification and confirmed that the max. number of eaters per stove is 8 people, which is far less than 693 calculated by CME as threshold per stove to exceed the 1% of small scale threshold (as per POA-DD).	/PDDs/ /POAR/ /XLS/ /PIS/ /MS/ /ssc/	OK	OK

<b>Checklist Item</b> (incl. guidance for the validation team)	<b>Validation Team Comments</b> (justification and substantiation of information, data and evidence)	<b>Ref.</b>	<b>Draft Concl.</b>	<b>Final Concl.</b>
	<p><i>Justifications of evidence:</i> by means of evidence check and crosschecking the calculations. The validation team has crosschecked the manufacturer specification</p> <p><i>Conclusion:</i> Requirements are fulfilled</p>			
<p><b>A.4.7. Confirmation that CPA is neither registered as an individual CDM or is part of another Registered PoA</b></p>				
<p>A.4.7.1. Does the real case CPA-DD include provisions for a confirmation that the CPA is neither registered as a CDM project activity nor included in another registered PoA?</p> <p>(EB 55 Annex 38, §7(h))</p> <p><i>Make sure that each single subsystem of the CPA, e.g., solar cooker, bio-digester, etc. is not registered as part of a CDM project or included in another registered PoA.</i></p> <p><i>Make sure that no double counting of any emission reductions will occur.</i></p>	<p><i>Description:</i> Section A.4.7 has included information regarding the CPA is neither registered as a CDM project activity nor included in another registered PoA.</p> <p>There is already only one registered CDM and one under validation PoA under scope 3 using this methodology AMS.II.G, implementing improved cook stoves for households within Nigeria. The registered CDM project Ref. 2711 is also managed by atmosfair gGmbH and was clarified by the CME as to be distinguished via unique serial number for the PoA stoves and the registered CDM stoves, hence no double counting will occur. Statement letter from CME regarding Check on UNFCCC website, date of access: 19/09/2011<sup>/SLU/</sup> has been provided, which has been also crosschecked by validation team via visiting the UNFCCC website on 27/09/2011.</p> <p>The validation team confirmed that no similar PoA has been registered as the proposed PoA in Nigeria; there is another Nigeria cookstove PoA under validation titled “Distribution of fuel-efficient improved cooking stoves in Nigeria”, however the CME is another entity called “C-Quest Capital LLC”, the validation team has conducted a joint conference call involving both atmosfair and the C-Quest Capital LLC and confirmed that they are completely different entities and they will ensure unique numbering system for</p>	<p>/POAR/ /IM09/ /unfccc/</p>	<p>OK</p>	<p>OK</p>

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidence)	Ref.	Draft Concl.	Final Concl.
	<p>their respective PoA to avoid any potential double counting<sup>7/11/</sup>.</p> <p>and has not found other similar CDM projects in Nigeria.</p> <p><i>Justifications of evidence:</i> by document review and crosschecking the UNFCCC website, the validation team has also checked following available links</p> <ul style="list-style-type: none"> <li>- Requesting renewal of crediting period,</li> <li>- Requesting registration,</li> <li>- Under review,</li> <li>- Review requested, and</li> <li>- Corrections requested,</li> </ul> <p>. Statement letter from CME regarding has been also crosschecked by validation team.</p> <p><i>Conclusion:</i> Requirements are fulfilled</p>			
<p>A.4.7.2. Are there provisions to ensure that those operating the CPA are aware and have agreed that their activity is being subscribed to the PoA?</p> <p>(EB 55 Annex 38, §6(i))</p>	<p><i>Description:</i> It has been confirmed in section B.2 of the CPA-DD eligibility criteria No. 9 and that those operating the CPA are aware and have agreed that their activity is being subscribed to the PoA. It was also evidenced by declaration letter from CPA operator.</p> <p><i>Justifications of evidence:</i> by means of document review and onsite interview.</p> <p><i>Conclusion:</i> Requirements are fulfilled</p>	<p>/PDDs/ /SR/ /SLS/</p>	OK	OK
<p><b>B. Eligibility of CPA and estimation of ERs</b></p>				
<p><b>B.1. Title and reference of the Registered PoA to which CPA is added</b></p>				
<p><b>B.1.1.</b> Has the exact name/title, version No.</p>	<p><i>Description:</i> In section B1 of the real case CPA-DD, it refers to the</p>	/PDDs/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidence)	Ref.	Draft Concl.	Final Concl.
<p>and date of the PoA-DD been consistently included in section B.1 of the real case CPA-DD form?</p> <p><i>Please ensure that the latest version number and date of the PoA-DD has been consistently included/updated in the real case CPA-DD.</i></p>	<p>correct PoA "Improved Cooking Stoves for Nigeria Programme of Activities, version 2.3"</p> <p><i>Justifications of evidence:</i></p> <p>The latest PoA-DD and CPA-DD have been checked..</p> <p><i>Conclusion:</i></p> <p>The exact title, version No. and date of the PoA-DD has been consistently included in section B.1 of the real case CPA-DD form.</p>			
<p><b>B.2. Justification of why CPA is eligible to be included in the Registered PoA</b></p>				
<p><b>B.2.1.</b> Does the real case CPA-DD include information how each CPA will fulfill the eligibility criteria specified in the POA-DD?</p> <p>(EB 55 Annex 38, §7(e))</p> <p><i>Details assessment please see Annex 6 of this report.</i></p>	<p><i>Description:</i> In section B.2. of the specific CPA-DD are 15 different eligibility criteria listed with the corresponding supporting evidence. The described eligibility criteria are the same like mentioned in the generic CPA-DD in section B.2. and in PoA-DD in section A.4.2.2. where each eligibility criteria has its specific required evidence. For detailed assessment please see Annex 6 of this report.</p> <p><i>Justifications of evidence:</i></p> <p>All listed evidence are checked and found to be appropriate.</p> <p><i>Conclusion:</i></p> <p>The real case CPA-DD include information how each CPA will fulfil the eligibility criteria specified in the POA-DD.</p>	/PDDs/	OK	OK
<p><b>B.3. Assessment and demonstration of additionality of the CPA, as per eligibility criteria listed in the Registered PoA</b></p>				

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidence)	Ref.	Draft Concl.	Final Concl.
<p><b>B.3.1.</b> Does the real case CPA-DD include information how each CPA will demonstrate additionality as specified in the POA-DD?</p> <p>(EB 55 Annex 38, §7(e))</p> <p><i>Including, as appropriate, the demonstration of the additionality of the CPA.</i></p>	<p><i>Description:</i></p> <p>In section B.3 of the real case CPA-DD, it has justified that approach 1 of eligibility criteria number 14 is chosen to demonstrate additionality for this CPA. Calculation for fulfilment of 60GWh energy saving per year of the CPA has lead to a number of 3,200 stoves to be deployed under this CPA. And the Product information sheet from the manufacturer has demonstrated that end users will be households.</p> <p><i>Justifications of evidence:</i> via document check.</p> <p><i>Conclusion:</i> Requirements are fulfilled</p>	/PDDs/ /PIS/	OK	OK
<p><b>B.4. Description of the sources and gases included in the project boundary and proof that the CPA is located within the geographical boundary of the PoA</b></p>				
<p><b>B.4.1.</b> Does the real case CPA-DD include information regarding sources and gases included in the CPA boundary and proof that the CPA will be located within the geographical boundary of the PoA?</p> <p>(EB 55 Annex 38, §7(a))</p>	<p><i>Description:</i> Combustion of non renewable biomass for cooking are defined as sources for the gas CO<sub>2</sub> within the CPA. Eligibility criteria No. 3 has demonstrated that the CPA will be located within the geographical boundary of the PoA, via evidence provided by CME.</p> <p><i>Justifications of evidence:</i> via document check.</p> <p><i>Conclusion:</i> No issues were raise.</p>	/PDDs/	OK	OK
<p><b>B.5. Emission reductions</b></p>				

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidence)	Ref.	Draft Concl.	Final Concl.
<b>B.5.1. Data and parameters that are available at validation</b>				
<p>B.5.1.1. Are all data and parameters in section B.5.1 of the real case CPA-DD consistent with section E.6.3 of the POA-DD?</p> <p>(EB 55 Annex 38, §15(d))</p>	<p><i>Description:</i> In section B.5.1. following parameters are listed:  <math>B_{old, capita} = 0.692 \text{ t/y}</math>,  <math>\eta_{old} = 0.1</math>,  <math>L_{NRB} = 0.95</math>,  <math>L_{PoA} = 0.95</math>,  <math>f_{NRB,y} = 0.77</math>,  <math>NCV_{biomass} = 0.015 \text{ TJ/t}</math>,  <math>EF_{projected\_fossilfuel} = 81.6 \text{ tCO}_2/\text{TJ}</math>,  <math>HH\_CAP = 8</math> (as per manufacture specification),  <math>\eta_{specified} = 52\%</math> (as per manufacture specification).</p> <p>They are fully consistent with section E.6.3 of the PoA-DD.</p> <p><i>Justifications of evidence:</i> The validation team compared the parameters listed in section B.5.1 of the real case CPA and section E.6.3 of the PoA-DD related to all information available in both documents.</p> <p><i>Conclusion:</i> Requirements are fulfilled</p>	/PDDs/  /MS/	OK	OK
<b>B.5.2. Ex-ante calculation of emission reductions</b>				
<p>B.5.2.1. Are CPA-specific conservative assumptions used and uncertainties addressed when calculating the baseline emissions, project emissions and leakage emissions?</p>	<p><i>Description:</i> The Average number of SAVE80systems deployed during the crediting period needs to be clearly evidenced.</p> <p><i>Justifications of evidence:</i> via document check.</p>	/PDDs/  /POAR/	CAR CPA- A1	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidence)	Ref.	Draft Concl.	Final Concl.
(EB55 Annex38 § 6(g) & 7(e(ii)))	<i>Conclusion:</i> CAR CPA-A1 was raised.		CAR GPA- B2	
<p>B.5.2.2. Are all information in section B.5.2 of the real case CPA-DD consistent with section E.6.2 of the POA-DD?</p> <p>(EB 55 Annex 38, §15(d))</p>	<p><i>Description:</i> In section B.5.3, all information has been consistent with section E.6.2 of the PoA-DD.</p> <p><i>Justifications of evidence:</i> The validation team compared the information listed in section B.5.2 of the real case CPA and section E.6.2 of the PoA-DD in both documents.</p> <p><i>Conclusion:</i> Requirements are fulfilled</p>	/PDDs/	OK	OK
<p><b>B.5.3. Summary of the ex-ante estimation of emission reductions</b></p>				
<p>B.5.3.1. Does the real case CPA-DD include a table of summary on the estimated amount of emission reductions over the chosen crediting period, incl. annual and total, of the CPA?</p> <p>(EB 55 Annex 38, §7)</p> <p><i>In the real case CPA-DD, a table template without exact ER amount shall be included, nonetheless, fixed information throughout the entire PoA duration/.CPA crediting period can be also included.</i></p>	<p><i>Description:</i> The emission reduction calculation needs to be adapted after CAR CPA-A1 is closed.</p> <p><i>Justifications of evidence:</i> by means of document review, crosschecking the spreadsheet. The data has been crosschecked with the spreadsheet and all formulas applied are consistent with the ones stipulated in the PoA-DD.</p> <p><i>Conclusion:</i> The real case CPA-DD includes the estimated amount of emission reductions over the chosen crediting period of the CPA. However CAR CPA-B2 was raised.</p>	/PDDs/ /unfccc/ /XLS/	CAR GPA- B2	OK
<p><b>B.6. Application of the monitoring methodology and description of</b></p>				

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidence)	Ref.	Draft Concl.	Final Concl.
<b>monitoring plan</b>				
<b>B.6.1. Description of monitoring plan</b>				
<p>B.6.1.1. Does the real case CPA-DD include provisions to demonstrate the application of the baseline and monitoring methodology as described in the latest updated PoA-DD?</p> <p>(EB55 Annex 38 § 7(e))</p>	<p><i>Description:</i> In section B.6.1 of the real case CPA-DD demonstrated that the SSC-CPA meets the applicability requirements of baseline and monitoring methodology AMS II.G Version 3, and uses associated methodologies and tools required.</p> <p><i>Justifications of evidence:</i> via document review.</p> <p><i>Conclusion:</i> Requirements are fulfilled</p>	/PDDs/ /AMS.II.G/	OK	OK
<p>B.6.1.2. Are all monitoring parameters and relevant information in section B.6.1 of the real case CPA-DD consistent with section E.7.1 of the POA-DD?</p> <p>(EB 55 Annex 38, §15(d))</p>	<p><i>Description:</i> In section B.6.1 following monitoring parameters have been listed:</p> <ul style="list-style-type: none"> <li>- <math>N_{\text{eaters,appliance}}</math></li> <li>- <math>N_y</math></li> <li>- <math>DO_y</math></li> <li>- <math>\eta_{\text{new}}</math></li> </ul> <p>All information has been consistent with section E.7.1 of the PoA-DD.</p> <p><i>Justifications of evidence:</i> The validation team compared the parameters listed in section B.6.1 of the real case CPA and section E.7.1 of the PoA-DD related to all information available in both documents.</p> <p><i>Conclusion:</i> Requirements are fulfilled</p>	/PDDs/	OK	OK
<p>B.6.1.3. Is the monitoring plan described in the section B.6.1 of the real case CPA-DD in accordance to the approved methodology and</p>	<p><i>Description:</i> The monitoring plan in section B.6.1 of the real case CPA-DD is described in consistent with section A.4.4.2 and E.7.2 of the PoA-DD.</p>	/PDDs/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidence)	Ref.	Draft Concl.	Final Concl.
section A.4.4.2 and E.7.2 of the PoA-DD?  (EB55 Annex38 § 6(g) & 7(e(ii)))	<p><i>Justifications of evidence:</i> The validation team compared the information described in section B.6.1 of the real case CPA and section A.4.4.2 and E.7.2 of the PoA-DD related to all information available in both documents.</p> <p><i>Conclusion:</i> Requirements are fulfilled</p>			
<b>C. Environmental Analysis</b>				
<b>C.1. Level of environmental analysis justification</b>				
<p><b>C.1.1.</b> Has the real case CDM-CPA-DD consistently justified the level of environmental analysis as per section C.1 of the PoA-DD?  (EB 55 Annex 37, §7(f))</p>	<p><i>Description:</i></p> <p><input checked="" type="checkbox"/> The environmental analysis has been undertaken for the whole PoA as reflected in the POA-DD.</p> <p><input type="checkbox"/> The environmental analysis has been undertaken for the CPA as per requirements of the CDM modalities and procedures.</p> <p><i>Justifications of evidence:</i> by means of document check.</p> <p><i>Conclusion:</i> Requirements are fulfilled</p>	/PDDs/ /POAR/	OK	OK
<b>C.2. Documentation on the analysis of the environmental impacts, incl. transboundary impacts</b>				
<p><b>C.2.1.</b> Has the real case CDM-CPA-DD consistently provided information regarding environmental analysis as per section C.2 of the</p>	<p><i>Description:</i></p> <p><input checked="" type="checkbox"/> The environmental analysis has been undertaken for the whole PoA as reflected in the POA-DD. Thus section C.2 of the CPA-DD needs not to be completed.</p>	/PDDs/ /POAR/	OK	OK

<b>Checklist Item</b> (incl. guidance for the validation team)	<b>Validation Team Comments</b> (justification and substantiation of information, data and evidence)	<b>Ref.</b>	<b>Draft Concl.</b>	<b>Final Concl.</b>
PoA-DD?  (EB 55 Annex 37, §7(f))	<input type="checkbox"/> The environmental analysis has been undertaken for the CPA as per requirements of the CDM modalities and procedures, and is consistently described as per section C.2 of the PoA-DD.  <input type="checkbox"/> The environmental analysis shall be undertaken for the CPA as per requirements of the CDM modalities and procedures, however, following finding(s) has/have been identified:  <i>Justifications of evidence:</i> by means of document review.  <i>Conclusion:</i> Requirements are fulfilled			
<b>C.3. Environmental Impact Assessment requirement for a typical CPA</b>				
<b>C.3.1.</b> Has the real case CPA-DD consistently provided information regarding EIA as per section C.3 of the PoA-DD?  (EB 55 Annex 37, §7(f))	<i>Description:</i> <input checked="" type="checkbox"/> The environmental analysis has been undertaken for the whole PoA as reflected in the POA-DD. Thus section C.3 of the CPA-DD needs not to be completed.  <input type="checkbox"/> The EIA has been undertaken for the CPA as per requirements of the CDM modalities and procedures, and is consistently described as per section C.3 of the PoA-DD.  <input type="checkbox"/> The EIA shall be undertaken for the CPA as per requirements of the CDM modalities and procedures, however, following finding(s) has/have been identified:  <i>Justifications of evidence:</i> by means of document review and onsite interview.  <i>Conclusion:</i> Requirements are fulfilled	/PDDs/ /POAR/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidence)	Ref.	Draft Concl.	Final Concl.
<b>D. Stakeholders' comments</b>				
<b>D.1. Level of local stakeholder comments justification</b>				
<p><b>D.1.1.</b> Has the real case CPA-DD consistently justified the level on which comments by local stakeholders shall be invited as per section D.1 of the PoA-DD?</p> <p>(EB 55 Annex 38, §7(g))</p> <p><i>It is assessed whether stakeholders have been properly consulted in the development of the CPA. EB48 Annex29Para4(m)</i></p>	<p><i>Description:</i></p> <p><input checked="" type="checkbox"/> The comments have been sought for the whole PoA as reflected in the POA-DD.</p> <p><input type="checkbox"/> The comments have been correctly sought for each CPA.</p> <p><i>Justifications of evidence:</i> by means of document review and evidence check.</p> <p><i>Conclusion:</i> Requirements are fulfilled</p>	/PDDs/ /POAR/	OK	OK
<b>D.2. Description how comments by local stakeholders have been invited and compiled</b>				
<p><b>D.2.1.</b> Has the real case CPA-DD consistently provided information regarding how comments by local stakeholders will be invited as per section D.2 of the PoA-DD?</p> <p>(EB 55 Annex 37, §7(f))</p>	<p><i>Description:</i></p> <p><input checked="" type="checkbox"/> The local stakeholder consultations have been undertaken for the whole PoA as reflected in the POA-DD. Thus section D.2 of the CPA-DD needs not to be completed.</p> <p><input type="checkbox"/> The local stakeholder consultations shall be undertaken for the CPA as per requirements of the CDM modalities and procedures, and is consistently described as per section D.2 of the PoA-DD.</p>	/PDDs/ /POAR/	OK	OK

<b>Checklist Item</b> (incl. guidance for the validation team)	<b>Validation Team Comments</b> (justification and substantiation of information, data and evidence)	<b>Ref.</b>	<b>Draft Concl.</b>	<b>Final Concl.</b>
	<input type="checkbox"/> The local stakeholder consultations shall be undertaken for the CPA as per requirements of the CDM modalities and procedures, however, following finding(s) has/have been identified:  <i>Justifications of evidence:</i> via document review.  <i>Conclusion: Requirements are fulfilled</i>			
<b>D.3. Summary of the comments received</b>				
<b>D.3.1.</b> Has section D.3 of the real case CPA-DD sufficiently provided information regarding summary of comments received from local stakeholders?  (EB 55 Annex 37, §7(f))	<i>Description:</i> <input checked="" type="checkbox"/> The local stakeholder consultations have been undertaken for the whole PoA as reflected in the POA-DD. Thus section D.3 of the CPA-DD needs not to be completed.  <input type="checkbox"/> The local stakeholder consultations have been undertaken for the CPA as per requirements of the CDM modalities and procedures, and the summary of comments received have been sufficiently described in section D.3 of the CPA-DD.  <input type="checkbox"/> The local stakeholder consultations shall be undertaken for the CPA as per requirements of the CDM modalities and procedures, however, following finding(s) has/have been identified:  <i>Justifications of evidence:</i> by means of document review and evidence check.  <i>Conclusion: Requirements are fulfilled</i>	/PDDs/  /POAR/	OK	OK
<b>D.4. Report on how due account was taken of any comments received.</b>				
<b>D.4.1.</b> Has section D.4 of the real case CPA-	<i>Description:</i>	/PDDs/	OK	OK

<b>Checklist Item</b> (incl. guidance for the validation team)	<b>Validation Team Comments</b> (justification and substantiation of information, data and evidence)	<b>Ref.</b>	<b>Draft Concl.</b>	<b>Final Concl.</b>
DD sufficiently provided information regarding how due account was taken of any comments received?  (EB 55 Annex 37, §7(f))	<input checked="" type="checkbox"/> The local stakeholder consultations have been undertaken for the whole PoA as reflected in the POA-DD. Thus section D.4 of the CPA-DD needs not to be completed.  <input type="checkbox"/> The local stakeholder consultations have been undertaken for the CPA as per requirements of the CDM modalities and procedures, and the report on how due account was taken of any comments received has been sufficiently described in section D.4 of the CPA-DD.  <input type="checkbox"/> The local stakeholder consultations shall be undertaken for the CPA as per requirements of the CDM modalities and procedures, however, following finding(s) has/have been identified: <i>Justifications of evidence:</i> by means of document review and evidence check.  <i>Conclusion:</i> Requirements are fulfilled	/POAR/		
<b>Annexes</b>				
An.1. Has contact information on entity/ individual responsible for the CPA been sufficiently and appropriately included in Annex 1 of the CPA-DD and consistent with section A.3 of the same?  (EB 55 Annex 1, § 52) <i>Each organisation listed in section A.3 shall include the following mandatory fields: Organization, Name of contact person, Street, City, Postfix/ZIP, Country, Telephone and Fax or e-mail.</i>	<i>Description:</i> The contact information on entity/ individual responsible for the CPA been sufficiently and appropriately included in Annex 1 of the CPA-DD and consistent with section A.3 of the same.  <i>Justifications of evidence:</i> by document review.  <i>Conclusion:</i> Requirements are fulfilled	/PDDs/ /POAR/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidence)	Ref.	Draft Concl.	Final Concl.
<p>An.2. Has any important Public Funding information been included in Annex 2 of the CPA-DD and consistent with section A.4.5 of the CPA-DD?</p> <p>(EB 55 Annex 38, §6(n))</p> <p><i>Assess information from Parties included in Annex 1 on sources of public funding for the project activity which shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties.</i></p>	<p><i>Description:</i> There is no public funding applied for this CPA and the public funding information in Annex 2 is consistent with section A.4.5 of the CPA-DD.</p> <p><i>Justifications of evidence:</i> by document review.</p> <p><i>Conclusion:</i> Requirements are fulfilled</p>	/PDDs/ /POAR/	OK	OK
<p>An.3. Has any important Baseline information necessary to be included in Annex 3 of the CPA-DD and consistent with section E.4 of the PoA-DD?</p> <p>(EB 55 Annex 1, §§ 67 (b), 82, §§ 104 – 106)</p> <p><i>Assess any further background information used in the application of the baseline methodology. This may include tables with time series data, documentation of measurement results and data sources, etc.</i></p>	<p><i>Description:</i> There is baseline information included in the Annex 3 which is deemed consistent with section E.4 of the PoA-DD.</p> <p><i>Justifications of evidence:</i> by document review and baseline survey database check.</p> <p><i>Conclusion:</i> Requirements are fulfilled</p>	/PDDs/ /POAR/	OK	OK
<p>An.4. Has any important Monitoring information necessary to be included in Annex 4 of the CPA-DD and consistent with section B.6 of the CPA-DD?</p>	<p><i>Description:</i> There is no further important monitoring information necessary to be included in Annex 4. The information in Annex 4 is consistent with section B.6 of the CPA-DD.</p> <p><i>Justifications of evidence:</i> by document review and baseline survey</p>	/PDDs/ /POAR/	OK	OK

Validation Report:

**CPA Title:** CPA # 1 Improved Cooking Stoves for Nigeria

**PoA Title:** Improved Cooking Stoves for Nigeria Programme of Activities

TÜV NORD CERT GmbH JI/CDM Certification Program

P-No.: 8000389449 - 10/501 - CPA001



<b>Checklist Item</b> (incl. guidance for the validation team)	<b>Validation Team Comments</b> (justification and substantiation of information, data and evidence)	<b>Ref.</b>	<b>Draft Concl.</b>	<b>Final Concl.</b>
<p>(EB 55 Annex 38, §6(j); EB 55 Annex 1 123 (b), 124) <i>Assess any further background information used in the application of the monitoring methodology. This may include tables with time series data, additional documentation of measurement equipment, procedures, etc.</i></p>	<p>database check. <i>Conclusion:</i> Requirements are fulfilled</p>			

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Validation Report:

**CPA Title:** CPA # 1 Improved Cooking Stoves for Nigeria

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P-No.: 8000389449 - 10/501 - CPA001



**ANNEX 2: ASSESSMENT OF BASELINE IDENTIFICATION**

**Table A-2:** Assessment of Baseline Identification

<input type="checkbox"/>	Baseline is not identified
<input checked="" type="checkbox"/>	Baseline has been identified at PoA level
<input type="checkbox"/>	Baseline is identified at CPA level, please refer to checklist
<input type="checkbox"/>	Assessment of baseline see below

Baseline Alternatives identified	Inline with the Methodology?	Eliminated	Reasons for elimination / non-elimination from list of alternatives	Evidence used	DOE Assessment	
					Appropriateness of elimination	Assessment of validation team (results and means of assessment)
	<input type="checkbox"/>	<input type="checkbox"/>		-	<input type="checkbox"/>	

Validation Report:

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## ANNEX 3: ASSESSMENT OF FINANCIAL PARAMETERS

**Table A-3:** Assessment of Financial Parameters

<input checked="" type="checkbox"/>	No financial parameters are used for additionality justification						
<input type="checkbox"/>	Assessment of all financial parameters see below						
Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE ASSESSMENT		
					Correctness of value applied	Appropriateness of information source	Comment
					<input type="checkbox"/>	<input type="checkbox"/>	

## ANNEX 4: ASSESSMENT OF BARRIER ANALYSIS

**Table A-4:** Assessment of Barrier Analysis

<input type="checkbox"/>	No barrier parameters are used for additionality justification
<input checked="" type="checkbox"/>	Assessment of barriers see below

Kind of Barrier	Description of Barrier	Evidence used	Assessment of validation team	
			Appropriateness	Explanation of final result
Microscale project barrier	This CPA uses Approach 1, Demonstration of Additionality of Microscale Project Activities in line with the PoA-DD, Section A.4.3, the number of ICS to be deployed under the CPA remains under the threshold of 20 GWh (corresponding to 60 GWh thermal energy savings) during every year of the crediting period and hence demonstrates additionality. Please refer to eligibility criterion 14 in Section B.2 of the CPA-DD.	<ul style="list-style-type: none"> <li>• Real CPA-DD,</li> <li>• ER calculation sheet,</li> <li>• onsite interview,</li> <li>• SAVE 80 product information sheet.</li> <li>• /ssc/</li> </ul>	<input checked="" type="checkbox"/>	<p>In Section B.2 of CPA-DD (equation 1 to 3) it has been calculated that in order to be under the small scale threshold of 180GWh annual thermal energy savings throughout the crediting period of the CPA<sup>/ssc/</sup>, the number of stoves (N<sub>y</sub>) shall be less than 9,663 per year.</p> <p>The microscale limit is 60 GWh annual thermal energy savings per CPA, which is 1/3 of the small-scale limit and hence to fulfill eligibility criterion 14 the maximum number of stoves (N<sub>y</sub>) that could be deployed is 3,221. To be more conservative, 3,200 stoves are confirmed to be the max. number deployed under this CPA per year. The validation team has crosschecked the calculation and confirmed the applied value is correct and conservative.</p> <p>Besides, the Product information sheet “My Stove SAVE80” <sup>/PIS/</sup> has been submitted by CME to validation team and has been crosschecked as well as during onsite visit cooking observation. It can be confirmed that SAVE 80 is to supply household users for cooking. The evidence is deemed appropriate and sufficient.</p> <p>Hence, the additionality demonstration is deemed in line with EB 60 Annex 25.</p>

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## ANNEX 5: OUTCOME OF THE PSCP

**Table A-5:** Outcome of the Public/ Global Stakeholder Consultation Process

<input checked="" type="checkbox"/>	No comments were received during the global stakeholder consultation period					
<input type="checkbox"/>	Comments were received during the global stakeholder consultation period. The comments (in unedited form) and the consideration/response of the validation team are presented below:					
Comment No.:	Comment by:	Inserted on:	Subject	Comment *)	Action taken by the validation team to take due account on the comment *)	Conclusion (incl. CARs CLs or FARs)
No public comments have been received during the GSCP (20 Nov 10 - 19 Dec 10)	-	-	-	-	Since no public comments have been received during the GSCP (20 Nov 10 - 19 Dec 10), no necessary actions are needed.	Since no public comments have been received during the GSCP (20 Nov 10 - 19 Dec 10), no findings are raised.

\*) In case clarifications have been requested by the validation team corresponding rows shall be added

## ANNEX 6: ELIGIBILITY CRITERIA COMPLIANCE

**Table A-6:** Assessment on CPA Compliance with Eligibility Criteria  
(EB 55 Annex 38 §15(b))

<input type="checkbox"/>	Eligibility Criteria has not been sufficiently justified and fulfilled by the CPA
<input checked="" type="checkbox"/>	Eligibility Criteria has been sufficiently justified and fulfilled by the CPA as follows

Eligibility Criteria	CPA Justification	Evidence Document	Assessment of validation team	
			Compliance	Explanation of final result
<p>1. The CPA consists of distribution of domestic ICS, stove type (single pot or multi pot portable or in-situ cook stove) 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. 3</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 in the specific CPA-DD: The ICS to be deployed is the SAVE80 system, which is a single pot, portable domestic cook stove and hence an appliance involving the efficiency improvements in the thermal applications of non-renewable biomass as per AMS II. G, ver. 3</p>	<p>Product information sheet from manufacturer</p>	<input checked="" type="checkbox"/>	<p>Product information sheet "My Stove SAVE80" <sup>/PIS/</sup> has been submitted by CME to validation team and has been checked as well as during onsite visit cooking observation has been taken part of. It can be confirmed that SAVE 80 contains two pots and is a portable stove, involving efficiency improvements in the thermal application via combusting much less firewood (non-renewable biomass) for cooking comparing to traditional three-stove fire place. The evidence is deemed appropriate and sufficient.</p> <p>Nevertheless, due to the fact that not all ICSs have been deployed at CPA validation stage, CME has also indicated that the 'type and number of ICS deployed' will be checked during verification, and in case any installed ICS type will be found not in line with the methodology requirement, those ICS will not be counted for emission reduction calculation. The validation team deems this statement appropriate, which has been also reflected as monitoring parameter <math>N_y</math> in section B.6.1 of the CPA-DD.</p> <p>Hence, EC1 is deemed sufficiently and appropriately fulfilled at CPA validation stage.</p>

Eligibility Criteria	CPA Justification	Evidence Document	Assessment of validation team	
			Compliance	Explanation of final result
2. The ICS disseminated under the CPA has a specified efficiency of at least 20%	Manufacturer Specification for the Save 80 shows a thermal efficiency of 52%.	Manufacturer Specification	<input checked="" type="checkbox"/>	<p>Manufacturer specification “Save80 cook stove system Model Save80 A“ <sup>/MS/</sup> has been submitted by CME to validation team and has been checked as well as during onsite visit cooking observation has been taken part of. It can be confirmed that SAVE 80 has a thermal efficiency of 52%, which is higher than 20% required by applied methodology. The evidence is deemed appropriate and sufficient.</p> <p>Nevertheless, the actual efficiency of the deployed stoves used for emission reduction calculation during monitoring period will be monitored through parameter <math>\eta_{new}</math> as specified in section B.6.1 of the CPA-DD, which is deemed appropriate.</p> <p>Hence, EC2 is deemed sufficiently and appropriately fulfilled at CPA validation stage.</p>
3. The CPA is located within Nigeria. Please note that not all ICS may have been deployed at CPA inclusion stage, the location of the ICS can however also be checked during verification, and in case any deployed ICS type will be found not in line with the boundary/location requirement, those ICS will not be counted for emission reduction calculation.	Location and boundary is specified in the specific CPA-DD stating that the location is limited to Nigeria: See Section A.4.1.1	Statement of CME that the location and boundary is within Nigeria.	<input checked="" type="checkbox"/>	<p>In section A.4.1.1 of the CPA-DD has specified that the location of all deployed stoves will be within geographical boundary of Nigeria. Besides, statement letter <sup>/SLB/</sup> from CME has also been submitted to the validation team, which is deemed sufficient.</p> <p>Nevertheless, due to the fact that not all ICSs have been deployed at CPA validation stage, CME has also indicated that the ‘Locations of ICS deployed’ will be checked during verification, and in case any installed ICS type found not within Nigeria, those ICS will not be counted for emission reduction calculation. The validation team deems this statement appropriate, which has been also reflected as monitoring parameter <math>DO_y</math> as specified in section B.6.1 of the CPA-DD. Hence, EC3 is deemed sufficiently and appropriately fulfilled at CPA validation stage.</p>

Eligibility Criteria	CPA Justification	Evidence Document	Assessment of validation team	
			Compliance	Explanation of final result
4. An unique numbering or identification system for the stoves disseminated is applied	The specific numbering or identification regime is included in the specific CPA-DD: See Section A.2	1. CPA-DD: See Section A.2; 2. First stove sales receipt	<input checked="" type="checkbox"/>	<p>Section A.2 footnote 3 has specified the unique numbering for stoves under the CPA as “The serial numbers for the ICS will be either from the manufacturer and manufacturer will confirm with each order that the serial numbers are unique; or, if the serial numbers are allocated by the CME, the ICS shall have a code for the PoA ....”</p> <p>Besides, the validation team has also confirmed that the 1<sup>st</sup> sold stove was numbered as “Atm-BIA-000050” as evidenced in the sales receipt <sup>/SR/</sup>, which is deemed in line with the unique numbering rule set by CME and also can avoid double counting with other CDM or PoA projects.</p> <p>Nevertheless, due to the fact that not all ICSs have been deployed at CPA validation stage, CME has also indicated that the “type and number of ICS deployed” will be checked during verification: In case any installed ICS type will be found not in line with the numbering requirement, those ICS will not be counted for emission reduction calculation. The validation team deems this statement appropriate, which has been also reflected as monitoring parameter <math>N_y</math> as specified in section B.6.1 of the CPA-DD.</p> <p>Hence, EC4 is deemed sufficiently and appropriately fulfilled at CPA validation stage.</p>
5. End users receiving ICS under the specific CPA contractually cede their rights to claim and own emission reductions under the Clean Development Mechanism of the UNFCCC to the CME of the PoA	The default ICS sales receipt provided for end users is including the provision that emission reductions generated by the stove are owned by the CME	1. Stove sales receipt template 2. First stove sales receipt	<input checked="" type="checkbox"/>	<p>Evidence “default ICS sales receipt template” <sup>/SRT/</sup> and the 1<sup>st</sup> deployed stove sales receipt <sup>/SR/</sup> have been provided by CME to the validation team, and are deemed appropriate. Especially from the statement signed by stove buyer (household end user) on the sales receipt “This stove is promoted and sold under the atmosfair improved Cooking Stove for Nigeria PoA. I herewith recognize that I get the stove at a subsidized price and therefore agree to the</p>

Eligibility Criteria	CPA Justification	Evidence Document	Assessment of validation team	
			Compliance	Explanation of final result
				following conditions: - to cede all entitlements from reduced carbon dioxide emission (CERs) to the managing entity of the PoA (atmosfair)...” the requirement is deemed fulfilled. Hence, EC5 is deemed sufficiently and appropriately fulfilled at CPA validation stage.
6. Only new ICS will be disseminated	Specification of stove type and compliance with the technological requirements of AMS II G is described in the specific CPA-DD: See Section A.2	1. Statement from CME that only new stoves will be disseminated under the CPA, 2. First stove sales receipt	<input checked="" type="checkbox"/>	Statement letter from CME regarding all stoves will be deployed under the CPA are new <sup>/SLN/</sup> has been provided. Furthermore, the 1 <sup>st</sup> stove sales receipt has also shown statement signed by stove buyer (household end user) on the sales receipt that “This stove is promoted and sold under the atmosfair improved Cooking Stove for Nigeria PoA. I herewith recognize that I ...agree to the following conditions: ... to not resell the stove”, hence the requirement is demonstrated fulfilled in order to avoid leakage. Hence, EC6 is deemed sufficiently and appropriately fulfilled at CPA validation stage.
7. The CPA is exempted from performing the de-bundling check since each individual sub-system, i.e. ICS, has thermal energy savings of less than 1% of the SSC threshold and will remain within this threshold throughout the crediting period. Please note that not all ICS may have been deployed at CPA inclusion stage, but the 1% threshold however can also be checked during verification, and in	Calculation is provided in the PoA DD (equations 1 to 4 in Section A.4.4.1 that show that according to thermal energy savings calculation provided in the AMS II G. in order to exceed the 1% threshold the number of eaters even under a 100% efficient ICS would be 693. Please note: The	Manufacturer specification, demonstrating that the number of eaters is less than 693.	<input checked="" type="checkbox"/>	Equation 1 to 4 in section A.4.4.1 of CPA-DD has correctly calculated the max. eaters per stove will be 693 so the thermal energy savings will be less than 1% of the SSC threshold <sup>/SSC/</sup> . The provided evidence Manufacturer specification “Save80 cook stove system Model Save80 A” <sup>/MS/</sup> has confirmed that the SAVE80 stoves can supply at least for 8 people, which is used as value for HH_Cap to cap the monitoring parameter $N_{eaters,appliance}$ for ex-ante emission reduction calculation, which is deemed conservative. Besides, due to the reason that not all ICS have been installed at CPA validation stage, CME has also indicated

Eligibility Criteria	CPA Justification	Evidence Document	Assessment of validation team	
			Compliance	Explanation of final result
case any deployed ICS type will be found not in line with the De-bundling requirement, those ICS will not be counted for emission reduction calculation.	manufacturer specification value will be used for parameter HH_Cap, which is the max. value to be applied for calculation of emission reductions.			that the 1% threshold will be checked during verification, and in case any installed ICS type will be found not within this threshold, those ICS will not be counted for emission reduction calculation. The validation team deems this statement appropriate and sufficient, which has been also reflected as monitoring parameter $N_{eaters,appliance}$ as specified in section B.6.1 of the CPA-DD. Hence, EC7 is deemed sufficiently and appropriately fulfilled at CPA validation stage.
8. 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 statement is included in the CPA-DD that the specific CPA will not be part of another single CDM project activity or CPA under another PoA: See Section A.4.7	Check on UNFCCC website, date of access: 19/09/2011	<input checked="" type="checkbox"/>	Statement letter from CME regarding Check on UNFCCC website, date of access: 19/09/2011 <sup>/SLU/</sup> has been provided, which has been also crosschecked by validation team via visiting the UNFCCC website on 27/09/2011. The validation team confirmed that no similar PoA has been registered as the proposed PoA in Nigeria; there is another Nigeria cookstove PoA under validation titled "Distribution of fuel-efficient improved cooking stoves in Nigeria", however the CME is another entity called "C-Quest Capital LLC", the validation team has conducted a joint conference call involving both atmosfair and the C-Quest Capital LLC and confirmed that they are completely different entities and they will ensure unique numbering system for their respective PoA to avoid any potential double counting <sup>/IM/</sup> . Besides, the validation team has also checked registered CDM project and found that one similar CDM project titled "Efficient Fuel Wood Stoves for Nigeria" (ref. 2711) has been registered on 12 Oct 2009, whose PP is also atmosfair, but it has been confirmed by CME atmosfair that "it is deploying stoves with a serial number different from the PoA. Hence, no double

Eligibility Criteria	CPA Justification	Evidence Document	Assessment of validation team	
			Compliance	Explanation of final result
				counting can occur” <sup>/SLU/</sup> . Furthermore, the validation team has also checked following available links on the UNFCCC CDM website <ul style="list-style-type: none"> <li>- Requesting renewal of crediting period,</li> <li>- Requesting registration,</li> <li>- Under review,</li> <li>- Review requested, and</li> <li>- Corrections requested,</li> </ul> and has not found other similar CDM projects in Nigeria. Hence, EC8 is deemed sufficiently and appropriately fulfilled at CPA validation stage.
9. Contractual provisions to ensure that those operating the CPA are aware and have agreed that their activity is being subscribed to the PoA	Declaration from CPA operators, stating that they are aware and have agreed that their activity is being subscribed to the PoA.	Declaration from CPA operator	<input checked="" type="checkbox"/>	This CPA operator listed in Annex 1 of the CPA-DD is the same as CME as atmosfair, and the statement letter regarding awareness of the CPA being subscribed to the PoA <sup>/SLS/</sup> from CME has also been provided and is deemed appropriate. Hence, EC9 is deemed sufficiently and appropriately fulfilled at CPA validation stage.
10. The CME and the CPA operator (in case of being different from the CME) shall confirm that in case of public funding there shall not be diversion of Official Development Assistance.	Statement of CME and the CPA operator (in case of being different from the CME) confirming Non-diversion of ODA in case of Public funding	Statement of CME	<input checked="" type="checkbox"/>	This CPA operator listed in Annex 1 of the CPA-DD is the same as CME as atmosfair, and the statement letter regarding no diversion of ODA is applied to the PoA <sup>/ODA/</sup> from CME has also been provided and is deemed appropriate. Hence, EC10 is deemed sufficiently and appropriately fulfilled at CPA validation stage.
11. CPA start date shall not be before PoA webhosting date, i.e. 20/11/2010. Please note that not all ICS may have	Starting date as stated in the CPA-DD is after 20/11/2010. Please refer to the Section A.4.2.1	1.Statement from CME that no ICS under the	<input checked="" type="checkbox"/>	Statement letter from CME regarding the starting date of CPA <sup>/SLSD/</sup> including the 1 <sup>st</sup> Stove sales receipt <sup>/SR/</sup> have been submitted to the validation team and are deemed appropriate. The 1 <sup>st</sup> stove sold under the CPA is on 2011-03-

Eligibility Criteria	CPA Justification	Evidence Document	Assessment of validation team	
			Compliance	Explanation of final result
been deployed at CPA inclusion stage, the ICS start date can however also be checked during verification, and in case any deployed ICS will be found not in line with CPA start date requirement, those ICS will not be counted for emission reduction calculation.		CPA were sold before 20/11/2010. 2. First stove sales receipt		29, which was after 2010-10-20. Besides, due to the fact that not all ICSs have been installed at CPA validation stage, CME has also indicated that the 'ICS deployed' will be checked during verification, and in case any installed ICS type will be found before 2010-10-20, those ICS will not be counted for emission reduction calculation. The validation team deems this statement appropriate, which has been also reflected as monitoring parameter N <sub>y</sub> as specified in section B.6.1 of the CPA-DD. Hence, EC11 is deemed sufficiently and appropriately fulfilled at CPA validation stage.
12. CPA starting date of the crediting period is date of inclusion into registered PoA or any date thereafter and crediting period not to exceed the PoA end date	CPA crediting period starting date is date of CPA inclusion into registered PoA or any date thereafter and crediting period not to exceed the PoA end date.	Please refer to Section A.4.3 of CPA-DD	<input checked="" type="checkbox"/>	In CPA-DD section A.4.3.1 states that the CPA crediting period will start on 2011-03-29 or the date of the CPA inclusion (same as the PoA registration date), whichever is later; and section A.4.3.2 states that the crediting period for this CPA is fixed 10 years, which is within the 28 years duration of the PoA. Hence, EC12 is deemed sufficiently and appropriately fulfilled at CPA validation stage.
13. CME approved each CPA to be included into its registered PoA	Statement of CME giving approval for the CPA to be included into its registered PoA	Statement of CME	<input checked="" type="checkbox"/>	Statement letter from CME regarding approval of this CPA <sup>/SLA</sup> has been provided and is deemed appropriate. Hence, EC13 is deemed sufficiently and appropriately fulfilled at CPA validation stage.
14. Additionality is demonstrated by either approach 1 or approach 2 as described in the PoA DD: Applicability of additionality criteria for micro-scale projects (approach 1) OR	Approach 1: Calculation in the CPA-DD as demonstrated under Section E.2 of the PoA-DD, showing that CPA remains under 60 GWh	Document for demonstration that end users will be households: Product	<input checked="" type="checkbox"/>	In Section B.2 of CPA-DD (equation 1 to 3) it has been calculated that in order to be under the small scale threshold of 180 GWh annual thermal energy savings <sup>/SSC/</sup> throughout the crediting period of the CPA, the number of stoves (N <sub>y</sub> ) shall be less than 9,663. The microscale limit is 60 GWh annual thermal energy

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Eligibility Criteria	CPA Justification	Evidence Document	Assessment of validation team	
			Compliance	Explanation of final result
Investment barriers described in the PoA-DD also apply for the CPA level (approach 2)	thermal energy savings limit: See calculation for fulfilment of eligibility criterion 14 below.	information sheets from manufacturer; Section B.2 of CPA-DD		savings per CPA, which is 1/3 of the small-scale limit and hence to fulfil eligibility criterion 14 the maximum number of stoves ( $N_y$ ) that could be deployed is 3,221 per year. To be more conservative, 3,200 stoves are confirmed to be the max. number stoves to be deployed under this CPA per year. The validation team has crosschecked the calculation and confirmed the applied value correct and conservative. Besides, the Product information sheet "My Stove SAVE80" <sup>/PIS/</sup> has been submitted by CME to validation team and has been crosschecked as well as during onsite visit cooking observation. It can be confirmed that SAVE 80 is to supply household users for cooking. The evidence is deemed appropriate and credible. Hence, EC14 is deemed sufficiently and appropriately fulfilled at CPA validation stage.
15. The CPA will remain under the thermal threshold of 180 GWh thermal energy savings throughout the crediting period of the CPA. 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.	The estimated maximum number of ICSs is to be defined in the CPA-DD according to the equation provided in Section E.2 of the PoA-DD. See calculation for fulfilment of eligibility criterion 15 below.	Section B.2 of CPA-DD	<input checked="" type="checkbox"/>	In Section B.2 of CPA-DD (equation 1 to 3) it has been calculated that in order to be under the small scale threshold of 180GWh annual thermal energy savings throughout the crediting period of the CPA, the number of stoves ( $N_y$ ) shall be less than 9,663 stoves. Furthermore, the eligibility criteria 14 has already been fulfilled by demonstrating the CPA size will not exceed the microscale limit of 60 GWh annual thermal energy savings, which is 1/3 of the small-scale limit and the maximum number of stoves that will be deployed conservatively has been taken as 3,200 stoves per year under this CPA. The validation team has crosschecked the calculation and confirmed the applied value is correct and conservative. Hence, EC15 is deemed sufficiently and appropriately fulfilled at CPA validation stage.

<sup>7)</sup> In case clarifications have been requested by the validation team corresponding rows shall be added

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## ANNEX 7: APPOINTMENT CERTIFICATES OF TEAM MEMBERS

**TUV NORD**  
Certification

**Statement of Competence**  
Appointment and authorization according to the procedures  
of the TÜV NORD JI/CDM Certification Program

**Ms. Jun Wang**

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification) Technical Reviewer	2013-11-19
VCS	Lead Assessor Technical Reviewer	2013-11-19

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.2	Renewable energy	1.2.1 Hydro 1.2.2 Wind 1.2.3 Geothermal 1.2.4 Solar 1.2.5 Tidal

126 – Rev. 3, Date: 2011-09-21

126\_S01-F003\_2011-09-21\_rev3 S01-F003 rev1 / 2011-08-02

**TUV NORD**  
Certification

**Statement of Competence**  
Appointment and authorization according to the procedures  
of the TÜV NORD JI/CDM Certification Program

**Mr. Ulrich Walter**

SCHEME	STATUS	VALID UNTIL
CDM	Assessor (Validation, Verification) Technical Reviewer	2013-05-24
Ji	Assessor Technical Reviewer	2013-05-24
VCS	Assessor Technical Reviewer	2013-05-24

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
2.1	Electricity Distribution	
2.2	Heat Distribution	
3.1	Energy Demand	
5.1	Chemical Process Industries	
11.1	Chemical Process Industries	
12.1	Chemical Process Industries	
13.1	Waste Handling and Disposal	13.1.1 Waste Management 13.1.2 Waste Water Management
13.2	Animal Waste Management	
15.2	Animal Waste Management	

149 - Rev. 1, Date: 2011-08-08

149\_S01-F003\_2011-08-08\_rev1 S01-F003 rev1 / 2011-08-02

**TUV NORD**  
Certification

**Statement of Competence**  
Appointment and authorization according to the procedures  
of the TÜV NORD JI/CDM Certification Program

**Ms. Ellen Goel**

SCHEME	STATUS	VALID UNTIL
CDM	Assessor (Validation, Verification)	2014-04-24
VCS	Assessor	2014-04-24

209 – Rev. 0, Date: 2011-04-25

209\_S01-F003\_2011-04-25\_rev0 S01-F003 rev1 / 2011-08-02

Validation Report:


**CPA Title:** CPA # 1 Improved Cooking Stoves for Nigeria

**PoA Title:** Improved Cooking Stoves for Nigeria Programme of Activities

TÜV NORD CERT GmbH JI/CDM Certification Program

P-No.: 8000389449 - 10/501 - CPA001




  
**Statement of Competence**  
Appointment and authorization according to the procedures  
of the TÜV NORD JI/CDM Certification Program

**Ms. Christina Stöhr**

SCHEME	STATUS	VALID UNTIL
CDM	Assessor	2013-12-14
VCS	Assessor	2013-12-14

200 – Rev. 0, Date: 2011-03-17

200\_801#003\_2011-03-17\_006 801#003 / 006 / 2010-08-10

  
**Statement of Competence**  
Appointment and authorization according to the procedures  
of the TÜV NORD JI/CDM Certification Program

**Mr. Stefan Winter**

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2014-08-30
VCS	Senior Assessor (Validation, Verification) Technical Reviewer	2014-08-30

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.1	Thermal energy generation	
1.2	Renewable Energy	1.2.1 Hydro 1.2.2 Wind 1.2.3 Geothermal 1.2.4 Solar 1.2.5 Tidal
2.2	Heat distribution	
3.1	Energy demand	
13.1	Waste handling and disposal	13.1.1 Waste management 13.1.2 Waste water management
13.2	Animal waste management	
15.2	Animal waste management	

163 – Rev. 2, Date: 2011-08-10

163\_801#003\_2011-08-10\_rev2 801#003 rev1 / 2011-08-02