

# VALIDATION REPORT

for the CDM Programme of Activities

## Energy Efficient Cook stoves in South Africa in

## South Africa

Report No. 01 997 9105069953-1/2

Version No. 03, 05/12/2012

Designated Operational Entity (DOE)

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**I. PoA description:**

<b>PoA title:</b>	Energy Efficient Cook stoves in South Africa		<b>Report No.:</b> 01 997 9105069953
<b>Host Country:</b>	India		<b>Current revision No.:</b> 03
<b>Methodology:</b>	AMS-II. G, Version 03.	<input type="checkbox"/> Large Scale	<b>Date of current revision:</b> 05/12/2012
		<input checked="" type="checkbox"/> Small Scale	<b>Date of first issue:</b> 31/07/2012
<b>GHG reducing measure/technology:</b>	The PoA Involves distribution of improved cook stove (ICS) to the households of South Africa which replaces the lower efficient conventional stoves. The project saves fuel wood household level which is majorly non-renewable biomass. It is assumed that the project activity replaces the fossil fuel for meeting the similar thermal energy need and thereby it avoids the GHG emission associated with it.		

Party	Private or public entity(ies) project parties (as applicable)	Party considered a project participant	Contract party
South Africa (Host)	CME & PP: Clean Air Renewable Energy (Pty) Ltd (Private entity)	No	<input checked="" type="checkbox"/>

**II. Validation Team:**

Validation Team			Role									
Full name	Affiliation TÜV Rheinland	Appointed for Sectoral Scopes (Technical Areas)	Team leader	Acting Team Leader	Local Expert	Team Member (Auditor)	Technical Expert	Acting Tech. Expert	Trainee Auditor	Technical Reviewer	Expert to TR	Trainee TR
Mr. R Narendra Kumar	India	1.2, 3.1	X				X					
Mr. Ma Paa Puratchikkanal	India	1.2, 3.1, 6.1, 13.1/13.2, 15.1				X	X					
Ms. Liza Margaret Simon	India				X							
Ms. Indumathi C	India	1.2								X		
Mr. Lixin Li	China	1.1, 1.2, 2.1, 2.2, 3.1, 4.5									X	

(adjust accordingly, i.e. provide one line per person)

**Validation Phases:**
☒ Desk Review  
 ☒ Follow up interviews  
 ☒ Resolution of outstanding issues
**Validation Status:**
☐ Corrective Actions / Clarifications Requested  
 ☒ Full Approval and Submission for Registration  
☐ Rejected
**III. Validation Report:**

Final approval	Released	Distribution
<input checked="" type="checkbox"/>	By: Mr. Praveen Urs	<input type="checkbox"/> No distribution without permission from the Client or responsible organizational unit
Date: 2012-12-07		<input checked="" type="checkbox"/> Unrestricted distribution

## EXECUTIVE SUMMARY- VALIDATION OPINION

The validation team assigned by the DOE (TÜV Rheinland (China) Ltd.), here after called TRC, is been assigned by “M/s. Clean Air Renewable Energy (Pty) Ltd” to perform the validation of their PoA “Energy Efficient Cook stoves in South Africa”. The validation was performed on the basis of UNFCCC criteria for the Clean Development Mechanism. The scope of the validation is defined as an independent and objective review of the PoA document, the project’s baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against CDM Validation and Verification Manual (Version 01.2), Kyoto Protocol requirements, CDM Executive Board/UNFCCC rules.

Standard auditing techniques have been used for the validation of the PoA. An analysis, as provided by the applied methodology, demonstrates that the PoA is not a likely baseline scenario. Emission reductions attributable to the PoA (eligible CPAs of the PoA) are additional to any that would occur in the absence of the proposed eligible CPAs. Given that the PoA is implemented as designed, the CPAs are likely to achieve the emission reductions.

The report is based on the assessment of the project design document undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to document reviews, site visit, stakeholder interviews, review of the applicable methodology and its underlying formulae and calculations.

The validation is based on the information made available to TUV Rheinland, as well as the engagement conditions detailed in this report. The validation has been performed following the VVM requirements and other PoA Specific procedures and Standards.

The validation was executed in the following steps so far:

- Receipt of PoA DD, CPA DD (generic) and CPA DD (real case) version 01, dated 11/04/2012 for global stakeholder commenting.
- Global stakeholder comment process (04/05/2012 to 12/06/2012)
- On-site visit with stakeholder interviews (24/07/2012 to 25/07/2012)
- Issue of checklist with corrective action requests (CARs) and clarification requests (CLs) and the draft validation report and protocol
- Desk review of revised DDs applying AMS.II.G Version 03
- Review of responses of CARs/CLs
- Issue of the final validation report and protocol

### Validation criteria

The following CDM requirements have been considered:

- Article 12 of the Kyoto Protocol,
- Modalities and procedures for CDM (Marrakech Accords)
- Subsequent decisions by the COP/MOP and CDM Executive Board
- Host country criteria
- Criteria given to provide for consistent project operations, monitoring and reporting.

The host part is South Africa and the party fulfil the participation criteria and have approved and authorized the project and the CME/project participant. The DNA from South Africa confirms that the PoA assists in achieving sustainable development.

The PoA correctly applies the baseline and monitoring methodology AMS II.G, version 03. “Energy efficiency measures in thermal applications of non-renewable biomass”.

The CPA to be involved in the PoA results in reductions of CO<sub>2</sub> emissions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the project is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity.

The validation protocol describes a total of 22 findings which include:

17 Corrective Action Requests (CARs);

5 Clarification Requests (CLs);

0 Forward Action Requests (FARs); and all findings have been closed satisfactorily.

The single purpose of this report is its use during the registration process as part of the CDM project cycle. In the opinion of TÜV Rheinland, the PoA meets all relevant UNFCCC requirements for the CDM if the underlying assumptions do not change. TÜV Rheinland thus recommends the PoA to be registered with the UNFCCC.

R Narendra Kumar (Team Leader)



TÜV Rheinland (India) Pvt. Ltd  
Bangalore, 05/12/2012

Mr. Praveen Nagaraje Urs (DOE Manager)



TÜV Rheinland (China) Ltd.  
Beijing, 07/12/2012

**Abbreviations**

AMS	Approved Methodology Small scale
BE	Baseline Emission
BOBFAB	BOBFAB (Pty) Ltd
CAR	Corrective Action Request
CARE	Clean Air Renewable Energy (Pty) Ltd
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CPA	CDM Programme activity
CPA-DD	CDM Programme Activity Design Document
CER	Certified Emission Reduction
CL	Clarification Request
CME	Co-ordinating or Managing Entity
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2</sub> e	Carbon Dioxide Equivalent
CTA	Complex Technical Area
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
DRB	Demonstrable Renewable Biomass
EB	Executive Board
EIA	Impact Assessment / Environmental Assessment
ER	Emission Reduction
FAR	Forward Action Request
FSR	Feasibility Study Report
GHG	Greenhouse Gas
GWh	Giga Watt Hours
I	Interview
ICS	Improved Cook Stove
IPCC	Intergovernmental Panel on Climate Change
KPT	Kitchen Performance Test
kW	Kilo Watt
kWh	Kilo Watt Hours
L <sub>y</sub>	Leakage
LoA	Letter of Approval
MoV	Means of Verification
MOC	Modalities of Communications
MW	Mega Watt
MWh	Mega Watt Hours
NGO	Non Government Organisation
NO <sub>x</sub>	Nitrogen Oxides
NRB	Non-Renewable Biomass
ODA	Official Development Assistance
OSV	On Site Visit
PE	Project Emission
PoA	Programme of Activities

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PoA-DD	Programme of activities design document
PP	Project Participant
SD	Sustainable Development
SME	Small and Medium Enterprise
t	Tonne
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual
WBT	Water Boiling Test

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Appendix A: Validation Protocol

Appendix B: Certificates of Competence

## 1 INTRODUCTION

Clean Air Renewable Energy (Pty) Limited (CARE) (hereafter referred to as “the CME”) has commissioned the DOE TÜV Rheinland China Ltd. to perform validation of the proposed CDM Programme of Activities (PoA) “Energy Efficient Cook stoves in South Africa” in South Africa (hereafter called “the PoA”). This report summarises the findings of the validation of the PoA identified in the PoA Design Document (SSC-PoA-DD); the CDM Programme Activity Design Document (SSC-CPA-DD) template with generic information relevant to all CDM Program Activities (CPAs) to be included in the PoA; and the associated real case CPA-DD. The validation was performed on the basis of UNFCCC criteria for the PoAs under the CDM, as well as criteria given to provide for consistent programme operations, monitoring and reporting. The term “UNFCCC criteria” refers to Article 12 of the Kyoto Protocol, the CDM modalities and procedures, the simplified modalities and procedures for small-scale CDM project /programme activities, the procedures for registration of a programme of activities and the subsequent decisions by the COP/MOP and CDM Executive Board. In addition to these criteria, host country criteria are also taken into account.

### 1.1 Objective

The purpose of a validation is to have an independent third party assess the PoA-DD, CPA-DD template and the associated real case CPA-DD (also known as specific CPA-DD). In particular, the eligibility criteria for inclusion and demonstration of additionality of CPAs, the programme’s baseline determination, monitoring plan, and the programme’s compliance with relevant UNFCCC and host Party criteria are validated in order to confirm that the programme design, as documented, is sound and reasonable and meets the identified criteria. Validation is a requirement for all CDM PoAs and is seen as necessary to provide assurance to stakeholders of the quality of the programme and its intended generation of certified emission reductions (CERs).

### 1.2 Scope

The validation scope is defined as an independent and objective review of the SSC-PoA-DD, SSC-CPA-DD template and the real case SSC-CPA-DD. The SSC-PoA-DD, SSC-CPA-DD template and the real case SSC-CPA-DD were reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures, the simplified modalities and procedures for small-scale CDM project/programme activities, the procedures for registration of a programme of activities as a single CDM project activity and the relevant decisions by the CDM Executive Board, including the approved baseline and monitoring methodology AMS-ILG.(Version 03).

The validation team has, based on the requirements contained in the Validation and Verification Manual and the procedures for registration of a programme of activities as a single CDM project activity employed a rules-based approach, focusing on the identification of significant risks for programme implementation and the generation of CERs.

The validation is not meant to provide any consulting towards the PoA Managing Entity, CPA Implementer(s) and/or project participant(s) (PP). However, stated requests for clarifications, corrective actions, and/or forward actions may provide input for improvement of the programme design.

## 2 METHODOLOGY

The validation consists of the following four phases:

- I publication of the programme design documents (PoA-DD, CPA-DD template and completed CPA-DD) in UNFCCC for global stakeholder consultation;
- II a desk review of the PoA-DD, CPA-DD template and the associated real case CPA-DD;
- III on-site visit and follow-up interviews with programme stakeholders; and
- IV the resolution of outstanding issues and the issuance of the final validation report and opinion.

The following sections outline each step in more detail.



## 2.1 Desk Review of the Programme Design Documentation

Documents provided by the project participant(s):

Ref no.		Reference Document
/P1/	/P1.1/	PoA [Energy Efficient Cook stoves in South Africa] Version 01, Date 11/04/2012
	/P1.2/	PoA [Energy Efficient Cook stoves in South Africa] Version 02.1, Date 29/11/2012
/P2/	/P2.1/	Generic CPA-DD of the PoA [Energy Efficient Cook stoves in South Africa] Version 01, Date 11/04/2012
	/P2.2/	Generic CPA-DD of the PoA [Energy Efficient Cook stoves in South Africa] Version 02.1, Date 29/11/2012
/P3/	/P3.1/	ER calculation (draft), version 01, date 11/04/2012
	/P3.2/	ER calculation sheet (final), version 2.1, date 29/11/2012
/P4/		Letter of approval from South African DNA dated 28/08/2012
/P5/		Modalities of Communication: date 31/10/2012
/P6/		Efficiency test certificate by M/s. Energy Cybernetics (Pty) Ltd dated 28/01/2011
/P7/		Sample end user purchase agreement
/P8/		Manufacture specification of the improved cook stove

Background investigation and other referred documents/websites:

/B1/	CDM Validation and Verification Manual (Version 1.2).
/B2/	Approved Baseline & Monitoring Methodology: AMS II.G, version 03
/B3/	Guidelines for demonstrating additionality of microscale project activities, version 04
/B4/	Guidelines on the demonstration of additionality of small-scale project activities, version 9.0
/B5/	1. Glossary of CDM terms, version 07 2. Relevant CDM and PoA specific requirements (CDM M & P and decisions by the CMP and documents released by CDM EB) published on the UNFCCC CDM website
	PoA Specific guidelines / standards published by UNFCCC:
/B6/	1. Small-scale CDM programme of activities design document form ( CDM SSC-PoA-DD) Version 01,EB 33
	2. Small-scale CDM programme activity design document form ( CDM SSC-CPA-DD) Version 01,EB 33
	3. 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, Version 04.1, EB 55/Annex 38
	4. Procedures for review of erroneous inclusion of a CPA, version 03, annex 22, EB 61
	5. Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, version 02, annex 05, EB 70
	6. Clarifications regarding the “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”, version 01, annex 26, EB 60

	7. Guidelines on assessment of de-bundling for SSC project activities, Version 03, EB 54/Annex 13  8. Standard for the development of eligibility criteria for the inclusion of a project activity as a CPA under the PoA, Annex 3 of EB 63  9. Standard for demonstration of additionality of GHG emission reductions achieved by a programme of activities, Annex 2 of EB 63
/B7/	A Synthesis Report on Biomass Energy Consumption and Availability in South Africa <a href="http://www.probec.org/fileuploads/fl121155200960516600Synthesis_Report_on_Biomass_Energy_Consumption_and_Availability_in_SA_FINAL.pdf">http://www.probec.org/fileuploads/fl121155200960516600Synthesis_Report_on_Biomass_Energy_Consumption_and_Availability_in_SA_FINAL.pdf</a>
/B8/	Global Forest Resources Assessment 2010, Country Report: South Africa <a href="http://www.fao.org/docrep/013/al630E/al630E.pdf">http://www.fao.org/docrep/013/al630E/al630E.pdf</a>
/B9/	Research report: Household Energy Consumption: community context and the fuel wood transition <a href="http://www.psc.isr.umich.edu/pubs/pdf/rr07-629.pdf">http://www.psc.isr.umich.edu/pubs/pdf/rr07-629.pdf</a>
/B10/	Global Forest Resource Assessment 2000, Global table <a href="http://www.fao.org/docrep/004/Y1997E/y1997e21.htm">http://www.fao.org/docrep/004/Y1997E/y1997e21.htm</a>
/B11/	Global Forest Resources Assessment 2010, Global tables <a href="http://foris.fao.org/static/data/fra2010/FRA2010GlobaltablesEnJune29.xls">http://foris.fao.org/static/data/fra2010/FRA2010GlobaltablesEnJune29.xls</a>
/B12/	2006 IPCC Guidelines for National Greenhouse Gas Inventories,
/B13/	Standard for sampling and surveys for CDM PAs and PoAs (version 03.0) Guidelines for sampling and surveys for CDM project activities and programme of activities (version 02.0)
/B14/	National Environmental Management Act 107 of 1998, effective from 1 <sup>st</sup> July 2006 <a href="http://www.eiatoolkit.ewt.org.za/process/what.html">http://www.eiatoolkit.ewt.org.za/process/what.html</a>

The changes between the PoA DD version 01 published for the 30 days stakeholder commenting period <sup>/P1.1/</sup> and the final version submitted for registration <sup>/P1.2/</sup> are addressed in the table 3 and 4 of the validation protocol as a part of this report and the sections of the revised DDs are marked in column 5 titled “Revised section(s)/Annexe (s) of the PoA DD/g CPA DD”.

The main changes between the PoA DD, version 01 <sup>/P1.1/</sup> published for the 30 days stakeholder commenting period and the final version <sup>/P1.2/</sup> submitted for registration are presented in the below table as follows:

Topic	PoA DD –GSC <sup>/P1.1/</sup>	Final PoA DD <sup>/P1.2/</sup>	Assessment
<b>PoA title</b>	Energy Efficient Cook stoves in South Africa	Energy Efficient Cook stoves in South Africa	No change
<b>Parties</b>	South Africa (host)	South Africa (host)	No Change
<b>Project participants</b>	Clean Air Renewable Energy (Pty) Ltd	Clean Air Renewable Energy (Pty) Ltd	No Change
<b>Scope</b>	03. Energy Demand	03. Energy Demand	No change
<b>Methodology and activity scale</b>	AMS II.G, version 03; Small Scale	AMS II.G, version 03; Small Scale	No change

<b>Baseline:</b>	$f_{NRB,y} = 0.911$	$f_{NRB,y} = 0.8975$	The data considered for the calculation is not correct. Now the $f_{NRB,y}$ is calculated based on the methodology as provided in "Information Note Default Values Of Fraction Of Non-Renewable Biomass For Least Developed Countries And Small Island Developing States", EB 67, Annex 22. Please refer CL-10 & CAR-11
<b>Additional ity</b>	Based on the following approaches: 1. Demonstration of Additionality of Microscale Project Activities 2. Additionality demonstration as per Attachment A to Appendix B of the simplified modalities and procedures for small scale CDM project activities.	Additionality is based on positive list provided in the "Guidelines On The Demonstration Of Additionality Of Small-Scale Project Activities", Version 09, (previously Attachment A to Appendix B)	As per the latest version (ie., version 9) of "Guidelines On The Demonstration Of Additionality Of Small-Scale Project Activities", the following is included: <i>Project activities solely composed of isolated units where the users of the technology/measure are households or communities or Small and Medium Enterprises (SMEs) and where the size1 of each unit is no larger than 5% of the small-scale CDM</i> <i>Thresholds.</i> Since the household cook stoves will fall under this category, justifying the additionality based on this category is correct.
<b>Amount of emission reductions (tCO<sub>2</sub>)</b>	Quantification of ERs at PoA level is not required as per the PoA DD template.	Quantification of ERs at PoA level is not required as per the PoA DD template.	NA
<b>PoA starting date</b>	07/03/2012 (date of contract between CDM consultant and CME)	04/05/2012 (date of webhosting of PoA-DD)	As per the glossary of CDM terms, version 7, the start date of PoA is the either the date of prior consideration or the date of publication of PoA-DD for GSP. As per the definition the start date is chanced.

			Hence considering webhosting date as start date is appropriate.
<b>PoA location</b>	Republic of South Africa	Republic of South Africa	No Change

## 2.2 Follow-up Interviews with Programme Stakeholders

TÜV Rheinland validation team carried out an on-site visit on 24/07/2012 to 25/07/2012 and performed interviews with the project representatives and stakeholders. The site visit was conducted to validate the accuracy and completeness of the project description as specified under webhosted DDs.

Prior to the interview salient points to be discussed were planned. Date of interview, interviewee and points discussed are given in the following table.

	Date	Name	Organization	Topic
/i/	24/07/2012 & 25/07/2012	Mr. Ricki Allen Mr. Steve Ireton	CARE	<ul style="list-style-type: none"> <li>• Discussion on stated goal and policy of the PoA.</li> <li>• Discussion on the operational and management arrangements of the PoA.</li> <li>• Discussion on status of the letter of approval</li> <li>• Discussion on sustainable development criteria</li> </ul>
/ii/	24/07/2012	Mr. Bob Bouwmeesters	BOBFAB	Technical & manufacturing aspect of the efficient cook stove
/iii/	24/07/2012 & 25/07/2012	Mr. Sandeep Kota Mr. Niroj Mohanty	CCX	<ul style="list-style-type: none"> <li>• PoA-DD editorial aspect</li> <li>• Baseline identification</li> <li>• NRB calculation</li> <li>• Additionality justification</li> <li>• Monitoring plan</li> </ul>
/iv/	25/07/2012	Mr. Babhide Mhlahlo	Local Villager	- Impacts by the project activity - Opinion on the project
/v/	25/07/2012	Mr. Phindiwe makubalo	Local Villager	
/vi/	25/07/2012	Mr. Madlono Mahaiya	Local Villager	
/vii/	25/07/2012	Mr. Nosipho Mgobozi	Local Villager	

Validation Team considered the views obtained in these interviews while arriving at Validation Opinion.

## 2.3 Resolution of Outstanding Issues

The objective of this phase of the validation is to resolve any outstanding issues which need be clarified prior to TÜV Rheinland's conclusion on the PoA design. In order to ensure transparency a validation protocol is customised for the programme. The protocol shows in transparent manner criteria (requirements), means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organises, details and clarifies the requirements a CDM PoA is expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The validation protocol consists of five tables. The different columns in these tables are described in the figure below. The completed validation protocol for the PoA is enclosed in Appendix A to this report.

Findings established during the validation can either be seen as a non-fulfilment of CDM criteria or where a risk to the fulfilment of programme objectives is identified. Corrective action requests (CAR) are issued, where:

- i) mistakes have been made with a direct influence on programme results;
- ii) CDM and/or methodology specific requirements have not been met; or
- iii) there is a risk that the programme would not be accepted as a CDM PoA or that emission reductions will not be certified.

A request for clarification (CL) may be used where additional information is needed to fully clarify an issue.

A forward action request (FAR) may be raised to highlight issues related to the PoA implementation that require review during the first verification.

**Validation Protocol Table 1: Requirement checklist for PoA DD**

Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements in Table 1 are linked to checklist questions the programme should meet. The checklist is organised in different sections, following the logic of the small-scale PoA-DD templates, version 01. Each section is then further sub-divided.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (OK), or a corrective action request (CAR) due to non-compliance with the checklist question (See below). A request for clarification (CL) is used when the validation team has identified a need for further clarification.

**Validation Protocol Table 2: Requirement checklist for g-CPA DD**

Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
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The various requirements in Table 2 are linked to checklist questions the programme should meet. The checklist is organised in different sections, following the logic of the small-scale g-CPA-DD templates, version 01. Each section is then further sub-divided.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (OK), or a corrective action request (CAR) due to non-compliance with the checklist question (See below). A request for clarification (CL) is used when the validation team has identified a need for further clarification.
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**Validation Protocol Table 3 and 4: Resolution of Corrective Action and Clarification Requests on the PoA DD and g-CPA DD respectively.**

CL/CAR No.	Observations	Reference	Summary of project owner response	Validation team conclusion
CL/CAR XX	If the conclusions from the draft Validation are either a CAR or a CL, these should be listed in this section.	Reference to the checklist question number in Table 1 and 2 where the CAR or CL is explained.	The responses given by the project participants during the communications with the validation team should be summarised in this section.	This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 1 and 2, under "Final Conclusion".

**Validation Protocol Table 5: List of forward action requests (FARs)**

FAR Number	Observations	Reference	Summary of project owner response	Validation team conclusion
FAR-XX	If the conclusions from the draft Validation are FARs, these should be listed in this section.	Reference to the checklist question number in Table 1 where the FAR is explained.	The responses given by the project participants during the communications with the validation team should be summarised in this section.	This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 1, under "Final Conclusion".

Figure 1. Validation protocol tables

## 2.4 Internal Quality Control

Before the assessment begins, members of the team covering the technical area(s), sectoral scope(s) and relevant host country experience for evaluating the CDM PoA/CPA are appointed. The validation report including the validation findings underwent a technical review. The technical review was performed by a technical reviewer qualified in accordance with TÜV Rheinland's qualification scheme for CDM validation and verification.

## 2.5 Validation Team

Validation Team	Type of Involvement
-----------------	---------------------

Full name	Affiliation TÜV Rheinland	Appointed for Sectoral Scopes (Technical Areas)	Supervising the work	Desk review	Site Visit + Interview	Report and protocol Writing	Technical Expert Input	Reporting Support	Technical Reviewer
Mr. R Narendra Kumar	India	1.2, 3.1	X		X	X	X		
Mr. Ma Paa Puratchikkanal	India	1.2, 13.1, 6.1, 13.1/13.2, 15.1		X	X	X	X		
Ms. Liza Margaret Simon	India			X	X				
Ms. Indumathi C	India	1.2							X
Mr. Lixin Li	China	1.1, 1.2, 2.1, 2.2, 3.1, 4.5							X

### 3 VALIDATION FINDINGS

The findings of the validation are stated in the following sections. The validation criteria (requirements), the means of verification and the results from validating the identified criteria are documented in more detail in the validation protocol in Appendix A.

The final validation findings relate to the programme design as documented and described in the PoA-DD and g-CPA-DD.

#### 3.1 Approval and participation

The below table summarizes the project participants and parties involved. The validation team received letter of approval for Host party from the Host project participant i.e. CME of the PoA <sup>/P4/</sup>. The contents of the LoA and the signature of the authorised issuer were also compared with those of other approval cases issued by the host country DNA. Therefore, the team has confirmed the authenticity of the letter issued. This LoA is therefore regarded as valid and meeting the CDM requirements.

The Validation Team can confirm that issued LoAs from host party refers to the precise proposed project title as in the PoA DD and g-CPA DD. The Validation Team can confirm that the project participants are listed in tabular form in section A.3 of the PoA DD and this information is consistent with the contact details provided in Annex 1 of the PoA DD. The letter of approvals were also found to be unconditional with respect to para 45 (a) to (d) of VVM <sup>/B1/</sup>. And hence these letter(s) are in accordance with paragraphs 45 - 48 of VVM. All the three LoAs, are checked and found in compliance of CDM requirements including requirements of PoA vide § 8, 9 and 10 of annex 38 EB 55.

The below table summarizes the project participants and parties involved:

CME/Project Participant	Clean Air Renewable Energy (Pty) Ltd
Parties involved	South Africa
APPROVAL	
LoA received	Yes
Date of LoA	28/08/2012
Reference to document	-
LoA received from	DNA of South Africa: Department of Energy
Validation of authenticity	The LoA is issued by Department of Energy It is valid. It is verified with the website of South African DNA



Validity of LoA	Valid
PARTICIPATION	
Party is party to Kyoto Protocol	Yes
Voluntary participation	Yes
Diversion of official development aid towards host country	No, ODA is involved
Project contribution to SD	Yes

### Validation of ODA

Sr. No 8 of the eligibility criteria for the inclusion of SSC-CPA under this PoA states that ‘there will be no diversion of public funding or ODA involved in the CPA’. Hence it can be confirmed that no ODA fund will be involved in any CPA under this PoA.

### Confirmation of MoC

The project Modalities of Communication (MoC)<sup>P5/</sup> signed on 30/10/2012, was received from the CME. As required in Procedures for Modalities of Communication between Project Participants and the Executive Board, the Validation Team has verified the names of authorised signatories for future communication related to the corresponding scope of authority with UNFCCC from the Host country and Annex 1 project participant. The Validation Team can confirm that the signatory and contact details on the MoC are authorized and credible. The MoC has been directly received from the CME (host party PP).

### 3.2 Programme of Activities Design Documents

The PoA-DD<sup>P1.2/</sup> and the g-CPA-DD<sup>P2.2/</sup> are in compliance with relevant form and guidance<sup>B6/</sup> as provided by UNFCCC. The most recent version of the forms is used. Validation team confirms that the guidelines for the completion of the PoA documents (as contained in the DD form itself) in their most recent version have been followed. Relevant information was provided by the Managing entity and/ or project participants in the applicable PoA sections.

### 3.3 Programme Description

This Programme of Activities will distribute improved cooking stoves (ICS) to households in the Republic of South Africa. ICS are energy efficient which will replace the energy inefficient conventional baseline stoves used in the households. The ICS will be manufactured within South Africa through the local manufacturers. The coordinating and Managing Entity, CARE will appoint distributor(s) (co-operative societies) for distributing the ICS to the households of South Africa. The ICS will be distributed through free of cost to the households.

The representative distributors will employ trained technicians for the distribution of ICS and the technicians will be in charge of the recording keeping and maintenance of the respective ICS which they distribute. The end user sales agreement will be signed with every household for giving the carbon credit rights to CME which also specify the respective ICS model, serial number, name of the user, location/address and Identification Number of the user, the unique identification number of cook stove and the baseline fuel used. The CME will also bear the repair & maintenance cost of all the ICS distributed during the crediting period with the help of CER revenue. The CME will keep all the installation record in electronic format which will be used for emission reduction calculation during the crediting period. CME has engaged CoreCarbonX for the development of the PoA-DD, the CPA-DDs and the Monitoring Reports to the management of the entire CDM cycle up to the issuance of CERs.

The CME will also appoint the trained staffs of the distributor for the repair, maintenance and monitoring. The geographical boundary for the proposed PoA is the Republic of South Africa. All CPAs included in the PoA will be implemented in South Africa. However CME is planning to extend the PoA to other countries viz. SADC countries comprising of Angola, Botswana, DRC, Lesotho, Madagascar, Malawi,



Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania and Zambia at a later stage. However this will be decided during later stage by the CME. In case CME wish to extend the PoA to other countries other than South Africa, the CME will intimate the change to UNFCCC as per the § 16 requirement of EB 63 annex 13. So, at present only the Republic of South Africa is considered as programme boundary.

The PoA will comprise CPA's each with a maximum limit of 180 GWh/year thermal energy savings and thermal energy savings per ICS will be with a maximum limit of 9 GWh/year.

As per the PoA-DD, the length of PoA is 28 years which is in line with the § 6 (h) of EB 55 annex 38.

The DOE hereby confirms that the programme description in PoA-DD<sup>/P1.2/</sup> is accurate and complete in all respects and that there are no changes to the project activity/design or boundary as compared to the webhosted DDs.

### 3.4 Eligibility Criteria for CPA Inclusion

Review of PoA-DD<sup>/P1.2/</sup>, g-CPA DD<sup>/P2.2/</sup> and OSV interview with representatives of CME reveals that the CME of the PoA employs clear and unambiguous criteria for the inclusion of the CPAs. The eligibility criteria have been stated and validation team confirms the eligibility criteria are in line with requirement of para 13, annex 3 of EB 63<sup>/B6-8/</sup>. Additionality and applicability of the applied methodology are the eligibility criteria as per the PoA DD, which is deemed appropriate and acceptable to the validation team. The eligibility criteria can be checked at the CPA level by the CME and shall be confirmed by the DOE before inclusion of the CPAs in the PoA.

The managing entity employs clear and exhaustive criteria for the inclusion of the CPA which are as follows:

1. *The geographical boundary of the SSC-CPA area is uniquely defined and located in Republic of South Africa.*
2. *The ICS that will be distributed to the households by the distributor who will have a standard contractual agreement with the CMEs. Each cook stove covered under the PoA and SSC-CPA will have a unique serial number which will ensure that there is no double counting.*
3. *The CPA will involve replacement of traditional three stone cook stoves without a grate or a chimney. The ICS that will be distributed under CPA will be new cookstoves. The ICS installed under the CPA will be designed based in the technology as described in section A.4.2.1 of the PoA DD. If the CME chooses to implement an ICS based on different technology design it will be ensured that the ICS will have an efficiency certified by the manufacturer greater than 27.9%. It will be ensured that the replaced traditional cook stoves will be disposed of and not used within the boundary*
4. *The Sales Agreement of the 1<sup>st</sup> ICS in the CPA will be the start date of the CPA. It will be ensured that the start dates of the CPA's will be after the publication of the PoA for the GSC process.*
5. *Uses the small scale approved methodology AMS.II.G version 03. The CME will verify that all CPA-DDs employ aforesaid version of the methodology*
6. *The maximum energy saving of each SSC-CPA will be less than 180 GWh/year which is the small scale threshold defined by AMS II.G and SSC CPA will remain within those threshold level throughout the crediting period of the CPA .*
7. *SSC CPA included in the PoA meet the requirements pertaining to the demonstration of additionality falls under positive list as specified in para 2(c) "Guidelines for demonstrating additionality of small-scale project activities" that is "Project activities solely composed of isolated units where the users of the technology/measure are households or communities or Small and Medium Enterprises (SMEs) and where*

- the size of each unit is no larger than 5% of the small-scale CDM thresholds;”. The energy saving from ICS supplied for SSC CPA will be lower than the 5% of the Type II threshold of 180 GWh<sub>th</sub> for small scale project activities. The 5% corresponds to maximum of 9 GWh<sub>th</sub> saving from each ICS.*
8. *A Local stakeholder consultation meeting shall be conducted for each of the CPA included in the PoA to gauge the opinions and comments of the stakeholders in the immediate project area. This is a social sector project which will have positive environmental impact through improved indoor air pollution in the households. The use of improved cooking stove technology will reduce the adverse environmental and social impacts associated with the use of non-renewable biomass. The reduced consumption of the stated baseline fuel will have sustainable benefit for all households included in the project activity. The distribution of ICS reduce workloads involved in fuel collection, and by reducing indoor air pollution, thus, will reduce the risk of respiratory diseases, especially for women and children. Improved cooking stoves also contribute to environmental protection by reducing biomass consumption and hence greenhouse gas emissions, mainly CO<sub>2</sub>, when the combusted biomass originates from non-renewable stocks. As use of ICS does not entail significant environmental impacts, it is not necessary to undertake an environmental impact assessments for each SSC-CPAs included in the PoA.*
  9. *The ICS distribution under SSC CPA will not result in diversion of official development assistance.*
  10. *The SSC-CPA will involve the distribution of ICS to households. The CPA implementer will distribute the ICS's to the households through the channel of the distribution networks created in each province vis-à-vis the distributors.*
  11. *Sampling plan shall be described in each SSC CPA and consistent with the latest standard /guideline for sampling and survey required by CDM EB.*
  12. *As per the “GUIDELINES ON ASSESSMENT OF DEBUNDLING FOR SSC PROJECT ACTIVITIES” in case if each independent subsystem/measures (ICS) included in the CPA of a PoA is no greater than 1% of the small scale threshold defined by the methodology applied, then that CPA of PoA is exempted from performing de-bundling check, i.e. considered as being not a de-bundled component of a large scale activity. It will be checked that each ICS under SSC CPA is no greater than 1% of the small scale thresholds.*
  13. *The SSC CPA will be a voluntary action.*
  14. *The SSC CPA should in conformance with mandatory laws and regulations.*
  15. *The SSC-CPA is not registered or being registered, as a stand-alone CDM or as a CPA of another PoA.*
  16. *For each verification the number of ICS's installed as the part of the Program that are still operating will be checked for a representative sample of ICS's installed. The representative sample will be determined through the simple random sampling method. Further the CME will depute a third party agency for checking the efficiency of representative sample of the installed ICS's (the representative sample will be determined using the simple random sampling method) annually. Average annual consumption of woody biomass per appliance substituted will also be determined using the simple random sampling procedure for each CPA before the installation of the energy efficient ICS's.*

All the above eligibility criteria have been stated are verifiable for each CPA. The eligibility criteria can be checked at the CPA level by the managing entity and can be confirmed by the DOE during CPA inclusion.

Validation team has checked the management system mentioned in the PoA-DD and based on this documents and site visit with personnel involved at the CME end, validation team confirms that the CME has competencies to check the features of potential CPAs of PoA and also have competency to check that each CPA meets all requirements and eligibility criteria before submission to the DOE for the inclusion. Based on above validation team confirms the compliance of § 9 of annex 3 of EB 63<sup>/B06-8/</sup>.

### 3.5 Operational and Management Plan

Validation team based on the review of operational and management plan mentioned in the PoA, confirms that clear and transparent description of the operational and management arrangement has been established by the CME for the PoA. The same has also been confirmed through the interview with PP during the onsite visit. As verified from PoA-DD and interview with the CME, it is confirmed that all the CPA under this PoA will implemented by CME itself (ie., M/s. Clean Air Renewable Energy). Hence, all the details of individual CPAs including the documents shall be controlled at CME end. Furthermore the CME will appoint distributors for each CPA who will employ trained technicians for the distribution of ICS, data collection, repair & maintenance and monitoring. The records of individual CPAs shall be maintained by the CME in electronic format. All the end user shall sign an end user sales agreement with the CME and agrees to comply with all terms and conditions of the PoA including those related to the providing CER rights to CME. The same has been confirmed from the review of draft agreement between the CME and the end user<sup>/P7/</sup>. This agreement is also one of the eligibility criteria. Hence any CPA which would be included in the PoA, shall follow the operation and management plan of the PoA as stated in the PoA DD.

The system to avoid double counting and technical review of the potential CPAs of the PoA has been clearly indicated in the CPA inclusion eligibility criteria mentioned in the PoA-DD. By reviewing this management plan mentioned in the PoA-DD, the validation team confirms that the CME have the competencies to check the features of potential CPAs and can ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA. Based on above, validation team confirms the compliance of following, in the management system of CME (in line with the requirement of §13 annex 3 of EB 63<sup>/B06-8/</sup> & §19 annex 05 of EB 70<sup>/B06-5/</sup>):

- (a) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies;
- (b) Records of arrangements for training and capacity development for personnel;
- (c) Procedures for technical review of inclusion of CPAs;
- (d) A procedure to avoid double counting (e.g. to avoid the case of including a new CPA that has already been registered either as a CDM project activity or as a CPA of another PoA);
- (e) Records and documentation control process for each CPA under the PoA;
- (f) Measures for continuous improvements of the PoA management system;

Based on above it can be confirmed that the CME would able to ensure that no double-counting occurs. Also, since as each CPA is uniquely identified in the format of CPA DD, the CME can check whether a CPA under the PoA is already a registered CDM project or CPA in another PoA from the UNFCCC website.

As per EB 54, Annex 13<sup>/B06-7/</sup>, the each CPA of PoA shall do the de-bundling check as per para 10 of the same. The same is a part of g-CPA DD template<sup>/P2.2/</sup>, which is checked and confirmed by the validation team.

### 3.6 Monitoring Plan

The respective distributor of each CPA will keep a record of all stoves it installs and assigns a stove serial number to each of the stove in its records. All the records will be maintained by the CME in electronic format. For every cook stove distributed the following details will be recorded:

- Name of customer
- Address and ID number
- Stove model and serial number
- Installation date
- Type of stove(present unit) the cook stove is replacing
- Type of fuel which was earlier used in the cook stove

To avoid double counting the ID number will be printed in the ICS. The following parameters are the monitoring parameter mentioned in the PoA-DD which requires for ex-post measurement

1. Number of ICS in SSC CPA installed in year y ( $N_y$ ),
2. Proportion of project ICS installed that are still in operation (Usage rate),
3. Efficiency of stoves ( $\eta_{new}$ ).
4. Average annual consumption of woody biomass per appliance substituted ( $Quantity_{Appliance}$ )

The detailed assessment of the monitoring plan above parameters are explained in section 3.10.2

Review of monitoring plan provides a transparent system to ensure that no double counting occurs and that the status of verification can be determined any time for each CPA. The system to avoid double counting has been indicated in the PoA DD<sup>/P1.2/</sup>.

The description provided in the PoA DD<sup>/P1.2/</sup> on the operational and management arrangements were confirmed based on document review and through site visit interviews.

### 3.7 Baseline and Monitoring Methodology

#### 3.7.1 Applicability of the selected methodology

The compliance of the applied baseline and monitoring methodology<sup>/B2/</sup> is a part of eligibility criteria as mentioned in the PoA DD<sup>/P1.2/</sup> and g-CPA DD<sup>/P2.2/</sup>. The same shall be checked by the DOE during inclusion of the CPA in the PoA.

The validation team determined the applicability of methodology AMS II.G (version 03) as follows:

Applicability criteria of the methodology (AMS II.G), Version 12.3.0	Criteria fulfilled	Determination by the validation team
This category comprises appliances involving the efficiency improvements in the thermal applications of non-renewable biomass. Examples of these technologies and measures include the introduction of high efficiency <sup>1</sup> biomass fired cook stoves <sup>2</sup> or ovens or dryers and/or improvement of energy efficiency of existing biomass fired cook stoves or ovens or dryers.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>The program of activity involves distribution of higher efficiency biomass (improved) cook stove which replaces the lower efficient biomass conventional cook stoves in the households.</p> <p>The efficiency of the improved cook stove to be distributed is 27.9% (which is more than 20%) which is certified by M/s. Energy Cybernetics (Pty) Ltd<sup>/P6/</sup> a recognized agency in South Africa.</p> <p>Hence the project activity fulfils this criteria</p>
Project participants are able to show that non-renewable biomass has been used since 31 December 1989, using survey methods or referring to published literature, official reports or statistics.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<p>As per the report "A Synthesis Report on Biomass Energy Consumption and Availability in South Africa"<sup>/P7/</sup>, the total annual demand for the fuel wood consumption is South Africa was 9.8 Million tons in the mid 1980's and the same has been increased to 11.2 Million tons through a recent estimate in 2006. This shows an increase of 1.4 Million tons or an increase of 14%.</p> <p>The report "Global Forest Resources Assessment, 2010, Country Report: South Africa"<sup>/P8/</sup> says that the fuel wood price has been increasing from 1990 which was at 27.08 Rand/m<sup>3</sup> to 76.94 Rand/m<sup>3</sup> in 2005. This clearly shows an Increasing trend in fuel wood prices indicating a scarcity of fuel-wood.</p>

<sup>1</sup> The efficiency of the project systems as certified by a national standards body or an appropriate certifying agent recognized by it. Alternatively manufacturers specifications may be used.

<sup>2</sup> Single pot or multi pot portable or in-situ cook stoves with specified efficiency of at least 20%.

Applicability criteria of the methodology (AMS II.G), Version 12.3.0	Criteria fulfilled	Determination by the validation team
		<p>In the research report “Household Energy Consumption: Community Context and the Fuelwood Transition” <sup>/P9/</sup> mentions that there has also been an increase in the fuel wood collection time “Other factors associated with reduced consumption of fuelwood and instead use of alternative fuels are forest scarcity and increased fuelwood collection time and household size.</p> <p>So, the following is conformed in the context of South Africa since 1989:</p> <ul style="list-style-type: none"> <li>- There has been trend of increasing fuel wood consumption.</li> <li>- Trend of increase price of fuel wood</li> <li>- Increasing trend of time required for fuel wood collection</li> </ul> <p>Hence it is concluded that Non-Renewable Biomass has been used since 31<sup>st</sup> December 1989.</p> <p>Hence the project activity fulfils this criteria</p>

The assessment of the project’s compliance with the applicability criteria of the methodology AMS II.G, version 03 as documented in the Section E.2 of PoA-DD, which are evaluated in detail under the validation protocol in Appendix A to this report based from the webhosted PoA-DD.

### 3.7.2 PoA 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 South Africa.

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 generic-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. The following sources and gases are involved in the project activity:

Source	Emission
Baseline:	CO <sub>2</sub> emission from Combustion of non-renewable biomass for cooking
Project activity:	CO <sub>2</sub> emission from Implementation of energy efficient ICS resulting in decrease of combustion of non-renewable biomass for cooking
	Leakage CO <sub>2</sub> emission (Diversion of non-renewable biomass saved under the project activity by non-project households that previously used renewable source)

Besides, there are no other sources which are impacted by the project and not addressed by the applied methodology

### 3.7.3 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 PoA baseline scenario is correctly defined as:

*“it is assumed that in the absence of the programme, the baseline scenario would be the use of fossil fuels for meeting similar thermal energy needs..”*

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

Hence the validation team confirms that the proposed project activity meets the methodological requirement. Therefore, the baseline scenario as prescribed in the AMS II.G (version 03.0) is applicable to the proposed project activity. The validation took cognizance of § 105 of VVM (version 01.2).

The approved baseline methodology applicable to the project explicit criteria implicit criteria (e.g. available scenarios, applicability of formulas for BE/PE/LE calculations)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The selected AMS II.G, Version 03.0 is demonstrated to be applicable to the project in the section 3.4.1 above
PDD includes all assumptions and data used by project participants	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The baseline scenario to the project is prescribed as per the applied methodology AMS II.G, version 03.0
All the references and documents used are relevant for establishing the baseline scenario	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The baseline scenario to the project is prescribed as per the applied methodology AMS II.G, version 03.0
All the references and documents used are correctly quoted and conservatively interpreted in the PDD	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The baseline scenario to the project is prescribed as per the applied methodology AMS II.G, version 03.0
All relevant policies / regulations considered are listed in the PDD	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The baseline scenario to the project is prescribed as per the applied methodology AMS II.G, version 03.0
Identified potential baseline scenarios reasonably represent what would/could occur in the absence of the proposed project activity	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The baseline scenario to the project is prescribed as per the applied methodology AMS II.G, version 03.0
The baseline scenario selection is appropriate and determined according to the methodology	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The baseline scenario to the project is prescribed as per the applied methodology AMS II.G, version 03.0
The approved methodology used is applicable to the identified baseline scenario	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The baseline scenario to the project is prescribed as per the applied methodology AMS II.G, version 03.0

The approved baseline methodology has been correctly applied to identify a realistic and credible baseline scenario, and the identified baseline scenario most reasonably represents what would occur in the absence of the proposed CDM project activity.

All the assumption and data used by the project participants are listed in the PDD and supporting documents. All documentation relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD. Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable.

### 3.8 Additionality

#### 3.8.1 Prior consideration of the CDM

As per § 3 of annex 26, EB 60<sup>/B06-6/</sup>, “Guidelines for the demonstration and assessment of prior consideration of the CDM” do not apply to PoAs, as at present it is expected that no component of the programme will commence prior to the start date of validation of the PoA.

### 3.8.2 Additionality of PoA

The description under the PoA DD<sup>/P1.2/</sup> demonstrates the compliance of § 6(e) of annex 38 of EB 55<sup>/B06-10/</sup>. The PP justify that the proposed programme is voluntary measure that would not be implemented in the absence of CDM. The PP justify the project is additional as this will fall under the positive list category mentioned in the “Guidelines on the Demonstration of Additionality of Small-Scale Project Activities”, Version 09 (previously Attachment A to Appendix B). As per the § 2(c) of “Guidelines on the Demonstration of Additionality of Small-Scale Project Activities” the project is automatically additional without proving any barrier if the following condition is satisfied:

*“Project activities solely composed of isolated units where the users of the technology/measure are households or communities or Small and Medium Enterprises (SMEs) and where the size1 of each unit is no larger than 5% of the small-scale CDM thresholds”*

Applicability on this project:

- The PoA involves distribution of improved cooking stoves (ICS) which are isolated units<sup>/P1.2/</sup>
- The ICS will be distributed to the households of South Africa<sup>/P1.2/</sup>
- The energy savings per cook stove will be less than 5% of small scale limit (ie., 9 GWh/year). For eg. The energy savings per single ICS in the specific CPA will be 0.0120 GWh/year which is much lesser than the 5% of type-II small scale limit (ie., 9 GWh/year)<sup>/P1.2/P3.2/</sup>

Hence the PoA is additional without proving any additionality. However the above conditions are also included as CPA inclusion criteria to ensure the CPA to be included in the PoA also additional.

Hence the additionality justification mentioned in the PoA-DD is acceptable and inline with “Guidelines on the Demonstration of Additionality of Small-Scale Project Activities”, Version 09

### 3.8.3 Approach for demonstrating CPA additionality

The additionality is proved in the PoA level. However to ensure the additionality of the CPA the following CPA inclusion criteria is included in the PoA-DD.

*“The CPA will distribute the ICS to domestic households and the energy saving from each cook stove will be lower than the 5% of the Type II threshold of 180 GWh<sub>th</sub> for small scale project activities. The 5% corresponds to maximum of 9 GWh<sub>th</sub> saving from each cook stove.”*

If the CPA to be included in the PoA fulfils the above criteria then CPA is additional without proving any barrier. This approach seems to be correct and inline with the “Guidelines on the Demonstration of Additionality of Small-Scale Project Activities”, Version 09

## 3.9 Emission Reduction from a typical CPA of the PoA

The steps taken to assess the requirement outlined in § 89 of VVM are described below:

The emission reductions generated by the Project were calculated in accordance with the baseline methodology AMS II.G, Version 3

The equation provided to calculate the emission reduction is

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

Where,

$ER_y$  Emission reductions during the year y in tCO<sub>2</sub>e

$B_{y,savings}$  Quantity of woody biomass that is saved in tonnes

$f_{NRB}$  Fraction of woody biomass saved by the project activity in year y that can be established as non-renewable biomass

$NCV_{biomass}$  Net calorific value of the non-renewable woody biomass that is substituted (IPCC

default for wood fuel, 0.015 TJ/tonne)

$EF_{projected\_fossilfuel}$  Emission factor for the substitution of non-renewable woody biomass by similar consumers. Use a value of 81.6 tCO<sub>2</sub>/TJ

The equation is as per the equation (1) provided in the methodology AMS II.G, version 3.

The quantity of woody biomass that is saved ( $B_{y,savings}$ ) will be calculated as follows during every monitoring period:

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

Where,

$B_{old}$  Quantity of woody biomass used in the absence of the project activity in tonnes

$\eta_{old}$  1. Efficiency of the system being replaced, measured using representative sampling methods or based on referenced literature values (fraction), use weighted average values if more than one type of system is being replaced;  
 2. A default value of 0.10 may be optionally used if the replaced system is a three stone fire, or a conventional system with no improved combustion air supply or flue gas ventilation system, i.e. without a grate or a chimney; for other types of systems a default value of 0.2 may be optionally used

As the programme involves replacement of cookstoves without a grate or a chimney the default value of 0.10 is being used.

$\eta_{new}$  Efficiency of the system being deployed as part of the project activity (fraction), as determined using the Water Boiling Test (WBT) protocol. Use weighted average values if more than one type of system is being introduced by the project activity.

The  $B_{old}$  is calculated as follows:

$$B_{old} = N_y \times \text{Usage rate} \times \text{Quantity}_{\text{Appliance}}$$

$N_y$  Number of ICS in SSC CPA installed in year y

Usage Rate Proportion of project ICS installed that are still in operation

$\text{Quantity}_{\text{Appliance}}$  estimated average annual consumption of woody biomass per appliance substituted (tonnes/year)

As per AMS II.G version 3, the leakage emission associated with use/diversion of non-renewable woody biomass saved under the project activity by non-project households/users that previously used renewable energy sources should be monitored or a default adjustment factor of 0.95 shall be multiplied with the  $B_{old}$  where there is no requirement of monitoring. PP has fixed 0.95 as adjustment factor for  $B_{old}$  in the PoA-DD to avoid the monitoring of the leakage.

The parameter of emission reduction for each CPA will be sourced as follows

Parameter	Fixed in PoA level	Fixed in CPA level	Monitored/calculated during monitoring period
$B_{y,savings}$	No	No	This will be calculated in each monitoring period as follows: $B_{y,savings} = B_{old} \cdot \left( 1 - \frac{\eta_{old}}{\eta_{new}} \right)$



$f_{NRB}$	In the PoA level, $f_{NRB}$ is calculated for South Africa based on the methodology as provided in “Information Note on Default Values of Fraction of Non-Renewable Biomass for Least Developed Countries And Small Island Developing States”, EB 67, Annex 22. $f_{NRB}$ fixed at PoA level is 0.8975 (ie., 89.75%)	Fixed at PoA level	Fixed at PoA level
$NCV_{biomass}$	As specified in the AMS II.G, Version 03 IPCC default for wood fuel, 0.015 TJ/tonne is fixed in PoA level	Fixed at PoA level	Fixed at PoA level
$EF_{projected\_fossilfuel}$	As specified in the AMS II.G Version 03, the default value of 81.6 tCO <sub>2</sub> /TJ is fixed in PoA level	Fixed at PoA level	Fixed at PoA level
$B_{old}$	No	No	<p>The <math>B_{old}</math> will be calculated every monitoring period as follows:</p> $B_{old} = N \times \text{Usage rate} \times \text{Quantity}_{\text{Appliance}}$ <p>The baseline fuel wood consumption is fixed at CPA level and the number of cookstoves operating during the monitoring period will be calculated based on the sample survey conducted every year</p>
$N_y$	No	The actual number of ICS distributed under each CPA will be monitored during distribution and the same value will be considered for verification	Fixed at CPA level
Usage rate	No	No	Monitored every year through sample survey.
$\text{Quantity}_{\text{Appliance}}$	No	This will be calculated based on the baseline sample survey results	Fixed at CPA level

		done before starting of project activity and the value is fixed at the CPA level.	
Adjustment factor	Default Value as specified in the approved methodology AMS II.G, Version 03, 0.95 (ie., 95%) is fixed at PoA level.	Fixed at PoA level	Fixed at PoA level
$\eta_{old}$	Default Value as specified in the approved methodology AMS II.G, Version 03, 10% efficiency is fixed at PoA level	Fixed at PoA level	Fixed at PoA level
$\eta_{new}$	$\eta_{new}$ of the ICS to be distributed in the CPA of PoA is determined using the Water Boiling Test (WBT) protocol by an independent agency <sup>P6/</sup> . The determined value of $\eta_{new}$ is 27.9%. However during the monitoring period, the actual operating efficiency will be monitored	The $\eta_{new}$ ICS to be distributed in the CPAs is 27.9% as mentioned in the PoA. However PP may use ICS having efficiency higher than 27.9% which will be mentioned in the respective CPA. However during the monitoring period, the actual operating efficiency will be monitored	Monitored every year through sample survey and average value will be used for ex-post ER claculation

The fNRB is calculated based on the methodology provided in the “Information Note on Default Values of Fraction of Non-Renewable Biomass for Least Developed Countries and Small Island Developing States”, EB 67, Annex 22. The calculation is provided as below.

Parameter	Description	Value	Source
fNRB	Fraction of non-renewable biomass (fraction or %)	0.897522	Calculated based on the equation $fNRB = \frac{NRB}{NRB + DRB} \text{ (Eq-1)}$
NRB	Non-renewable biomass (t/yr)	14319591	Calculated using equation $NRB = R - DRB \text{ (Eq-2)}$
DRB	Demonstrably renewable biomass (t/yr)	1634995.5	Calculated using equation $DRB = PA \times GR \text{ (Eq-5)}$
R	Total Annual Biomass Removals (t/yr)	15954586.5	Calculated using equation $R = MAI + \Delta F \text{ (Eq-3)}$
MAI	Mean Annual Increment of biomass growth (t/yr)	15954586.5	Calculated using equation $MAI = F \times GR \text{ (Eq-4)}$
$\Delta F$	Annual change in living forest biomass (t/yr)	0	Calculated as a product of Annual change in carbon stock in living Forest Biomass 2005-2010 and Carbon stock / Biomass Conversion rate <sup>B11/</sup>
F	Extent of forest (ha)	9241000	FAO Forest Resource Assessment (FRA) 2010 Global Tables, Table 2 <sup>B11/</sup>
GR	Annual Growth rate of biomass (t/ha-yr)	1.7265	Calculated as a weighted average based on FAO reporting <sup>B10/</sup> on distribution of total forest area by ecological zone and IPCC above-ground biomass growth

			rates <sup>/B12/</sup> for different ecological zones
PA	Protected Area Extent of Forest (ha)	947000	FAO Forest Resource Assessment (FRA) 2010 Global Tables, Table 6 <sup>/B11/</sup>

All data source are verified and found to be consistent. The detailed calculation provided in the PoA ER calculation sheet<sup>/P3.2/</sup>. The sheet is verified and found that the calculation provided in the sheet is transparent, correct and inline with the calculation methodology given in the “Information Note on Default Values of Fraction of Non-Renewable Biomass for Least Developed Countries and Small Island Developing States”, EB 67, Annex 22. As per the “Information Note on Default Values of Fraction of Non-Renewable Biomass for Least Developed Countries and Small Island Developing States”, EB 67, Annex 22, Paragraph 5 “A national-level default value for fNRB can be derived by calculating Total Annual Biomass Removals (R) from each country as a proxy for By and estimating the proportion of R that is demonstrably renewable (DRB) and non-renewable (NRB)”. Hence the option of the PP to fix the value of fNRB ex-ante for South Africa at national level in the PoA-DD is correct as the Total Annual Biomass Removals (R) from South Africa is being used as proxy for By.

The equations and choices provided in the methodology and all other methodological tools are correctly quoted in the PoA-DD<sup>/P1.2/</sup> and the Generic CPA-DD<sup>/P2.2/</sup>. The emission reductions of the CPAs of the PoA would be calculated using the formulae mentioned in the applied methodology AMS II.G, Version 03.

Validation team based on the review of PoA-DD and generic CPA-DD, confirms that the formulae are correctly presented for the determination of emission reductions at CPA level. The parameters and equations presented in the PoA-DD, as well as other applicable documents, have been compared with the information and requirements presented in the methodology. An equation comparison has also been made to ensure consistency between all the formulae presented in the PoA-DD, template CPA-DD, calculation files (for the real case CPA DD), methodology AMS.II.G, Version 03.

### 3.10 Monitoring Plan of a typical CPA

The monitoring plan presented in the PoA-DD and generic CPA DD complies with the requirements of the applicable methodology. The validation team has checked all parameters in the monitoring plan against the requirements of the methodology and no deviations have been found.

The procedures have been reviewed by the validation team through document review and interviews with the relevant personnel. The information provided has allowed the validation team to confirm that the proposed monitoring plan is feasible within the project design. The relevant points of monitoring plan have been discussed with the PoA managing entity/CPA implementer.

The management system document of the CME provide sufficient information which forms the confirmation by the validation team on the issues related but not limited to the monitoring methodology, data management, and the quality assurance and quality control procedures to be implemented in the context of the programme. Therefore, the PoA managing entity and/or CPA implementer(s) will be able to implement the monitoring plan and the achieved emission reductions can be reported ex-post and verified.

#### 3.10.1 Parameters determined ex-ante

Following are the parameters as per the PoA DD, fixed ex-ante at the PoA level:

- 
- $\eta_{old}$  Efficiency of the system being replaced (Traditional Cooking Stoves)
- $f_{NRB}$  Fraction of woody biomass saved by the project activity in year y that can be established as non-renewable biomass
- $NCV_{biomass}$  Net calorific value of the non-renewable woody biomass that is substituted

- $EF_{projected\_fossilfuel}$  Emission factor for the substitution of non-renewable woody biomass by similar consumers
- $AF$  Gross adjustment factor

All the parameter fixed ex-ante are taken from appropriate source or calculated conservatively. The assessment is given below:

Parameter	Value fixed ex-ante	DOE Assessment
$\eta_{old}$	10%	Since the project intended to distribute the ICS to the household where 3 stone stove is being used in the baseline and hence the default value as specified in the approved methodology AMS II.G, Version 03, 10% efficiency is fixed ex-ante which seems to be appropriate
$f_{NRB,y}$	0.95	The fraction of Non-Renewable biomass for the South Africa is calculated as per “ <i>Information Note on Default Values of Fraction of Non-Renewable Biomass for Least Developed Countries and Small Island Developing States</i> ”, EB 67, Annex 22. The calculation is assessed in the section 3.9 above and found that the value is correct
$NCV_{biomass}$	0.015 TJ/tonne	The value is based on the default value provided in AMS II.G <sup>/B2/</sup> for the NCV of biomass. Hence it is correct.
$EF_{projected\_fossilfuel}$	81.6 tCO <sub>2</sub> /TJ	The value is based on the default value provided in AMS II.G <sup>/B2/</sup> for the emission factor of fossil fuel. Hence it is correct.
$AF$	0.95	Default Value as specified in the approved methodology AMS II.G, Version 03 <sup>/B2/</sup> , 0.95 (ie., 95%) is considered. Since PP is not decided to monitor the leakage emission, considering the default value given in the methodology seems to be correct.

All the above parameter will be fixed at PoA level which seems to be appropriate and inline with the AMS II.G, version 3 requirements.

The validation team confirms that all relevant parameters have been determined appropriately and using conservative assumption. .

### 3.10.2 Parameters determined ex-post

Following are the parameters as per the PoA DD, shall be monitored in each CPA and fixed at CPA level

- $Quantity_{Appliance}$  Average annual consumption of woody biomass per appliance substituted

Following are the parameters as per the PoA DD, shall be monitored in each CPA during the monitoring period

- $N_y$  Number of ICS in SSC CPA installed in year y (monitored once at the distribution state)
- $\eta_{new}$  Efficiency of stove being deployed as part of the project activity (to confirm the ICS operating at the same  $\eta_{new}$  mentioned in the PoA-DD/CPA-DD)
- Usage rate Proportion of project ICS installed that are still in operation

The Number of ICS in SSC CPA installed in year y ( $N_y$ ) will be monitored during the distribution of ICS in each CPA. This data will be recorded based on the number of sales agreement signed. Hence this data can be crosschecked through the verifying of sales record. This seems to be feasible and appropriate

The following parameters will be monitored through sample survey:

1. Proportion of project ICS installed that are still in operation (Usage rate),
2. Efficiency of stoves ( $\eta_{new}$ ) .

### 3. Average annual consumption of woody biomass per appliance substituted ( $\text{Quantity}_{\text{Appliance}}$ )

The average annual average woody biomass consumption per appliance substituted ( $\text{Quantity}_{\text{Appliance}}$ ) will be arrived before the implementation of the CPA based on sample survey in the region. This will be monitored through sample survey for every CPA before implementation and the average annual woody biomass consumption value will be fixed in each CPA-DD. The ex-post monitoring parameters (Usage rate &  $\eta_{\text{new}}$ ) will be monitored every year during the crediting period of the CPA. The PP has provided the sampling plan in the PoA-DD. The same is verified and the following are confirmed:

- The objectives of the sampling plan is clearly defined
- 90/10 confidence/precision level is considered for all the above parameters. The parameters monitored ex-post (Usage rate &  $\eta_{\text{new}}$ ) will be monitored every year. Hence the confidence/precision level considered for these parameter is appropriate and in line with § 22 of AMS I.D version 3. Since the AMS II. G version 3 provides reliability requirements only for the ex-post monitoring parameter & not provided any requirements for the baseline parameters determination ( $\text{Quantity}_{\text{Appliance}}$ ), the 90/10 confidence/precision seems to be appropriate and in line with § 10 of ‘Standard for sampling and surveys for CDM PAs and PoAs’ (version 03.0)<sup>B13/</sup>. In case where the survey results do not achieve the 10% precision level, then the sample size will be increased until to achieve the required precision or the lower bound value of 90/10 will be considered. Hence it can be confirmed that the sample survey will achieve the minimum required confidence/precision level of 90/10.
- The proposed sampling plan ensures that samples will be randomly selected and are representative of the population. So there is no suspect of biased results from the survey.
- The target population is the households where the ICS will be distributed under the specific CPA. The exact definition of target population will be provided in the specific CPA-DD
- The sampling frame provided in the plan is appropriate and seems to be possible.
- The simple random sampling method is selected which is appropriate for the CPA as the target population of any CPA under the PoA will be households which are homogeneous in nature.
- PP has provided formula for calculation of sample size for each parameter. All the equations are checked and found to be in line with ‘Guidelines for sampling and surveys for CDM project activities and programme of activities’ (version 02.0)<sup>B13/</sup>. The actual sample size required for each CPA will be calculated in the respective CPA-DD based on the CPA specific parameters. In case if the sample size calculated is less than 30, the minimum of 30 samples will be considered to be in line with § 12 of ‘Standard for sampling and surveys for CDM PAs and PoAs’ (version 03.0)<sup>B13/</sup>.
- Sampling plan specifies that the sampling frame will be kept in hard copy and the random numbers will be generated using random number tables and the same will be used to select the sample
- The measurement method of each parameter is clear & unambiguous and it will provide accurate & reliable data.
- The quality control and assurance stagey provided in the plan is adequate
- The mechanisms provided for avoiding non-sampling errors in the plan is adequate
- The PP will appoint third party competent agency for testing the efficiency of ICS ( $\eta_{\text{new}}$ ) & appoints the trained people for the monitoring of other parameters (Usage rate &  $\text{Quantity}_{\text{Appliance}}$ ). The

proposed skill sets, qualification and experience of other personnel to be engaged to conduct sampling are adequate.

The validation team, thus concludes that the sampling plan provided in the PoA-DD is in accordance with 'Standard for sampling and surveys for CDM PAs and PoAs' (version 03.0) and as per the 'Guidelines for sampling and surveys for CDM project activities and programme of activities' (version 02.0)<sup>/B13/</sup>

Hence, monitoring plan of all the above parameters is to be monitored for each CPA which seems to be appropriate and in line with the AMS II.G, version 3 requirements.

### 3.10.3 Monitoring and Reporting System and Quality Assurance

The operational and management structure of the CME in context of the PoA has been clearly described in the PoA-DD and confirmed through the interview with CME. The responsibilities and institutional arrangements for data collection and archiving have been clearly provided in the PoA-DD and also evident from OSV observation. Furthermore, for this PoA, CME has included monitoring plan and review of the same reveals the fact that the information provided in the PoA-DD can provide sufficient information to the CPA implementers of the PoA to stick with the monitoring requirements of the PoA in order to ensure correct monitoring procedure.

Detailed procedures have been developed in the PoA-DD as follows:

- Monitoring organization;
- Sampling plan;
- Data collection and QA/QC;
- Training of monitoring personals
- Data management;
- Monitoring.

The monitoring arrangements described in the monitoring plan of the PoA-DD have been assessed by the validation team, by means of documentation review and from interviewing with the representative from the project owner<sup>/I/</sup>. On that basis the effective implementation of the monitoring plan is considered feasible.

In conclusion, it is the validation team's opinion that the monitoring, management & quality assurance plan of the project identified in the PoA-DD is in compliance with the requirements of the methodology AMS II.G, version 03.0.

### 3.11 Environmental Impacts

The environmental analysis has been done at the PoA- level. The PoA involves the distribution of residential ICS. Installing energy efficient improved cooking stoves (ICS) neither entail any significant negative environmental impacts nor trans-boundary impacts. As per the South African National Environmental Management Act 107 of 1998, effective from 1<sup>st</sup> July 2006<sup>/B14/</sup>, EIA is not required for this PoA.

### 3.12 Local Stakeholder Consultation

CME has decided to conduct the local stakeholder consultation at each CPA level as the each CPA will be implemented in various locations all over the South Africa. So conducting the LSC at each CPA level will be more appropriate as it will help to get comments of all the relevant stakeholders in each CPA.

### 3.13 Comments by Parties, Stakeholders and NGOs

The version 01 of PoA-DD<sup>/P1.1/</sup>, g-CPA-DD<sup>/P2.1/</sup> and real-case CPA-DD were made publicly available on UNFCCC's

website(<http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/7C0F2GMJ2TWTY60TKJ2U2JMSJ00NL1/view.html>) and parties, stakeholders and NGOs were through the CDM website invited to provide comments during a 30 days period from 04/05/2012 to 02/06/2012, where no comment was received.

## **Appendix A**

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**The Validation Protocol for CDM Programme of Activities**  
based on CDM Validation and Verification Manual, Annex 2 of EB 55 report

**Energy Efficient Cook stoves in South Africa**  
**In**  
**South Africa**

**Report No. 01 997 9105069953-1/2**



<b>Table 1: CDM-SSC-POA-DD Requirements Checklist</b> (based on § 37 of the CDM Modalities and Procedures and on VVM ver 01.2, Annex 2 of EB55 Ref and EB 55 annex 38- PoA specific)					
<b>Checklist</b>	<b>Ref.</b>	<b>MoV<sup>3</sup></b>	<b>Comment</b>	<b>Draft Concl.</b>	<b>Final Conc.</b>
<b>A. General Description of the Programme of Activities</b>					
<b>A.1. Title of the PoA</b>					
A.1.1.Are title, version number and the date of completion of PoA DD given in section A.1 of the PoA-DD?	/P1.1/	DR	Yes, title, current version number and the date of document completion has been provided in section A.1 of the PoA DD.	OK	OK
<b>A.2. Description of the PoA</b>					
A.2.1.Has PoA DD in section A.2 contains a sufficient description of general operating and implementing framework of the proposed PoA?  (Ref: § 6 of EB 55 Annex 38)	/P1.1/	DR	Yes, section A.2 of PoA-DD contains sufficient description of general operating and implementing framework of proposed PoA. Nevertheless CAR-02 is raised	<del>CAR-02</del>	OK
A.2.2. Has PoA DD in section A.2 contains the description of the policy/measure or stated goal that the <u>PoA seeks</u> to promote in a transparent manner with sufficient reference of the policy/measure/stated goal if any? (Ref : §6 (c)of EB 55 Annex 38)	/P1.1/	DR	Yes, section A.2 of PoA-DD contains description of the goal of PoA.	OK	OK
A.2.3.Has a confirmation been given that the proposed PoA is a voluntary action by the coordinating/managing entity?  (EB 55 Annex 38, §6(d))	/P1.1/	DR	Yes, the CME has provided confirmation that proposed PoA is a voluntary measure by the CME.	OK	OK
A.2.4. Will the PoA create other environmental or social benefits than GHG emission reductions?  (EB 55 Annex 1, §§ 125 – 127)	/P1.1/	DR	Yes according to the description provided in the PoA DD(section A.2), CME has presented other benefits of the PoA under SD criteria.	OK	OK
A.2.5.Does the project qualify as a small scale CDM project activity as defined in decision 4 / CMP.1 annex II?  (EB 55 Annex 1, § 136 (a))	/P1.1/	DR	The PoA mentions the limit of SSC as a CPA inclusion criteria, ie., maximum energy saving of each CPA will be less than 180 GWh/year. Hence, it can be confirmed that all the CPA of the PoA quantifies under small scale project activity.	OK	OK

<sup>3</sup> MoV = Means of Validation, DR = Document Review, I = Interview, www = internet search.



A.2.6. Has the latest version of the CDM-POA DD form been applied?  (EB 55 Annex 1, § 55)	/P1.1/ /B6-1/	DR	Yes latest version of PoA DD template has been used. The same crosschecked through the latest version of “Small-scale CDM programme of activities design document form ( CDM SSC-PoA-DD) Version 01,EB 33” provided under VVM has been crosschecked	OK	OK
A.2.7. Has the CDM-POA-DD been duly filled in accordance with the latest guidance(s) and procedures and all information are consistently described?  Note: At present there is no guidelines for completing the PoA-DD , hence combination of description provided in the PoA DD template, EB 55 annex 38 guidelines and the guidelines for completing the LSC/ SSC project shall be considered where deemed applicable.	/P1.1/ /B6-1/	DR	Yes, the PoA-DD is duly filled in accordance with the guideline provided in the latest version of “Small-scale CDM programme of activities design document form ( CDM SSC-PoA-DD) Version 01,EB 33” provided under VVM.	OK	OK
<b>A.3. CME and Participants of PoA</b>					
A.3.1. Has the coordinating/managing entity obtained letters of approval for the implementation of the PoA from each Host Party and Annex I Party involved in the PoA?  <i>Note: Letters of approval shall be issued in accordance with the guidance provided by the CDM Executive Board (EB16, Annex 6)</i>	--	DR	CME has not provided the LoA of the host DNA i.e. South Africa. In this context CAR-01 has been raised.	<del>CAR-01</del>	OK
A.3.2. Do the written approvals confirm that the corresponding party is a Party to the Kyoto Protocol?	--	DR	Subject to closure of CAR-01.	<del>CAR-01</del>	OK
A.3.3. Are the approvals issued from organizations listed as DNAs on the UNFCCC CDM website?  Indicate the means of validation employed to assess the authenticity, i.e. in case of doubt whether LoA has been verified with the DNA. Further describe which entity submitted the LoA for validation.	--	DR	Subject to closure of CAR-01.	<del>CAR-01</del>	OK

A.3.4. Do the written approvals confirm that the participation is voluntary?	--	DR	Subject to closure of CAR-01.	<del>CAR-01</del>	OK
A.3.5. Does the written approval from the host country confirm that the project contributes to the sustainable development in the country?	--	DR	Subject to closure of CAR-01.	<del>CAR-01</del>	OK
A.3.6. Do the written approvals refer to the precise project title in the PoA-DD submitted for registration or an additional specification of the project activity, e.g. PoA-DD version number?	--	DR	Subject to closure of CAR-01.	<del>CAR-01</del>	OK
A.3.7. Are the written approvals unconditional with regard to A.3.2, A.3.4 to A.3.6?	--	DR	Subject to closure of CAR-01.	<del>CAR-01</del>	OK
A.3.8. Has the coordinating/managing entity obtained letters of authorization of its coordination of the PoA from each Host Party?  <i>The authorizations for the coordination of the PoA can be granted vide the letters of approval from each Host Party.</i>	--	DR	Subject to closure of CAR-01.	<del>CAR-01</del>	OK
A.3.9. Is the information regarding the project participants listed in section A3 and in Annex 1 of the PoA-DD internally consistent to each other?	/P1.2/	DR	The PP/CME name mentioned in the Section A.3 of PoA-DD is not consistent with the Appendix-I. Hence CAR-03 is raised	<del>CAR-03</del>	OK
A.3.10. Has the participation to the PoA of each project participant listed in the PoA-DD been approved by at least one Party involved?  <i>Indicate whether the participation of the project participant(s) has been approved by a Party to the Kyoto Protocol. Describe the means of validation employed to draw this conclusion.</i>	--	DR	Subject to closure of CAR-01.	<del>CAR-01</del>	OK
A.3.11. Are there any other project participants approved but not listed in the PoA DD?	--	DR	Subject to closure of CAR-01.	<del>CAR-01</del>	OK

<b>A.4. Technical description of the PoA</b>					
<b>A.4.1. Location of PoA</b>					
A.4.1.1. Has the location of the PoA been correctly described?	/P1.2/	DR	Yes, the location of the PoA is included in the PoA-DD is Republic of South Africa which is correct and checked with the CME during the OSV	OK	OK
<b>A.4.1.2. Host parties</b>					
A.4.1.2.1. Have all host countries been correctly listed?	/P1.2/	DR	Yes, the only host country involved is South Africa the same is included in the section A.4.1.1. However in the following issue is raised <u>CAR-02:</u> In section A.2 of the PoA-DD: It is mentioned that the countries Angola, Bostwana, DRC, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Nambia, Seychelles, South Africa, Swaziland, Tanzania and Zambia will be included in the CPA. But these countries are not included in the PoA as per Section A5	CAR-02	OK
A.4.1.2.2. Is there any PP directly involved as project participant, and if yes, is that PP's contact details included in Appendix-1 of the PoA-DD?	--	DR	The only PP involved in this PoA is "Clean Air Renewable Energy (Pty) Limited". The contact details of the same is included in the Appendix –I of the PoA-DD.	OK	OK
<b>A.4.1.3. Physical / Geographical properties</b>					
A.4.1.3.1. Does the CDM-POA-DD include a definition of the boundary for the PoA in terms of a geographical area (e.g., municipality, region within a country, country or several countries) within which all CPAs included in the PoA will be implemented?  (Ref : §6(b)of EB 55 Annex 38)	/P1.2/	DR	Yes, the PoA DD mentions definition of project boundary in terms of geographical location as South Africa in PoA DD which is correct.	OK	OK
A.4.1.3.2. Are all applicable national and/or sectoral policies and regulations within that chosen boundary reflected in the determination of the baseline?  (Ref : §6(b)of EB 55 Annex 38)	/P1.2/	DR	Not applicable as the baseline is provided by methodology	OK	OK
<b>A.4.2. Description of a typical CPA</b>					

<b>A.4.2.1. Description/ Technology or measures to be employed by the CPA</b>					
<p>A.4.2.1.1. Does the PoA-DD contain a clear, accurate and complete description of the CPAs with regard to the technology / measures to be used?</p> <p>((Ref : §6(f)of EB 55 Annex 38)</p>	/P1.2/	DR	The technical details of the improved cook stove to be distributed in the CPAs of PoA are not provided. Hence CAR-04 is raised	CAR-04	OK
<p>A.4.2.1.2. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?</p>	/P1.2/	DR	Subjected to closure of CAR-04.	CAR-04	OK
<b>A.4.2.2. Eligibility criteria for inclusion of a CPA</b>					
<p>A.4.2.2.1. Has the definition of eligibility criteria for inclusion of a CPA under the PoA included the following information:</p> <ul style="list-style-type: none"> <li>□ appropriate criteria for demonstration of additionality of the CPA, and</li> <li>all type and/or extent of information (e.g. criteria, indicators, variables, parameters or measurements) that shall be provided by each CPA in order to ensure its eligibility?</li> </ul> <p>(Ref : §6(g)of EB 55 Annex 38 and § 167 of VVM ver 01.2)</p>	/P1.2/	DR	<p>The following issue is raised in this regard:</p> <p><u>CAR-06</u></p> <p>In Section A.4.2.2 of PoA-DD:</p> <p>Not all the minimum requirements mentioned in §14 of EB 65 annex3 are described. For example the following requirement are missing:</p> <ul style="list-style-type: none"> <li>Conditions related sampling</li> <li>Conditions related to debundlling</li> <li>Conditions to avoid double counting</li> <li>Conditions to qualify as micro scale/small scale</li> </ul>	CAR-06	OK
<b>A.4.3. Assessment and Demonstration of Additionality</b>					
<p>A.4.3.1.Has the PoA demonstrated that in the absence of the CDM one of the following would have occurred:</p> <ul style="list-style-type: none"> <li>□the proposed voluntary measure would not be implemented, or</li> <li>the mandatory policy/regulation would be systematically not enforced and that non-compliance with those requirements is widespread in the country / region, or</li> <li>that the PoA will lead to a greater level of enforcement of the existing mandatory policy /regulation.</li> </ul>	/P1.1/	DR	<p>Yes, POA DD contains information on the demonstration of additionality on PoA level, however the following issue is raised:</p> <p><u>CAR-05:</u></p> <p>In Section A.4.3 &amp; E.5.1 of PoA-DD:</p> <ol style="list-style-type: none"> <li>1. Additionality justification for the small scale project activity is not properly explained with documentary evidences</li> <li>2. No explanation provided how CDM revenue will help to overcome the barrier</li> </ol>	CAR-05	OK

(Ref : §6(e)of EB 55 Annex 38)					
A.4.4. Operational, management and monitoring plan					
A.4.4.1. Operational and management plan					
A.4.4.1.1. Has the coordinating/managing entity established the operational and management arrangements for the implementation of the PoA, which includes a record keeping system for each CPA under the PoA?  (Ref : §6(i)of EB 55 Annex 38 and § 166 of VVM ver 01.2)	/P1.1/	DR	Yes, the CME has established the operational and management structures for the implementation of the PoA in section A.4.4.1 of the PoA DD.	OK	OK
A.4.4.1.2. Are procedures identified for data management?	/P1.1/	DR	Yes procedures for has been identified for data management.	OK	OK
A.4.4.1.3. Has the arrangements included a system/procedure to avoid double accounting, e.g., provisions to ensure that those operating the CPA are aware and have agreed that their activity is being subscribed to the PoA? (Ref : §6(i)of EB 55 Annex 38)	/P1.1/	DR	Yes, the PoA DD includes the following as CPA inclusion criteria: <i>Each improved cooking stove covered under the CPA will have a unique serial number which will ensure that there is no double counting</i> This eligibility a criterion ensures that double counting will be avoided in any CPA included in the PoA.	OK	OK
A.4.4.1.4. Is the small scale project activity not a debundled component of a larger project activity? (Ref: EB 55 Annex 1, § 136 (c))	/P1.1/	DR	The eligibility condition criteria to confirm the CPA included are not a debundled component of any larger project activity is missing under the CPA eligibility criteria. Hence CAR-06 is raised	<del>CAR-06</del>	OK
A.4.4.1.5. Has the CME made provisions to ensure that the CPA operators are aware of and have agreed that their activity is being subscribed to the PoA?	/P1.1/	DR	In case if other party other than CARE implements any CPA then they will be having agreement for the inclusion of CPA. Moreover the CPA inclusion eligibility criteria also confirm the same.	OK	OK
A.4.4.2. Monitoring plan					
A.4.4.2.1. If the coordinating /managing entity does not wish to have all CPAs verified, has a description of the proposed statistically sound sampling method/procedure to be used by DOEs for verification of the CPA GHG emission reductions been provided?  (Ref: § 6(k)EB 55 Annex 38)	/P1.1/	DR	Not applicable as this will be determined by PP during the verification	OK	OK
A.4.4.2.2. In case each CPA shall be verified, is there a transparent	/P1.1/	DR	Please refer above	OK	OK

system in place that a) the verification status can be determined any time for each CPA and b) no double-accounting of ER occurs?					
<b>A.4.5. Public funding of the PoA</b>					
A.4.5.1. Is there a confirmation that official development assistance has not been diverted to the implementation of the PoA in case public funding is used? (Ref: § 6(n) EB 55 Annex 38)	/P1.1/	DR	The CME has included the following as a CPA inclusion criterion in the PoA-DD: <i>"There will be no diversion of public funding or ODA involved in the project activity"</i> Hence it can be confirmed that no official development fund will be involved in the implementation of CPAs that will be included in the PoA.	OK	OK
<b>B. Duration of the PoA</b>					
<b>B.1. Starting Date of the PoA</b>					
B.1.1. What is the starting date of the PoA? Is it Reasonable?	/P1.1/	DR	The starting date of PoA is mentioned as 07/03/2012 which is the date of signing of contract between the CME and the Consultants. This seems to be appropriate as there are no criteria given by EB for validation of the same.	OK	OK
<b>B.2. Length of the PoA</b>					
<i>The length of the PoA shall be assessed</i>					
B.2.1. What is the length/lifetime of the PoA? Is it reasonable?  <i>PoA duration should not exceeding 28 years (60 years for A/R)</i> (Ref: § 6(h)EB 55 Annex 38)	/P1.1/	DR	Yes the length of the PoA has been considered as 28 years which is reasonable and in line with §6(h) of EB 55 annex 38.	OK	OK
<b>C. Environmental Analysis</b>					
<b>C.1. Level of Analysis</b>					
<i>The analysis shall be carried out either on PoA or CPA level</i>					
C.1.1.Has it been clearly indicated on which level i.e. PoA or CPA an environmental Analysis has been carried out or will be carried out?	/P1.1/	DR	Yes, it has been indicated that the environmental analysis will be done on PoA level.	OK	OK

(Ref §(I)of EB 55 Annex 38)					
<b>C.2. Documentation on the analysis of the environmental impacts</b> <i>The analysis shall be assessed</i>					
C.2.1. Has an environmental analysis of the PoA as per requirements of the CDM modalities and procedures been undertaken and described in the CDM-POA-DD?  (Ref: §6(I)EB 55 Annex 38)	/P1.1/	DR	The PoA involves the distribution of residential ICS. Installing energy efficient cooking stoves neither entail any significant negative environmental impacts nor transboundary impacts. An EIA is not required from host country for this PoA. The same is described in the PoA-DD	OK	OK
<b>C.3. Environmental impact Analysis Requirements</b>					
C.3.1. Are there any Host Party requirements for an Environmental Impact Assessment (EIA)?	/P1.1/	DR	EIA for the improved cook stove project is not a requirement of South Africa.	OK	OK
C.3.2. In case an Environmental Impact Assessment (EIA) is requested by the host party, has it been carried out and if applicable duly approved?	/P1.1/	DR	EIA for the improved cook stove project is not a requirement of South Africa.	OK	OK
C.3.3. Are trans boundary environmental impacts considered in the analysis?	/P1.1/	DR	No transboundary environmental impacts are involved in the PoA	OK	OK
<b>D. Stakeholders' comments</b>					
<b>D.1. Level of Analysis</b>					
D.1.1. Has it been clearly indicated on which level i.e. PoA or CPA stakeholder comments have been or will be invited?	/P1.1/	DR	Yes, according to the PoA DD, stakeholders consultation has/will be done at CPA level.	OK	OK
<b>D.2. Brief description how comments by local stakeholders have been invited and compiled.</b>					
D.2.1. With regard to the PoA, how have local stakeholders' comments been invited prior to the publication of the DDs and summarized? If applicable, was due account taken of the comments received? (Ref: § 6(m)EB 55 Annex 38)	/P1.1/	DR	Not applicable as LSC will be conducted as CPA level	OK	OK
<b>D.3. Summary of the comments received</b>					
D.3.1. With regard to the PoA, can the summary provided assessed	/P1.1/	DR	Not applicable as LSC will be conducted as CPA	OK	OK

as adequate?			level		
<b>D.4. Report on how due account was taken of comments received</b>					
D.4.1. With regard to the PoA, can the report provided assessed as adequate?	/P1.1/	DR	Not applicable as LSC will be conducted as CPA level	OK	OK
D.4.2. With regard to the PoA, can the local stakeholder consultation process in general be assessed as adequate?	/P1.1/	DR	Not applicable as LSC will be conducted as CPA level	OK	OK
<b>E. Application of baseline and monitoring Methodology</b>					
<b>E.1. Title and reference of the methodology</b>					
E.1.1. Does the PoA apply an approved and applicable CDM methodology and a valid version thereof?	/P1.1/	DR	Yes, the proposed PoA applied AMS II.G ver 03, which is an approved CDM methodology and the version 03 is the latest available version of methodology.	OK	OK
<b>E.2. Justification of the choice of the methodology</b>					
E.2.1. Is the justification of the choice of an approved baseline and monitoring methodology for the typical CPA sufficient?  (Ref: § 6(f) EB 55 Annex 38)	/P1.1/	DR	The following issue is raised in this regard: <u>CAR-07:</u> In Section E.2 of PoA-DD:  Applicability criteria related to efficiency of project appliance which is mentioned in foot note of AMS II.G version 3	<del>CAR-07</del>	OK
E.2.2. Does a typical CPA apply a combination of approved methodologies? If so, has such combination been approved only once in accordance with “Procedures for approval of the application of multiple methodologies to a programme of activities”?  (Ref: § 6(f)EB 55 Annex 38)	/P1.1/	DR	Not applicable, since a typical CPA under this PoA will apply only one methodology i.e. AMS II.G ver 03.	OK	OK
E.2.3. Does the typical CPA apply one of the approved small scale categories and any methodology and tool referred therein?	/P1.1/	DR	The PoA-DD includes the following as one of CPA inclusion criteria: “Uses the small scale approved methodology AMS.II.G version 03. The CME will verify that all CPA-DDs employ aforesaid version of the	OK	OK



			<i>methodology”</i> Hence it can be confirmed that CPAs included in the PoA will apply AMS II.G version-03 which is approved SSC methodology. The methodology does not refer any tool.		
E.2.4. Are all applicability criteria in the methodology, the applied tools or any other methodology component referred to therein fulfilled?	/P1.1/	DR	Subjected to closure of CAR-07	<del>CAR-07</del>	OK
<b>E.3. Description of the sources and gases included in the boundary</b>					
E.3.1. Are the CPA's spatial boundaries (geographical) of the CPAs to be included are clearly defined?	/P1.1/	DR	All the CPA to be included in the PoA will be within the Republic of South Africa. Hence the special boundary of any CPA will be within the South Africa. The same is explained in the PoA-DD. Nevertheless CAR-02 is raised	<del>CAR-02</del>	OK
E.3.2. Are all sources and GHGs included in the project boundary as required in the applied methodology?	/P1.1/	DR	Yes, all the sources and GHG included in the project boundary as per the methodology is included in the PoA-DD	OK	OK
E.3.3. In case the methodology allows to choose whether a source and/or gas is to be included, is the choice sufficiently explained and justified?	/P1.1/	DR	Not applicable, methodology does not call to choose the choice of sources and gases to be included or excluded.	OK	OK
<b>E.4. Description of how the baseline scenario is identified and description of baseline scenario</b> <i>The description shall be assessed</i>					
E.4.1. Does the PoA-DD make provisions to identify possible baseline scenarios to be been considered for CPAs?  (Ref: §6(b)EB 55 Annex 38)	/P1.1/	DR	Not applicable as the baseline scenario is provided by methodology.	OK	OK
E.4.2. Does the PoA-DD make provisions to identify the list of all the alternatives? Is the list of alternatives complete?	/P1.1/	DR	Not applicable as the baseline scenario is provided by methodology.	OK	OK

E.4.3. Does the PoA-DD make provisions to identify the baseline scenario for each CPA?  (Ref: §6(b)EB 55 Annex 38)	/P1.1/	DR	Not applicable as the baseline scenario is provided by methodology.	OK	OK
E.4.4. Does the PoA-DD make provisions to identify the baseline scenario according to the methodology for each CPA?	/P1.1/	DR	Not applicable as the baseline scenario is provided by methodology.	OK	OK
E.4.5. Does the PoA-DD make provisions that any plausible alternative scenario is not excluded?	/P1.1/	DR	Not applicable as the baseline scenario is provided by methodology.	OK	OK
E.4.6. Does the baseline alternatives sufficiently take into account relevant national and/or sectoral policies?  (Ref: §6(b)EB 55 Annex 38)	/P1.1/	DR	Not applicable as the baseline scenario is provided by methodology.	OK	OK
E.4.7. Are the provisions for the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced?	/P1.1/	DR	Not applicable as the baseline scenario is provided by methodology.	OK	OK
<b>E.5. CPA additionality</b>					
<b>E.5.1. Assessment and demonstration of CPA additionality</b>					
E.5.1.1. Does the PoA-DD makes provisions to describe the additionality justification, which follows the requirements of the applied methodology and/or other methodological tools?	/P1.1/	DR	Yes, the PoA DD under section A.4.3 & E.5.1 has made provisions to describe additionality of a typical CPA by using the following two approaches: 1: Demonstration of Additionality of Microscale Project Activities 2: Additionality demonstration as per Attachment A to Appendix B of the simplified modalities and procedures for small scale CDM project activities.	OK	OK
<b>E.5.2. Key criteria for assessment and demonstration of CPA additionality</b>		DR			
E.5.2.1. Which criteria have been established to assess the additionality of CPA under this PoA?	/P1.1/	DR	CME opted to prove additionality of a typical CPA by using the following two approaches: 1: Demonstration of Additionality of Microscale Project Activities 2: Additionality demonstration as per Attachment A to Appendix B of the simplified modalities and	<del>CAR-05</del>	OK

			procedures for small scale CDM project activities. Nevertheless CAR-05 is raised		
E.5.2.2. Does the PoA-DD provide criteria to assess that the proposed CPA of the PoA would not be the most economically or financially attractive alternative or economically / financially feasible without the revenues from the sale of CERs?	/P1.1/	DR	Not applicable for this PoA, since the CME has not opted to assess financial viability of the CPA.	OK	OK
E.5.2.3. Is the type of investment analysis selected correctly?	/P1.1/	DR	Not applicable for this PoA, since the CME has not opted to assess Investment analysis of the CPA.	OK	OK
E.5.2.4. Is the selected financial indicator chosen and applied correctly, if applicable?	/P1.1/	DR	Not applicable for this PoA, since the CME has not opted to assess Investment analysis of the CPA.	OK	OK
E.5.2.5. If applicable, were the input values used in the investment analysis valid and applicable at the time of the investment decision and justified?	/P1.1/	DR	Not applicable for this PoA, since the CME has not opted to assess Investment analysis of the CPA.	OK	OK
E.5.2.6. In CME proposes to use values from Feasibility Study Reports (FSR) is it possible to verify that the period between the FSR date and investment decision was reasonably short and FSR values did not change materially?	/P1.1/	DR	Not applicable for this PoA, since the CME has not opted to assess Investment analysis of the CPA.	OK	OK
E.5.2.7. Is it reasonable to assume that no investment would be made at a rate of return lower than the benchmark by, for example, assessing previous investment decisions by the project participants or some verifiable circumstances that have lead to a change in the benchmark??	/P1.1/	DR	Not applicable for this PoA, since the CME has not opted to assess Investment analysis of the CPA.	OK	OK
E.5.2.8. Is the Investment Analysis prepared in compliance with the latest version of the "Guidance on the Assessment of Investment Analysis" as provided by the CDM EB?	/P1.1/	DR	Not applicable for this PoA, since the CME has not opted to assess Investment analysis of the CPA.	OK	OK
E.5.2.9. If applicable, Are there any issues addressed in the barrier analysis that have a clear impact on the financial viability of the project activity and that shall be assessed by an investment analysis?	/P1.1/	DR	Yes, there are issues which have clear direct impact on the financial viability of the project and shall be asses as investment analysis as described in section E.5.1 of the PoA DD under investment barrier and technological barrier and in this context CAR-05 has been raised.	<del>CAR-05</del>	OK
E.5.2.10. If applicable, Do the listed barriers exist and is their existence substantiated? Note: (a) by independent sources of data such as relevant national	/P1.1/	DR	Subjected to closure of CAR-05	<del>CAR-05</del>	OK

legislation, surveys of local conditions and national or international statistics and/or (b) by interviews with relevant individuals: including members of industry associations, government officials or local experts if necessary?					
E.5.2.11 Would any of the identified barriers prevent the implementation of the project activity but not equally prevent the implementation of the possible alternatives, in particular the implementation of the identified baseline scenario?	/P1.1/	DR	Subjected to closure of CAR-05	<del>CAR-05</del>	OK
E.5.2.12. Are the geographical boundaries for the common practice analysis identified correctly?	/P1.1/	DR	Since the CPA of the PoA is a SSC project activity, common practice analysis is not required and not demonstrated in the PoA DD.	OK	OK
E.5.2.13. Does the PoA DD provides an explanation why this region was selected and deemed more appropriate and is this explanation traceable and reliable?	/P1.1/	DR	Since the CPA of the PoA is a SSC project activity, common practice analysis is not required and not demonstrated in the PoA DD.	OK	OK
E.5.2.14 Are there similar operational project activities, other than CDM activities, “widely observed and commonly carried out” in the defined region? Note: Use official sources and local and industry expertise?	/P1.1/	DR	Since the CPA of the PoA is a SSC project activity, common practice analysis is not required and not demonstrated in the PoA DD.	OK	OK
E.5.2.15. In case there are similar commercially operated project activities, other than CDM activities, already “widely observed and commonly carried out” in the defined region, are there essential distinctions between the CDM project activity and the other similar activities?	/P1.1/	DR	Since the CPA of the PoA is a SSC project activity, common practice analysis is not required and not demonstrated in the PoA DD.	OK	OK
<b>E.6. Estimation of Emission Reductions of CPA</b>					
<b>E.6.1. Explanation of methodological choices</b>					
E.6.1.1. In case the methodology allows for different methodological choices, are the equations applied properly justified and have they been used reflecting the other methodological choices (i.e. baseline identification)?	/P1.1/	DR	No, the methodology does not allow for different methodological choices for the baseline identification.	OK	OK
<b>E.6.2. Equations, including fixed parametric values used for ER calculation</b>					
E.6.2.1. Are the equations applied correctly according to the applied approved methodology?	/P1.1/	DR	Yes, the equations used for the emission reduction calculation are correctly applied which is in accordance to the methodology	OK	OK

E.6.2.2. Have conservative assumptions been used when calculating the project emissions?	/P1.1/	DR	As per the methodology AMS II.G version 03, no project emission is involved in the CPAs of the PoA	OK	OK
<b>E.6.3. Data and parameters to be reported in the CPA-DD form</b>					
E.6.3.1. Are provisions made to identify all data and parameters which remain fixed throughout the crediting period correct, applicable to the project and will lead to a conservative estimation of emission reductions?	/P1.1/	DR	<p>The following parameters will be fixed at PoA level:</p> <ul style="list-style-type: none"> <li>- Efficiency of the system being replaced (Traditional Cooking Stoves) (<math>\eta_{old}</math>)</li> <li>- Fraction of woody biomass saved by the project activity in year y that can be established as non-renewable biomass (<math>f_{NRB}</math>)</li> <li>- Net calorific value of the non-renewable woody biomass that is substituted (<math>NCV_{biomass}</math>)</li> <li>- Emission factor for the substitution of non-renewable woody biomass by similar consumers (<math>EF_{projected\_fossilfuel}</math>)</li> <li>- Gross adjustment factor (AF)</li> </ul> <p>Except <math>f_{NRB}</math>, all the parameters are taken from the default value provided in the methodology.</p> <p>There are some issues identified in the calculation of <math>f_{NRB}</math>. Hence CAR-10, CL-11, CL-12 &amp; CAR-13 are raised</p>	<del>CAR-10</del> <del>CL-11</del> <del>CL-12</del> <del>CAR-13</del>	OK
E.6.3.2. Does the PoA-DD mention reasonable values for all ex-ante calculation / monitoring parameters?	/P1.1/	DR	Subjected to closure of CAR-10, CL-11, CL-12 & CAR-13	<del>CAR-10</del> <del>CL-11</del> <del>CL-12</del> <del>CAR-13</del>	OK
<b>E.7. Application of the monitoring methodology and description of the monitoring plan</b>					
<b>E.7.1. Data and parameters to be monitored by each CPA</b>					
E.7.1.1. Has the PoA DD contains monitoring parameters for the CPAs? Are the means of monitoring of all parameters contained in the monitoring plan feasible and in accordance with the requirements of the applied methodology?	/P1.1/	DR	Yes, PoA DD in section E.7.1 provides list of parameters to be monitored by the CPAs of the PoA. Nevertheless CL-15 are raised	<del>CL-15</del>	OK
E.7.1.2. Has the PoA DD provides all monitoring parameters as	/P1.1/	DR	Yes, PoA-DD provides all the monitoring parameters	<del>CL-15</del>	OK

required by the applied methodology required to be implemented by CPA monitoring plan?			as required by the AMS II.G version 3 and the CPA monitoring plan. Nevertheless CL-15 are raised		
<b>E.7.2. Description of the monitoring plan for a SSC-CPA:</b>					
E.7.2.1 Has PoA DD contains monitoring plan for a CPA in accordance with the approved monitoring methodology, and identified the monitoring provisions and data parameters a CPA has to apply/monitor?	/P1.1/	DR	Yes the PoA DD contains monitoring plan to be employed by any CPA which is in accordance with the AMS II.G version 3. Nevertheless CL-17 is raised	<del>CL-17</del>	OK
E.7.2.2. Are the QA/QC procedures described under monitoring appropriate sufficient to ensure the emission reductions achieved from the project activity can be reported ex-post and verified?	/P1.1/	DR	Subjected to closure of CL-17	<del>CL-17</del>	OK
E.7.2.3. Have all means of implementing the monitoring plan, e.g. equations necessary for ex-post emission reduction calculation, been described clearly and in line with the methodology?	/P1.1/	DR	Subjected to closure of CL-17	<del>CL-17</del>	OK
<b>E.8. Date of completion of the application of the baseline study and monitoring methodology and the name of the responsible person(s)/ entity(ies)</b>					
E.8.1. Have the dates of the completion of the application of the baseline study and monitoring methodology and the name of the responsible person(s)/ entity(ies) appropriately mentioned?	/P1.1/	DR	Yes, the date of completion of application of baseline study and monitoring methodology and the names of the responsible person & entity are mentioned in the section E.8 of the PoA-DD	OK	OK

<b>Table 3: CDM-SSC-gCPA-DD Requirements Checklist</b> (based on § 37 of the CDM Modalities and Procedures and on VVM ver 01.2, Annex 2 of EB 55 Ref and EB 55 annex 38- PoA specific)					
CHECKLIST QUESTION	Ref.	MoV	Findings and comments	Draft Concl.	Final Concl.
<b>A. General Description of small scale CDM project activity (CPA)</b>					
A.1. Are title, current version number and the date of document completion given in section A.1 of the generic CPA-DD?	/P2.1/	DR	No, the provision for version and date of completion of the CPA-DD is not included under section A.1 of generic CPA-DD. Hence CAR-18 is raised	<del>CAR-18</del>	OK
A.2. Has the latest version of the CDM-SSC-CPA-DD form been used? Has g CPA DD includes information as required by the g CPA DD template?  Note: Refer UNFCCC website for latest template.	/P2.1/	DR	Yes latest version of CPA DD template, ie., “ <i>Small-scale CDM programme activity design document form ( CDM SSC-CPA-DD)</i> ” Version 01,EB 33 (under VVM) has been used.  Nevertheless CAR-08 is raised	<del>CAR-08</del>	OK
A.3. Does the generic CPA-DD provides unique identification of a CPA? Has general description of the small-scale CPA been provided in the g CPA DD?  (Ref : §7(a)of EB 55 Annex 38,)	/P2.1/	DR	Yes the generic CPA DD provides the provision for the unique identification number in the section A.1.  The general description of the SSC CPA has been provided in the generic CPA-DD	OK	OK
A.4 Has it been established that the CPA is within the geographical borders of the proposed PoA?  (Ref: § 7(a)EB 55 Annex 38)  Note: Geographical Boundary of CPA can be in more than one DNA.	/P2.1/	DR	Yes it has been demonstrated that the geographical borders of any CPA in this PoA will be within Republic of South Africa	OK	OK
A.5. Whether information on the Parties and CPA implementers which are participating in the CPA has been provided in the CPA DD? Are all host parties specified in the generic CPA-DD?  (Ref: §7(b)EB 55 Annex 38,)	/P2.1/	DR	The following issue is raised in this regard: <u>CAR-19:</u> Section A.3 of generic CPA-DD: The CME name is mentioned under this section. However there is no provision provided for including Entity/individual responsible for the small-scale CPA.	<del>CAR-19</del>	OK
<b>A.6.</b> Does the generic CPA-DD provided the name and	/P2.1/	DR	Subject to closure of CAR-19	<del>CAR-19</del>	OK



<b>Table 3: CDM-SSC-gCPA-DD Requirements Checklist</b> (based on § 37 of the CDM Modalities and Procedures and on VVM ver 01.2, Annex 2 of EB 55 Ref and EB 55 annex 38- PoA specific)					
CHECKLIST QUESTION	Ref.	MoV	Findings and comments	Draft Concl.	Final Concl.
contact details of the entity responsible for the operation of the CPA?  (Ref: §7 (a)of EB 55 Annex 38,)					
<b>A.7.</b> Has the Generic CPA-DD using the provisions provided under proposed PoA-DD?  (Ref: §7 of EB 55 Annex 38)	/P2.1/	DR	Yes the generic CPA DD has used provision provided under proposed PoA DD with respect to §7 of EB 55 Annex 38	OK	OK
<b>A.8.</b> Does the gCPA provides information in order to define the start date and with reference of appropriate evidence?  Note: Definition of SD of CPA has been provided in “Glossary of CDM terms”.	/P2.1/	DR	Yes, generic CPA-DD has made provision that the date of signing of first user agreement will the start date. Since the signing of first end user agreement is the first real action in any CPA, the start date seems to be appropriate as it is in accordance with the glossary of CDM terms.	OK	OK
<b>A.9.</b> Does the generic CDM-CPA-DD provides a confirmation that the start date of any CPA is not/or will not be, prior to the PoA validation? (i.e. the date on which the CDM POA- DD is first published for GSC)  <b>(Ref: §7(d)of EB 55 Annex 38)</b>  <b>Note:</b>  EB 47 Report Para72. Exemption according to EB 47 report para 72 can be provided if applicable.	/P2.1/	DR	This criterion is included as CPA inclusion criteria in the PoA-DD. Hence it is not mentioned under each CPA-DD is as the CPA which confirms the CPA inclusion criteria only be included in the PoA.	OK	OK
<b>A.10.</b> Does the gCPA provide information that ensures the operational lifetime of the CPA and reference of the evidence?	/P2.1/	DR	No, g-CPD does not provide operational lifetime details and in this context CAR-20 has been raised.	CAR-20	OK

<b>Table 3: CDM-SSC-gCPA-DD Requirements Checklist</b> (based on § 37 of the CDM Modalities and Procedures and on VVM ver 01.2, Annex 2 of EB 55 Ref and EB 55 annex 38- PoA specific)					
CHECKLIST QUESTION	Ref.	MoV	Findings and comments	Draft Concl.	Final Concl.
(Ref: para7(d)of EB55 Annex 38)					
<b>A.11.</b> Does the generic CDM-CPA-DD provides information on the SD of the crediting period of the proposed CPA? (Ref: §7(c)of EB 55 Annex 38,)	/P2.1/	DR	Yes, the generic CPA-DD provides provisions for start date of the crediting period of the CPA	OK	OK
<b>A.12.</b> Does the generic CDM-CPA-DD include information on the options to choose the type of CP(either fixed or renewable) and duration of the chosen crediting period of the CPA?  (Ref: §7(c)of EB 55 Annex 38)  Note: The duration of the CP of the CPA shall not exceed the end date of the PoA(i.e. 28 years).	/P2.1/	DR	Yes, generic PoA-DD mentions the type of crediting period considered for the CPA is 10 year fixed crediting period	OK	OK
<b>A.13.</b> Does the generic CPA-DD provides information to confirm that the proposed small-scale CPA is not a de-bundled component?  <i>Ref: EB 54, Annex 13, please refer to the PoA specific de-bundling check.</i>	/P2.1/	DR	Yes, section A.4.6 of generic CPA-DD provides provision to confirm the proposed SSC CPA is not a debundled component of a larger project activity.	OK	OK
<b>A.14.</b> Does the generic CPA-DD provides information for the confirmation of the requirement that the CPA is neither registered as a CDM project activity nor included in another registered PoA?  (Ref: §7(h)of EB 55 Annex 38)	/P2.1/	DR	Yes section A.4.7. of the generic CPA DD provides information for the confirmation of the requirement that the CPA is neither registered as a CDM project activity nor included in another registered PoA.	OK	OK

**Table 3: CDM-SSC-gCPA-DD Requirements Checklist**

(based on § 37 of the CDM Modalities and Procedures and on VVM ver 01.2, Annex 2 of EB 55 Ref and EB 55 annex 38- PoA specific)

CHECKLIST QUESTION	Ref.	MoV	Findings and comments	Draft Concl.	Final Concl.
<b>A.15.</b> Have CPA DD provides information on the provisions which ensure that those operating the CPA are aware and have agreed that their activity is being subscribed to the PoA?  (Ref: §6(i)of EB 55 Annex 38)	/P2.1/ /P7/	DR	CARE, the CME will be implementing all the CPA under this PoA. Hence CME & CPA implementer are same in the PoA. The CARE will sign the end user agreement with each household in which each household user agrees to transfer CER rights to CARE. The template of the end user agreement is verified to be appropriate. Hence all the users of the ICS are aware that the ICS in their households are being subscribed to this PoA.	OK	OK
<b>A.16.</b> Is all necessary information are mutually consistent between POA-DD and the Generic CPA-DD? In case of any corrective action on the PoA DD, ensure the synchronisation of the PoA DD and g-CPA DD at the closure of corrective action. (Ref: §15(d) of EB 55 Annex 38,)	/P2.1/	DR	Yes, all the necessary information are mutually consistent between PoA-DD and generic CPA-DD.	OK	OK
<b>B. Eligibility of CPA and ER Estimation</b>					
<b>B.1. Eligibility of CPA and Additionality</b>  <b>Assessment of CPA with the eligibility criteria for inclusion in the programme of activity.</b>  <b>Ref: para6(g)of EB55 Annex 38</b>					
<b>B.1.1.</b> Does the information(how each CPA will fulfil the eligibility criteria)as specified in the PoA DD provided in the generic CPA-DD?  (Ref: §7(e)EB 55 Annex 38and § 168 of VVM ver 01.2)	/P2.1/	DR	Yes information on the eligibility criteria has been provided in section B.2 of the g CPA DD. However the eligibility criteria needs to be re-defined.  Subjected to closure of CAR-06	<del>CAR-06</del>	OK
<b>B.1.2.</b> Does the gCPA includes information on the applicability of the applied baseline and monitoring methodology as described in the most updated PoA-DD?	/P2.1/	DR	Subject to closure of the following issue: <b>CAR-07:</b> Applicability criteria related to efficiency of project appliance which is mentioned in foot note of AMS	<del>CAR-07</del>	OK

**Table 3: CDM-SSC-gCPA-DD Requirements Checklist**

(based on § 37 of the CDM Modalities and Procedures and on VVM ver 01.2, Annex 2 of EB 55 Ref and EB 55 annex 38- PoA specific)

CHECKLIST QUESTION	Ref.	MoV	Findings and comments	Draft Concl.	Final Concl.
(Ref: § 7(e)EB55 Annex 38)			II.G version 3		
B.1.3. Does the gCPA include information on the financial analysis of the CPA to demonstrate that without CDM revenue the CPA is not a financially attractive option?  Note: This is PoA specific, if CME has opted the demonstration of financial analysis in the PoA DD, then it is required in the generic CPA DD otherwise not required.	/P2.1/	DR	CME has not opted for financial analysis to demonstrate additionality in PoA DD and g CPA DD.	OK	OK
B.1.4. Does the gCPA information on the barrier analysis to demonstrate that the project activity faces significant/prohibitive barriers that are overcome through the CDM?	/P2.1/	DR	Yes, the generic CPA DD provides barrier analysis also as an option of proving additionality for the CPA. The investment barrier and technological barrier are justified. However subject to closure of CAR-05	CAR-05	OK
<b>B.2. CPA ER Estimation</b>					
B.2.1. Does the generic CPA-DD provides information on the calculations of baseline emissions and estimated emission reductions according to information delineated in the POA-DD?  (Ref: §7(e)of EB 55 Annex 38,)	/P2.1/	DR	Yes, the generic CPA DD provides information on the calculations of baseline emissions and estimated emission reductions according to information delineated in the POA-DD.	OK	OK
B.2.2. Does the CPA-DD ensure that the information and approach of leakage calculation, additionality demonstration, baseline scenario selection and baseline are explicitly defined? (Ref: §7 (e)EB55 Annex 38)	/P2.1/	DR	Yes the information on the information and approach of leakage calculation, and baseline are defined in the generic CPA DD.	OK	OK
B.2.3. Is the g CPA DD provides calculation (approach only) of baseline emissions, project emissions and leakage emissions of the typical CPAs(to be included in the PoA) established in accordance with the procedure described in the PoA-DD?	/P2.1/	DR	Yes the calculation approach has been provided for the calculation of emission reduction which is in accordance with the methodology AMS II.G , version 03 and the provision mentioned in the PoA-DD	OK	OK

**Table 3: CDM-SSC-gCPA-DD Requirements Checklist**

(based on § 37 of the CDM Modalities and Procedures and on VVM ver 01.2, Annex 2 of EB 55 Ref and EB 55 annex 38- PoA specific)

CHECKLIST QUESTION	Ref.	MoV	Findings and comments	Draft Concl.	Final Concl.
(Ref: 7(e(ii))of EB55 Annex 38)					
B.2.4. Are information on emission reduction calculation includes required information on any (if required) conservative assumptions used and uncertainties to be addressed when calculating the baseline emissions, project emissions and leakage emissions?  (Ref: § 7(e(ii))of EB55 Annex 38)	/P2.1/	DR	Subjected to closure of CL-09, CAR-10, CL-11, CL-12 & CAR-13	<del>CL-09</del> <del>CAR-10,</del> <del>CL-11, CL-</del> <del>12 CAR-</del> <del>13</del>	OK
B.2.5. Does the gCPA information on the demonstration that emission reductions of the CPA will be real, measurable and give long term benefits related to the mitigation of climate change?	/P2.1/	DR	Subjected to closure of CAR-10, CL-11, CL-12 & CAR-13	<del>CAR-10,</del> <del>CL-11, CL-</del> <del>12 CAR-</del> <del>13</del>	OK
<b>B.3. Monitoring Plan and CPA Management Planning</b>					
B.3.1. Is the information (in a complete and transparent manner) on the monitoring plan (to be employed by a typical CPA of the PoA) provided in the gCPA DD and does it comply with the applied methodology, in accordance with the information provided in the PoA DD?  (Ref: § 6(g) & 7(e(ii))EB55 Annex38)	/P2.1/	DR	Information on the monitoring plan has been provided in the g-CPA DD. Nevertheless CAR-14, CL-14 & CL-17 is raised	<del>CAR-14,</del> <del>CL-14, CL-</del> <del>17</del>	OK
B.3.2. Does the gCPA-DD provides confirmation that all monitored data required for verification and issuance be kept for two years after the end of the crediting period or the last issuance of CERs, for this programme, whichever occurs later?	/P2.1/	DR	No the gCPA-DD does not provides confirmation that all monitored data required for verification and issuance be kept for two years after the end of the crediting period or the last issuance of CERs, for this programme, whichever occurs later. Hence CAR-16 is raised	<del>CAR-16</del>	OK
B.3.3. Are the measurement methods clearly stated for each monitored parameters to be monitored for ER calculations and deemed appropriate?  (Ref: § 6(g) & 7(e(ii))of EB55 Annex 38)	/P2.1/	DR	Yes, the measurement methods clearly stated for each monitoring parameter in the generic CPA-DD	OK	OK

<b>Table 3: CDM-SSC-gCPA-DD Requirements Checklist</b> (based on § 37 of the CDM Modalities and Procedures and on VVM ver 01.2, Annex 2 of EB 55 Ref and EB 55 annex 38- PoA specific)					
<b>CHECKLIST QUESTION</b>	<b>Ref.</b>	<b>MoV</b>	<b>Findings and comments</b>	<b>Draft Concl.</b>	<b>Final Concl.</b>
B.3.4. Are the information on the measurement equipment and calibration procedures described and deemed appropriate?  (Ref: § 6(g) & 7(e(ii))of EB55 Annex 38)	/P2.1/	DR	No equipment is used to measure any monitoring parameter.	OK	OK
B.3.5. Is the information on the authority and responsibility of overall CPA management clearly described in the g CPA DD?  (Ref: § 6(i)of EB55 Annex38)	/P2.1/	DR	Yes, the authority and responsibility of the overall CPA management is CARE. The same is explained in the CPA-DD	OK	OK
B.3.6. Are procedures identified for training of monitoring personnel?  (Ref: § 6(i)of EB55 Annex38)	/P2.1/	DR	Yes, procedures has been identified for training of monitoring personnel.	OK	OK
B.3.7. Are information on procedures to identify emergency preparedness for cases where emergencies can cause unintended emissions described in the gCPA DD?  (Ref: § 6(i)of EB55 Annex 38)	/P2.1/	DR	No emergency situation is expected to occur in the monitoring of improved cook stove CPA.	OK	OK
B.3.8. Are information on procedures for review of reported results/data summarised in the g CPA DD?	/P2.1/	DR	Yes, information on procedures for review of reported results/data has been summarised in the generic CPA DD.	OK	OK
<b>C. Environmental Impacts</b>					
C.1. Does the generic CPA-DD provides information on the environmental analysis as per requirements of the CDM modalities and procedures and PoA specific guidelines?  (Ref: §7(f)EB 55 Annex 38,)	/P2.1/	DR	Yes, the generic CPA-DD provides information on the environmental analysis as per requirements of the CDM modalities and procedures and PoA specific guideline i.e. as identified in the PoA DD that environmental analysis will be conducted on CPA level.	OK	OK

<b>Table 3: CDM-SSC-gCPA-DD Requirements Checklist</b> (based on § 37 of the CDM Modalities and Procedures and on VVM ver 01.2, Annex 2 of EB 55 Ref and EB 55 annex 38- PoA specific)					
CHECKLIST QUESTION	Ref.	MoV	Findings and comments	Draft Concl.	Final Concl.
			However being an improved cook stove project no negative environmental impact is expected from this project.		
<b><i>D. Stakeholders' Comments</i></b>					
D.1. Does the generic CPA-DD provides information on how comments by local stakeholders shall be invited, a summary of the comments shall be received and how due account shall be taken of any comments to be received, as applicable? And whether stakeholders consultation process has/will be/ done on PoA level or each CPA level (as described in the PoA DD)?  (Ref: §7(g)of EB 55 Annex 38)	/P2.1/	DR	Yes, the generic CPA-DD provides information on how comments by local stakeholders shall be invited, a summary of the comments shall be received and how due account shall be taken of any comments to be received, as applicable, furthermore it is also confirmed in the generic CPA DD that LSC will be conducted on CPA level.	OK	OK



Table 3: List of Requests for Corrective Action (CAR) and Clarification (CL) (CDM PoA DD & Generic CPA-DD) ‘Energy Efficient Cook stoves in South Africa’						
No.	CAR/CL		Observation (CAR/CL)	Reference	Summary of project owner response	Validation team conclusion
1	CAR	01	<div>1. Letter of approval letters of authorization of CME coordination of the PoA &amp; approval of parties involved in the proposed PoA are not submitted.</div> <div>2. Modalities of communication is not submitted.</div>	<div>(PoA)</div> <div>A.3.1 to</div> <div>A.3.8</div> <div>A.3.10</div> <div>A.3.11</div>	<div>1. The letter of approval from Department of Energy, the DNA of South Africa has been submitted for verification as Annex_LOA</div> <div>2. Modalities of Communication are submitted as Annex_moc</div>	<div>1. The letter of approval from Department of Energy, the DNA of South Africa has been submitted for verification. LOA submitted by the CME was reviewed and followings are confirmed.</div> <div><div>• The approval is issued by the Department of Energy which is listed in the UNFCCC website as the DNA in South Africa. This is confirmed through the website <a href="http://cdm.unfccc.int/DNA/view.html?CID=197">http://cdm.unfccc.int/DNA/view.html?CID=197</a></div><div>• The LoA confirms that Government of South Africa ratified the Kyoto Protocol</div><div>• LoA confirms that the project participation is a voluntary action.</div><div>• LoA confirms that the program contributes to the sustainable development in the country</div><div>• LoA authorise “Clean Air Renewable Energy (Pty) Ltd» as the PP &amp; CME for this program. There is no other PP approved by the DNA and not listed in the DDs</div><div>• The PoA title in the LoA is “Energy Efficient Cook stoves in South Africa” and matches with the project title mentioned in A.1 of the PoA-DD.</div></div>

						<ul style="list-style-type: none"> <li>LoA is unconditional with regard to protocol checklist § A.3.2, A.3.4 to A.3.6</li> <li>The MoC has been submitted which is checked to be OK.</li> </ul> <p>CAR-01 is closed</p>
2	CAR	02	<p>In section A.2 of the PoA-DD:</p> <p>1. It is mentioned that the countries Angola, Botswana, DRC, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania and Zambia will be included in the CPA. But these countries are not included in the PoA as per Section A5</p> <p>2. Brief on how the GHG emission reduction will be occurred in the PoA is missing</p>	<p>(PoA) A.2.1 A.4.1.2.1 E.3.1</p>	<p>1. The PP has intention to include these additional countries into the PoA post registration. However at the time of registration, the PoA will be limited to the republic of South Africa. As per para 6 of EB 60, Annex 26, The Board clarified that the boundary of the programme can be amended post registration to include an additional Host Party” Hence the intention is expressed in section A.2</p> <p>2. Implementation of the proposed activity will reduce the usage of non-renewable biomass i.e. fuel wood for house hold activities. Thus the PoA will reduce the GHG emission occurring from the combustion of non-renewable biomass, i.e. fuel wood, thereby also contributing to sustainable development. The same is included in section A.2 of the PoA-DD</p>	<p>1. Since PP has mentioned the intention to include those countries in the future, those countries are not included in the section A.5. If the PP wish to include any other country in the PoA other than South Africa after registration, the PP will inform the change to UNFCCC as per the § 16 requirement of EB 63 annex 13. So, at present only the Republic of South Africa is considered as programme boundary.</p> <p>2. The explanation on how the GHG emission reduction will be occurred is explained clearly in the section A.2 of PoA-DD.</p> <p>CAR-02 is closed</p>
3	CAR	03	<p>In section A.3 of the PoA-DD: The PP/CME name is not consistent with the Appendix-I</p>	<p>(PoA) A.3.9</p>	<p>The PP/CME name in the Appendix-I is now corrected.</p>	<p>the PP name in the Appendix-I is now made consistently with the name mentioned in the section A.3 of PoA-DD and LoA</p> <p>CAR-03 is closed</p>
4	CAR	04	<p>Section A.4.2.1 of PoA-DD: The technical details of the improved cook</p>	<p>(PoA) A.4.2.1.1</p>	<p>The technical details of the ICS are now included in the section A.4.2.1 of PoA-</p>	<p>The technical details of the ICS to be distributed in the CPAs of this PoA</p>

			stove to be distributed in the CPAs of PoA are not provided	A.4.2.1.2	DD	are now included in the section A.4.2.1. CAR-04 is closed
5	CAR	05	<p>In Section A.4.3 &amp; E.5.1 of PoA-DD:</p> <p>1. Additionality justification for the small scale project activity is not properly explained with documentary evidences</p> <p>2. No explanation provided how CDM revenue will help to overcome the barrier.</p>	<p>(PoA) A.4.3.1 E.5.2.1 E.5.2.9 E.5.2.10 E.5.2.11</p> <p>(g-CPA) B.1.4</p>	<p>1. The PoA involves the dissemination of ICS (isolated units) to the households. Furthermore the size of each unit is only 0.067% of the small-scale CDM threshold. Hence the PoA comprise of positive list of technologies and project activity types that are defined as automatically additional as per paragraph 2 (c) of Attachment A to Appendix B, Version 09, EB 68, Annex 27. The same is included in section A.4.3 and E.5.1 of the revised PoA-DD.</p> <p>2. As PoA comprise of positive list of technologies and project activity types that are defined as automatically additional as per paragraph 2 (c) of Attachment A to Appendix B, Version 09, EB 68, Annex 27 the explanation of how CDM revenue will help overcome the barrier is not included.</p>	<p>1. As per the latest EB guideline EB 65, Annex 27, § 2 (c) the project will fall under positive list of technology where the project is automatically additional without proving any barrier. The additionality of the PoA is now justified based on the EB 68, Annex 27, § 2 (c) which seems to be correct and appropriate.</p> <p>2. Since the additionality is now justified based on the EB 65, Annex 27, § 2 (c) where the PoA is automatically additional without proving any barrier, the CAR lost its relevance.</p> <p>CAR-05 is closed</p>
6	CAR	06	<p>In Section A.4.2.2 of PoA-DD:</p> <p>Not all the minimum requirements mentioned in §14 of EB 65 annex3 are described. For example the following requirement are missing:</p> <ul style="list-style-type: none"> <li>• Conditions related sampling</li> <li>• Conditions related to debundling</li> <li>• Conditions to avoid double counting</li> <li>• Conditions to qualify as micro scale/small scale</li> </ul>	<p>(PoA) A.4.2.2.1 A.4.1.4</p> <p>(g-CPA) B.1.1</p>	<p>The minimum requirements for the eligibility conditions for the inclusion of the CPA in the PoA are included in the revised PoA-DD</p>	<p>Now all the required CPA conditions are included in the CPA inclusion criteria. This is now satisfies the entire minimum requirement mentioned §14 of EB 65, annex 03. (also satisfy the §16 of EB 70, annex 05, the latest version of the standard)</p> <p>CAR-06 is closed</p>
7	CAR	07	In Section E.2 of PoA-DD:	(PoA) E.2.1	The test efficiency conducted by Energy Cybernetics (Pty) Limited using	The PP has appointed M/s. Energy Cybernetics (Pty) Limited to conduct

			Applicability criteria related to efficiency of project appliance which is mentioned in footnote of AMS II.G version 3	E.2.4 (g-CPA) B.1.2	the Water Boiling Test (WBT) protocol indicates that the efficiency of the project appliance is 27.9% which is greater than 20% as mentioned in the footnote of the applicability condition.	Water boiling test which is reputed testing agency in South Africa. As per the test report <sup>P6/</sup> provided by M/s. Energy Cybernetics (Pty) Limited, the efficiency of the ICS is 27.9% which is greater than the minimum specified efficiency of 20% in the methodology. The same is justified in the Section E.2 of the PoA-DD. CAR-07 is closed
8	CAR	08	In section A.2 of the Generic CPA-DD: 1. Brief on how the GHG emission reduction will be occurred in the CPA is missing 2. No provision for estimated annual emission reduction is included.	(g-CPA) A.2	1. The brief on how the GHG emission reductions will occur in the CPA is described in Section A.2 of the revised Generic CPA-DD. 2. The provision for the estimated annual emission reductions is included.	1. the explanation on how the GHG emission will be occurred in the CPA is now included in the section A.2 of generic CPA-DD 2. the provision for estimation of annual emission reduction is now included in the CPA-DD CAR-08 is closed
9	CL	09	In Section E.6.3 of PoA-DD and Section B.5.1 of Generic CPA-DD: 10% efficiency is considered for the baseline cooking appliance. Please clarify how it will be ensured that all the baseline appliance of the programme are only three stone stove or conventional system with no improved air combustion or flue gas ventilation.	B.2.4	At the time of the distribution of the ICS, the replaced cook stoves will be collected which will ensure that the baseline appliance is only three stone cook stove. The same is included as the eligibility criteria for the inclusion of the CPA in the PoA. The information of the type of cook stove being replaced is also mentioned in the sales contract. The same is described in section A.2 of the PoA DD. Thus it is ensured that the baseline appliance which is replaced will be three stone cook stove.	The criteria " <i>The CPA will involve replacement of traditional three stone cook stoves without a grate or a chimney</i> " is now included in the CPA inclusion criteria. Hence it can be confirmed that the all the CPAs to be included in the PoA involve replacement of only the three stove cookstoves without grate or chimney and hence considering 10% as baseline stove efficiency is correct and appropriate. CL-09 is closed
10	CAR	10	In step 1 under Section E.6.1 of PoA-DD and Annex-3 of Generic CPA-DD: 1. Only one condition is mentioned out of two for the renewable woody biomass	(PoA) E.6.3.1 E.6.3.2	In the revised PoA DD and generic CPA-DD, default value of $f_{NRB,y}$ for the country is determined following the methodology as provided in	The CME has now calculated the $f_{NRB,y}$ based on methodology as provided in "Information Note Default Values Of Fraction Of Non-

			<p>2. No conclusion is provided in justifying whether the woody biomass is renewable or not</p> <p>3. The link provided for the forest area of South Africa is showing the data is not correct. It is related to the forest details of the country Rawanda.</p>	<p>(g-CPA) B.2.4 B.2.5</p>	<p>“Information Note Default Values Of Fraction Of Non-Renewable Biomass For Least Developed Countries And Small Island Developing States”, EB 67, Annex 22.</p>	<p>Renewable Biomass For Least Developed Countries And Small Island Developing States”, EB 67, Annex 22.</p> <p>All the parameter and calculation are checked and found that the <math>f_{NRB,y}</math> calculation provided now is correct and inline with the EB 67, Annex 22.</p> <p>Hence the CAR lost its relevance. CAR-10 is closed</p>
11	CL	11	<p>In Section E.6.1 of PoA-DD and Annex-3 of Generic CPA-DD:</p> <p>1. Under Step 1, the mean increment of wood in South Africa forest is mentioned as 1.8 tonnes/ha/year based on IPPCC which is for ‘Moist with long dry region’. However no justification is provided on how this value is appropriate to the project region</p> <p>2. Under step 3, the value of Total fuel wood consumption in household is wrong.</p>	<p>(PoA) E.6.3.1 E.6.3.2 (g-CPA) B.2.4 B.2.5</p>	<p>In the revised PoA DD and generic CPA-DD, default value of <math>f_{NRB,y}</math> for the country is determined following the methodology as provided in “Information Note Default Values Of Fraction Of Non-Renewable Biomass For Least Developed Countries And Small Island Developing States”, EB 67, Annex 22.</p>	<p>The CME has now calculated the <math>f_{NRB,y}</math> based on methodology as provided in “Information Note Default Values Of Fraction Of Non-Renewable Biomass For Least Developed Countries And Small Island Developing States”, EB 67, Annex 22.</p> <p>All the parameter and calculation are checked and found that the <math>f_{NRB,y}</math> calculation provided now is correct and inline with the EB 67, Annex 22.</p> <p>Hence the CAR lost its relevance. CL-11 is closed</p>
12	CL	12	<p>Under step 4 in Section E.6.1 of PoA-DD and Annex-3 of Generic CPA-DD:</p> <p>1. It is mentioned “<i>increases in the price of fuel wood well below that of other fuels and the prevailing inflation rate.</i>”. Clarify how this statement supports that the fuel wood is NRB.</p> <p>2. The link provided for “Fuel wood and</p>	<p>(PoA) E.6.3.1 E.6.3.2 (g-CPA) B.2.4 B.2.5</p>	<p>In the revised PoA DD and generic CPA-DD, default value of <math>f_{NRB,y}</math> for the country is determined following the methodology as provided in “Information Note Default Values Of Fraction Of Non-Renewable Biomass For Least Developed Countries And Small Island Developing States”, EB 67, Annex 22.</p>	<p>The CME has now calculated the <math>f_{NRB,y}</math> based on methodology as provided in “Information Note Default Values Of Fraction Of Non-Renewable Biomass For Least Developed Countries And Small Island Developing States”, EB 67, Annex 22.</p>

			poverty alleviation in South Africa: opportunities, constraints and intervention options” is not working 3. The report referred “Household Energy Consumption: Community Context and Fuel wood Transition” is not South Africa specific		Annex 22.	All the parameter and calculation are checked and found that the $f_{NRB,y}$ calculation provided now is correct and inline with the EB 67, Annex 22.  Hence the CAR lost its relevance. CL-12 is closed
13	CAR	13	Under step 4 in Section E.6.1 of PoA-DD and Annex-3 of Generic CPA-DD: All the justification is based on the general statements from any publically available literature. No data or statistics submitted for the justification. So the justification does not fulfil any criteria mentioned in para 10 of AMS II.G, version 3	(PoA) E.6.3.1 E.6.3.2 (g-CPA) B.2.4 B.2.5	In the revised PoA DD and generic CPA-DD, default value of $f_{NRB,y}$ for the country is determined following the methodology as provided in “Information Note Default Values Of Fraction Of Non-Renewable Biomass For Least Developed Countries And Small Island Developing States”, EB 67, Annex 22.	The CME has now calculated the $f_{NRB,y}$ based on methodology as provided in “Information Note Default Values Of Fraction Of Non-Renewable Biomass For Least Developed Countries And Small Island Developing States”, EB 67, Annex 22. All the parameter and calculation are checked and found that the $f_{NRB,y}$ calculation provided now is correct and inline with the EB 67, Annex 22.  Hence the CAR lost its relevance. CAR-13 is closed
14	CAR	14	In PoA-DD: Under leakage in Section E.6.1, the applicability of § 23 of AMS II.G is missing	B.3.2	The applicability of § 23 of AMS II.G under leakage in section E.6.1 is included in the revised PoA DD.	The applicability of § 23 of AMS II.G version 3 is now explained appropriately in the Section E.6.1 of PoA-DD. CAR-14 is closed
15	CL	15	In Section E.7.1 of PoA-DD & Section B.6.1 of Generic CPA-DD: For the measurement method of $\eta_{new}$ it is mentioned “ <i>After one year, a one-year-old stove will be tested; whereas after two-years, a one-year and two-year-old stove will be tested</i> ”	E.7.1.1 E.7.1.2	The same has been deleted in section E.7.1 of the PoA DD	The inappropriate sentence is now modified.  CL-15 is closed

			In this regard, please clarify how after 2 year, the one year old stove will be available for testing			
16	CAR	16	No information provided in the generic CPA-DD about how long the monitoring records will be stored.	B.3.2	All the monitoring records will be kept till 2 years after end of the crediting period or the last issuance of CERs, for this programme, whichever occurs later. The same is explained in the generic CPA-DD	All the monitoring records will be kept till 2 years after end of the crediting period or the last issuance of CERs, for this programme, whichever occurs later which is inline with the CDM requirements. CAR-16 is closed
17	CL	17	In section E.7.2 of PoA-DD and Section B.6.1 Generic CPA-DD: 1. Under sampling design mentioning specific location in the programme boundary as target population is not appropriate for PoA-DD and Generic CPA-DD 2. All the parameter of interest for survey and then explanation on the sampling procedure for each type of parameter is not provided clearly. EB 67 annex 6 shall be referred for the same. 3. The QA/QC provided is not related to sampling	(PoA) E.7.2.1 E.7.2.2 E.7.2.3 (g-CPA) B.3.1	1. The specific location has been deleted in the sampling design in the PoA DD and the Generic CPA DD 2. The sampling plan has been developed with reference to Annex 5, EB 69, "Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities", Version (02.0) 3. QA/QC procedures related to sampling are described in the revised PoA DD.	1. the specific locations have been removed now which is correct in the context of PoA-DD and g-CPA-DD 2. all the parameter of interest to be monitored through sample survey and the explanation on the sampling procedure is modified and now in line with the EB 69 annex 5 requirements 3. The QA/QC procedure is modified and now the QA/QC procedure given is specific to the sampling. The sampling plan is now inline with the generic outline provided in the EB 67 annex 6 CL-17 is closed
18	CAR	18	Section A.1 of generic CPA-DD: The provision for version number of the CPA-DD and the date of completion is not included.	(g-CPA) A.1	The provision for version number and the date of CPA-DD is included now	The provision of CPA-DD version number and its completion date is now included in the section A-1 of generic CPA-DD. CAR-18 is closed
19	CAR	19	Section A.3 of generic CPA-DD: The CME name is mentioned under this section. However there is no provision	(g-CPA) A.5 A.6	The provision for Entity/individual responsible for the small-scale CPA implementer is same as the CME	The provision for including the Entity/individual responsible for the respective small-scale CPA is



			provided for including Entity/individual responsible for the small-scale CPA.		for the PoA. The same is included in section A.3 of the generic CPA-DD	included now under Section A.3 of generic CPA-DD. Moreover CARE will be CPA implementer for all the CPA under this PoA. CAR-19 is closed
20	CAR	20	Section A.4.2.2 of generic CPA-DD: The operational life time of the CPA is mentioned as 10 years. However no justification is provide on what basis 10 years is considered as lifetime of any CPA.	(g-CPA) A.10	The lifetime of the CPA is considered as 10 years based on the manufacturer's certificate. The manufacturer's certificate is submitted as Annex_certificate.	The operational lifetime is based on the life time of the ICS as per the manufacture certificate <sup>/P8/</sup> . The same is explained in the generic CPA-DD which is seems to be appropriate. CAR-20 is closed
21	CAR	21	Please submit the following documents 1) End user agreement if already signed or template to be used as agreement 2) Global Forest Resources Assessment 2010, South Africa 3) Source for $\eta_{new}$	-	1. The end user agreement template is submitted as Annex_template. 2. The Global Forest Resource Assessment,2010 web link is <a href="http://www.fao.org/docrep/013/al630E/al630E.pdf">http://www.fao.org/docrep/013/al630E/al630E.pdf</a> 3. The source for is efficiency test report by M/s. Energy Cybernetics (Pty) Ltd which is submitted as Annex_test_certificate.	1. The template of the end user purchase agreement is submitted. The same is verified that and conclude to be adequate 2. The Global Forest Resource Assessment,2010 web link has been submitted. <a href="http://www.fao.org/docrep/013/al630E/al630E.pdf">http://www.fao.org/docrep/013/al630E/al630E.pdf</a> 3. The ICS efficiency test report by M/s. Energy Cybernetics (Pty) Ltd has been submitted. The same is verified and found to be acceptable CAR-21 is closed

## Appendix B

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### Certificates of Competence

## Qualification

R, Narendra Kumar /

## Emission Trading

### United Nations Framework Convention on Climate Change

(The following data is set by the certification body)

Auditor No.:

(AuditorenRegNr)

Appointed:

(Zugelassen)

ja

Qualification

Level:

(Qualifikationsstufe)

Lead Auditor

External:

(Externer)

Add. reviewer:

(Zusätzlicher Prüfer)

EAC Scopes:

(EAC Branchen)

CDM 03 - Energy demand

CDM 01 - Energy industries (renewable - / non-renewable sources)

Add.

qualification:

(zus. Qualifikation)

First

Appointment:

(Erstberufung)

15-05-2012

Valid to:

(Gültig bis)

14-05-2015

Remarks:

TA. 1.2, 3.1

Languages:

Tamil

English

Hindi

## Experience Exchange

Date

Location

Remarks

Accreditation(s)

## Monitoring

Latest Monitoring:

(letzte Beurteilung)

Next Monitoring:

(nächste Beurteilung)

Remarks:

## History of scope allocation

## Validation Report



Date: 2012-06-29  
Change: EAC CDM removed; CDM added  
By: Praveen Urs  
Reason:

Date: 2012-06-28  
Change: EAC CDM, CDM added  
By: Praveen Urs  
Reason:

### History

Created:	27-06-2012 12:58:24	Kaustubh Rane/Ind/TUV
Modified:	29-06-2012 18:18:45 ZE8	Praveen Urs/Chn/TUV
	28-06-2012 18:04:05 ZE8	Praveen Urs/Chn/TUV
	27-06-2012 12:58:53	Kaustubh Rane/Ind/TUV

## Qualification

MP, Kanal /

## Emission Trading

### United Nations Framework Convention on Climate Change

(The following data is set by the certification body)

Auditor No.:

(AuditorenRegNr)

Appointed:

(Zugelassen)

ja

Qualification Level: Lead Auditor

(Qualifikationsstufe)

External:

(Externer)

Add. reviewer:

(Zusätzlicher Prüfer)

EAC Scopes:

(EAC Branchen)

CDM 01 - Energy industries (renewable - / non-renewable sources)

CDM 03 - Energy demand

CDM 06 - Construction

CDM 13 - Waste handling and disposal

CDM 15 - Agriculture

Add. qualification:

(zus. Qualifikation)

First Appointment: 06/02/2012

(Erstberufung)

Valid to:

(Gültig bis)

05/02/2015

Remarks:

TA. 1.2, 3.1, 6.1, 13.1/13.2, 15.1

Languages:

English

Tamil

Hindi

## Experience Exchange

Date

Location

Remarks

Accreditation(s)

## Monitoring

Latest Monitoring:

(letzte Beurteilung)

Next Monitoring:

(nächste Beurteilung)

# Validation Report



Remarks:

## History of scope allocation

Date: 2012-07-04  
Change: EAC CDM, CDM, CDM, CDM, CDM added  
By: Praveen Urs  
Reason:

## History

Created:	03/12/2012 01:18:50 PM ZE5B	Kanal MP/Ind/TUV
Modified:	07/04/2012 02:21:23 PM ZE8	Praveen Urs/Chn/TUV
	06/29/2012 01:57:34 PM ZE8	Praveen Urs/Chn/TUV
	03/12/2012 01:19:19 PM ZE5B	Kanal MP/Ind/TUV

Qualification
Ms Liza Margaret Simon

**Emission Trading****United Nations Framework Convention on Climate change**

Appointed:	<input checked="" type="checkbox"/>	Qualification level:	Local Expert
External:	<input checked="" type="checkbox"/>		
Scopes:			

Scope:	
Languages:	English Afrikaans French
Legal requirements	<input checked="" type="checkbox"/>

**Validity:**

First Appointment	1 July 2012	Valid To:	30 June 2015
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**Approved By:**

Mr. Praveen Urs	
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**History of Scope Allocation:**

Date:	
Change:	
By:	
Reason:	



## Qualification

C, Indumathi /

## Emission Trading

### United Nations Framework Convention on Climate Change

Auditor No.:

(AuditorenRegNr)

Appointed:  
(Zugelassen)☒ jaQualification Level:  
(Qualifikationsstufe)

Lead Auditor

External:  
(Externer)☐ jaAdd. reviewer:  
(Zusätzlicher Prüfer)☒ yesEAC Scopes:  
(EAC Branchen)

CDM 01 - Energy industries (renewable - / non-renewable sources)

Add. qualification:  
(zus. Qualifikation)First Appointment:  
(Erstberufung)

06/06/2012

Valid to:  
(Gültig bis)

05/06/2015

Remarks:

TA 1.2

Languages:

Tamil  
English  
Hindi

## Experience Exchange

Date

Location

Remarks

Accreditation(s)

## Monitoring

Latest Monitoring:  
(letzte Beurteilung)Next Monitoring:  
(nächste Beurteilung)

Remarks:

## History of scope allocation

## Qualification

Li, Lixin /

## Emission Trading

### United Nations Framework Convention on Climate Change

(The following data is set by the certification body)

Auditor No.:

(AuditorenRegNr)

Appointed:

(Zugelassen)

ja

Qualification Level: Lead Auditor

(Qualifikationsstufe)

External:

(Externer)

Add. reviewer:

(Zusätzlicher Prüfer)

yes

EAC Scopes:

(EAC Branchen)

CDM 01 - Energy industries (renewable - / non-renewable sources)

CDM 03 - Energy demand

CDM 02 - Energy distribution

CDM 04 - Manufacturing industries

Add. qualification:

(zus. Qualifikation)

First Appointment: 09/06/2010

(Erstberufung)

Valid to:

(Gültig bis)

09/05/2013

Remarks:

Appointed as Technical Reviewer for TA 1.1, 1.2, 2.1, 2.2, 3.1

TA 4.5

Languages:

## Experience Exchange

Date

Location

Remarks

Accreditation(s)

2010-12-21

Beijing

GC CDM Auditor Experience Exchange, Beijing, 2010-12-21to23