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Validation Report

VALIDATION OF THE CDM-PoA:
Improved Cookstoves Program for Malawi and
cross-border regions of Mozambique

AND VALIDATION OF THE SPECIFIC CDM-CPA:
Improved Cookstoves Program for Malawi and cross-
border regions of Mozambique – CPA – MAL - 001

Report No. 00674PT

10th March 2014

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Environmental Technology
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Date of first issue of this report	Revision No. of this report								
21-12-2012	06								
Managing Entity (contractor): C-Quest Capital Malaysia Global Stoves Limited (100% subsidiary of C-Quest Capital, LLC) Brighton Place, Lot U0215, Jalan Bahasa, P.O. Box 80148 c/o Equity Trust Business Centre Labuan, ZIP 87011, F.T., Malaysia Further Project Participant: Total LandCare (TLC) Malawi PO Box 2440, Lilongwe Building: Total LandCare, Area 14, Plot 100 Malawi	Host Country/ies: Republic of Malawi								
CPA Implementer: Total LandCare (TLC) Malawi PO Box 2440, Lilongwe Building: Total LandCare, Area 14, Plot 100 Malawi	Project Site: Republic of Malawi <table border="1" data-bbox="751 1122 1501 1397"> <tr> <th colspan="2">GPS coordinates</th></tr> <tr> <td> Northern Point Latitude: -9.366667° S Longitude: 33.000000° E </td><td> Western Point Latitude: -13.600000° S Longitude: 32.666667° E </td></tr> <tr> <td> Eastern Point Latitude: -14.883333° S Longitude: 35.916667° E </td><td> Southern Point Latitude: -17.133333° S Longitude: 35.283333° E </td></tr> </table>			GPS coordinates		Northern Point Latitude: -9.366667° S Longitude: 33.000000° E	Western Point Latitude: -13.600000° S Longitude: 32.666667° E	Eastern Point Latitude: -14.883333° S Longitude: 35.916667° E	Southern Point Latitude: -17.133333° S Longitude: 35.283333° E
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Applied Methodology / Version:		AMS-II.G / Version 05	Scope(s): 3 Technical Area(s): 3.1						
First PoA-DD Version (GSP): PoA-DD version date: 28-04-2012 Version No.: 01 Starting Date of GSP 01-05-2012		First CPA-DD Version (GSP): CPA-DD version date: 28-04-2012 Version No.: 01 Starting Date of GSP 01-05-2012							
Final PoA-DD version: PoA-DD version date: 08-03-2014 Version No.: 09		Final CPA-DD version: CPA-DD version date: 08-03-2014 Version No.: 09							



South Asia

VALIDATION OPINION

TÜV SÜD has performed a validation of the aforementioned CDM programme of activity (PoA) and specific CPA.

Standard auditing techniques have been used for the validation of the PoA and the specific CPA. An internal validation checklist has been prepared to conduct the validation process in a transparent and comprehensive manner.

The review of the PoA and CPA design documentation, subsequent follow-up interviews, and further verification of references have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria in the protocol. In the opinion of TÜV SÜD, the PoA and the specific CPA fulfill all relevant UNFCCC requirements for the CDM if the underlying assumptions do not change. TÜV SÜD recommends the PoA for registration by the CDM Executive Board. TÜV SÜD also recommends the specific CPA for inclusion under the PoA.

An analysis, as provided by the applied methodology, demonstrates that the proposed activity is not a likely baseline scenario. Emission reductions attributable to the activity are additional to any that would occur in the absence of the programme. Considering that the PoA will be implemented as designed, the CPAs under the same are likely to achieve emission reductions.

The validation has been performed following the requirements of the latest version of the CDM VVS and on the basis of the contractual agreement. The single purpose of this report is its use during the registration process as part of the CDM project cycle. Based on the work described in this report, nothing has come to our attention that causes us to believe that any project component or issue has not been covered by the validation process.

Pune, 10/03/2014

A handwritten signature in black ink, appearing to read 'Eswar Murty', written over a horizontal line.

Eswar Murty,
Member Certification Body "Environment and En-
ergy"
TÜV SÜD South Asia Pvt Ltd



Abbreviations

ACM	Approved Consolidated Methodology
BM	Build Margin
CAR	Corrective Action Request
CB	Certification Body
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CPA	Component Project Activity
CPA-DD	Component Project Activity Design Document
CER	Certified Emission Reduction
CM	Combined Margin
CME	Coordinating Managing Entity
CMP	Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol
CR	Clarification Request
DNA	Designated National Authority
DOE	Designated Operational Entity
EF	Emission Factor
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission Reduction
FAR	Forward Action Request
FSR	Feasibility Study Report
GHG	GreenHouse Gas(es)
GSP	Global Stakeholder Consultation / Process
IPCC	Intergovernmental Panel on Climate Change
IRL	Information Reference List
IRR	Internal Rate of Return
KP	Kyoto Protocol
MP	Monitoring Plan
NGO	Non Governmental Organisation
OM	Operating Margin
PoA	Programme of Activities
PoA-DD	Programme of Activities Design Document
PP	Project Participant
TÜV SÜD	TÜV SÜD South Asia Pvt Ltd
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Clean Development Mechanism Validation And Verification Standard

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Annex 2: Information Reference List

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1 INTRODUCTION

1.1 Objective

The objective of the validation process is to provide an independent assessment by a third party, a Designated Operational Entity (DOE), of the proposed Programme of Activities (PoA) and the Component Project Activity (CPA; generic and specific) against the applicable CDM requirements. The assessment involves the evaluation whether the proposed activities comply with the requirements of §37 of the CDM modalities and procedures, the applicability conditions of the selected methodology and any applicable guidance issued by the CDM Executive Board (CDM-EB).

The PoA validation is part of the PoA CDM project cycle and results in a conclusion by the executing DOE on whether or not the PoA is valid to be submitted for registration to the CDM-EB. The CPA validation is also part of the PoA CDM project cycle and results in a conclusion by the executing DOE on whether or not a CPA is valid to be included under the proposed PoA. The ultimate decision on the registration of a proposed PoA rests with the CDM-EB and the Parties involved.

1.2 Scope

The scope of any assessment is defined by the underlying legislation, regulation and guidance given by relevant entities or authorities. In the case of CDM PoA, the scope is set by:

- The Kyoto Protocol, in particular §12 and modalities and procedures for the CDM;
- Decision 2/CMP1 and Decision 3/CMP.1 (Marrakech Accords);
- Further COP/MOP decisions with reference to the CDM (e.g. decisions 4 – 8/CMP.1);
- Clean Development Mechanism Validation And Verification Standard (VVS) published under <http://cdm.unfccc.int>;
- Decisions and specific guidance outlined by the EB which are published under <http://cdm.unfccc.int>;
- Guidelines for completing the CDM PoA and CPA design documents (PoA-DD and CPA-DD) and the applied CDM methodology;
- Baselines and monitoring methodologies (including GHG inventories);
- Management systems and auditing methods;
- Environmental issues relevant to the applicable sectoral scope;
- Applicable environmental and social impacts and aspects of the CDM PoA;
- Sector specific technologies and their applications;
- Current technical and operational knowledge of the specific sectoral scope and information on best practice.

The validation process is not meant to provide any form of consulting to the project participant (PP). However, stated requests for clarifications, corrective actions, and/or forward actions may provide input for improvement of the programme design.

Once TÜV SÜD receives the design documents, it is made publicly available through a dedicated interface on the UNFCCC CDM website for global stakeholder consultation. The duration of the period for submission of comments for the global stakeholder consultation is 30 days.



2 VALIDATION METHODOLOGY

The information provided by the project participant(s) is assessed by applying the means of validation specified in the “Clean Development Mechanism Validation And Verification Standard” and standard auditing techniques. In the absence of specific means of validation specified in the VVS, the standard auditing techniques are applied.

A competent team is selected for the performance of the validation prior to the start of the assessment. The team is selected to cover the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the CDM PoA and specific CPA. Once the program is made available for the stakeholder consultation process, members of the team carry out the desk review, follow-up actions, resolution of issues identified, and the preparation of the validation report. The prepared validation report and other supporting documents then undergo an internal quality control by the CB “Environment and Energy” before being submitted to the CDM-EB.

In case the validation team identifies issues that require further elaboration, research or expansion in order to determine whether the activities meet the CDM requirements, and whether the CPAs under the same PoA can achieve credible emission reductions, findings are raised as specified in the VVS.

All corrective action and clarification requests shall be closed out in order to submit the request for registration for this PoA.

All requests are listed in annex 1 of this validation report including the responses provided by the project participant(s) as well as the means of validation of these responses and any references to any resulting changes in the design documents or supporting annexes.

2.1 Appointment of the Assessment Team

According to the technical scopes and experiences in the sectoral or national business environment, TÜV SÜD composed a project team in accordance with the appointment rules of the TÜV SÜD Certification body “Environment and Energy”.

The composition of an assessment team has to be approved by the Certification Body (CB) to assure that the required skills are covered by the team. The CB TÜV SÜD operates the following qualification levels for team members that are assigned by formal appointment rules:

- Assessment Team Leader (ATL);
- Validator (V);
- Validator Trainee (T);
- Technical Experts (TE);
- Country expert (CE);
- Technical review (TR).

It is required that the sectoral scope(s) and the technical area(s) (TA) linked to the methodology and project has to be covered by the assessment team. A technical review is conducted to perform a check on quality and completeness. Appointment certificates are attached to this report in Annex 3.

**Assessment Team:**

Name	Qualification	Coverage of scope	Coverage of technical area	Coverage of financial aspect	Host country experience	Conducted On-site visit
Praveen Tekchandani	ATL	-	-		<input checked="" type="checkbox"/>	
Nikunj Agarwal	V	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Bhairaja Maharajan [*]					<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Technical Reviewer:

Name	Qualification	Coverage of scope	Coverage of technical area	Coverage of financial aspect
Shivraj Sharma	TR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Appointment certificates are attached to this report in Annex 3.

2.2 Review of Documents

The GSP-DDs and additional background documents related to the PoA and specific CPA design and baseline have been reviewed to verify the correctness, credibility, and interpretation of the presented information. Furthermore, a cross-check between information provided and information from other sources was performed as an initial step of the validation process. A complete list of all documents and evidences reviewed is attached as annex 2 to this report.

2.3 Follow-up Interviews

From 28/05/2012 to 07/06/2012, TÜV SÜD performed a physical site inspection and interviews with project stakeholders to confirm relevant information and to resolve issues identified in the first document review. A list of all persons interviewed in this process is presented in annex 2 to this report.

2.4 Cross-check

During the validation process the team has made reference to available information related to similar projects or technologies as described in the CDM PoA and CPA. Project documentation has also been reviewed against the approved methodology applied to confirm the appropriateness of formulae and correctness of calculations.

^{*} Left the Organization, Covered the Technical Area during on site



2.5 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation is to resolve the requests for corrective actions (CAR), clarifications (CR), and any other outstanding issues which need to be clarified for TÜV SÜD's conclusion on the PoA and CPA design. The CARs and CRs raised by TÜV SÜD are resolved during communication between the managing entity, the CPA implementer and TÜV SÜD. To guarantee the transparency of the validation process, the concerns raised and responses that have been given are documented in more detail in annex 1 to this report.

2.6 Internal Quality Control

Internal quality control within the team is assured by means of a technical review process that takes place after the on-site assessment and after the closure of findings. The internal quality control in the validation process is given by the final decision (Validation Opinion) made by the CB "Environment and Energy".



3 REPORTING REQUIREMENTS

The assessment work and the main results are described below in accordance with the CDM Validation and Verification Standard (VVS). The reference documents indicated in this report are stated in annex 2 of this report.

3.1 Global stakeholder consultation

No comments have been received during the global stakeholder process.

Comment submitted by: xxx	Date: xxx
Issue raised: xxx	
Actions taken due account of the comment: xxx	
Final conclusion: xxx	

3.2 Approval, Authorization and Contribution to sustainable development

Party / DNA	Authorized Project Participant(s)
Republic of Malawi (host)	Total LandCare (TLC) Malawi
Netherlands	C-Quest Capital Malaysia Global Stoves Limited (CQC)



The Party issued a LoA (IRL 103)^{*}.

The Party's DNA is included in the list available on the UNFCCC CDM.

As checked by TÜV SÜD the LoA is in accordance with paragraph 39-42 of the VVS.

The project participant mentioned above has been authorized by the aforementioned DNA.

The DNA of Republic of Malawi has issued a letter of approval (LoA) dated 25/01/2013 authorizing Total LandCare (TLC) Malawi as project participant (IRL 103)[†]. The DNA of the Netherlands has issued a LoA dated 11/12/2012 authorizing C-Quest Capital Malaysia Global Stoves Limited (CQC) as project participant (IRL 104). TÜV SÜD received these two letters from the project participant C-Quest Capital directly and considers the provided letters as authentic.

Furthermore, after checking the provided LoAs, TÜV SÜD confirms that the Netherlands and Malawi LoAs refer to the precise proposed PoA title in line with the title in the PoA-DD: 'Improved Cookstoves Program for Malawi and cross-border regions of Mozambique'

The **host Party's** DNA has confirmed the contribution of the project to the sustainable development of the host Party.

The LoA of the Republic of Malawi (authorizing C-Quest Capital as well as CME of the PoA) (IRL 103) has been issued by the Environmental Affairs Department, Malawi and the LoA of the Netherlands has been issued by the Netherlands' Ministry of Infrastructure and the Environment and both LoAs do not refer to a specific version of the PoA-DD or validation report.

The GSP PoA-DD and UNFCCC interface mention as well Republic of Mozambique as host Party involved in the given PoA. However, PP explained that it was not fully prepared to include the host country Republic of Mozambique in the PoA, so it will add Republic of Mozambique to the PoA once: 1) the baseline study is done, 2) a CPA implementer is ready to implement a CPA, and 3) the CME is granted with a LoA from the Mozambican government. Therefore, the POA-DD for the moment will deal exclusively with Republic of Malawi and will be revised post registration once the CME includes, validated by a DOE, the host party Republic of Mozambique.

3.3 Modalities of Communications

TÜV SÜD used notarized documentation (IRL 102) to perform due diligence on the Modalities of Communication (MoC) statement (IRL 102). The notarized documentation (IRL 102) confirms the corporate identity of all project participants and focal points included in the MoC statement, as well as the personal identities, including specimen signatures and employment status, of their authorized signatories.

TÜV SÜD confirms that the MoC statement complies with all relevant forms and requirements as

^{*} The Host Country Letter of Approval issued by the DNA of Republic of Malawi authorises as well C-Quest Capital Malaysia Global Stoves Limited (CQC) as project participant, however the PoA-DD does not mention for CQC the party 'Republic of Malawi' since the party 'Netherlands' is already mentioned for CQC. This is deemed to be appropriate and sufficient in the opinion of the DOE.

[†] The Host Country Letter of Approval issued by the DNA of Republic of Malawi authorises as well C-Quest Capital Malaysia Global Stoves Limited (CQC) as project participant, however the PoA-DD does not mention for CQC the party 'Republic of Malawi' since the party 'Netherlands' is already mentioned for CQC. This is deemed to be appropriate and sufficient in the opinion of the DOE.



- the latest version of the form “Modalities of Communication statement” (F-CDM-MOC) has been used
- the information required as per the F-CDM-MOC, including its annex 1, is correctly completed
- the project participant’s authorized signatories signing the F-CDM-MOC correspond to the project participant’s authorized signatories included in F-CDM-MOC, annex 1

3.4 Design Documents

The PoA-DD & CPA-DD is compliant with relevant form and guidance as provided by UNFCCC. The most recent version of the DDs form was used.

3.5 Application of the selected baseline and monitoring methodology

3.5.1 Applicability of the selected baseline and monitoring methodology

Compliance with each applicability condition as listed in the chosen baseline and monitoring methodology has been demonstrated.

The validation team assessed by checking the UNFCCC webpage that the baseline and monitoring methodology selected by the project participants are the valid versions of those approved by the Board.

Applicability criteria from AMS-II.G Version 05

This category comprises efficiency improvements in thermal applications of non-renewable biomass. Examples of applicable technologies and measures include the introduction of high efficiency biomass fired cook stoves or ovens or dryers and/or energy efficiency improvements in existing biomass fired cook stoves or ovens or dryers.

PoA-DD:

CPAs will only allow the use of high efficiency biomass fired improved cook stoves (ICS). The thermal efficiency of the ICS will not be less than 20% as measured by water boiling tests. The thermal efficiency of the ICS will be certified by a national standards body or an appropriate certifying agent recognized by it. Alternatively, manufacturer's specifications may be used. CPA eligibility criterion 11 in this SSC-PoA-DD ensures that this applicability criterion is met for each CPA before inclusion and therefore for the SSC-PoA as a whole.

Specific CPA-DD:

This CPA will only allow the use of high efficiency biomass fired improved cook stoves (ICS). The thermal efficiency of the ICS proposed will not be less than 20% as measured by water boiling tests. The thermal efficiency of the ICS will be certified by a national standards body or an appropriate certifying agent recognized by it. Alternatively, manufacturer's specifications may be used.

CPA eligibility criterion 11 of this PoA ensures that this applicability criterion is met for each CPA before inclusion and therefore for the SSC-PoA as a whole.

Assessment:

The SSC-CPAs under the PoA consist of dissemination of high efficiency biomass improved cooking stoves (ICS) in the Republic of Malawi. The fuel consumption of ICS is significantly less than



compared to traditional three-stone fires or traditional pot supports and the efficiency of ICS will be at least 20% as measured by water boiling tests. The efficiency of the ICS will be certified by a national standards body, or by an appropriate certifying agent recognized by it, or according to manufacturer's specifications. The compliance with this applicability criterion for the 1st CPA has been checked against the manufacturer's specifications of the TLC rocket stove (IRL 93,94), water boiling test report of the TLC rocket stove (IRL 24) and eligibility criterion 11 (together with eligibility criterion 5) in the PoA-DD will ensure that this applicability criterion is met for each CPA before inclusion into the PoA.

Validation opinion:

The documentation content is correctly quoted and interpreted in the PDD.
The applicability criteria is met by the project activity.

Applicability criteria from AMS-II.G Version 05

Project participants shall be able to show that non-renewable biomass has been used in the project region since 31 December 1989, using survey methods or referring to published literature, official reports or statistics.

PoA-DD:

Non-renewable biomass has been used since 31 December 1989 in Malawi as demonstrated in Appendix 3 in the DD.

Specific CPA-DD:

Non-renewable biomass has been used since 31 December 1989 in Malawi as demonstrated in Appendix 3.

Assessment:

Non-renewable biomass has been used since 31 December 1989 in the Republic of Malawi. This methodology condition has been verified by publicly available statistical data from FAO that show that carbon stocks are depleting in Malawi. The DOE by assessing the FAO Global Forest Resources Assessment 2010, Global Tables (IRL 90) and country report Malawi (IRL 32) confirm that carbon stocks have been depleting in Malawi from 1973 to 1990 to 2010. These figures together with a very high non-renewable biomass fraction in Malawi (the 3rd party C4EcoSolutions calculated the non-renewable biomass fraction as 0.97 in Malawi (IRL 61) leads to the conclusion that non-renewable biomass has been used in Malawi since 1989. The same has been confirmed in interviews with end-users during DOE's on-site visit.

Validation opinion:

The documentation content is correctly quoted and interpreted in the PDD.
The applicability criteria is met by the project activity.

Applicability criteria from AMS-II.G Version 05

The use of this methodology in a project activity under a programme of activities is legitimate if the following leakages are estimated and accounted for, as required on a sample basis using a 90/30 precision for the selection of samples:

(a) Use of non-renewable woody biomass saved under the project activity to justify the baseline of



other CDM project activities can also be a potential source of leakage. If this leakage assessment quantifies a portion of non-renewable woody biomass saved under the project activity that is then used as the baseline of other CDM project activities then Bold is adjusted to account for the quantified leakage;

(b) Increase in the use of non-renewable woody biomass outside the project boundary to create non-renewable woody biomass baselines can also be a potential source of leakage. If this leakage assessment quantifies an increase in the use of non-renewable woody biomass outside the project boundary then Bold is adjusted to account for the quantified leakage;

(c) As an alternative to subparagraphs (a) and (b), Bold can be multiplied by a net to gross adjustment factor of 0.95 to account for leakages, in which case surveys are not required.

PoA-DD:

This SSC-PoA, and hence all CPA under this SSC-PoA, opt to use option (c) of paragraph 23 of AMS.II.G. (v.05). I.e. B_{old} shall be multiplied by a net to gross adjustment factor of 0.95 to account for leakages and no surveys on leakage are required.

Specific CPA-DD:

This SSC-PoA, and hence all CPA under this SSC-PoA, opt to use option (c) of paragraph 29 of AMS.II.G. (v.05). I.e. B_{old} shall be multiplied by a net to gross adjustment factor of 0.95 to account for leakages and no surveys on leakage are required.

Assessment:

Paragraph 23 of the applied methodology indicates that the use of the methodology in a project activity under a PoA is legitimate if leakage is accounted for. PP applies option (c) of the paragraph 23, thus B_{old} is multiplied by a net to gross adjustment factor of 0.95 to account for leakages. The DOE by assessing the emission reduction calculation excel spreadsheet (IRL 21) confirms the application of an adjustment factor of 0.95 to account for leakages.

Validation opinion:

The documentation content is correctly quoted and interpreted in the DD.

The applicability criteria is met by the project activity.

Applicability criteria from AMS-II.G Version 05

To determine the value of the fraction of non-renewable (fNRB) to be applied in a component project activity (CPA) of a POA, use one of the two options as follows:

- (a) Conduct local own studies to determine the local fNRB value (sub national values); or
- (b) Use default national values approved by the Board (see footnote 3). The choice of which option to use shall be made ex ante. However, a switch from a national value of fNRB (i.e. option (b)) to sub-national values (i.e. option (a)) is permitted, under the condition that the selected approach is consistently applied to all CPAs.

PoA-DD:

Specification of the source of fNRB value. The source is included in this PoA.

Specific CPA-DD:

Default country-specific values approved by CDM Board will be applied in this CPA. For Malawi, the default value is 0.81



Assessment:

The validator compared the actual text of the applicable version of the methodology with the information stated in the PDD.

The PDD was verified by the assessment team. PP has used the national average non-renewable biomass (NRB) fraction as outlined in EB 67 Annex 22, A typical CPA will use the option of using the default value outlined in EB 67 Annex 22, which for Malawi, is 0.81.

Hence it is confirmed by the local and sectoral knowledge of the assessment team that the content of this document is correctly quoted and interpreted in the PDD.

Validation opinion:

The documentation content is correctly quoted and interpreted in the PDD.

The applicability criteria is met by the project activity.

TÜV SÜD confirms that the chosen baseline and monitoring methodology is applicable to the project activity.

3.5.2 Baseline scenario identification and description

TÜV SÜD did following steps to assess the requirements for baseline identification:

- initial document review
- on-site visit
- view of information from similar projects and/or technologies
- Biomass Energy Strategy
- National Energy Policy

The PoA is a voluntary coordinated action as evident from the fact that there is no mandatory regulation which mandates use of ICS in Republic of Malawi.

A declaration signed by C-Quest Capital (IRL 27) has been submitted to confirm that the PoA is a voluntary action. Even though the National Energy Policy (IRL 85) mentions that the government of Malawi ‘will devise promotional strategies aimed at expanding the use of improved ceramic firewood stoves in poor urban households and at reducing the proportion of households using three stone cookstoves to 50% by 2020’, neither mandatory targets nor mandatory implementation policies are in place by the government of Malawi according to this National Energy Policy. This is further confirmed by the Biomass Energy Strategy (IRL 73). The PP correctly states in his answer that the Malawi Biomass Energy Strategy was designed to move energy use away from “traditional biomass” to “modern” sources of energy (electricity, liquid fuels and “renewables”) and that less attention is paid to efficient utilization of woodfuels (by amongst others better stoves). Thus this policy is primarily devoted to substituting away from biomass energy.

The fact that there are no mandatory targets or implementation policies for ICS formulated by the government of Malawi has been further substantiated through an interview carried out by the DOE with Mr. Mhango, Lewis (Deputy Director, Energy Department under Ministry of Energy, Malawi) and Mr. Kalowekano, Joseph (Assistant Director, Energy Department, Malawi under Ministry of Energy, Malawi). Both confirmed that there is no such mandatory policy or mandatory targets for the implementation of ICS.



The baseline scenario is substantiated by the baseline fuel use survey and the additional following documents which all of them were verified by the DOE:

- The baseline firewood consumption study (survey) (IRL 92) carried out by the 3rd party HED Consulting Ltd.* (with assistance from CAPS Msukwa and Amulike Msukwa, De Tas, Malawi) resulted in a mean baseline firewood household consumption across Malawi of 8.92 kg/stove/day. The aims of the survey were (i) to estimate the average amount of firewood used per existing stove per day (kg/stove/day) in rural households; (ii) to account for seasonal variation and multiple stove use; (iii) investigate the differences in firewood consumption between different locations (i.e. the degree of homogeneity); and (iv) investigate other factors to validate findings and inform successful implementation. The survey was carried out during May 2012 in 2 randomly selected constituencies[†] in again 2 randomly selected districts using probability proportional to size on the primary unit (districts). The districts may be considered representative of their regions (clusters) and together of all of rural Malawi as they have been randomly selected from two clusters each identified by literature review as relatively homogeneous in terms of firewood use and availability and together representative of the entire country.

The sampling strategy was designed in a way to be representative of any different firewood supply, firewood consumption and economic aspects[‡] within the proposed area of dissemination of stoves (all of rural Malawi). A literature review and consultation with local partners CAPS Msukwa and Amulike Msukwa suggests that rural per capita wood consumption decreases from north to south in line with wood scarcity. While consumption is similar in the Northern and Central Regions where wood supply is adequate, consumption decreases in the Southern region where wood is relatively scarce. Based on this, the baseline area was considered in two clusters as follows: (i) Northern and Central regions of Malawi; (ii) Southern region of Malawi. Samples were taken from each cluster. No rural areas within Malawi have been excluded from the sampling frame. After removal of outliers, individual household data was adjusted to account for seasonal changes in amount of firewood used and simultaneous multiple stove use. Analysis of the data collected from the two regions (clusters) concludes that there is no evidence for a statistically significant difference between them in terms of mean household firewood consumption, and that collectively they can be seen as representative of the country Malawi as a whole. An analysis of other factors, including supplementing firewood with crop residues, space heating, impact of using all of a

* HED Consulting Ltd. provides specialist advice on household and small enterprise energy for developing countries, with a focus on ICS. One of the main activities is to carry out baseline surveys and monitoring for GS and SSC CDM projects. The DOE by assessing the website <http://www.hedconsulting.com> [accessed on 05/12/2012] and due to its local and sectoral expertise concludes that HED Consulting Ltd. is a qualified company to carry out baseline studies like the one for this given PoA.

[†] Each constituency selected contained multiple villages.

[‡] Climatic conditions were considered but disregarded for the purpose of clustering since no significant difference regarding climatic conditions (like e.g. precipitation) was found across the country and no evidence was found that climatic conditions (like precipitation) could affect biomass consumption in Malawi. Regarding economic aspects it has been clarified in the baseline study report that although some patterns of poverty may be discerned from regional data, these were not strong, though do corroborate the conclusions of the wood-fuel supply and consumption and the formation of two clusters (Northern/Central regions of Malawi and Southern region of Malawi).



household's firewood for weighing and comparison of results with other studies indicated that no further adjustments were required to the data.

The DOE by assessing the baseline firewood consumption study concludes that the assumptions and results are credible and appropriate and that sampling has been carried out as per UNFCCC requirements. Furthermore, the 3rd party expertise assures that the baseline study correctly reflects the actual baseline situation in the Republic of Malawi.

- Biomass energy use in Malawi (IRL 30) which indicates that “up to 98% of the households use biomass in the form of firewood (91%) and charcoal (7%) for cooking”.
- Malawi household census and energy info (IRL 71) which results in 87.6% of households using firewood and 7.9% using charcoal for cooking.

The following sources of information were used for crosscheck the information contained in the PDD:

Assumption / Data used for baseline identification	Source stated in PDD (reference documents, etc.)	Information cross-checked by	Conclusion
As per applied methodology, the baseline scenario is the use of fossil fuels for meeting similar thermal energy needs.	In this particular project, the baseline is the avoidance of non-renewable biomass, which actually has a higher emissions factor than many fossil fuels	According to the applied methodology, in the absence of the programme, the baseline scenario would be the use of fossil fuel for meeting similar thermal energy needs. This is a conservative approach to determine the baseline emissions keeping in mind that the emissions factor of non-renewable biomass as per IPCC 1996 guidelines (IRL 41) is higher than the default emissions factor of fossil fuel defined in the applied methodology and used in the emission reduction calculation. In absence of the programme, the intended beneficiaries would continue using the traditional inefficient cooking stoves, consuming high quantity of non-renewable	It can be concluded baseline scenario is the use of fossil fuels for meeting similar thermal energy needs.



Assumption / Data used for baseline identification	Source stated in PDD (reference documents, etc.)	Information checked by cross-	Conclusion
		biomass.	
Emission factor	81.6	The emission factor for the substitution of non-renewable woody biomass ($EF_{projected\ fossil\ fuel}$) by similar consumers has been taken as 81.6 tCO ₂ /TJ, as per the methodology.	Emission factor used in the project activity is acceptable to the DoE.

TÜV SÜD confirms the following statements:

- All the assumptions and data used by the project participants are listed in the DDs, including their references and sources;
- All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the DDs;
- Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence, and can be deemed reasonable;
- Relevant national and/or sectoral policies and circumstances are considered and listed in the DDs;
- The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario, and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.
- The DDs provides a description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed project activity.

3.5.3 Algorithms and/or formulae used to determine emission reductions

TÜV SÜD has assessed the calculations of project emissions, baseline emissions, leakage, and emission reductions. Corresponding calculations have been carried out based on calculation spreadsheets. The parameters and equations presented in the DD, as well as other applicable documents, have been compared with the information and requirements presented in the methodology and respective tools. An equation comparison has been made to ensure consistency between all the formulae presented in the calculation files and in the DD, methodology, and tools.

The estimate of the baseline emissions are considered correct as the calculations have been reproduced by the audit team with the attainment of the same results.

The assumptions and data used to determine the emission reductions are listed in the DD and all the sources have been reviewed. The following sources of information were used for crosscheck the information contained in the DD:

Assumption / Data / References used for estimating the emission reductions in the DD	Information crosschecked by	Conclusion
The average annual consumption of woody biomass	The average annual consumption of woody biomass per appliance per household used in the absence of the project activity (B_{old} per appliance) of 3.2558 tonnes per year has been determined by means of a 3 rd party baseline firewood consumption study (IRL 92).	The value of 3.2558 tonnes per appliance per year resulting from the baseline study is multiplied with the number of ICS in operation to result in the "Quantity of wood biomass used in the absence of the project activity" as per paragraph 7 (a) of the applied methodology is accepted to the DoE.
The efficiency of the traditional cook	The efficiency of the traditional cook stove (η_{old}), is taken as the default value of 0.10 indicated in the methodology.	This value is accepted to DoE.
The fraction of woody biomass	The fraction of woody biomass saved by the project activity in year y as non-renewable biomass ($f_{NRB, y}$) will be the option of using the default value outlined in EB 67 Annex 22, which for Malawi, is 0.81	Value of 0.81 is accepted to DoE.
The IPCC default for wood fuel	The IPCC default for wood fuel, 0.015 TJ/tonne, has been taken for the net calorific value of the non-renewable woody biomass ($NCV_{biomass}$), as per the methodology.	IPCC default value is accepted to DoE.
The emission factor for the substitution of non-renewable woody biomass	The emission factor for the substitution of non-renewable woody biomass ($EF_{projected\ fossil\ fuel}$) by similar consumers has been taken as 81.6 tCO ₂ /TJ, as per the methodology.	Value of EF is accepted to DoE.
Leakage	To account for leakage, B_{old} is multiplied with a net to gross adjustment factor (L_y) of 0.95, as per the methodology	This value is accepted to DoE.



TÜV SÜD confirms the following statements

- (a) All assumptions and data used by the project participants are listed in the DD, including their references and sources;
- (b) All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the DD;
- (c) All values used in the PDD are considered reasonable in the context of the proposed project activity;
- (d) The baseline methodology and corresponding tool(s) have been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;
- (e) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the DD;
- (f) Any estimates for monitored data or parameter are reasonable for estimating the emission reductions in the DD
- (g) The data AND parameters fixed ex-ante are conservative and appropriate.



3.6 Programme of activities / component project activities

3.6.1 Coordinating/managing entity and participants in a PoA

A clear and transparent description of the operational and management arrangement has been established by CQC Capital and is stated in the PoA-DD. The CME will develop and implement a management system that includes the following as per paragraph 19 of EB70, Annex 05.

(a) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies;

A Table in A.4.2. of the PoA-DD summarizes the responsibilities both of CME and CPA implementer. Further, an overview of the competencies of CQC Capital (CME) has been provided in A.4.4.1. (item a). The working experiences and educational background of CQC Capital staff have been submitted to the DOE (IRL 35). The description in the PoA-DD and submitted supporting documentation demonstrates the involvement of experienced and competent personnel in the PoA.

(b) Records of arrangements for training and capacity development for personnel made available to the DOE at the time of validation of the PoA;

There are no specific training and capacity development/building records for personnel responsible for monitoring activities available at this moment since the project has not been implemented yet. However, a CME manual (IRL 38) as well a training manual (IRL 25), guidelines for the entry of data into the database (IRL 36), interviewer field guide (IRL 20) have been submitted to the DOE. Besides, sections A.4.2. and A.4.4.1. of the PoA-DD inform about training on ICS distribution and installation. The DOE verified these aforementioned documents and the PoA-DD and concludes that appropriate measures will be undertaken to ensure that personnel involved in monitoring or any other activities related to the PoA are sufficiently trained.

(c) Procedures for technical review of inclusion of CPAs made available to the DOE at the time of validation of the PoA;

The CME will undertake several activities (as mentioned in the PoA-DD) before a CPA is included into the PoA like

- review each CPA document and methodically go through each and every eligibility/applicability criterion of the PoA to make sure there is no doubt that the CPA meets each requirement. In cases where there is doubt, the CME will not request the upload for CPA inclusion until the requirements are met to the CME's satisfaction;
- review the ICS models that are proposed for distribution/installation under each CPA. If stove models have been used elsewhere, the CME will attempt to get actual performance data in the field to ensure minimum criteria for the PoA are met, such as the 20% minimum thermal efficiency;
- review any Water Boiling Test (WBT) results to ensure they are in line with established protocols and have been conducted and certified by a national standards body or an appropriate certifying agent recognized by it. Alternatively manufacturer's specifications may be used.
- review database/registration procedures to ensure proper recording of the ICS data collection in line with the methodology and PoA eligibility criteria;
- If the CPA implementer is choosing to use a regional or local NRB analysis which was not uploaded together with the PoA-DD yet, CME will review the study completely to ensure it is as robust in method and data as the national NRB study approved during the PoA validation. If there are any gaps or problems with the local NRB study, the CPA will not be uploaded for inclusion until the analysis is completed to the CME's satisfaction;



- review all proposed CPA implementer's monitoring procedures to ensure they are in line with the monitoring plan in the PoA, including stove efficiency testing and procedures to check whether ICS are still in operation;

- visit during implementation each CPA region to ensure all procedures outlined in the PoA are being followed, particularly on stove registration and database updating.

The procedures for technical review of inclusion of CPAs are deemed to be appropriate in the opinion of the DOE.

(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);

Each ICS will be identified by a unique identification serial number. The serial number will start with an identifier to be able to separate the stoves from this PoA with those of other potential PoAs. The identifier that will precede each serial number will be "CQC-MAL". Each stove's serial number will be entered into a database that will keep track of which stoves are in which CPA. Each CPA will have a set of serial numbers so the CME or verifier can easily determine that any stove identified in any household is affiliated with one (and only one) CPA. No individual serial number can be in more than one CPA, so it will not be possible for one stove to be counted in two different CPAs. Besides, when a new ICS registration card is filled out, or sent via SMS or ICT, the customer will acknowledge that he/she is a household, previously used a three-stone fire or traditional pot support and did not previously own any ICS. This will ensure that no customer will be included in a new CPA if he/she already owns an ICS.

In addition, each CPA will be cross-checked with other CPAs in this PoA and with CPAs in any other PoA or in a CDM project activity operating in the country using the UNFCCC, the Gold Standard or any other relevant voluntary carbon schemes to ensure that the CPA is not included in any other PoA, CDM project activity or voluntary project activity.

The DOE due to its local and sectoral expertise confirms that the procedures to avoid double counting are appropriate.

(e) Records and documentation control process for each CPA under the PoA;

- A record keeping system for each CPA under the PoA;

Detailed information will be collected for each customer at the time of distribution/installation of the ICS, using either electronic or paper-based means, directly by the CPA implementer's field personnel or through partner organizations or independent distributors/retailers. It is expected to have the following means of collecting end-users' information:

- The CPA implementer's field personnel, partner organizations or independent distributors/retailers will through direct contact fill in the Registration Card with users' information when distributing/installing the ICS. This is envisaged to be done manually with paper and pen, but Information and Communication technologies (ICT) (like personal digital assistant (PDA) which is a handheld device that transfers data over the internet) to increase the efficiency of data collection and data transfer may be used. The information collected by the CPA implementer (or partner organization, distributes/retailers, as appropriate) is stored locally on a CPA implementer database and all data and updates are transferred regularly to an electronic database managed by the CME. In the case that information was collected manually with paper and pen, the CPA implementer will input these hard-copy data into the electronic database. In the case that information was collected with an ICT device, there is no hard-copy and electronic data is transferred from the ICT device to the database managed by the CPA implementer.

- The users' data (as per Registration Card) may be transferred to the CPA implementer via Short



Message Service (SMS) also known as a text messaging service. In this instance, the CPA implementer will provide the user with instruction on how to submit the SMS to the CPA implementer. SMS data is transferred directly to the electronic database managed by the CPA implementer and all data and updates are transferred regularly to an electronic database which is managed by the CME.

In either case, the following data will be collected in the data management system: date of distribution/installation, unique ICS identification serial number, stove model, customer name, contact telephone number (if available), geographic location, retailer/distributor information (if applicable).

In case a replacement stove is being issued/sold to a customer already registered on the project database, a new registration will not be required. The replacement stove will be recorded in the project database in such a way that it is clear that the replaced stove ceases to be included in the CPA; and the replacement stove is associated with the customer's details as a new stove, and is included in the CPA as a new stove with a new serial number.

The DOE due to its sectoral and local expertise concludes that the data record keeping system is deemed to be appropriate. A CME manual (IRL 38) including a template of the registration card as well as a procedure for data collection and management has been submitted to the DOE.

-The SSC-CPA included in the PoA is not a de-bundled component of another CDM programme activity (CPA) or CDM project activity;

As per EB 54, Annex 13, paragraph 10, the CPA of a PoA is exempted from performing a de-bundling check if each of the independent subsystems/measures (in this specific case ICS) included in the CPA of a PoA is no larger than 1% of the small-scale threshold defined by the methodology. As the energy savings of each of the independent subsystems (ICS) included in the CPA of a PoA is not larger than 1% of the SSC threshold (180 GWh_{th}) defined by General Guidelines to SSC CDM methodologies (EB61, Annex 21) and SSC WG Clarification SSC_233, no debundling check has to be performed. The DOE by assessing the calculation resulting in the annual energy savings of an ICS as % of the SSC threshold (IRL 21) confirms that the energy savings of the independent subsystem (ICS) is by far lower than 1% of the SSC threshold.

-The provisions to ensure that those operating the CPA are aware of and have agreed that their activity is being subscribed to the PoA;

The CME will have legal contracts put in place with CPA implementers and as appropriate with entities assisting with the implementation of the CPA. These legal contracts will clearly state that the implementation of CPA activities are subscribed to the SSC-PoA. The same has been confirmed in interviews with the CME during the DOE on-site visit.

(f) Measures for continuous improvements of the PoA management system have been mentioned as last item in A.4.4.1. It is amongst others stated that the CME will undertake an annual review of the overall PoA management system including identifying any problems with stove distribution/installation, stove use once in the homes, monitoring continued stove use and overall database maintenance. The same has been confirmed in interviews with the CME during the DOE on-site visit.

The description provided in the PoA-DD on the operational and management arrangements were confirmed based on document review and on-site interviews.



3.6.2 CPA Design Document

The CPA-DD is in compliant with relevant form and guidance as provided by UNFCCC.

TÜV SÜD considers that the guidelines for the completion of the CPA documents in their most recent version (under the VVS) have been followed. Relevant information was provided by the Coordinating Managing Entity in the applicable CPA-DD sections.

The means of validation of the specific CPA include a desk review as well follow-up interviews and a site visit. Hence, the requirements of §187 and §188 are considered to be fully met.

3.6.3 Description of a PoA/CPA

The following description of the programme as per PoA-DD was verified:

The PoA consists of the promotion, distribution and installation of fuel-efficient improved cooking stoves (ICS) in the Republic of Malawi and will at a later stage include cross-border regions in Mozambique*. The ICS disseminated through this Programme will replace the prevailing inefficient three-stone fires or traditional pot support, with stoves that combust firewood more efficiently and improve thermal transfer to pots, thus saving non-renewable biomass and reducing greenhouse gas emissions. The ICS consist of single or multi pot portable or in-situ cook stoves with specified efficiency of at least 20% (as per methodology AMS II.G., version 05). The ICS are commonly made of one or more of the following materials: metal, clay/mud, fired-clay/mud or ceramics and bricks. Specific stove types will be described in each SSC-CPA. The PoA contributes to the sustainable development by amongst others reducing deforestation, indoor air pollution, expenditures on cooking fuel, time spent on fuel wood collection for the end users. The target market will be to distribute/install improved wood-burning stoves to the rural areas. The DOE by assessing the website (<http://unstats.un.org/unsd/demographic/products/dyb/dyb2011.htm>) (IRL 86) [accessed on 30/11/2012] confirms that urban areas in Malawi are defined as per the United Nations Demographic Yearbook as "All townships and town planning areas and all districts centres". There is no specific definition for rural areas in Malawi, thus rural areas are considered to be all areas which are not urban. Therefore the CME defined rural communities as areas outside of urban boundaries of towns, townships, district centres and cities of population greater than 4,765. 4,765 is the lowest population number found in the classification 'cities, towns, villages' as per the website <http://www.citypopulation.de/Malawi.html> (access on 15/12/2012). The DOE by assessing the aforementioned website confirms that the number of 4,765 can be considered as a threshold for an urban agglomeration and everything below this figure is considered as rural area. The definition of urban/rural area is deemed to be appropriate by the DOE.

C-Quest Capital Malaysia Global Stoves Limited (CQC)[†] will be the Coordinating Managing Entity (CME) of this SSC-PoA. ICS will be distributed/installed on a commercial or a non-commercial basis. Carbon finance will be used to facilitate the purchase, distribution[‡] and marketing of stoves, and make the ICS more affordable to users; without carbon finance, these activities would not take

* As mentioned in section 3.1., the host party Republic of Mozambique will be included post registration.

[†] C-Quest Capital Malaysia Global Stoves Limited (CQC) is a 100% subsidiary of C-Quest Capital LLC (IRL 27).

[‡] 'Distribution' is taken to include sales.



place.

Collection of end-users' and stove related information (like date of distribution/installation, unique ICS identification (serial) number, stove model, customer name, contact telephone number (if available), geographic location, retailer/distributor information (if applicable) can be achieved through different means like via a registration card, Short Message Service (SMS) or Information and Communication technologies (ICT) like e.g. personal digital assistant (PDA).

Regardless of the chosen approach, the CPA implementer* must ensure that the user is aware of his/her voluntary participation in the PoA, assign the carbon rights to the CME and affirm that he/she is a household, the ICS is replacing a traditional inefficient three-stone fire or traditional pot support and that he/she previously did not own an ICS. This can be achieved by instructing the CPA implementer's sales/field or retailer team members to read out the required information to users and if possible have users sign the registration card or the CPA implementer sales/field or retailer team members can sign the paper ascertaining that they have read out the clauses. In this instance, CPA implementers sales/field team or retailer team shall tick a box next this clause once end-user acknowledges it. When SMS is used, the clauses can be written on the instruction for the user on how to submit the information to the CPA implementer. By sending the SMS, users are acknowledging to be a household and that it is voluntarily participating in the SSC-PoA, that the ICS is replacing a three-stone fire or traditional pot support (i.e. did not previously use an ICS) and that they agree to transfer the carbon rights to the CME. The CME manual including a template of the registration card and the information about user's acknowledgement of carbon right transfer, confirmation to be a household, voluntary participation in the PoA and previous use of traditional inefficient three-stone fire or traditional pot support (i.e. not using an ICS) has been checked by the DOE (IRL 38).

This PoA is a voluntary action, and will be implemented by the CME. A self-declaration signed by C-Quest Capital (IRL 27) has been submitted to the DOE to confirm that the PoA is a voluntary action. Even though the National Energy Policy (IRL 85) mentions that the government of Malawi 'will devise promotional strategies aimed at expanding the use of improved ceramic firewood stoves in poor urban households and at reducing the proportion of households using three stone cookstoves to 50% by 2020', neither mandatory targets nor mandatory implementation policies are in place by the government of Malawi according to this National Energy Policy. This is further confirmed by the Biomass Energy Strategy (IRL 73). The PP correctly states in his answer that the Malawi Biomass Energy Strategy was designed to move energy use away from "traditional biomass" to "modern" sources of energy (electricity, liquid fuels and "renewables") and that less attention is paid to efficient utilization of woodfuels (by amongst others better stoves). Thus this policy is primarily devoted to substituting away from biomass energy.

The fact that there are no mandatory targets or implementation policies for ICS formulated by the government of Malawi has been further substantiated through an interview carried out by the DOE with Mr. Mhango, Lewis (Deputy Director, Energy Department under Ministry of Energy, Malawi) and Mr. Kalowekano, Joseph (Assistant Director, Energy Department, Malawi under Ministry of Energy, Malawi). Both confirmed that there is no such mandatory policy or mandatory targets for the implementation of ICS. The DOE further concludes, that E- policy is not applicable and relevant for Malawi.

* As per A.1. of the PoA-DD, examples of CPA implementers are: NGOs, religious, environmental, social organizations, farmers associations and private, public or governmental entities. CPA implementers will have an agreement with the CME establishing roles and responsibilities for the successful implementation of the CPA.



At the time of validation, funding for this ICS PoA has been identified exclusively from private investors as confirmed by the CME during the on-site visit and through a self-declaration letter signed by the CME (IRL 28) and further substantiated by two letters from major private investors (IRL 29). It is expected that no public funding will be made available, however if such one occurs, it will be ensured that it does not result in a diversion of ODA from Annex I countries. The same was confirmed by a self declaration letter signed by C-Quest Capital (IRL 23). The affirmation that there is no diversion of ODA will be further checked for each CPA through eligibility criterion.

The following description of the CDM programme activity as per CPA-DD was verified:

The project is developed under the Small-Scale Programme of Activities (PoA^{*}) titled "Improved Cookstoves Program for Malawi and cross-border regions of Mozambique".

The CPA implementer of this 1st CPA is Total LandCare (TLC) Malawi.

The proposed small-scale CPA involves the promotion and installation of up to 20,763 domestic fuel-efficient improved cooking stoves (ICS) in the Republic of Malawi. The ICS disseminated through this CPA will replace the prevailing inefficient three-stone fire or traditional pot support without improved combustion air supply, i.e. no grate or chimney with stoves which combust fuel wood more efficiently, and improve thermal transfer to pots, hence saving fuel and lowering greenhouse gas emissions. The ICS will be installed on a commercial and non-commercial basis. Carbon finance will be used to facilitate the purchase, installation and marketing of improved cook stoves, and will enable the provision of the ICS at no/low cost to households; without carbon finance, these activities would not take place.

The ICS installed under this CPA is the TLC rocket stove (16 brick stove) with pot skirt, grate and stick shelf. The TLC Rocket Stove is a simple design with basic features. The design uses a total of 16 readily available building bricks that are made by the households (under the instructions of TLC field team) using locally available clay. The average size of the brick used on the TLC rocket stove, which is produced using a standard mold, is 22.5cm x 11cm x 6.5cm. The bricks are mortared together using locally available material (clay soil, cow dung, and sand) for better insulation and heat loss reduction. The mud mortar is a mix of 5 liters clay, 5 liters sand, 5 liters manure with 5 liters of water. Metal components have been added to optimize combustion and heat transfer. To aid the combustion process a grate and a stick support are added. The grate is made from heat corrosion resistant cast iron and sits at the bottom of the combustion chamber. It allows the firewood to rest on it while allowing airflow underneath the firewood to improve combustion. A metal stick support is placed in front of and slightly into the opening of the stove and acts as a firewood feeding platform and also ensures airflow while feeding the fuel into the combustion chamber. To aid the process of heat transfer a pot skirt is added, made from galvanized iron sheet metal.

The specifications are the following:

Technical Specifications – TLC Rocket Stove	
Thermal efficiency indicated by the manufacturer and efficiency testing	25.66%

^{*} The term 'PoA' in the following always refers to SSC-PoA even if 'SSC' is not explicitly mentioned.



Size (stove)	Depth: 35 cm Width: 35 cm Height: 28 cm
Size (combustion chamber)	Depth: 12 cm Width: 12 cm Height: 28 cm

The PoA contributes to the sustainable development by amongst others reducing deforestation, indoor air pollution, expenditures on cooking fuel, time spent on fuel wood collection for the end users. The target market will be to install improved wood-burning stoves in rural areas*.

The CPA is expected to result in an average annual emission reduction of 38,857 tCO₂e.

The CPA does not involve any public funding. A self-declaration letter from the CME C-Quest Capital (IRL 28) and letters from 2 major private investors (IRL 29) were provided to the validator confirming that the investment comes from the private sector and no public funding is being used. Further, the self-declaration letter from the CME (IRL 28) confirms that the majority of the needed investment in the 1st CPA is from the 2 investors who have filed investor letters (IRL 29) indicating that they would not have invested in the PoA or any CPA in the absence of CDM.

DoE received the Incompleteness from the UNFCCC on 3rd September 2013, for the following issues:

The DOE is requested to further substantiate how it has validated the fNRB in accordance with the VVM version 01.2 paragraphs 33(a) and 91, in particular: (a) how it has validated the forested area being 234,260 ha and 3,164 ha (document "Appendix 1 - CQCapital_Malawi NRB_C4ES_28 May_31 jan") whereas the document "FAO Global Forest Resources Assessment 2010", which is listed in the reference of documents that were used by the DOE during the validation, provides figures of 3,237,000 ha for total forest area (Table 2, 3 and 5), 1,526,000 ha for permanent forest estate and 757,000 ha for forest within protected area (Table 6), 3,036,000 ha for primary forest and 365,000 for planted forest (Table 7), 934,000 ha for area of primary forest (Table 8); (b) in light of the rural area considered in the document "Appendix 1 - CQCapital_Malawi NRB_C4ES_28 May_31 jan", whether the definition is in line with the definition of rural area mentioned in the PoA-DD page 3 (footnote 7).

With response of the Incompleteness, PP has revised the DDs, and considered the fNRB values as per the default values provided by the UNFCCC, and Audit Team has checked the revised DDs

* Urban areas in Malawi are defined as per the United Nations Demographic Yearbook as "All townships and town planning areas and all districts centres". There is no specific definition for rural areas in Malawi, thus rural areas are considered to be all areas which are not urban. Therefore the CME defined rural communities as areas outside of urban boundaries of towns, townships, district centres and cities of population greater than 4,765. 4,765 is the lowest population number found in the classification 'cities, towns, villages' as per the website <http://www.citypopulation.de/Malawi.html> (access on 15/12/2012). The DOE by assessing the aforementioned website confirms that the number of 4,765 can be considered as a threshold for an urban agglomeration and everything below this figure is considered as rural area. The definition of urban/rural area is deemed to be appropriate by the DOE.



where PP is using the Default country-specific values approved by CDM Board. For Malawi, the default value is 0.81.

Hence this Issue was closed by the DoE.

DoE received the 2nd Incompleteness from the UNFCCC on 20th February 2014, for the following issues:

1. The eligibility criteria 13 of the PoA-DD allows the development of own regional level NRB, however in Section B.6.1 (page 24), it says that a typical CPA will use the option of using the default value outlined in EB 67 Annex 22. Please clarify. Furthermore, if own regional level of NRB will be developed, the PoA-DD/Generic CPA-DD have not provided information how the NRB will be developed.
2. The DOE is requested to explain how it has validated the sampling plan for parameter $n_{y,i}$ (Number of stoves still in operation during the monitoring period), in particular why the vintage of the stoves are not taken into account determining the Primary Sampling Unit.

With response of the Incompleteness, PP has revised the DDs, and considered the n_{NRB} values as per the default values provided by the UNFCCC only. Eligibility criteria 13 has been amended to avoid the confusion. Audit Team has checked the revised DDs where PP is using the Default country-specific values approved by CDM Board.

Regarding the second question, DoE has now provided the details regarding the Vintage of stoves in section 3.6.11 of this report,

Hence this Issue was closed by the DoE.

The information presented in the CPA documents is consistent with the actual planning and implementation of the activity confirmed in the following ways:

(a) Document review including

- A review of data and information;
- Cross checks between information provided in the PoA-DD, CPA-DD and information from sources other than those used including the DOE's sectoral or local expertise. In addition, independent background investigations were performed.

(b) Follow-up actions including:

- Interviews with relevant stakeholders in the host country, personnel with knowledge of the PoA/CPA design and implementation;
- Cross checks between information provided by interviewed personnel (i.e. by checking sources or other interviews) to ensure that no relevant information has been omitted.

(c) Reference to available information relating to projects or technologies similar to the proposed PoA under validation;

It is TÜV SÜD's opinion that the project description, as included in the PoA-DD including the generic



CPA-DDs and the specific CPA-DD, is accurate and complete; and it provides a correct understanding of the proposed programme and the specific CPA. After assessment of the PoA-DD including the generic CPA-DDs and the specific CPA-DD that was submitted to TÜV SÜD by the CME, the assessment team confirms the framework developed for the implementation of the PoA, and defining a CPA under the PoA as per VVS §189.

3.6.4 Application of Multiple Methodologies

Not Applicable

3.6.5 Boundary for the PoA in terms of geographical area

The CPA boundary was assessed considering information gathered from the physical site inspection, interviews, and secondary evidence received on the design of the PoA.

The project boundary is the physical, geographical site of the efficient systems (i.e. ICS) using biomass. The sources and gases within the boundary have been considered in a clear manner. The CO₂ emissions from the combustion of non renewable biomass for cooking have been included.

TÜV SÜD confirms that the identified boundary, the selected sources, and gases as documented in the PoA-DD are justified for the project activity and are fully in line with the requirements set by the applied methodology.

Therefore, the audit team confirms that the identified boundary, the selected sources, and gases as documented in the PoA-DD are justified for the proposed PoA (including the generic and specific CPA) and are fully in line with the requirements set by the applied methodology and the PoA-DD as per VVS §87. Furthermore, it can be confirmed that the boundary of the specific CPA is correctly identified and in line with the underlying requirements. It can also be confirmed that the sources and gases included in the specific CPA boundary are in accordance with the above.

Emission sources, not addressed by the applied methodology and expected to contribute more than 1% of the overall expected average annual emission reductions, have not been identified.

Hence, TÜV SÜD confirms that the boundary for the PoA in terms of geographical area is accurately selected and complete in order to comply with the VVS (§§191-192).

3.6.6 Start Date of a PoA / CPA -

The starting date of the PoA has been determined to be 30/04/2012 based on the date at which the PoA documents were uploaded to the UNFCCC website for Global Stakeholder Process (GSP), which is validated to be in line with para 193 of VVS.

The starting date of the CPA is being determined as 01/02/2013 or the date of first installation of ICS, whichever is later. The length of the CPA is taken as 7 years.

ICS was not installed till the date of site visit, However PP has a database that will uniquely identify and define households in which ICS have been installed. In addition, each stove itself will be uniquely identified with a serial number clearly starting with "CQC-MAL. This was Validated against CME manual (IRL 38) which mentions the information to be collected when an ICS is installed, including stove serial number. The CME during DOE's on-site visit informed the DOE that the database is being implemented but has not been finalized yet, since the 1st CPA has not started installation of ICS yet. The earliest date of ICS installations will be 01/02/2013 or even later which has been confirmed through the self-declaration letter issued by the CME regarding 1st CPA (IRL 27). As per the information given by the CME during on-site interviews, the database will be however implemented prior



to commencement of ICS installation.

Hence, it can be confirmed that the start date of the specific CPA is not prior to the date the CDM-PoA-DD was first published for global stakeholder consultation. As a result, it can be confirmed that the requirements of VVS §193 are met.

3.6.7 Prior Consideration of the CDM

According to EB 60, annex 26 and VVS §194, the demonstration and assessment of prior consideration of the CDM does not apply to PoAs.

3.6.8 Demonstration of additionality of the PoA as a whole

The additionality of the programme has been presented in section B.1 of the PoA-DD. The approach used in the PoA-DD has been assessed initially through the document review followed by on-site discussions. Finally, the data, rationales, assumptions, justifications, and documentation provided have been verified using local knowledge as well as sectoral and financial expertise.

- The PoA is a voluntary coordinated action as evident from the fact that there is no mandatory regulation which mandates use of ICS in the Republic of Malawi.

A declaration signed by C-Quest Capital (IRL 27) has been submitted to confirm that the PoA is a voluntary action. Even though the National Energy Policy (IRL 85) mentions that the government of Malawi 'will devise promotional strategies aimed at expanding the use of improved ceramic firewood stoves in poor urban households and at reducing the proportion of households using three stone cookstoves to 50% by 2020', neither mandatory targets nor mandatory implementation policies are in place by the government of Malawi according to this National Energy Policy. This is further confirmed by the Biomass Energy Strategy (IRL 73). The PP correctly states in his answer that the Malawi Biomass Energy Strategy was designed to move energy use away from "traditional biomass" to "modern" sources of energy (electricity, liquid fuels and "renewables") and that less attention is paid to efficient utilization of woodfuels (by amongst others better stoves). Thus this policy is primarily devoted to substituting away from biomass energy. The fact that there are no mandatory targets or implementation policies for ICS formulated by the government of Malawi has been further substantiated through an interview carried out by the DOE with Mr. Mhango, Lewis (Deputy Director, Energy Department under Ministry of Energy, Malawi) and Mr. Kalowekano, Joseph (Assistant Director, Energy Department, Malawi under Ministry of Energy, Malawi). Both confirmed that there is no such mandatory policy or mandatory targets for the implementation of ICS.

Based on the aforementioned documents, interviews carried out by the DOE during on-site visit and the host country experience of the audit team it is confirmed that there is no mandated legal requirement for replacing traditional stoves by ICS in households in Malawi.

- It has been clearly demonstrated that the programme would not be implemented in the absence of carbon revenues.

Section B.1, item 2 of the PoA-DD mentions that "significant capital is required to invest in a programme which could match the achievements of this proposed PoA, including for import of technologies, developing the brand, widespread marketing, and establishing a distribution and retail network. CQC has been unable to find investors willing to provide the level of capital necessary to implement such a program without the hard-currency revenues from selling CERs". Letters of two major private investors (IRL 29) have been submitted to the



DOE which confirm that they would not consider this kind of investment unless this PoA is CDM registered and generates CDM revenues. Further, a self-declaration letter from C-Quest Capital (IRL 28) confirms that the majority of the needed equity investment in the PoA and the 1st CPA is from the 2 investors who have filed investor letters (IRL 29) indicating that they would not have invested in the PoA or any CPA in the absence of CDM.

TÜV SÜD confirms that the proposed PoA is additional as per EB 68 Annex 27.

3.6.8.1 Identifications of alternatives

Not applicable, because the baseline scenario is defined as per the approved methodology - VVS/115.

3.6.8.2 Investment Analysis

Not applicable.

3.6.8.3 Barrier analysis

As per EB68, Annex 27, version 09.0 in paragraph 2(c) states that the

Documentation of barriers.....is not required for the positive list of technologies and project activity types that are defined as automatically additional for project sizes up to and including the small-scale CDM thresholds....

Hence Barrier analysis is not applicable for this project.

3.6.8.4 Common practice analysis

Not Applicable

3.6.9 Eligibility criteria for inclusion of a CPA in the PoA

All the eligibility criteria required for the inclusion of the CPA under the PoA have been addressed in the PoA-DD and will be assessed for each potential CPA through the procedures described in the PoA Management System (PoA MS). The stated confirmation against each eligibility criteria has been checked and found acceptable. It can be confirmed that the criteria are verifiable, sufficiently objective as well as comprehensive. Please refer to the following sections for a detailed assessment of the individual criteria as per the "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities".

PoA Standard requirement (EB 74 Annex 05)	Assessment and Conclusion (PoA-DD and generic CPA-DD)	Assessment and Conclusion (specific CPA-DD)
The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA.	The compliance with this criterion can be checked amongst others through a self-declaration letter issued by the CME which mentions amongst others that ICS will be distributed to individual rural households on a commercial or non-commercial basis within a certain geographical boundary and print-screens from Google Earth or Google Maps to confirm the	Validated against a self declaration letter issued by the CME regarding 1 st CPA which mentions that the expected start of ICS installations across Malawi for the 1 st CPA will be on 01/02/2013 or later (IRL 27). A print-screen from Google Earth (IRL 15) clearly illustrates the Malawian territory including GPS coordinates. The compliance with the criterion was further substantiated through



PoA Standard requirement (EB 74 Annex 05)	Assessment and Conclusion (PoA-DD and generic CPA-DD)	Assessment and Conclusion (specific CPA-DD)
	geographical boundary of the respective CPA.	on-site interviews carried out by the DOE with representatives of TLC Malawi (Total LandCare Malawi). TLC Malawi will implement this CPA acting as CPA Implementer.
Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo).	<p>Each ICS will be identified by a unique identification serial number. The serial number will start with an identifier to be able to separate the stoves from this PoA with those of other potential PoAs. The identifier that will precede each serial number will be "CQC-MAL". Each stove's serial number will be entered into a database that will keep track of which stoves are in which CPA. Each CPA will have a set of serial numbers so the CME or verifier can easily determine that any stove identified in any household is affiliated with one (and only one) CPA. No individual serial number can be in more than one CPA, so it will not be possible for one stove to be counted in two different CPAs. Besides, when a new ICS registration card is filled out, or sent via SMS or ICT, the customer will acknowledge that he/she is a household, previously used a three-stone fire or traditional pot support and did not previously own any ICS. This will ensure that no customer will be included in a new CPA if he/she already owns an ICS.</p> <p>In addition, each CPA will be cross-checked with other CPAs in this PoA and with CPAs in any other PoA or in a CDM project activity operating in the country using the UNFCCC, the Gold Standard or any other relevant voluntary carbon schemes to ensure that the CPA is</p>	Validated against CME manual (IRL 38) which mentions the information to be collected when an ICS is installed, including stove serial number. The CME during DOE's on-site visit informed the DOE that the database is being implemented but has not been finalized yet, since the 1 st CPA has not started installation of ICS yet (till the date of DoE site visit). The earliest date of ICS installations will be 01/02/2013 or even later which has been confirmed through the self-declaration letter issued by the CME regarding 1 st CPA (IRL 27). As per the information given by the CME during on-site interviews, the database will be however implemented prior to commencement of ICS installation.

PoA Standard requirement (EB 74 Annex 05)	Assessment and Conclusion (PoA-DD and generic CPA-DD)	Assessment and Conclusion (specific CPA-DD)
	not included in any other PoA, CDM project activity or voluntary project activity.	
The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/ certifications.	have a maximum energy saving of 180 GWh _{th} / year throughout the CPA's crediting period to conform with the SSC threshold for type II projects as per EB61, Annex 21, paragraph 3; → The compliance with this criterion can be checked amongst others through the ER excel calculation spreadsheet of the respective CPA.	Validated against ER calculation excel spreadsheet (IRL 21). The calculations for the maximum energy savings per stove and the maximum number of stoves which can be included in a CPA without exceeding the threshold of 180 GWh _{th} /year has been verified by the DOE against the 1 st CPA ER calculation excel sheet (IRL 21). The DOE by assessing the formulae and calculations confirms that the 1 st CPA will not pass the threshold of 180 GWh _{th} /year.
Conditions to check the start date of the CPA through documentary evidence.	The compliance with this criterion can be checked amongst others through a self-declaration letter issued by the CME and the PoA database confirming the start of the ICS implementation in the respective CPA (if available).	Validated against self declaration letter issued by the CME regarding 1 st CPA (IRL 27). The 1 st CPA has not started yet. It is expected to start installation of ICS for the 1 st CPA on 01/02/2013, thus this date or the actual date of the 1 st stove installation, whichever is later, shall be considered as the effective starting date of the 1 st CPA. The same has been confirmed in the self declaration letter (IRL 27). The PoA database was not available at the time of DOE validation since installation of ICS had not been started yet.
Conditions that ensure compliance with applicability and other requirements of single or multiple methodolo-	Each CPA shall follow the applicability criteria as per the methodology, as described in section 3.5.1 of this report.	Applicability of methodology has been validated as discussed in section 3.5.1 of this report.

* At time of each CPA inclusion, the CME shall provide the DOE with the calculation as per Section B.2 of the SSC-POA-DD demonstrating what the maximum number of ICSs is for that CPA so it remains below the small-scale threshold.

PoA Standard requirement (EB 74 Annex 05)	Assessment and Conclusion (PoA-DD and generic CPA-DD)	Assessment and Conclusion (specific CPA-DD)
gies applied by CPAs.		
<p>The conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality.</p>	<p>Additionality is demonstrated using the “Guidelines on the demonstration of additionality of small-scale project activities” (EB68, Annex 27, version 09.0). As mentioned in section B.2. of the PoA DD, if the annual energy savings of a CPA under this PoA remain below the threshold of 180 GWh_{th} and the size of each unit (ICS) is below 1,800 MWh_{th}[*], the CPA is considered additional. A full additionality assessment will not be carried out at CPA level, however an eligibility criterion referring to additionality has been included which will confirm the additionality of each CPA. This is in line with EB60, Annex 26, paragraph 4 which states that “the Board clarified that a full additionality assessment is not required in the context of component project activities (CPA), rather the confirmation of additionality for CPAs should be conducted by means of the eligibility criteria.</p> <p>The additionality of each CPA is demonstrated by complying with the eligibility criterion 3 stated in the PoA-DD (CPAs must “have a maximum energy saving of 180 GWh_{th}/ year throughout the CPA's crediting period to conform with the SSC threshold for type II projects as per EB61, Annex 21, paragraph</p>	<p>Validated against ER calculation excel spreadsheet (IRL 21). The calculations for the maximum energy savings per stove and the maximum number of stoves which can be included in a CPA without exceeding the threshold of 180 GWh_{th}/year has been verified by the DOE against the 1st CPA ER calculation excel sheet (IRL 21). The DOE by assessing the formulae and calculations confirms that the 1st CPA will not pass the threshold of 180 GWh_{th}/year.</p>

* EB68, Annex 27 mentions in footnote 1 a threshold of 3,000 MWh of energy savings per year of each unit, which translates into 9,000 MWh_{th} (as per SSC_233 Clarification), however the debundling criterion of 1% of the SSC threshold (180 GWh_{th}) is more restrictive, thus 1,800 MWh_{th} is considered the threshold for demonstration of additionality.

PoA Standard requirement (EB 74 Annex 05)	Assessment and Conclusion (PoA-DD and generic CPA-DD)	Assessment and Conclusion (specific CPA-DD)
	3").	
The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis.	Stakeholder consultation has already been performed at PoA level so not required at CPA level.	Stakeholder consultation has already been performed at PoA level so not required at CPA level [IRL 53,55,56,57,58].
Conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance.	The compliance with this criterion can be checked amongst others through a self-declaration letter issued by the CME confirming that there is no ODA funding or if any, that there is no diversion of ODA and letters from investors (if available).	Validated against self-declaration letter from the CME regarding no ODA funding (IRL 23). Letters from 2 major private investors (IRL 29) further substantiate the fact that the PoA in general and 1 st CPA is pre-financed by private equity. One of the conditions investors require is the pay-back through carbon credits. Further, a self-declaration letter from C-Quest Capital (IRL 28) confirms that the 1 st CPA will not use ODA funds and that the majority of the needed investment in the 1 st CPA is from the 2 investors who have filed investor letters (IRL 29) indicating that they would not have invested in the PoA or any CPA in the absence of CDM.
Where applicable, target group (e.g. domestic/ commercial/ industrial, rural/ urban, grid-connected/ off-grid) and distribution mechanisms (e.g. direct installation).	NA	NA
Where applicable, the conditions related to sampling requirements for a PoA in accordance with the approved guide-lines/standard from the Board pertain-	The compliance with this criterion can be checked amongst others through section B.2 of the PoA-DD against the monitoring plan mentioned in the CPA-DD.	Validated against section B.2. of the PoA-DD. The DOE by assessing the sampling and monitoring plan in the 1 st CPA confirms that all requirements related to sampling as outlined in section B.2 of the PoA-DD will be followed by the 1 st CPA.



PoA Standard requirement (EB 74 Annex 05)	Assessment and Conclusion (PoA-DD and generic CPA-DD)	Assessment and Conclusion (specific CPA-DD)
ing to sampling and surveys;		
Ensure that the ICS installed/distributed under the CPA are single pot or multi pot portable or in-situ cook stoves with specified efficiency of at least 20%. The efficiency of the project systems (ICS) is certified by a national standards body or an appropriate certifying agency recognized by it (using the WBT outlined in AMS II.G, Version 5 approved by the CDM Executive Board). Alternatively manufacturers specifications may be used;	The compliance with this criterion can be checked amongst others through water boiling test reports and technical specifications of the ICS.	Validated against water boiling test report (IRL 24) and manufacturer's specifications of the TLC rocket stove (IRL 93) Both documents (manufacturer specification and laboratory efficiency test report following the WBT protocol, version 4.1.2) mention for the TLC rocket stove (used in the 1 st CPA) a thermal efficiency of 25.66%.
Where applicable, the requirements for the debundling check, in case CPAs belong to small-scale (SSC) or micro-scale project categories.	The debundling rule does not apply since the ICS as an independent sub-system, does not exceed 1% of the SSC threshold (as per guidance EB 54 Annex 13 and clarification SSC_233).	Validated against ER calculation excel spreadsheet (IRL 21). The calculation for the maximum energy savings per stove has been verified by the DOE against the 1 st CPA ER calculation excel spreadsheet (IRL 21). The DOE by assessing the formulae and calculation confirms that none of the independent sub-systems (ICS) will exceed 1% of 180 GWh _{th} . By having a size of each unit which is not larger than 1% of the SSC CDM threshold means at the same time not to exceed 5% of the SSC threshold since 1% is more restrictive than 5%. Concluding, none of the ICS included into the CPA will exceed either 1% or 5% of the SSC threshold (180 GWh _{th}).



PoA Standard requirement (EB 74 Annex 05)	Assessment and Conclusion (PoA-DD and generic CPA-DD)	Assessment and Conclusion (specific CPA-DD)
Involve the promotion and distribution/installation of ICS through direct distribution/installation, delivery, community distribution events or through commercial/retail outlets;	The compliance with this criterion can be checked amongst others through the PoA database and a self declaration letter issued by CME.	Validated against self declaration letter issued by CME regarding 1 st CPA (IRL 27). IRL 27 mentions that ICS under the 1 st CPA will be installed on a commercial and non-commercial basis to end-users through the CPA implementer's field team. The PoA database was not available at the time of DOE validation since installation of ICS had not been started yet.

The managing entity employs clear and unambiguous criteria for the inclusion of the CPA. The eligibility criteria stated in the PoA-DD are verifiable with regards to the applicability of the applied methodology and EB 65 annex 3. Furthermore, the DOE confirms that the eligibility criteria are sufficiently objective and comprehensive to permit the assessment of the inclusion of CPAs in the PoA.

The eligibility criteria can be checked at the CPA level by the managing entity and can be confirmed by the DOE during inclusion.

Hence, TÜV SÜD considers that the eligibility criteria for inclusion of CPA in the PoA is demonstrated accurately in order to comply with the VVS §196.

3.6.10 Crediting period of a PoA/CPA

The assessment team confirms that the length of the PoA is 28 years, hence it is in line with VVS §197.

3.6.11 Monitoring plan for a PoA

The CME ensures that statistically sound sampling methods will be used to be in line with Annex 4 of EB74 "Standard for sampling and surveys for CDM project activities and programme of activities", and with Annex 5 of EB69 "Guidelines for sampling and surveys for CDM project activities and programme of activities", version 02.0 and the applied methodology. The monitoring procedures to be used for verification of ERs achieved by the CPAs under this SSC-PoA are outlined in detail in Section 3.5 of this report.

The CME has chosen the multi-stage sampling method for the 1st and further CPAs to be implemented, which combines the cluster and simple random sampling methods in a multi-stage approach, and can be thought of as sampling from a number of groups, and then going on to sample units within each group (paragraph 73 of EB69, Annex 5). In a first stage, all CPAs that have been included in the monitoring period are grouped into Primary Sampling Units. Primary sampling units for the parameters $n_{y,j}$ and SS_y are CPAs with the same CPA implementer and ICS model and



primary sampling units for the parameter $\eta_{\text{new},i}$ consist of CPAs with the same ICS model and vintage* regardless of the CPA implementer. Each primary sampling unit will be comprised of a number of districts† – the secondary sampling units – and the number of households/ICS within each sampled district which will be visited (sampled). The number of districts to be sampled is selected using a simple random sampling approach from a list of all districts present in each Primary Sampling Unit. Once the districts are defined, ICS/households present in each district will be randomly selected.

Multi-stage sampling is deemed to be an appropriate sampling method as given the large number of ICSs and the geographical area of the country where ICSs are expected to be disseminated. Using multi-stage sampling, the sampling effort can be concentrated in a set of localities (districts, villages, etc – as explained before), thereby reducing travel needs and associated costs. This method is justified by the fact that though the baseline of the PoA is homogenous, the ICS models and CPA Implementer may vary for different CPAs, hence it is appropriate to use a two step approach so to take these variations into consideration. The DOE confirms that this is in line with paragraph 21 (multi-stage sampling) of EB69, Annex 05 which mentions that “measuring all the elements in the selected clusters may be prohibitively expensive, or not even necessary”.

There are three parameters that will be evaluated through sampling:

$n_{y,j}$ - Number of stoves still in operation during the monitoring period as determined by the monitoring survey in each stove vintage‡. This includes total number of stoves distributed in the entire CPA: The percentage of stoves found to be still in operation in each vintage based on the sampling plan in each monitoring period will be applied to the total number of stoves distributed in that vintage for the CPA (according to the ICS registration records in the monitoring database and the applicable sample frame) when calculating emission reductions. If based on the sample size selected in any monitoring period, the confidence/precision requirements set out in EB74, Annex 6 are not satisfied, then the CPA implementer will follow the procedures outlined in the Monitoring Plan (B.7.2 of the PoA-DD) to ensure the required level of confidence/precision are met. The unique reference number of each stove shall be logged in the monitoring database showing the total number of stoves.

Data from the sampling plan will be collected in each monitoring period by trained project staff and applied to the emissions reductions calculations. Internal cross-checks by the CME or project implementer will be undertaken as quality control.

SS_y – Percentage of ongoing baseline stove use within the population of in-use ICS of each vintage during a monitoring period. This parameter will be used to calculate the ex-post baseline adjustment factor in each monitoring period, as outlined in section B.7.1. of the PoA-DD. Data for this parameter will be collected using the same survey as for the parameter $n_{y,i}$ (in-use appliances). Households will be asked if

* For the purposes of the PoA, an ICS vintage correspond to all ICSs which have been in operation for the same amount of years. For example, stoves vintage 1 are all ICSs which have been in operation for less than 365 days. ICSs vintage 2 are those which have been in operation for longer than one year but less than two years.

† Populations centres, villages, towns and other definitions for areas where households are located can be included/used as long as it is not considered as urban area, i.e. the CME may opt to sample across population centres, villages, towns and other area definitions instead of districts per se, assuming there is enough and appropriate data to define a population centre, village, town or other definition for areas where households are located for that monitoring period.

‡ A vintage defines a year of stove distribution and does not necessarily correspond to a calendar year. For example, stoves distributed starting on 01/03/2014 and until 28/02/2015 (a stove distribution period of one year) will belong to the same vintage. The CME shall define the vintage start and end dates, but the period in between these dates will correspond to one year.



they use a second (baseline) stove at least once per week, as per the monitoring plan outlined in Section B.7.2 of the PoA-DD. SS_y will be calculated in each monitoring period using the number of sampled households per vintage with in-use ICS that also continue to use a baseline stove divided by the total number of in-use ICS in that vintage sample. The values obtained from each vintage will be applied to stoves of the same vintage in the CME records for the purpose of calculating emissions reductions. As a conservative approach to ex-ante calculations of the 1st CPA, the percentage of households in the baseline firewood fuel consumption study using a second baseline stove at least once per week (19.7%), resulting in a mean total household stove usage 1.0471, has been applied in order to subtract fuel-wood used in these second (baseline) stoves resulting in the B_{old} estimate of 3.2558 tonnes/year.

new,i – Continuing efficiency of ICS: The tests based on a sample of stoves in-use in the monitoring period will be coordinated by the CME and undertaken by a trained professional working for the CME or CPA implementer or an experienced third party. The tests will be carried out using WBT Protocol 3.0 or a more recent version of WBT Protocol. Water boiling tests on the Ecozoom Dura ICS (IRL 22), which will be implemented in the 1st CPA, which will be used as efficiency for the ICS in the ex-ante calculation for the first CPA. The efficiency test results from Aprovecho Research Center (entity responsible for the tests) (IRL 24) have been verified by the DOE. Hence, the result is deemed to be credible. Aprovecho Research Center is a world-wide known entity for designing, testing and implementing improved biomass cooking and heating technologies. The DOE by assessing the website <http://www.aprovecho.org/lab/index.php> [accessed on 10/03/2014] and due to its local and sectoral expertise concludes that Aprovecho Research Center is a qualified entity for doing ICS efficiency testing.

In summary, the parameters determined ex-post have been presented correctly according to the requirements in accordance with the applied methodology.

A 95/10 confidence/precision for annual (as per paragraph 20 of EB74, Annex 6) and 95/10 for biennial sampling* across CPAs has to be met.

In case a single CPA is sampled[†], a 90/10 confidence/precision for annual and 95/10 confidence/precision for biennial sampling shall be complied with (as required by paragraph 28 of the applied methodology AMS-II.G).

Details about sampling plan, calculation of sampling size etc. are provided in section 3.6.13 of this report.

Hence it could be confirmed that the PP would be able to implement the monitoring plan as per the methodology and the reporting requirement as per VVS para 133 and 198.

3.6.12 Monitoring plan for a CPA

The monitoring plan presented in the CPA-DD complies with the requirements of the PoA. The assessment team has verified 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 assessment team through document review and interviews with the relevant personnel. The information provided has allowed the assessment team to confirm that the proposed monitoring plan is feasible within the project design. The relevant points of monitoring plan have been discussed with the CME and the implementer of the 1st CPA. Specifically,

* As per Methodology AMS-II.G version 05 para 28.

† Single CPA sampling will only be applicable in the case that a Primary Sampling Unit consists of only one CPA.



these points include the monitoring methodology, data management, quality assurance and quality control procedures to be implemented in the context of the activity. Therefore, the CME will be able to implement the monitoring plan and the achieved emission reductions can be reported ex-post and verified.

The parameters that are to be monitored ex-post are:

$n_{y,j}$ - Number of stoves still in operation during the monitoring period as determined by the monitoring survey. This includes total number of stoves installed in the entire CPA:

$t_{y,j}$ - Fraction of monitoring period the stove is in operation (days in operation/total days in monitoring period): The fraction will be calculated by dividing the number of days from the registration date of the stove, or the start date of the monitoring period (whichever is later), until the end of the monitoring period by the total number of days in the monitoring period.

$\eta_{new,i}$ - Continuing efficiency of ICS: The tests based on a sample of stoves in-use in the monitoring period will be coordinated by the CME and undertaken by a trained professional working for the CME or CPA implementer or an experienced third party. The tests will be carried out using WBT Protocol or a more recent version of WBT Protocol. A WBT on the TLC rocket stove (IRL 24),

SS_y - Percentage of ongoing baseline stove use within the population of in-use ICS during a monitoring period. This parameter will be used to calculate the ex-post baseline adjustment factor in each monitoring period, as outlined in section B of the PoA-DD and D.6 of the CPA-DD.

In summary, the parameters determined ex-post have been presented correctly according to the requirements in accordance with the applied methodology.

Ex post sampling method - Statistical sound sampling has been adopted and sampling plan design has been described transparently in the PoA-DD (as well as in the CPA-DD).

The PoA-DD (as well as the CPA-DD) indicates a sampling plan as per the recommendation outlined in section III of EB69, Annex 05 and contains amongst others information related to sampling design, data to be collected and implementation plan.

It can be confirmed that the parameter that is determined ex-post is correctly presented and is considered to be in accordance with the applied methodology and the applied tool. Therefore, the CPA implementer will be able to implement the monitoring plan and the achieved emission reductions can be reported ex-ante and verified as per para 198 of VVS.

3.6.13 Sampling

Ex post sampling method - Statistical sound sampling has been adopted and sampling plan design has been described transparently in the PoA-DD.

The PoA-DD indicates a sampling plan as per the recommendation outlined in EB74, Annex 06 and contains amongst others information related to sampling design, data to be collected and implementation plan.

(i) Objectives and Reliability Requirements

The objective is to obtain an unbiased and reliable estimate of the proportion (in the case of the parameters $n_{y,j}$ (numbers of ICS still in operation during the monitoring period as determined by the monitoring survey) and SS_y (percentage of ongoing baseline stove (second stove) use)) and of the mean value (in the case of the parameter $\eta_{new,i}$ (continuing thermal efficiency of ICS)) for each monitoring period over the course of the crediting period. A 95/10 confidence/precision (as per paragraph



20 of EB74, Annex 6) for annual and 95/10 for biennial sampling* (as required by paragraph 28 of the applied methodology AMS-II.G) across CPAs has to be met. In case a single CPA is sampled (i.e. if a primary sampling unit consists of only one CPA), a 90/10 confidence/precision for annual and 95/10 confidence/precision for biennial sampling shall be complied with (as required by paragraph 28 of the applied methodology AMS-II.G).

(ii) Target Population

The target population for the parameter $n_{y,j}$ are the stoves in the CME database records (still in operation or not) for which emissions reductions are to be accounted in the monitoring period in question. The target population for the parameter SS_y are all households with operational ICS in the CME records database for which emissions reductions are to be accounted in the monitoring period in question. The target population for efficiency of new appliances ($\eta_{new,i}$) is the set of stoves still in operation in the CME database for which emissions reductions are to be accounted in the monitoring period in question. The DOE checked the evaluation criterion in EB69, Annex 05, paragraph 38 (b) and confirms that the description of the target population is clear enough to define the population for the sampling purpose.

(iii) Sampling Frame

The PoA is open to different CPA implementers and different models of ICS and will have ICS of different vintages implemented. As per EB74, Annex 6, sampling across a group of CPAs is possible, provided the homogeneity of population in included CPAs can be demonstrated, or differences among the included CPAs are taken into account in the sample size calculation.

Two sampling frames have been defined. For the parameters $n_{y,j}$ and SS_y , CPAs shall be grouped together in the case of same CPA implementer, same ICS model, same ICS vintage and same country, hence creating a Primary Sampling Unit which is homogenous. In the event that CPAs have different CPA Implementers using the same ICS model, same ICS vintage, two different primary sampling units are created. Same is true if CPAs have the same CPA Implementer however a different ICS model being implemented.

For the parameter $\eta_{new,i}$ a primary sampling unit is defined as the group of ICSs implemented in different CPAs under the PoA of the same model and same ICS vintage and regardless of CPA implementer.

(iv) Sampling Method

The sampling method for all 3 sampled parameters ($n_{y,j}$, SS_y and $\eta_{new,i}$) is multi-stage sampling (as per EB69, Annex 5, Section II). The sampling method is considered to be appropriate by the DOE given the large number of ICSs and the geographical area of the country where ICSs are expected to be disseminated. Using this approach, the sampling effort can be concentrated in a set of localities, thereby reducing travel needs and associated costs. Besides, ICS models and CPA implementer may vary for different CPAs, hence it is appropriate to use a two step approach so to take these variations into consideration.

* EB74, Annex 6 does not indicate the confidence/precision for biennial sampling across CPAs.



Multi-stage sampling combines the cluster and simple random sampling approaches in a multi-stage approach and can be thought of as sampling from a number of groups, and then going on to sample units within each group (paragraph 73 of EB69, Annex 5). In a first stage, all CPAs that have been included in the monitoring period are grouped into Primary Sampling Units - following the 2 aforementioned sampling frames. Each primary sampling unit will be comprised of a number of districts* which are considered as the secondary sampling units and the number of households/ICS within each sampled district which will be sampled. The number of districts to be sampled is selected using a simple random sampling approach from a list of all districts present in each Primary Sampling Unit. Once the districts are defined, ICS/households present in each district will be randomly selected.

The DOE confirms that primary sampling units using the same stove model and implemented by the same CPA Implementer (in the case of ICS thermal efficiency same stove model and same vintage) are homogeneous and each household has an equal probability of being chosen. Random number generators will be applied in order to ensure a random selection. Each ICS in the target population can be uniquely identified by its unique serial number. Each ICS can thus be allocated a sample selection number in each monitoring period. Applying the random number generators, the ICS can then be randomly chosen from the defined population up to the required sample size as calculated by the CME.

The criteria in EB69, Annex 05, paragraph 38 (c) and (e) have been evaluated and the DOE confirms that the sampling method (multi-stage sampling) is clearly described and is in line with the description of the population. The sampling plan transparently describes how the samples are selected and that the use of random number generators ensure a random selection.

(v) Sample Size

Two of the three parameters that will be sampled, namely $n_{y,j}$ and SS_y are binary in nature and are proportions/percentages and one of the parameters $\eta_{new,i}$ is a mean value, thus two different formulae for calculating the required sample size are applied as per EB69, Annex 4 and 5.

For the parameters $n_{y,j}$ and SS_y the following equation[†] is used:

$$c \geq \frac{\frac{SD_B^2}{\bar{p}^2} \times \frac{M}{M-1} + \frac{1}{\bar{u}} \times \frac{SD_W^2}{\bar{p}^2} \times \frac{(\bar{N} - \bar{u})}{(\bar{N} - 1)}}{\frac{precision^2}{z^2} + \frac{1}{M-1} \times \frac{SD_B^2}{\bar{p}^2}}$$

Where:

c = number of districts that should be sampled

* Population centres, villages, towns and other definitions for areas where households are located can be included/used as long as it is not considered as urban area, i.e. the CME may opt to sample across population centres, villages, towns and other area definitions instead of districts per se, assuming there is enough and appropriate data to define a population centre, village, town or other definitions for areas where households are located for that monitoring period.

[†] Equation 16, *Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities* (EB69, Annex 5)



M	= total number of districts in the population
\bar{u}	= number of households/ICS to be sampled within each district
\bar{N}	= average number of households with ICS per district
SD_B^2	= Unit variance (variance between districts)
SD_W^2	= average of group variances (average within district variation)
p	= overall proportion
z	=Constant (z-score) referring to the level of confidence (e.g. 1.96 for 95% confidence).
Precision	= Required precision (e.g. 10% = 0.1)

For the parameter $\eta_{new,i}$ the following equation* is applied:

$$c \geq \frac{\left(\frac{SD_B}{Clustermean} \right)^2 \times \frac{M}{M-1} + \frac{1}{\bar{u}} \times \left(\frac{SD_W}{Overallmean} \right)^2 \times \frac{(\bar{N} - \bar{u})}{(\bar{N} - 1)}}{\left(\frac{precision}{z} \right)^2 + \frac{1}{M-1} \times \left(\frac{SD_B}{Clustermean} \right)^2}$$

Where:

c	= number of districts that should be sampled
M	= total number of districts in the population
\bar{u}	= number of households/ICS to be sampled within each district
\bar{N}	= average number of households with ICS per district
SD_B^2	= Unit variance (variance between districts)
SD_W^2	= average of group variances (average within district variation)
Clustermean	= average efficiency of ICS across districts
Overallmean	= average efficiency of all ICS sampled
z	=Constant (z-score) referring to the level of confidence (e.g. 1.96 for 95% confidence).
Precision	= Required precision (e.g. 10% = 0.1)

* Equation 33, *Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities* (EB69, Annex 5)

Given that the same number of stoves will be tested in each district, the weight of each ICS to the clustermean and to the overallmean is the same. Hence the clustermean is equal to the overallmean, i.e. the average of efficiency of ICSs across districts is the same as the average efficiency of all ICSs monitored. The above equation can therefore, be simplified as:

$$c \geq \frac{\left(\frac{SD_B}{mean}\right)^2 \times \frac{M}{M-1} + \frac{1}{\bar{u}} \times \left(\frac{SD_W}{mean}\right)^2 \times \frac{(\bar{N} - \bar{u})}{(\bar{N} - 1)}}{\left(\frac{precision}{z}\right)^2 + \frac{1}{M-1} \times \left(\frac{SD_B}{mean}\right)^2}$$

Where:

Mean = mean thermal efficiency of the monitored ICSs

The CPA Implementers or CME will collect pilot data to determine sample sizes for the first monitoring period. In subsequent monitoring periods, the sample size equations will be updated with the values obtained during monitoring from previous monitoring periods. Since pilot data specific for this given PoA are not available yet, the CME has made certain assumptions to exemplify the sample size calculations for the 3 parameters.

Assumptions for the proportion value, unit variance and average of within district variance (for the parameter $n_{y,j}$), unit variance and average of within district variance (for the parameter SSy) are taken from pilot tests in other ICS PoAs the CME is involved. The DOE by assessing the pilot study parameters and calculations in the submitted excel file (IRL 65) confirms that the assumptions for the aforementioned input values for sample size calculation are appropriate and plausible.

The unit standard deviation and the average of within district standard deviation (for the parameter ICS thermal efficiency) were estimated using an excel simulation of a pilot where 6 districts are selected and 5 ICS are tested in each village for thermal efficiency. Random generators following a normal distribution were used to simulate the pilot. The simulation used a 6.4% standard deviation, which was estimated by multiplying the average coefficient of variation of thermal efficiencies of 5 wood stove models by the 25.66% efficiency of the ICS in the first CPA. The thermal efficiency values and standard deviations to estimate the coefficients of variation of the five stove models were obtained from the document "Partnership for Clean Indoor Air - Test Results of cookstove performance" (IRL 26). The DOE by assessing IRL 26 and verifying the simulation done in the excel file (IRL 65) confirms that the assumptions for unit standard deviation and the average of within district standard deviation (for the parameter ICS thermal efficiency) for the sample size calculation are deemed to be plausible and appropriate. The proportion value for the parameter SSy used for the sample size calculation is the same value as found in the baseline study and has been verified by the DOE through the baseline firewood consumption study report (IRL 92). However, in order to be in line with EB74, Annex 6, paragraph 12, the larger of the two proportions (p and (1-p)) is used in the sample size calculation, thus the value of 0.803 (instead of 0.197) is applied. The mean value for efficiency of the ICS is based on manufacturer's specifications and ICS efficiency test results and has been verified by the DOE through the technical specifications from the TLC rocket stove (IRL 93) and efficiency test report (IRL 24). Further assumptions include the total number of districts in the primary sampling unit which has been confirmed through http://en.wikipedia.org/wiki/Districts_of_Malawi to be the same as the number of districts in Malawi, namely 28. The number of households to be sampled within each district has been assumed by the



CME to be 20 (and in the case of ICS thermal efficiency as 5)* and the average number of households with ICS per district is assumed to be 11,071. The CME envisages that over 7 years of operation, a total of 310,000 ICS will be distributed in 28 districts of Malawi. This gives an average of 11,071 (310,000 ICS divided by 28 districts) ICS per district. These assumptions have been confirmed by the CME in interviews and are deemed to be appropriate by the DOE for the purpose of exemplifying the sample size calculation.

Assuming annual inspection and a 95/10 confidence/precision (since sampling is done across CPAs), results in a sampling size of 10, 12 and 13 districts for the parameters $n_{y,j}$, SS_y and $\eta_{new,i}$ respectively. The sample size calculations have been verified by the DOE through the sample size calculation excel spreadsheet (IRL 21) and were found to be correct.

The CME shall decide the number of ICS to sample within each district and calculate the district sample sizes accordingly to meet the required level of confidence/precision. In case the resulting sample size to achieve the desired confidence/precision level is smaller than 30 ICS for any of the three parameters, then the sample size will be increased to 30 which is in accordance with EB69 Annex 4, Section IV, paragraph 12. The increase will be made in the number of ICS sampled per district.

The CME may choose to use the same districts to monitor more than one parameter. Assuming the aforementioned sampling sizes, from the initial pool of 13 districts where $\eta_{new,i}$ will be sampled, the CME would randomly select 12 districts to sample parameter SS_y . Likewise, from the same pool of 12 districts, the CME will randomly select 10 districts to sample $n_{y,j}$. The DOE accepts this approach since the random selection of districts for every parameter is ensured, as districts are randomly selected.

The criteria in EB69, Annex 05, paragraph 38 (d) have been evaluated and the DOE confirms that the proposed sample sizes (calculated for exemplification) of the three parameters to be sampled are adequate to achieve the minimum confidence/precision requirements. As aforementioned, assumptions like variances, standard deviations, proportions and mean value have been verified by the DOE and are deemed to be plausible and are based on pilot studies from other PoAs in which the CME is involved, literature values and simulation. The sample sizes for the three parameters will be re-calculated for the 1st monitoring period by the CME as soon as PoA specific pilot data are available. In subsequent monitoring periods, the sample sizes will be re-calculated updated with the values obtained during monitoring from previous monitoring periods.

(vi) Field Measurements

The following table summarizes field measurement data requirements:

Parameter	Timing (indicative)	Frequency (required by AMS II.G –Version 3)	Methods to be applied	Comments on seasonal fluctuation
$n_{y,j}$	Monitoring will likely occur every 12 months	No less frequently than every two years	Visits to the premises, visual inspection and in-	Unlikely to be due to any seasonal fluctuation.

* The number of households per district to be sampled was arbitrarily chosen for exemplification purposes only.



			interview with ICS end-user	
SS_y	Monitoring will likely occur every 12 months	No less frequently than every two years	Visits to the premises, visual inspection and interview with ICS end-user.	Unlikely to be due to any seasonal fluctuation.
$\eta_{\text{new},i}$	Monitoring will likely occur every 12 months and will include ICS from all vintages for which emission reductions are to be claimed in that monitoring period.	Annually	Water Boiling Test (WBT) Protocol Version 3.0 (or more recent version at the discretion of the CME).	Not due to any seasonal fluctuation.

(vii) Quality Assurance/Quality Control

The CME will apply measures to ensure that the required confidence/precision for each sampled parameter is met, allowing for non-response and the possible removal of outliers from the sample, as part of a quality control and quality assurance system. Measures may include oversampling, buffer group, draw of additional samples or use of a lower confidence bound (in the case of the parameters $n_{y,j}$ or $\eta_{\text{new},i}$) or upper confidence bound (in the case of the parameter SS_y). More detailed explanations to these measures are provided in B.7.2. of the PoA-DD.

The CME will ensure that field personnel have reviewed, understood and agreed to follow the monitoring procedures, including provisions for maximizing response rates, documenting out-of-population cases, refusals and other sources of non-response. A quality control and assurance strategy will be documented. Quality control and assurance strategies include addressing non-sampling errors, such as non-response or bias from interviewer. The CME or a competent third party designated by the CME with the proper skills will train the monitoring personnel on how to properly survey households to prevent bias from interviewer. In the case a household refuses to participate, another household will be chosen at random. To reduce interviewer bias, good questionnaire design and well-tested questionnaires will be used.

The calculation of the sample size will be carried out using estimates for parameter proportions, mean values, variances and standard deviations, as the actual characteristics of the population/sampling frame are unknown. In order to ensure the quality of the sampling results, the CME can draw on the provisions for reliability calculations including estimating the bounds of the confidence interval, the standard error of the mean value or proportion, and the t-value as derived from the t-distribution.* In the event that the sampling results do not fulfil the required level of confidence and precision, the CME can undertake additional samples. If the reliability is still not

* As provided in EB69, Annex 5, paragraphs 220 to 290



sufficient after raw data and summary statistics are scrutinized and after additional samples have been collected*, the sampling may be repeated with an increased sample size. Alternatively, the CME may choose to apply the lower bound (or higher bound according to the more conservative approach, as for example for the parameter SSy) of the sampling results as is allowed for by the applied methodology, paragraph 28.

As the continued use of ICS and the incidence of baseline stove usage among ICS users are binary parameters, there can be no outliers in the sampled data and no treatment for outliers is required. The sample data for $\eta_{new,i}$ is continuous and therefore the presence of outliers is possible. The following approach will be used to identify and address outliers for the parameter $\eta_{new,i}$.

Because the sample size is by definition 30 or above for the parameter $\eta_{new,i}$, outliers will be defined as those data points with values greater than three standard deviations from the mean of the sample for each vintage. The approach for outliers has been validated by the DOE against 'Applied Statistics in Business and Economics, chapter: Sampling distributions and estimation' by Doane and Seward (IRL 31).

(viii) Data archiving and Analysis

Hard copies of the surveys will be kept and the database will have a back up. Original stove purchase contracts, information collected from the Registration Card or other means of acceptance by the users will be stored in the CME's main office. A back-up of the project database will also be stored on an electric medium by the CME.

Data obtained from the samples will be used to estimate proportions and mean values for the aforementioned sampled parameters. The values will then serve as input for the emissions reduction calculations for the respective groups of CPAs, the primary sampling units. The parameters are applied for emission reduction calculations as outlined in B.6.3 of the PoA-DD. The stoves that are not in use will be excluded from emissions reductions calculations and will not be counted towards the total number of ICS in operation during the monitoring period. The thermal efficiency of ICS ($\eta_{new,i}$) will be used in the calculation of the per stove emission reduction, which will be multiplied by the number of stoves in the CPA to obtain the emission reductions per CPA.

(ix) Implementation plan

Sampling of the aforementioned three parameters will occur at the end of each monitoring period. The maximum length of one monitoring period will be two years (duration, not calendar years), as AMS II.G., version 5, provides the option for annual or biennial monitoring. The CPA implementer will be responsible for managing household data collection and entry into the project database. Field personnel will receive training on how to properly deal with surveying techniques and reduce errors and sign a document certifying that there is no conflict of interest of those involved in data collection and analysis. If there is conflict of interest, the personnel will not be allowed to participate in data collection and analysis. The project database will record the start and end dates of each monitoring period, and record the emission reductions attributable to each monitoring period. Appropriate record keeping procedures will be implemented to ensure that each monitoring period data set can be transparently attributed to its corresponding CPA, preventing any occurrences of double counting. An internal review of the project database will be able to determine the current status of

* As per EB69, Annex 5 paragraphs 258 to 314



each SSC-CPA, the duration of previous monitoring periods, the households delivering monitoring data, and current verification activities. The CME will elaborate a monitoring report for each CPA and submit to the DOE.

The criteria in EB69, Annex 05, paragraph 38 (a), (f) and (g) have been evaluated and the DOE confirms that sufficient provisions are established in order to obtain unbiased, reliable estimates of the variables during data collection/measurement and in order to minimize non-sampling errors. The objective and reliability requirements are complete and are in line with EB74, Annex 06 and the applied methodology AMS-II.G, version 05 and there is no reason to suspect that the sampling results from the activity will be biased. Mechanisms will be established in order to avoid bias in the answers. Personnel to be engaged to conduct sampling will be adequately trained and qualified and the credentials and/or training materials for the sampling personnel can be checked by the verifying DOE at verification stage. Thus, it will be ensured that the evaluation criterion in EB69, Annex 05, paragraph 38 (h) will be complied with. Adequate archiving of the sampling documents will be guaranteed by the CME.

The CME proposes that the DOE implement a verification system, that will verify the amount of reductions of anthropogenic emissions of greenhouse gases achieved by CPAs under the PoA using a sampling approach. The CME proposes the DOE to apply a multi-stage sampling (as per EB69, Annex 5) and to apply the following steps:

Step 1: Determine the primary sampling units from the population of CPAs included during the specified monitoring period according to the sampling frames mentioned earlier in section "sampling frame".

Step 2: Select a sample of districts under CPAs from each primary sampling unit and then a number of households (ICS) for each district that the DOE would like to visit. The number of households and districts to be chosen is at the DOE discretion. Regarding the monitoring of ICS thermal efficiency, the DOE may ask the CME to conduct WBTs in specific households and districts selected by the DOE in advance of the verification or ask the CME or CPA implementer to coordinate this testing and provide the results to the DOE for verification.

Step 3: Determine the sample size of the Standard for sampling and surveys for CDM project activities and PoAs (EB74, Annex 6), Guidelines for Sampling and Surveys for CDM project activities and PoAs (EB69, Annex 5) as well as the procedures outlined in section B.7.2. of the PoA-DD.

The DOE by assessing EB74, Annex 06 and EB 69 Annex 05 (Standard and Guidelines for sampling and surveys for CDM project activities and programme of activities) confirms that the sampling plan is appropriate and plausible and is following the applicable requirements. The DOE used amongst others the recommended evaluation criteria indicated in section V of EB69, Annex 05 for the validation of the sampling plan. The DOE confirms that the evaluation criteria as per Section V of EB69, Annex 5 can be satisfactorily responded when assessing the sampling plan.

Sampling objective, sampling size, sampling target, sampling frame, sampling method, field measurements, QA/QC procedures and implementation plan are deemed to be appropriate and plausible according to the sectoral expertise of the DOE and have been further confirmed and substantiated in on-site interviews with the CME.

3.6.14 Environmental analysis of a PoA

It has been indicated in section B.1. of the PoA-DD that the environmental analysis is undertaken at PoA level. The ICS models distributed through each CPA present similar positive environmental impacts (like e.g. reducing deforestation and indoor air pollution) wherever they are applied and no



anticipated negative impacts. This could be confirmed in interviews with end-users during the DOE's on-site visit. Therefore, a PoA-level environmental analysis is deemed to be most appropriate.

The Letter of No Objection issued by the Environmental Affairs Department Malawi (at the same time DNA of Malawi) states that "the DNA reviewed the PIN and is pleased to issue a Letter of No Objection (LNO) on this project. Due to the nature and scope of the project, the proposed does not require an EIA to be undertaken prior to implementation". The PIN sent was in reference to the POA and not to a CPA, hence the DNA assessment was made on the POA level. The DOE by assessing the Letter of No Objection (IRL 87) and the PIN sent by TLC Malawi to the Environmental Affairs Department Malawi (DNA) (IRL 98) confirms that no EIA is required according to the assessment made by the DNA on the PoA level and the same was confirmed in Annex 1 of the LoA (IRL 103). Hence the DOE concludes that environmental analysis at PoA level is deemed to be appropriate. Furthermore, a letter sent from the CME (CQC) to the DNA of Malawi (IRL 105) confirms that the recommendations (amongst others the preparation of an Environmental Management Plan) made by the CDM Technical Committee for Malawi in Annex 1 of the LoA will be followed by C-Quest Capital. The preparation of an environmental management plan is a recommendation given by the DNA of Malawi and has no compulsory character. The DOE by assessing the letter sent from the CME (CQC) to the DNA of Malawi (IRL 105) confirms that even though an environmental examination or environmental analysis is not a compulsory requirement by the Environmental Affairs Department, Malawi (at the same time DNA of Malawi), the CME will follow the recommendation of the DNA Malawi and prepare an environmental management plan to address negative environmental impacts that the PoA may bring about such as clay mining.

Since PP has considered the EIA at PoA level, Hence the requirement of VVS para 199 has been met.

3.6.15 Local stakeholder consultation

It has been indicated that the local stakeholder consultation is done at the PoA level. The justification of doing local stakeholder consultation at the PoA level has been provided. It is explained that stakeholder comments are invited at PoA level because CPA boundaries are defined primarily by ICS/household location, and may extend across the entire SSC-PoA project area. PPs don't expect significantly different comments from stakeholders across CPAs. The justification is deemed to be appropriate and plausible according to the local and sectoral expertise of the DOE and was confirmed in interviews during the DOE's on-site visit.

A public local stakeholder consultation was held on 24/05/2012 in Lilongwe, Malawi. Stakeholders were invited by the following methods including 1) Two adverts in the 'The Nation' national newspaper published on 08/05/2012 and 15/05/2012; 2) Email invitations on 04/05/2012 to about 100 individuals from NGOs, project developers, private and public sector entities involved with cookstoves and/or energy efficiency, government departments/ministries, donor agencies and embassies; (IRL 53,55,56,57,58).

The assessment team has reviewed the documentation in order to validate the inclusion of relevant stakeholders. The team's local expertise has confirmed that the communication method used to invite the stakeholders is appropriate. The "CDM project approval procedure for Malawi" clarifies the requirements for conducting the stakeholders meeting. The DOE by assessing the procedure (IRL 60) confirms that the local stakeholder consultation was carried out according to the DNA requirements. Besides, it has been clarified in an interview with the focal point of DNA Malawi (Mrs. S. Najira) that PP has to obtain some few feedback comments from end users in rural areas regarding



the programme. According to Mrs. S. Najira, this is however a DNA specific requirement and has been verified by the DNA prior to issuance of the LoA and thus has not to be validated by the DOE.

The summary of comments presented in the PoA-DD has been verified with the documentation of the stakeholder consultation (IRL 54) and has been found to be complete and consistent. Advertisements in the nationally published newspaper 'The Nation' (IRL 57) gave stakeholders from different locations the chance to provide their comments. Furthermore, the DOE by assessing the stakeholder comments in the aforementioned submitted documentation and interviewing stakeholders during the DOE's on-site field visits, confirms that both comments from stakeholders participating in the stakeholder meeting and interviewed stakeholders are quite similar, thus one can expect that those stakeholders who could finally not participate in the stakeholder meeting would not have significantly different comments.

Comments presented by the local stakeholders have been taken into account by the CME and has been verified with information obtained during interviews.

Hence, the local stakeholder consultation has been performed adequately according to the CDM requirements.

As a result, it can be confirmed that the local stakeholder consultation is in accordance with the level of consultation specified by the managing entity and that the local stakeholder comments were taken into account and described in the CDM-PoA-DD and the CDM-CPA-DD (i.e §201 and §202).

3.6.16 Determination of occurrences of debundling under a PoA

The SSC-CPA included in the PoA is not a de-bundled component of another CDM programme activity (CPA) or CDM project activity;

As per EB 54, Annex 13, paragraph 10, the CPA of a PoA is exempted from performing a de-bundling check If each of the independent subsystems/measures (in this specific case ICS) included in the CPA of a PoA is no larger than 1% of the small-scale threshold defined by the methodology. As the energy savings of each of the independent subsystems (ICS) included in the CPA of a PoA is not larger than 1% of the SSC threshold (180 GWh_{th}) defined by General Guidelines to SSC CDM methodologies (EB61, Annex 21) and SSC WG Clarification SSC_233, no debundling check has to be performed. The DOE by assessing the calculation resulting in the annual energy savings of an ICS as % of the SSC threshold (IRL 21) confirms that the energy savings of the independent subsystem (ICS) is by far lower than 1% of the SSC threshold.

Annex 1

List of Findings

List of Findings - Compilation and Resolutions

Project Title: Improved Cookstoves Program for Malawi and cross-border regions of Mozambique - CPA- MAL - 001
Under the PoA: Improved Cookstoves Program for Malawi and cross-border regions of Mozambique



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Definitions contained in the Glossary of CDM terms and applied in the Standard	
Shall / Should / May	In addition to the definitions contained in the Glossary of CDM terms, the following terms apply in the VVS (VVS/10): <u>Shall</u> is used to indicate requirements to be followed; <u>Should</u> is used to indicate that among several possibilities, one course of action is recommended as particularly suitable; <u>May</u> is used to indicate what is permitted.
Credible	Information is credible if it is authentic and is able to inspire belief or trust, and the willingness of persons to accept the quality of evidence. (VVS/17)
Reliable	Information is reliable if the quality of evidence is accurate and credible and able to yield the same results on a repeated basis. (VVS/17)
CAR	The DOE shall raise a corrective action request (CAR) if one of the following situations occurs (VVS/27): (a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable, verifiable and additional emission reductions; (b) The applicable CDM requirements have not been met; (c) There is a risk that emission reductions cannot be monitored or calculated.
CL	The DOE shall raise a clarification request (CL) if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met. (VVS/26)
FAR	The DOE shall raise a forward action request (FAR) during validation to identify issues related to project implementation that require review during the first verification of the project activity. The DOE shall not raise a FAR that relates to the CDM requirements for registration (VVS/27)

Compilation and Resolutions of CARs, CRs and FARs

Corrective Action Requests by the assessment team		
	Comments and Results	Conclusion and IRL
Issue	<u>Applicability criteria according to the methodology AMS II G & eligibility criteria is not transparent in the PoA DD</u>	<input checked="" type="checkbox"/> Findings Closed IRL 27, 28
Requirement	PS para 148	
Corrective Action	<u>Corrective Action Request No.1</u>	

List of Findings - Compilation and Resolutions

Project Title: Improved Cookstoves Program for Malawi and cross-border regions of Mozambique - CPA- MAL - 001
Under the PoA: Improved Cookstoves Program for Malawi and cross-border regions of Mozambique



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Corrective Action Requests by the assessment team		
Request	<p>The PP's explanation regarding compliance with criterion 2 in section B.2. of the CPA-DD (specific) mentions that "...all stoves will be sold/distributed within the boundary of Malawi". Clarification shall be provided why it is referred only to Malawi whereas in other sections of the CPA-DD to Malawi and cross-border regions of Mozambique.</p> <p>2) The PP's explanation regarding compliance with criterion 12 refers to the baseline survey 'as outlined in the PoA-DD'. However, there is no such baseline survey outlined in the PoA-DD. Clarification shall be provided.</p> <p>3) The PP's explanation regarding compliance with criterion 13 refers just to the national NRB study for Malawi however not to the national NRB study for Mozambique. Clarification has to be provided what value for f_{NRB} will be finally chosen since the 2 f_{NRB} values are different.</p> <p>4) The PP's explanation regarding compliance with criterion 6 mentions the check through UNFCCC, Gold Standard (GS) and other voluntary schemes to ensure that the CPA is not included in any other PoA, CDM project activity or voluntary project activity. Clarity has to be provided why this information is provided under criterion 6 since this criterion refers to something different.</p> <p>5) The PP's explanation regarding compliance with criterion 7 mentions "2 other improved stove GS projects operated in the area". The term "operated in the area" has to be specified.</p> <p>6) The PP's explanation regarding compliance with criterion 14 mentions thermal energy savings of ICS distributed under the CPA of approximately 11.1 MWh/y. This figure is not consistent with the 1st CPA ER excel calculation.</p> <p>7) The PP's explanation regarding compliance with criterion 10 lacks the explicit confirmation that no ODA funds will be involved during the lifetime of the CPA.</p> <p>8) The PP's explanation regarding compliance with criterion 1 lacks the confirmation that cookstoves are distributed in/to residential households in rural and peri-urban areas that use wood fuel following the PoA specifications. Respective supporting documentation for the compliance with this criterion has to be submitted to the DOE.</p>	

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Corrective Action Requests by the assessment team		
Response	<p>1) As PP decided to exclude Mozambique for the moment, all mentions of cross-border regions of Mozambique were excluded from the DDs;</p> <p>2) PP response to criterion 12 in the specific CPA-DD was amended to reflect that the data used is from the baseline report which is uploaded together with the POA-DD;</p> <p>3) As PP decided to exclude Mozambique for the moment, the first CPA will be restricted to Malawi and the fNRB data is extracted from the fNRB report amended to the POA-DD. The specific CPA-DD was amended accordingly.</p> <p>4) The eligibility criteria 6 and PP's explanation on compliance with Criteria 6 of Section B.2 of specific CPA-DD was amended to clarify that the CPA does not involve participation of household which were previously using a ICS – be part of a carbon project or not. PP deleted the final paragraph of the compliance explanation, as this pertains to criteria 7.</p> <p>5) Compliance with Criteria 7 of Section B.2 of specific CPA-DD was amended to clarify that the 1 existing registered GS project was found to be in operation in Malawi.</p> <p>6) Compliance with Criteria 14 of Section B.2 of specific CPA-DD was amended to clarify that each ICS saves 0.0071 GWhth/year. This figure is now consistent with the ER calculations.</p> <p>7) Compliance with Criteria 10 of Section B.2 of specific CPA-DD was amended to clarify that the investor letter does confirm no use of ODA funds will be involved during the lifetime of the CPA.</p> <p>8) Compliance with Criterion 1 of Section B.2 of specific CPA-DD was amended to clarify that ICS will only be distributed to rural households and this will be evidenced by the Registration Card, ICT or SMS as well as a self letter from the CME confirming that only rural households will be targeted.</p>	
Assessment Means of validation /	<p>1) This finding became irrelevant since PP decided to exclude Mozambique for the moment from the PoA-DD and eventually from the CPA-DD..</p> <p>2) PP explanation regarding compliance with criterion 12 in section D.2. of the final CPA-DD (specific) makes clear now that the CPA uses data from the household fuel consumption study</p>	

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Corrective Action Requests by the assessment team		
	<p>report (baseline study report) which is uploaded together with the PoA-DD and further described in section B.6.3. of the PoA-DD.</p> <p>3) This finding became irrelevant since PP decided to exclude Mozambique for the moment from the PoA-DD. The 1st CPA will be restricted to rural areas in Malawi and the PP' explanation regarding compliance with criterion 13 makes clear that the 1st CPA will use the fNRB data from the national fNRB report uploaded together with the PoA-DD.</p> <p>4) The information in question has been removed from the PPs' explanation regarding compliance with criterion 6 since it has nothing to do with this criterion. Instead it has been added that CPA-Implementers will train the stove distributor (whether retailers or field stove/technicians) to read out to users that they confirm not having or are using another ICS in their homes. The confirmation from the user is gathered from the registration Card (be through physical, SMS or ICT data format). This additional information is deemed to be appropriate by the DOE and in line with other sections of the DD documents.</p> <p>5) Clarification has been provided in PP explanation regarding compliance with criterion 7 that there is only one operating ICS Gold Standard project located in Malawi. The DOE confirms that the given CPA is however not included in that GS project or in any other carbon project.</p> <p>6) The figure of 'thermal energy savings of ICS distributed under the CPA' is consistent now between PP explanation regarding compliance with criterion 14 in the CPA-DD and ER excel calculation tool.</p> <p>7) PP explanation regarding compliance with criterion 10 mentions explicitly now that investment finance for the 1st CPA comes from the private sector and not from ODA. This has been confirmed through a self-declaration letter (IRL 28).</p> <p>8) PP explanation regarding compliance with criterion 1 confirms now that cookstoves are distributed only to residential households in rural areas. PP decided to remove peri-urban areas from the eligibility criterion. The same has been confirmed by a self-declaration letter issued by the CME (IRL 27).</p>	
Adjustment on pro-	PP has submitted the revised CPA DD	

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Corrective Action Requests by the assessment team		
ject design		

Corrective Action Requests by the assessment team		
	Comments and Results	Conclusion and IRL
Issue	PP shall provide further information regarding the baseline survey	<input checked="" type="checkbox"/> Findings Closed IRL 21, 92, 99
Requirement	PS 156	
Corrective Action Request	<p><u>Corrective Action Request No.2</u></p> <p>1) The (draft) baseline fuel survey results in different figures referring to baseline (second) stove issue than the figures indicated in section B.5.2. of the specific CPA-DD. Therefore, figures referring to baseline (second) stove issue shall be revised in section B.5.2. of the specific CPA-DD in order to be consistent with the baseline fuel survey.</p> <p>2) Some figures in the table “ex-ante ER calculation using baseline date (per stove)” are not consistent with the submitted ER excel file for the 1st CPA like $B_{y,savings}$, ERY. Consistent figures have to be provided between ER excel file and specific CPA-DD. Besides, the data source for f_{NRB} shall be corrected (in both CPA-DDs) since data source is not the baseline study but the f_{NRB} Report.</p> <p>3) The data unit for energy savings per stove in the ER excel file is not correct.</p>	
Response	<p>1) Figures in Section B.5.2 were revised to be consistent with baseline report fo Malawi.</p> <p>2) All data in POA and CPA-DDs were revised to match the data in the ER calculation xls.</p> <p>3) The data unit for energy savings per stove was corrected in the ER excel file.</p> <p>2nd DOE Request:</p>	

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Corrective Action Requests by the assessment team		
	<p>2) Some inconsistencies in the table in question persist. Besides, some data sources like for ICS efficiency and fNRB,y are not consistent with the provided primary data documents.</p> <p>2nd PP response:</p> <p>2) PP revised table “ex-ante ER calculation using baseline date (per stove)” to be consistent with the submitted ER excel file for the 1st CPA.</p> <p>3rd DOE Request:</p> <p>The amendment of the adjustment factor to 1.0471 (instead of previously 1.07) in the ER excel calculation spreadsheet and DD documents resulted in a change of the maximum number of stoves in the 1st CPA. However, the figure has not been consistently changed in the CPA-DD (specific).</p> <p>3rd PP response:</p> <p>The CPA-DD (specific) has been amended to reflect the revised number of maximum stoves per CPA.</p>	
Assessment Means of validation /	<p>1) The DOE by assessing the revised CPA-DDs (as well as PoA-DD) (IRL 99) confirms that the figures referring to baseline (second) stove use are consistent between DD documents and final baseline firewood consumption study (IRL 92).</p> <p>3) The data unit for annual energy savings per stove is correctly indicated as ‘GWhth/stove’ in the revised ER excel calculation spreadsheet (IRL 21).</p> <p>Conclusion (after 2nd DOE Request):</p> <p>The table “ex-ante ER calculation using baseline date (per stove)” in the CPA-DD (specific) is</p>	

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Corrective Action Requests by the assessment team		
	<p>now consistent with the ER excel calculation spreadsheet for the 1st CPA. The same can be confirmed by the DOE by assessing the revised CPA-DD (IRL 99) and the final ER excel calculation spreadsheet (IRL 21). Besides, data sources like for ICS efficiency and fNRB,y are now consistent with the provided primary data documents.</p> <p>Conclusion (after 3rd DOE Request): The DOE by assessing the revised CPA-DD (specific) (IRL 99) confirms that the figure of the maximum number of stoves in the 1st CPA is consistent within the CPA-DD (specific) now as well as consistent with the ER excel calculation spreadsheet (IRL 21) of the 1st CPA.</p>	
Adjustment on project design	PP has submitted the revised CPA-DD.	

Clarification Requests by the assessment team		
	Comments and Results	Conclusion and IRL
Issue	CPA-DD does not contain transparent details of the project boundary.	<input checked="" type="checkbox"/> Findings Closed IRL 15, 99
Requirement	PS 39	
Clarification Request	<p><u>Clarification Request No. 1</u> <u>'Niassa' province is mentioned in section B.4. (generic CPA) however does not make part of the PoA boundary. Clarification shall be provided.</u></p>	
Response	The mention of Niassa was excluded from the generic CPA-DD since it does not make part of the PoA boundary.	

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Clarification Requests by the assessment team		
	<p>2nd DOE Request:</p> <p>The mention of 'Niassa' province has been removed from section B.4. (generic CPA). The DOE by assessing the revised CPA-DD (generic) confirms the same.</p> <p>However, the GPS coordinates are missing in B.4. of the CPA-DDs.</p> <p>2nd PP Responses:</p> <ul style="list-style-type: none"> Specific CPA-DD was amended with the geocoordinates while generic CPA has a field to be completed [ADD MAP AND LONGITUDE AND LATITUDE] 	
Assessment Means of validation /	<p>Conclusion (after 2nd DOE Request):</p> <p>The GPS coordinates of Malawi have been provided in the CPA-DD (specific) and have been found to be consistent with the Google Earth printscreen (IRL 15).</p> <p>Besides, a generic field has been introduced in the CPA-DD (generic) (IRL 99) regarding the GPS coordinates.</p>	
Adjustment on project design	PP has submitted the revised CPA-DD.	

Clarification Requests by the assessment team		
	Comments and Results	Conclusion and IRL
Issue	<u>PP shall provide transparent information against the name of the PP involved in the CPA</u>	<input checked="" type="checkbox"/> Findings Closed
Requirement	<u>PS 70 & 72</u>	

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Clarification Requests by the assessment team		
Clarification Request	<p><u>Clarification Request No. 2</u></p> <p>Annex 1 of the CPA-DD differentiate between Total LandCare Mozambique and Total LandCare with the address of Malawi however as per section A.3. it is not clear whether Total LandCare Mozambique or Total LandCare Malawi is the CPA implementer</p>	IRL 99
Response	<p>PP decided to not include Mozambique for the moment as PPs were not fully prepared to implement the POA in Mozambique, hence PP removed all mentions of cross-border regions of Mozambique including the mention of TLC Mozambique from Annex 1. PP will add Mozambique to the POA once: 1) the baseline study are done, 2) the CPA implementer is ready to implement a CPA, and 3) the CME is granted with a LOA from the Mozambican government. Addition of TLC Mozambique or any other entity which will implement a CPA in Mozambique will only happen once Mozambique is included to the POA (post Registration).</p> <p>TLC Malawi is a PP and will be the CPA implementer for the first CPA.</p>	
Assessment Means of validation /	<p>It has been clarified both in A.6. and Appendix 1 of the final CPA-DD (specific) that the implementer of the 1st CPA will be Total Land Care (TLC) Malawi. The DOE by assessing the revised CPA-DD (specific) (IRL 99) confirms the same.</p> <p>PP decided to remove the host party Republic of Mozambique for the moment from the PoA-DD and the same will be included (post registration) and validated by the DOE once the baseline study and host country LoA are available and a CPA implementer is ready to implement a CPA. Since not all necessary documentation for the host country Republic of Mozambique was available during validation, the DOE deems the PP's decision to exclude the host party Republic of Mozambique from the PoA for the moment as appropriate. The DOE by assessing the revised DD documents (IRL 99) confirms that all mentions of Mozambique including the mention of TLC Mozambique in Appendix 1 have been removed from the DD documents.</p>	
Adjustment on project design	PP has submitted the revised PoA DD.	

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Clarification Requests by the assessment team		

Clarification Requests by the assessment team		
	Comments and Results	Conclusion and IRL
Issue	<u>Eligibility criteria is not transparent in the specific CPA-DD</u>	<input checked="" type="checkbox"/> Findings Closed IRL 99
Requirement	<u>PS 151 & 158</u>	
Clarification Request	<u>Clarification Request No. 3</u> The eligibility criteria in the CPA-DDs (specific and generic) shall follow the CR 4 (PoA List of findings).	
Response	Eligibility criteria in CPA-DDs were revised according to the POA-DD following CR 4 (PoA List of findings).	
Assessment Means of validation /	The DOE by assessing the revised eligibility criteria in the CPA-DDs (IRL 99) confirms that eligibility criteria were revised according to the PoA-DD and following the CR 4 of the PoA Findings list.	
Adjustment on project design	PP has submitted the revised CPA-DD.	

Clarification Requests by the assessment team		
	Comments and Results	Conclusion and IRL
Issue	<u>Monitoring plan shall be further elaborated</u>	<input checked="" type="checkbox"/>

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Clarification Requests by the assessment team		
Requirement	<u>PS 157</u>	Findings Closed IRL 92, 99
Clarification Request	<p><u>Clarification Request No. 4</u></p> <ul style="list-style-type: none"> Regarding the parameter η_{old}: In 'Justification of choice of data or description of measurement methods' no reference is given to paragraph 6, option 2 in both CPA-DDs (generic and specific). In the generic CPA-DD: The formulae of option 2 for calculating $B_{y,savings}$ shall be indicated as generic field since the specific CPA can choose between option 2 or option 3 of the methodology (as per the information provided in the PoA-DD). Regarding the parameter B_{old}: In 'any comment' it is mentioned "see Annex 3 (below) for details of second stove adjustment factor used in baseline calculations for this CPA", however Annex 3 does not provide additional information regarding the baseline fuel survey and 2nd stove issue. Clarification shall be provided. Description shall be consistent between CPA-DD (specific) and CPA-DD (generic). 	
Response	<ul style="list-style-type: none"> Parameter η_{old} on both CPA-DDs was amended to clarify that this parameter refers to paragraph 6, option 2 of the AMS II G (v.03) The generic CPA-DD was amended to reflect the fact that the formulae of option 3 was excluded from the POA and hence from the CPA-DDs. Hence, only option 2 is possible and there is no highlight anymore. Section "any comment" in B.5.1 was amended to provide details of second stove adjustment factor in the section and does not point to Annex 3. Both specific and generic CPA-DDs have been revised and are consistent 	
Assessment Means of validation /	Regarding the parameter η_{old} : Reference to paragraph 6, option 2 has been provided in both CPA-DDs. The DOE by assessing both CPA-DDs (IRL 99) confirms the same.	

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Clarification Requests by the assessment team		
	<p>This finding became irrelevant since PP decided to allow only option 2 (as per paragraph 6 of the applied methodology) for the calculation of $B_{y,savings}$. Hence, all mentions and related information regarding option 3 (as per paragraph 6 of the applied methodology) have been removed. The DOE by assessing the CPA-DDs (IRL 99) confirms the same.</p> <p>1) Regarding section B.5.1., parameter B_{old}, 'any comment' has been revised providing details of the second stove adjustment factor now. The reference to Annex 3 has been removed. The DOE confirms that the provided information is consistent within the DD documents and with the baseline study report (IRL 92).</p> <p>2) The DOE by assessing the revised CPA-DDs (IRL 99) confirms that the CPA-DDs are consistent now.</p>	
Adjustment on project design	PP has submitted the revised CPA DD.	

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Definitions contained in the Glossary of CDM terms and applied in the Standard	
Shall / Should / May	In addition to the definitions contained in the Glossary of CDM terms, the following terms apply in the VVS (VVS/10): <u>Shall</u> is used to indicate requirements to be followed; <u>Should</u> is used to indicate that among several possibilities, one course of action is recommended as particularly suitable; <u>May</u> is used to indicate what is permitted.
Credible	Information is credible if it is authentic and is able to inspire belief or trust, and the willingness of persons to accept the quality of evidence. (VVS/17)
Reliable	Information is reliable if the quality of evidence is accurate and credible and able to yield the same results on a repeated basis. (VVS/17)
CAR	The DOE shall raise a corrective action request (CAR) if one of the following situations occurs (VVS/27): (a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable, verifiable and additional emission reductions; (b) The applicable CDM requirements have not been met; (c) There is a risk that emission reductions cannot be monitored or calculated.
CL	The DOE shall raise a clarification request (CL) if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met. (VVS/26)
FAR	The DOE shall raise a forward action request (FAR) during validation to identify issues related to project implementation that require review during the first verification of the project activity. The DOE shall not raise a FAR that relates to the CDM requirements for registration (VVS/27)

Compilation and Resolutions of CARs, CRs and FARs

Corrective Action Requests by the assessment team		
	Comments and Results	Conclusion and IRL
Issue	<u>Applicability criteria according to the methodology AMS II G is not transparent in the PoA DD</u>	<input checked="" type="checkbox"/> Findings Closed IRL 99
Requirement	PS para 148	
Corrective Action Request	<u>Corrective Action Request No.1</u> The PoA-DD in section E.2. does not mention the applicability criterion as per paragraph 23 of the applied methodology. Paragraph 23 mentions that “the use of this methodology in a project activity under a PoA is legitimate if the...leakages are estimated and accounted for”. PP shall add the criterion regarding leakage in section E.2. of the PoA-DD and explain how it is com-	

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Corrective Action Requests by the assessment team		
	plied with.	
Response	Section E.2 of the POA-DD was amended to include the applicability criterion as per paragraph 23 of the methodology and clarifies that PP opts to use option (c) of paragraph 23, i.e. calculations for emission reductions shall be multiplied by a net to gross adjustment factor of 0.95 to account for leakages and no surveys on leakage are required	
Assessment Means of validation /	The applicability criterion as per paragraph 29 of the applied methodology has been added in section B.2. of the PoA-DD. It has been clarified that option (c) of paragraph 29 of the applied methodology is chosen, i.e. B_{old} is multiplied by a net to gross adjustment factor of 0.95 to account for leakages. Surveys are not required in this case. The DOE by assessing the revised PoA-DD (IRL 99) confirms that the applicability criterion is correctly addressed and that the adjustment factor of 0.95 is correctly considered in the formula for ER calculation.	
Adjustment on project design	PP has submitted the revised PoA DD	

Corrective Action Requests by the assessment team		
	Comments and Results	Conclusion and IRL
Issue	Regarding the information in sub-section "Evidence that the non-renewable biomass has been in use since 1989	<input checked="" type="checkbox"/> Findings Closed IRL 32, 61, 89, 90, 95
Requirement	PS 148	
Corrective Action Request	<p><u>Corrective Action Request No.2</u></p> <p>Regarding the information in sub-section "Evidence that the non-renewable biomass has been in use since 1989 and compliance with paragraph 10 of AMS-II.G" in section E.2. the following shall be clarified:</p> <p>1) As per the provided information in the PoA-DD, it is not clear for the reader how to draw the conclusion that non-renewable biomass has been used since 31 December 1989 (mostly in the</p>	

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Corrective Action Requests by the assessment team		
	<p>case of Mozambique).</p> <p>2) All supporting documentation (indicating the relevant chapters/pages of the data sources used) proving the fact that non-renewable biomass has been used since 1989 shall be submitted to the DOE.</p> <p>3) All supporting documentation (indicating the relevant chapters/pages of the data sources used) shall be submitted to the DOE proving the fact that at least 2 indicators (trends) indicated as per paragraph 10 of the applied methodology are valid both for Malawi and Mozambique.</p> <p>4) The trends indicated in E.2. of the PoA-DD refer mostly to time periods until 1990/1991, however it is not clear what are the more recent development of these trends (after 1991). Furthermore, trends shall be separately indicated both for Malawi and cross-border regions of Mozambique.</p>	
Response	<p>The whole section “Evidence that the non-renewable biomass has been in use since 1989 and compliance with paragraph 10 of AMS-II.G” in section E.2. was revised and all the supporting evidence has been given to the DOE.</p> <p>2nd DOE Request:</p> <p>The document by Brouwer et al (IRL 89) and the description in the PoA-DD do not explain/demonstrate a clear trend for an increase in time spent or distance travelled for gathering fuel-wood by users or a clear trend in the types of cooking fuel collected by users that indicate a scarcity of woody biomass.</p> <p>2nd PP Response:</p> <p>PP removed Brower as a source and switched with a trend that shows increased length of time collecting firewood, which comes from national survey data. Moreover the section was reviewed in depth to add additional trends.</p>	
Assessment Means of validation /	<p>The whole section “Evidence that the non-renewable biomass has been in use since 1989 and compliance with paragraph 17 of AMS-II.G version 05” in section B.2. of the PoA-DD was revised. Hence, the DOE does not respond to each item of the finding separately anymore, but provides an overall assessment whether paragraph 3 and 17 of the applied methodology version 05 are complied with and whether supporting documentation has been submitted to the</p>	

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Corrective Action Requests by the assessment team		
	<p>DOE.</p> <p>The use of non-renewable biomass since 1989 and one of the indicators as per paragraph 10 of the applied methodology is substantiated by publicly available statistical data from FAO that show that carbon stocks are depleting in Malawi. The DOE by assessing the FAO Global Forest Resources Assessment 2010, Global Tables (IRL 90) and country report Malawi (IRL 32) confirm that carbon stocks have been depleting in Malawi from 1973 to 1990 to 2010. These figures together with a very high non-renewable biomass fraction in Malawi (the 3rd party C4EcoSolutions calculated the non-renewable biomass fraction as 0.97 in Malawi (IRL 61) leads to the conclusion that non-renewable biomass has been used in Malawi since 1989. The DOE by assessing the aforementioned documentation confirms that the data mentioned in E.2. of the PoA-DD are consistent with the primary data sources.</p> <p>Assessment regarding Mozambique is not relevant at this stage, since PP decided to exclude Mozambique (for the moment) from the PoA.</p> <p>Conclusion (after 2nd DOE Request):</p> <p>PP decided to remove the reference to Brouwer et al (IRL 89) since the same did not explain/demonstrate a clear trend for an increase in time spent or distance travelled for gathering fuel-wood by users or a clear trend in the types of cooking fuel collected by users that indicate a scarcity of woody biomass.</p> <p>Instead, PP used data from the National Statistical Office of Malawi in order to demonstrate that there is a trend showing an increase in time spent to collect firewood which is in compliance with one of the indicators stated under paragraph 10 of the applied methodology. The DOE by assessing the integrated household survey 2004-2005 report (IRL 95) and integrated household survey 2010-2011 report (IRL 96) confirms that the average time for collection of firewood per person in Malawi increased from 12 minutes/day (in 2004-2005) to 30 minutes/day (in 2010-2011). Hence, the DOE concludes that there is a clear trend for the increase in time spent to collect firewood.</p>	
Adjustment on project design		

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Corrective Action Requests by the assessment team		

Clarification Requests by the assessment team		
	Comments and Results	Conclusion and IRL
Issue	PoA-DD does not contain transparent details of the project activity. Hence transparent explanation along with information is required in the PoA-DD.	<input checked="" type="checkbox"/> Findings Closed IRL 99
Requirement	PS 30	
Clarification Request	<u>Clarification Request No. 1</u> <ul style="list-style-type: none"> The 1st paragraph in section A does not clarify what kind of fuels are meant to be included in the expression 'firewood fuels'. Item 2 of Section A of the PoA-DD refers to "Africa", however, this is not consistent with other section A of the PoA-DD which defines as the project boundary Malawi and the cross-border regions of Mozambique. 	
Response	<ul style="list-style-type: none"> Section A now states that ICS combusts firewood more efficiently, and includes a footnote clarifying that charcoal is not involved in this POA Section A (item 2) now lists Malawi instead of 'Africa' in order to be consistent with programme boundaries identified in A.4., and all other inappropriate references to 'Africa' have been removed from the DDs. Moreover, the PP clarified in the same section through a footnote that at time of validation, the PP wasn't fully prepared to implement the POA in Mozambique, hence PP removed all mentions of cross-border regions of Mozambique and will add Mozambique to the POA once: 1) baseline study is completed, 2) the CPA implementer is ready to implement a CPA, and 3) the CME is granted with a LoA from the Mozambican government. Therefore, this POA-DD will deal exclusively with Malawi and will be revised post registration once the CME, validated by a DOE, includes Mozambique 	

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Clarification Requests by the assessment team		
Assessment Means of validation /	<p>A footnote has been introduced in section A.2. of the PoA-DD making clear that the given PoA exclusively includes wood as fuel for cooking whereas charcoal is not included as cooking fuel. The DOE by assessing the revised PoA-DD (IRL 99) confirms that a respective footnote provided the necessary clarification.</p> <p>The term “Africa” in item 2 of A.2. of the PoA-DD has been replaced by “Malawi” and is thus consistent with section A.4. now. The DOE by assessing the revised PoA-DD (IRL 99) confirms the same.</p> <p>Besides, the PP clarified in section A.2. of the PoA-DD that the host party Republic of Mozambique has been removed for the moment from the PoA-DD and will be included (post registration) and validated by the DOE once the baseline study and host country LoA are available and a CPA implementer is ready to implement a CPA. Since not all necessary documentation for the host country Republic of Mozambique was available during validation, the DOE deems the PP’s decision to exclude the host party Republic of Mozambique from the PoA for the moment as appropriate. The DOE by assessing the revised DD documents¹ (IRL 99) confirms that all mentions of Mozambique (where appropriate) have been removed from the DD documents.</p>	
Adjustment on project design	PP has submitted the revised PoA-DD.	

Clarification Requests by the assessment team		
	Comments and Results	Conclusion and IRL
Issue	Further clarification is requested on project details	<input checked="" type="checkbox"/> Findings Closed
Requirement	<u>PS 44</u>	

¹ The term ‘DD documents’ stands for PoA-DD, CPA-DD (specific) and CPA-DD (generic).

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Clarification Requests by the assessment team		
Clarification Request	<p><u>Clarification Request No. 2</u></p> <p>1) Supporting documentation (like National Energy Policy/documents published by the government/declaration of Malawi and Mozambique) shall be submitted to the validation team proving that there are no mandatory targets or implementation policies for ICS formulated by the governments of Malawi and Mozambique.</p> <p>In the case that there is some kind of government policies for the dissemination of ICS, it has to be demonstrated that these policies do not fall under E-policy as per EB22, Annex 3.</p> <p>2) The 2nd web-link under footnote 4 does not open.</p> <p>3) Section A.4.3. of the PoA-DD does not mention anything regarding items (iii) and (iv) as per the PoA-DD form and whether those items are/are not applicable to the PoA.</p>	IRL 73, 85
Response	<p>1) A copy of the Malawi National Energy Policy (2003) was provided to the DOE. In the document there is no mention of any mandatory targets or implementation policies for ICS. The Malawi Biomass Energy Strategy 2009, page 12, confirms that the National Energy Policy was designed to move energy use away from “traditional biomass” to “modern” sources of energy (electricity, liquid fuels and “renewables”), but there are no mandatory targets or policy regarding the use of ICS. The policy is thus primarily devoted to substituting away from biomass energy. Improving the supply and efficiency of biomass—the largest source of energy in the country - receives only a small portion of attention. During on-site validation the Deputy Director of Energy Affairs Department under the Ministry of Energy of Malawi confirmed to the DOE that there are no mandatory targets or implementation policies for ICS formulated by the government of Malawi.</p> <p>Due to the temporary exclusion of Mozambique of the POA, no supporting evidence is given for Mozambique.</p> <p>2) The footnote has been deleted from this section of the POA-DD and was inserted under Section A.4.3 item 1, where it is more relevant. The link – which was last visited March 23 – was corrected</p> <p>3) Section A.4.3 of the POA-DD has been amended to include items 3 and 4. It was confirmed by the DNA and by the Department of Energy in Malawi that there is no mandatory pol-</p>	

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Clarification Requests by the assessment team		
	icy/regulation in Malawi for the distribution of ICS.	
Assessment Means of validation /	<p>Even though the National Energy Policy (IRL 85) mentions that the government of Malawi ‘will devise promotional strategies aimed at expanding the use of improved ceramic firewood stoves in poor urban households and at reducing the proportion of households using three stone cookstoves to 50% by 2020’, neither mandatory targets nor mandatory implementation policies are in place by the government of Malawi according to this National Energy Policy. This is further confirmed by the Biomass Energy Strategy (IRL 73). The PP correctly states in his answer that the Malawi Biomass Energy Strategy was designed to move energy use away from “traditional biomass” to “modern” sources of energy (electricity, liquid fuels and “renewables”) and that less attention is paid to efficient utilization of woodfuels (by amongst others better stoves). Thus this policy is primarily devoted to substituting away from biomass energy.</p> <p>The fact that there are no mandatory targets or implementation policies for ICS formulated by the government of Malawi has been further substantiated through an interview carried out by the DOE with Mr. Mhango, Lewis (Deputy Director, Energy Department under Ministry of Energy, Malawi) and Mr. Kalowekano, Joseph (Assistant Director, Energy Department, Malawi under Ministry of Energy, Malawi). Both confirmed that there is no such mandatory policy or mandatory targets for the implementation of ICS. The DOE concludes, that E- policy is not applicable and relevant for Malawi.</p> <p>No further assessment has been carried out for the Republic of Mozambique since Mozambique was excluded for the moment from the PoA.</p> <p>2) The weblink under question has been removed from section A.2. however is mentioned in other section. The web-link was accessed by the DOE during the on-site visit and was found to be o.k.</p> <p>3) Items (iii) and (iv) as per the PoA-DD form have been added in section B.1 of the latest PoA-DD and it is clearly mentioned that those 2 items are not applicable since there are no mandatory policies/regulations in Malawi for the distribution of ICS. The same has been validated by the DOE</p>	
Adjustment on project design	PP has submitted the revised PoA DD.	

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Clarification Requests by the assessment team		
	Comments and Results	Conclusion and IRL
Issue	<u>PP shall provide further information against the PP and shall submit the LoA and MoC</u>	<input checked="" type="checkbox"/> Findings Closed IRL 52, 99, 102, 103, 104
Requirement	<u>PS 70 & 72</u>	
Clarification Request	<p><u>Clarification Request No. 3</u></p> <p><u>The host country letters of approval from Malawi and Mozambique shall be submitted to the validation team once available as well as the Modalities of Communication (MoC).</u></p> <p><u>The name of the Party is not indicated for the PP “C-Quest Capital Malaysia Global Stoves Limited (CQC)”.</u></p> <p><u>Annex 1 mentions Total LandCare as organization whereas A.3. indicates Total LandCare (TLC) Malawi. Consistent information shall be provided.</u></p>	
Response	<p>The PoA-DD was amended to include Netherlands as a Party for PP.</p> <p>The following documents have been submitted to the DOE:</p> <ul style="list-style-type: none"> - The host country LOA from the Republic of Malawi (including CME approval) - The Annex-I LOA from the Netherlands - The MoC signed by both project participants. <p>Total LandCare Malawi is the complete name of the entity based in Malawi. This information can be confirmed by Registration and Constitution of the entity provided to the DOE. The POA-DD Annex-I has been amended to correct TLC Malawi.</p>	
Assessment Means of validation /	<p>The name of the Party “Netherlands” has been added in A.3. for the PP “C-Quest Capital Malaysia Global Stoves Limited (CQC)”. The DOE by assessing the revised PoA-DD (IRL 99) confirms the same.</p> <p>The host country LoA (Republic of Malawi) (IRL 103) and Annex-I LoA from the Netherlands (IRL 104) have been submitted to the DOE as well as the MoC (IRL 102). The LoAs authorize</p>	

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Clarification Requests by the assessment team		
	<p>the PPs CQC and TLC Malawi respectively as well as CQC as CME in the PoA. The DOE by assessing the LoAs and MoC confirms that the submitted documents are in line with the requirements.</p> <p>Appendix 1 has been revised indicating now Total LandCare (TLC) Malawi. The DOE by assessing the constitution (IRL 52) of the entity confirms that the name of the entity is consistent with that in the revised DD documents.</p>	
Adjustment on project design	PP has submitted the revised PoA DD.	

Clarification Requests by the assessment team		
	Comments and Results	Conclusion and IRL
Issue	<p><u>Eligibility criteria is not transparent.</u></p> <p><u>De-bundling Criteria is not clear in the PoA DD.</u></p>	<p>☑</p> <p>Findings Closed</p> <p>IRL 38, 86, 99</p>
Requirement	<u>PS 151 & 158</u>	
Clarification Request	<p><u>Clarification Request No. 4</u></p> <p>1) The debundling criterion does not transparently mention that the 60 GWh_{th} refers to 'energy savings per year'.</p> <p>2) Footnote 17 (PoA-DD, version 01) mentions "some of the countries under this PoA are LDCs", however both countries under this PoA (Malawi and Mozambique) are LDCs.</p> <p>3) The same footnote mentions that "if the CPA complies with eligibility criterion 3 (not exceeding 60 GWh_{th}) and is located within an LDC....". The wording is not transparent.</p> <p>4) Eligibility criterion 6 (PoA-DD, version 01) mentions that CPAs must "not involve households already involved in any other CPA or CDM project involving the distribution or installation of ICS". Clarification is necessary why this criterion not also includes ICS from non CDM project</p>	

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Clarification Requests by the assessment team		
	<p>activities, like e.g. ICS distributed through NGO activities or ICS disseminated by government policies etc. Besides, no detailed information in the PoA-DD is provided how it is ensured with the distribution mechanisms involved in the PoA-DD that this eligibility criterion is ensured to be complied with.</p> <p>5) Eligibility criterion 12 (PoA-DD, version 01) mentions that CPAs have to “use data from the household fuel survey of the PoA-DD”, however no reference to a certain section of the PoA-DD is given where these household fuel survey data is further explained.</p> <p><u>6) Eligibility criterion 1 (PoA-DD, version 01) mentions that CPAs will “promote and install/distribute ICS in/to residential households in rural and peri-urban areas....”. It is not clarified how it is verifiable at CPA inclusion that households are really from “rural and peri-urban areas”.</u></p>	
Response	<p>1) PP decided to change from micro-scale to small-scale, as PP wants to maximize the number of ICS under a CPA and hence minimize transaction costs. Therefore the CME updated the eligibility criteria 3 and 14. The small-scale debundling threshold of 1% of 180 GWhth is now referenced on eligibility criteria 14. For additional clarity to the reader, PPs added a footnote to eligibility criteria 14 to clarify that if CPAs meet both criteria (3 and 14), the CPA shall be considered additional as it would have met the de-bundling criterion as well as the criterion of being a SSC POA.</p> <p>2) The footnote in question was deleted from the POA-DD as new guidance of EB68 annex 27 do not differentiate between LDCs and non-LDCs, hence there is no need for this footnote in the POA-DD.</p> <p>3) Footnote in question was deleted as explained in point 2) above.</p> <p>4) Eligibility criterion 6 was amended to clarify that the POA will not involve households already using an ICS - including households involved in any other CPA or CDM or other voluntary scheme (such as Gold Standard, VCS, VER+) involving the distribution or installation of ICS, and households which have purchased or received an ICS on a commercial or non-commercial</p>	

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Clarification Requests by the assessment team	
	<p>basis (eg. NGO distributed or government distributed stoves). A footnote was added to the same criterion to clarify that At time of inclusion the DOE shall confirm that the CPA is using the methods of data collection described in Section A.4.2 of the POA-DD and in the CME manual, to confirm this eligibility criterion.</p> <p>5) Eligibility criterion 12 was amended to clarify that baseline report is uploaded together with the POA-DD and that baseline fuel consumption (B_{old}) data is further described in Section E.6.3 of the POA-DD)</p> <p>6) Eligibility criterion 1 was amended to exclude the use of the term “peri-urban”, which was also excluded from other sections of the POA-DD. The reason for the exclusion is the inexistence of a definition for peri-urban population. This POA, is therefore restricted to rural households and this is in accordance with the baseline study. Rural households are considered all those households which are not located in urban areas. Urban areas in Malawi are defined according to the United Nations Demographic Yearbook as “All townships and town planning areas and all district centres” and this is referenced in the POA-DD in footnote 7 section A.2. of the POA-DD.</p> <p>2nd DOE Request:</p> <p>6) PP indicated that the PoA is restricted to households in rural areas (in line with the baseline study report) and rural households are considered all those households which are not located in urban areas. Urban areas again are defined (according to the United Nations Demographic Yearbook (IRL 86)) as all townships, town planning areas and all district areas. Clarity shall be provided according to which criteria townships, town planning areas and district areas are defined. Does e.g. exist a publicly available list for all those townships, town planning and district areas?</p> <p>2nd PP responses:</p> <p>6) PP revised the footnote in Section A.2. In order to increase clarity, the CME defined rural</p>

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Clarification Requests by the assessment team		
	<p>communities as areas outside of urban boundaries of towns, townships, district centres and cities of population greater than 4765 – the lowest population number found in the classification “cities, towns, villages” as per the website (http://www.citypopulation.de/Malawi.html (last visited on 14/12/2012). Rural areas are characterized by lack of infrastructure such as shops, hospitals, good roads. Therefore, only households residing in areas outside of the urban areas as described here will be considered rural households and therefore targeted and eligible for CERs under this SSC-PoA</p>	
Assessment Means of validation /	<p>1) PP decided to change from the micro-scale approach (mentioned in the GSP-PoA-DD) to the small scale approach and the programme applies paragraph 2(c) of EB 68 Annex 27 “Guidelines on the Demonstration of Additionality of Small-Scale Project Activities” version 09.0. The DOE by assessing the revised PoA-DD (IRL 99) confirms that eligibility criterion 3 now refers to 180 GWh_{th}/year which is in accordance with the SSC threshold for type II projects as per EB61, Annex 21, paragraph 3 and clarification by the SSC working group (SSC_233). Besides, the DOE confirms by assessing the revised PoA-DD (IRL 99) that the footnote for criteria 3 was deleted and instead a footnote for criteria 14 was added which refers to the “Guidelines on the demonstration of additionality of small-scale project activities” (version 09), (EB68 Annex 27). According to the footnote it becomes clear that the CPA is considered additional if the ICS distributed under this CPA complies with the debundling criterion, i.e. the annual every savings of an ICS do not exceed 1% of the SSC threshold (equivalent to 1800 MWh_{th} per year) and if the CPA complies with eligibility criterion 3, i.e. qualifies as a SSC CPA. The reference to ‘energy savings per year’ is correctly indicated.</p> <p>2) Footnote in question was removed from the POA-DD since the same is not relevant anymore. EB68 Annex 27 “Guidelines on the Demonstration of Additionality of Small-Scale Project Activities” version 09.0 (which is applied now) does not differentiate between LDCs and non-LDCs.</p> <p>3) Footnote in question was removed from the POA-DD since the same is not relevant anymore. EB68 Annex 27 “Guidelines on the Demonstration of Additionality of Small-Scale Project Activities” version 09.0 (which is applied now) does not differentiate between LDCs and non-LDCs.</p> <p>4) Eligibility criterion 6 was revised excluding now households from a CPA not only if this</p>	

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Clarification Requests by the assessment team		
	<p>household makes part of another CDM or voluntary scheme project but as well if the household is already using an ICS which was purchased or received through a NGO or the government. Besides, section A.4.2. of the revised PoA-DD informs about the means of collecting end-users' information. Furthermore it is informed in the same section that the CPA implementer must ensure that the user is aware of his/her participation in the PoA, assign the carbon rights to the CME and affirm that he/she is a household, the ICS is replacing a traditional inefficient three-stone fire or traditional pot support and that the user previously did not own an ICS. This can be achieved by instructing the CPA implementer's sales/field or retailer team members to read out the required information to users (i.e. that user previously did not own an ICS and transfer of carbon rights) and if possible have users sign the registration card or the CPA implementer sales/field or retailer team members can sign the paper ascertaining that they have read out the clauses. In this instance, CPA implementers shall tick a box next this clause once end-user acknowledges it. When SMS is used, this clause can be written on the instruction for the user on how to submit the information to the CPA implementer. By sending the SMS, users are acknowledging that it is voluntarily participating in the SSC-PoA, that the ICS is replacing a three-stone fire or traditional pot support (i.e. did not previously use an ICS) and that they agree to transfer the carbon rights to the CME. The CME manual including a template of the registration card and the information about user's acknowledgement of carbon right transfer, voluntary participation in the PoA and previous use of traditional inefficient three-stone fire or traditional pot support (i.e. not using an ICS) has been checked by the DOE (IRL 38). The DOE concludes that appropriate mechanisms are in place to be able to verify the compliance of eligibility criterion 6.</p> <p>5) Eligibility criterion 12 was revised and refers now to the baseline study report (which is uploaded together with the PoA-DD) and to section B of the PoA-DD with a further description of baseline fuel consumption (B_{old}) data.</p> <p>Conclusion (after 2nd DOE Request):</p> <p>An explanation has been provided now in section A.2. of the PoA-DD how 'rural areas' are defined. Rural areas are defined as rural communities outside of urban boundaries of towns, townships, district centres and cities of population greater than 4,765. 4,765 is the lowest population number found in the classification 'cities, towns, villages' as per the website</p>	

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Clarification Requests by the assessment team		
	http://www.citypopulation.de/Malawi.html (access on 15/12/2012). The DOE by assessing the aforementioned website confirms that the number of 4,765 can be considered as a threshold for an urban agglomeration and everything below this figure is considered as rural area. The definition of rural area is deemed to be appropriate by the DOE.	
Adjustment on project design	PP has submitted the revised PoA-DD.	

Clarification Requests by the assessment team		
	Comments and Results	Conclusion and IRL
Issue	<u>Sampling shall be further elaborated and clarified.</u>	<input checked="" type="checkbox"/> Findings Closed
Requirement	<u>PS 156</u>	
Clarification Request	<u>Clarification Request No. 5</u> 1) Clarity shall be provided whether option (i) or (ii) as per section A.4.4.2. (PoA-DD form) is applied. In the case of option (i) the proposed statistically sound sampling method/procedure to be used by DOEs for verification of the amount of ERs achieved by CPAs under the PoA has to be described. If the CME opts for a verification method that does not use sampling but verifies each CPA, a transparent system has to be defined and described that ensures that no double accounting occurs and that the status of verification can be determined anytime for each CPA. 2) <u>A.4.4.2. (PoA, version 01) states that “a minimum of 90/10 confidence/precision sampling criteria, unless....”. The wording is not correct since 90/10 is not the minimum but the choice of the confidence/precision depends on the monitoring frequency, i.e. biennial or annually</u>	
Response	1) Section A.4.4.2 of the POA-DD was amended and now clearly states that the CME proposes that “the DOE implement a verification system that will verify a sample of CPAs from the population of CPAs in the PoA (option (i) above)”. 2) Section A.4.4.2 was amended to propose a multi-stage sampling approach and a step “de-	

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Clarification Requests by the assessment team		
	sign sample size” was added to clarify the proposed procedure for determining the sample size (and confidence levels as necessary)	
Assessment Means of validation /	<p>1) Clarity has been provided by PP response and in section B.2 of the revised PoA-DD that CME opts for option (i) to be applied by the DOE. A multi-stage sampling has been proposed to the DOE combining cluster and simple random sampling approaches in a two-stage sampling scheme. It has been further clarified that the CME is proposing the DOE to determine primary sampling units from the population of CPAs included during the specified monitoring period. Then a sample of districts from each primary sampling unit and then a number of households for each district that the DOE would like to visit is randomly taken. The number of households and districts to be chosen is at the DOE discretion.</p> <p>In order to determine the sample size for field/on-site check, the DOE specifies in advance (using its own professional judgement) the acceptable quality level or the level of assurance and the proportion of discrepancies between the PP sample record and DOE sample record that are unacceptable following EB74, Annex 6. Besides, the DOE may use where appropriate the Guidelines for sampling and surveys for CDM project activities and PoAs (EB69, Annex 5) along with the procedures outlined in section B of the PoA-DD to determine the sample size.</p> <p>It has been further clarified in the revised PoA-DD that for parameters SS_y and $n_{y,j}$, primary sampling units are CPAs which have same CPA Implementer and same ICS model. Primary sampling units for the parameter $n_{new,i}$ are comprised of ICS which have the same model and same ICS vintage.</p> <p>2) The DOE confirms that PoA-DD has been completely revised and the information in question has been removed. Instead a multi-stage sampling approach and a step “design sample size” was (amongst others) added to clarify the proposed procedure for the DOE for determining the sample size. The procedure follows EB74, Annex 6, thus is in line with UNFCCC requirements.</p>	
Adjustment on project design	PP has submitted the revised PoA DD.	

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Clarification Requests by the assessment team		
	Comments and Results	Conclusion and IRL
Issue	<u>PP shall submit the document regarding EIA</u>	<input checked="" type="checkbox"/> Findings Closed IRL 87, 98, 103, 105
Requirement	<u>PS 169</u>	
Clarification Request	<p><u>Clarification Request No. 6</u></p> <p>1) Declarations from the environmental authorities of each country participating in the PoA (Malawi and Mozambique) shall be submitted confirming that there are no host country requirements for EIA, environmental examination or environmental analysis for ICS projects. C.3. of the PoA-DD shall be revised accordingly.</p> <p><u>2) The use of the term 'technologies' in C.1. and other sections of the PoA-DD is not clear. Even though the PoA allows different ICS models, the implementation of ICS is understood as one single technology.</u></p>	
Response	<p>1) The letter of no objection published by the acting Director of Environmental Affairs Department & CDM DNA for Malawi on 21st June 2012 for this POA, clearly states that "Due to the nature and scope of the project, the proposed does not require an Environmental Impact Assessment to be undertaken prior to implementation". Section C.3. of the POA-DD was revised accordingly.</p> <p>2) The POA and CPA-DDs were amended to replace "technology" with "ICS models", so it is clear that the POA is focused exclusively on ICS.</p> <p>2nd DOE Request:</p> <p>1) Ms. S. Najira from the DNA Malawi (at the same time Environmental Affairs Department) confirmed during the on-site interview with the DOE that a 'no objection letter' will be issued by the Environmental Affairs Department once the programme has been analyzed. This 'letter of no objection' has been submitted to the DOE in the meantime (IRL 87). The letter mentions that an EIA is not required prior to implementation however it is not clear whether this refers to the PoA (programme) or to the 1st CPA. Besides, it is also not clarified whether there is any other environmental requirement like e.g. environmental license, environmental analysis etc.</p>	

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Clarification Requests by the assessment team		
	<p>2nd PP Response:</p> <p>1) The Letter of non objection from the DNA states that "the DNA reviewed the PIN and is pleased to issue a Letter of No Objection (LNO) on this project. Due to the nature and scope of the project, the proposed does not require an EIA to be undertaken prior to implementation". The PIN sent was in reference to the POA and not to a CPA, hence the DNA assessment was made on the POA level. The PIN was provided to the DOE.</p> <p>No additional environmental examination or environmental analysis were required by the DNA or other environmental departments of Malawi.</p> <p>Additionally, the CDM Technical Committee for Malawi reviewed the Programme and recommended that PPs prepare an Environmental Management Plan indicating how the POA intends to address negative environmental impacts that it may create, such as clay mining. The CME confirmed in writing that it will develop and present to the DNA an Environmental Management Plan.</p>	
Assessment Means of validation /	<p>2) The term 'technologies' in C.1. and other sections of the PoA-DD (where applicable) has been replaced by ICS models. The DOE confirms that it is more appropriate to use the term 'ICS models' than 'technologies' since (even though different ICS models are allowed under the PoA) ICS is considered as one single technology.</p> <p>Conclusion (after 2nd DOE Request):</p> <p>1) The DOE by assessing the Letter of No Objection (IRL 87) and the PIN sent by TLC Malawi to the Environmental Affairs Department Malawi (DNA) (IRL 98) confirms that no EIA is required according to the assessment made by the DNA on the PoA level and the same was confirmed in Annex 1 of the LoA (IRL 103). Hence the DOE concludes that environmental analysis at PoA level is deemed to be appropriate. Furthermore, a letter sent from the CME (CQC) to the DNA of Malawi (IRL 105) confirms that the recommendations (amongst others the preparation of an Environmental Management Plan) made by the CDM Technical Committee for Malawi in Annex 1 of the LoA will be followed by C-Quest Capital. The preparation of an environmental management plan is a recommendation given by the DNA of Malawi and has no compulsory character. The DOE by assessing the letter sent from the CME (CQC) to the DNA of Malawi (IRL 105) confirms that even though an environmental examination or environmental analysis is not a compulsory requirement by the Environmental Affairs Department, Malawi (at</p>	

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Clarification Requests by the assessment team		
	the same time DNA of Malawi), the CME will follow the recommendation of the DNA Malawi and prepare an environmental management plan to address negative environmental impacts that the PoA may bring about such as clay mining.	
Adjustment on project design	PP has submitted the revised PoA DD.	

Clarification Requests by the assessment team		
	Comments and Results	Conclusion and IRL
Issue	<u>PP shall provide documents regarding the stake holder consultation</u>	<input checked="" type="checkbox"/> Findings Closed IRL 53,54,55,57,58,59,99
Requirement	<u>PS 170</u>	
Clarification Request	<u>Clarification Request No. 7</u> All relevant information regarding stakeholder process in Malawi and Mozambique (like stakeholder consultation report including stakeholder comments, attendance list, invitations to stakeholders, media used) shall be submitted to the DOE. Clarification shall be provided why in section D.1. of the PoA-DD it is mentioned that PPs undertook four PoA level stakeholder consultations, one in each country, since only 2 countries are involved in the PoA.	
Response	Section D of the POA-DD was amended to provide details of the stakeholder consultation in Malawi. The supporting documents (invitations, methods of invitation, agenda, list of participants, power point, and comments from participants) were provided to the DOE. As clarified in PP response on CR2 above, PP decided to exclude Mozambique from the POA until post registration when PP plan to include it. Section D was amended to provide clarification and details on the stakeholder consultation in Malawi on 24 th May 2012.	
Assessment	Relevant information regarding stakeholder consultation process (meeting) in Malawi (like agenda of stakeholder consultation meeting (IRL 53), list of invitees for meeting (IRL 56), Email	

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Clarification Requests by the assessment team		
Means of validation /	<p>invitations to stakeholders (IRL 55), newspaper advertisements in the national newspaper 'The Nation' (IRL 57), questions raised by stakeholders and answers provided by TLC (PP and responsible entity for carrying out the stakeholder meeting) and evaluation forms (IRL 54), power point presentation during the stakeholder consultation meeting (RL 59) and participants list of the stakeholder meeting (IRL 58)) have been submitted to the DOE and the documents were verified by the DOE. The DOE found the presented documents as appropriate to demonstrate that relevant stakeholders have been invited for comments. The advertisements published in the national newspaper 'The Nation'² gave stakeholders all across the country Malawi the possibility to participate in the stakeholder consultation meeting.</p> <p>Furthermore, the DOE by interviewing several end-users during the on-site visit confirms that comments given by the end-users were exclusively positive and no negative comments were given.</p> <p>Assessment of the information regarding stakeholder process in Mozambique is not relevant at this stage, since PP decided to exclude Mozambique (for the moment) from the PoA.</p> <p>Correction has been carried out in section F.1. of the Final PoA-DD mentioning now that PP undertook one PoA level stakeholder consultations in Malawi. The DOE by assessing the revised PoA-DD (IRL 99) confirms the same.</p>	
Adjustment on project design	PP has submitted the revised PoA DD.	

Clarification Requests by the assessment team		
	Comments and Results	Conclusion and IRL
Issue	<u>PP shall provide further information regarding the baseline survey</u>	<input checked="" type="checkbox"/>

² 'The Nation' is one of the national newspapers in Malawi as it was validated through <http://www.abyznewslinks.com/malaw.htm>.

List of Findings - Compilation and Resolutions

Project Title: Improved Cookstoves Program for Malawi and cross-border regions of Mozambique



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Clarification Requests by the assessment team		
Requirement	<u>PS 156</u>	Findings Closed IRL 92, 100
Clarification Request	<p><u>Clarification Request No. 8</u></p> <p><u>The baseline fuel survey report(s) (which have not been completely finalized yet during the on-site visit) shall be submitted to the DOE. Supporting documentation (in particular excel calculation sheet for multiple stove use) shall be submitted together with the baseline fuel survey reports. If the finalized baseline fuel survey reports result in a different firewood consumption than the one mentioned in the DD-documents, revision of B_{old} and all related information (like maximum number of stoves) is necessary in the DD documents.</u></p>	
Response	<p>The final baseline fuel report for Malawi was delivered to the DOE together with the supporting documentation. B_{old} was amended throughout the DDs accordingly.</p> <p>2nd DOE Request:</p> <p>The final baseline firewood consumption study (survey) report (IRL 92) for Malawi including Excel spreadsheet for the calculation of the mean number and adjustment factor of second (baseline) stoves (IRL 97) have been submitted to the DOE. The following is not clear or not correct:</p> <ul style="list-style-type: none"> -Page 4 mentions that “the sampling strategy was designed in such a way as to be representative of any different climatic, firewood supply and economic aspects....” however climatic and economic aspects have not been considered in the determination of clusters; the only criterion applied was firewood supply and consumption in different regions; hence the information is inconsistent within the baseline study. Besides, clarity shall be provided whether the consideration of climatic and economic aspects could result in a different definition of clusters than the one determined in the baseline study report; -the baseline study report does not provide any explanation how ‘rural areas’ (where sampling took place) have been defined; -the maps indicated in the baseline study report do not provide a sufficiently transparent overview about the wood availability situation and the differences between North/Central/South regions in Malawi. -the baseline study report mentions that “the mean baseline fuel consumption for Malawi as a whole can be presented as per Table 3.6.” and that “Table 3.6. presents the confidence intervals and margins of error, showing....precision requirements”, however Table 3.6. does not 	

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Clarification Requests by the assessment team		
	<p>provide such information; -Figure 4 does not refer to Malawi, but to Mozambique.</p> <p>2nd PP Responses:</p> <p>The PP has worked with the HED Consultants to review the Baseline study and a revised version has been provided to the DOE with specific answers to the findings.</p>	
Assessment Means of validation /	<p>Conclusion (after 2nd DOE Request):</p> <p>-The 3rd party baseline study report clarifies now that climatic impacts were considered but disregarded for the purpose of clustering since no significant difference regarding climatic conditions (like e.g. precipitation) was found across the country and no evidence was found that climatic conditions (like precipitation) could affect biomass consumption in Malawi.</p> <p>Regarding economic aspects it has been clarified in the baseline study report that although some patterns of poverty may be discerned from regional data, these were not strong, though do corroborate the conclusions of the wood-fuel supply and consumption and the formation of two clusters (Northern/Central regions of Malawi and Southern region of Malawi).</p> <p>The DOE by assessing the revised baseline study report (IRL 92) confirms that the finally provided information is consistent within the baseline study report and it is clear how climatic and economic aspects have been considered.</p> <p>-an explanation has been provided now in the baseline study report how 'rural areas' are defined. Rural areas are defined as rural communities outside of urban boundaries of towns, townships, district centres and cities of population greater than 4,765. 4,765 is the lowest population number found in the classification 'cities, towns, villages' as per the website http://www.citypopulation.de/Malawi.html (access on 15/12/2012). The DOE by assessing the aforementioned website confirms that the number of 4,765 can be considered as a threshold for an urban agglomeration and everything below this figure is considered as rural area. The definition of rural area is deemed to be appropriate by the DOE.</p> <p>-An additional data source from the Worldbank (IRL 100) has been provided in the baseline study report which corroborates the information provided through the maps. It becomes clear through the presented documentation that there is a greater supply of wood fuel in the Northern</p>	

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Clarification Requests by the assessment team		
	<p>and Central regions compared to the Southern regions of Malawi.</p> <p>-the reference to Table 3.6. was wrong and was revised to Table 3.5. Table 3.5. indicates the national mean firewood consumption adjusted for seasonal changes and patterns of multiple stove use including confidence intervals, precision and standard error.</p> <p>-Figure 4 has been removed since it referred to Mozambique (instead of Malawi).</p>	
Adjustment on project design	PP has submitted the revised PoA DD.	

Clarification Requests by the assessment team		
	Comments and Results	Conclusion and IRL
Issue	<u>Calculation formula is not clear</u>	<input checked="" type="checkbox"/> Findings Closed IRL 66, 88, 99, 101
Requirement	<u>PS 198</u>	
Clarification Request	<p><u>Clarification Request No. 9</u></p> <p>The formula regarding the calculation of maximum ICS per CPA in section E.5.1. (and section A.4.2.) of the PoA-DD just considers option 2 of paragraph 6 in the applied methodology when calculating $B_{y,savings}$ however not option 3 of the same paragraph in the applied methodology. Clarification shall be provided (as well in the CPA-DD generic).</p> <p><u>Besides, the factor “277777.7777778 kWh/TJ” in the formula is not explained.</u></p> <p>Project participants shall submit evidence (as per paragraph 12 of the applied methodology) that the trends identified in E.2. of the PoA-DD are not occurring due to the enforcement of local/national regulations in each of the countries.</p>	
Response	Section E.6.2 of the POA-DD was amended to clarify that PP will not be using Option 3 (as per paragraph 6 of the methodology) anymore, as this option involves the use of CCTs. The section “Calculating $B_{y,savings}$ ” under E.6.2. clarifies that PP will only be using option 2 as per para-	

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Project Title: Improved Cookstoves Program for Malawi and cross-border regions of Mozambique



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Clarification Requests by the assessment team		
	<p>graph 6.</p> <p>The conversion factor of 277777.7777778 kWh/TJ was amended in formula in Section A.4.2 to 0.277777GWh/TJ, which is the conversion factor for KWh to TJ – i.e. 1TJ equates to 277777.777777778 KWh. A footnote was added to equation in A.4.2.</p> <p>The whole section in reference to the enforcement of local/national regulations in section E.2. was revised and all the supporting evidence has been given to the DOE</p>	
Assessment Means of validation /	<p>Section B.6.2. of the PoA-DD (as well as CPA-DDs) were revised excluding now the possibility of using option 3 (as per paragraph 12 of the methodology). $B_{y,savings}$ are exclusively calculated by applying option 2 as per paragraph 12. The DOE by assessing the revised DD-documents (IRL 99) confirms that the DD documents have been revised excluding option 3 as an alternative for the calculation of $B_{y,savings}$.</p> <p>Section A.1 Part II of the Final PoA-DD was amended indicating now the conversion factor as 0.277777 GWh/TJ and a footnote was added explaining that it is the conversion factor from TJ to GWh.</p> <p>Although the national forest policy of Malawi from 1996 was established for the development, conservation, protection, management and sustainable use of forest and tree resources in the country, forest area continues to decrease permanently in Malawi according to FAO data (IRL 90). This evidences the lack of enforcement of the existing regulation. Some of the reasons for this lack of enforcement are explained in IRL 88 by the lack of budgetary resources that can facilitate the effective control, management, protection and utilisation. IRL 88 mentions that 'the low budgetary allocations by government to the Forestry Department has meant that there is little investment in forest management taking place in the plantations and consequently the rate of harvesting far exceeds that of replanting. The result is a clear deterioration of Malawi's forest estate'. A further reason mentioned in IRL 88 is the lack of human resource capacity. IRL 66 further mentions that 'some arms of the government do not take forest management regulations seriously and do not enforce laws regarding the reserve. People committing illegal, forest related offences are not punished appropriately and as such, there is little deterrent to other would-be offenders'. The non-enforcement of forestry laws is further confirmed in IRL 101.</p>	

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Clarification Requests by the assessment team		
	<p>Therefore the DOE concludes, that it cannot be expected that the trends identified are occurring due to the enforcement of local/national regulations, but rather due to the result of deforestation. Hence, paragraph 19 of the applied methodology version 05 is complied with.</p> <p>Assessment regarding Mozambique is not relevant at this stage, since PP decided to exclude Mozambique (for the moment) from the PoA.</p>	
Adjustment on project design	PP has submitted the revised PoA DD.	

Clarification Requests by the assessment team		
	Comments and Results	Conclusion and IRL
Issue	<u>Monitoring plan shall be further elaborated</u>	<input checked="" type="checkbox"/> Findings Closed IRL 48, 91
Requirement	<u>PS 157</u>	
Clarification Request	<p><u>Clarification Request No. 10</u></p> <ul style="list-style-type: none"> Regarding the parameter n_{old}: Supporting documentation shall be submitted that proves that the replaced systems in Malawi and Mozambique consist predominantly of 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. Regarding the parameter SSy: The description of measurement methods mentions that a survey will be conducted asking households if they use a second (baseline) stove at least one per week. However, no information is provided how the objectivity can be ensured by asking households verbally. Besides, it is not clear why a less frequent use than once per week will not be counted as ongoing baseline stove use. Clarification has to be provided. 	
Response	Page 19 of "GoM. (2003) Malawi's Climate Technology Transfer and Needs Assessment. Environmental Affairs Department, Ministry of Natural Resources and Environmental Affairs, Gov-	

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Clarification Requests by the assessment team		
	<p>ernment of Malawi” confirms that “The low efficiency 3-stone fire stove is the dominant firewood end-use systems for cooking”. POA-DD was amended to exclude the mention of Mozambique.</p> <p>The monitoring surveyor will visit the household and ask a direct and objective question to the household whether they use a second (baseline) stove at least once per week. The reason why the question is designed this way is because rural households in Malawi can think of per week basis and not on a daily basis. So you get a more precise answer if you ask if people use their baseline stove more than once a week instead if you try to reduce the time limit to one day – which people can’t really remember how many days they used. Hence the question on a per week basis will provide the most accurate result. The PPs as explained in section A.4.4.1 and E.7.2 will also conduct a visual inspection during the survey to confirm the existence of the second stove.</p> <p>The use of a baseline stove less frequently than once per week is statistically negligible. Supporting evidence (a two page document together with an excel spreadsheet) has been provided to the DOE.</p>	
Assessment Means of validation /	<p>The report on Malawi’s climate technology transfer and needs assessment issued by the environmental affairs department (Ministry for natural resources and environmental affairs) (IRL 48) confirms that the low efficiency 3-stone fire stove is the dominant firewood end use system for cooking in Malawi. The predominant use of 3-stone fire was further confirmed by the DOE when visiting several households in rural areas during the on-site visit. Thus, it is confirmed that the traditional cooking systems in Malawi have no improved combustion air supply or flue gas ventilation system, i.e. are without a grate or a chimney and the application of a default value of 0.10 for the replaced system (as per paragraph 12, option 2 of the applied methodology version 05) is justified.</p> <p>Assessment regarding Mozambique is not relevant at this stage, since PP decided to exclude Mozambique (for the moment) from the PoA.</p>	

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Clarification Requests by the assessment team		
	<p>PP clarified that households will be asked in a direct and objective way whether they use a second (baseline) stove at least once per week. It has been also clarified that the question is designed in this way in order to get a more precise answer than asking the household about the use of the second stove on a daily basis. The answer given by the PP is deemed to be plausible by the DOE and thus accepted.</p> <p>HED Consulting, the entity responsible for the baseline wood fuel consumption study, submitted an additional explanation (IRL 91), demonstrating that a less frequent use than once per week of the baseline stove is statistically negligible. The DOE by assessing the additional explanation (IRL 91) confirms that the calculated impact in the baseline would be a decrease of 0.19% if considering the maximum next possible frequency of one meal per 2 weeks (weekly wise cooking cycles can be considered as appropriate since cooks tend to relate behaviours to repeated events on a weekly (or longer) basis), hence is statistically not significant in view of the accuracy of measurement of other parameters measured in the baseline. The same is confirmed by the 3rd party HED Consulting in their explanation.</p>	
Adjustment on project design	PP has submitted the revised PoA DD.	

Clarification Requests by the assessment team		
	Comments and Results	Conclusion and IRL
Issue	<u>Monitoring plan and sampling plan need to be further elaborated with sufficient documentary evidences</u>	<input checked="" type="checkbox"/> Findings Closed IRL 82, 99
Requirement	<u>PS 156 & 157</u>	
Clarification Request	<p><u>Clarification Request No. 11</u></p> <p>Regarding the section E.7.2. the following shall be clarified/considered/revised:</p> <ol style="list-style-type: none"> 1) Information regarding the sampling of the parameter SC_{new} is completely missing. 2) In 'Field measurement objectives and data to be collected': SSy is mixed up with 	

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Clarification Requests by the assessment team		
	<p>number of stoves in operation.</p> <ol style="list-style-type: none"> 3) In some instances the 'i' in $\eta_{new,i}$ is missing in E.7.2. 4) Lori Seward (co-author of reference mentioned in IRL 82) and Sr. Instructor, M&E University of Colorado at Boulder) sent on 11/04/2012 an Email confirming the appropriateness of the approach on sample size for stove efficiency, amongst others to choose an initial random sample of ten ICS per strata. Clarification has to be provided how the initial random sample of only "three ICS per stratum" is appropriate. 5) The flow chart in E.7.2. mentions under item 5 the CME. Clarification has to be provided why the CME is also mentioned again in a box to the left of box with item 5. 6) In "sampling objective": It is mentioned that "the objective of sampling the ongoing use of stoves is to determine the percentage of stoves that are still in use at a level of confidence/precision that meets EB65, Annex 2 requirements". The reference to paragraph 22 of the applied methodology is missing. 	
Response	<p>Section E.7.2 was fully revised to use the multi-stage sampling approach and follow the latest guidance from EB69, Annex 4. With regards to the specific finding:</p> <ol style="list-style-type: none"> 1) PP clarified that will not be using option (3) of paragraph 6 of AMS.II.G., hence all mentions of SCnew were deleted from POA-DD 2) A table and a paragraph of explanation was added to the POA-DD under section "Field Measurements" which clearly defines the methods applied for monitoring of the three parameters. 3) Section E.7.2 was revised and "i" was added to the efficiency of the new stoves 4) The revised text on Section E.7.2. refers to EB69 Annexes 4 and 5 and use a minimum sample of 30 (as per paragraph 12 EB69 Annex 4) 5) Flowchart in Section E.7.2 was amended and now excludes the mention of the CME in the last box 6) A revised section "(i) Objective and Reliability Requirements:" clarifies that confidence/precision requirements follow guidance of paragraph 20 of EB 69 Annex 4 and of Methodology AMS-II.G version 03 paragraph 22. 	

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Clarification Requests by the assessment team		
Assessment Means of validation /	<p>The sampling plan was fully revised following the latest sampling standard/guidelines as per EB 74 Annex 6 & EB69, Annex 5. Besides, PP decided to completely revise section B.7.2 in order to provide the reader, DOE and CPA implementers additional clarity on the procedures as well as apply the most suitable method of sampling (multi-stage sampling). Besides, the use of Appendix 3 of EB65 Annex 2 as the recommended outline for a sampling plan has been applied in the revised monitoring plan. The DOE validated the revised sampling plan against EB69, Annex 4 and 5 and the same was found to be appropriate.</p> <p>With regards to the specific findings:</p> <ol style="list-style-type: none"> 1) This finding became irrelevant since PP decided not to use option 3 (as per paragraph 12 of the applied methodology version 05) for calculating $B_{y,savings}$. Hence, all mentions of SC_{new} were deleted from the DD documents. 2) Like most other sections of the sampling plan, the section 'field measurements' has been revised in general. A table and a paragraph of explanation were added explaining the variables to be measured including timing, frequency and methods of the measurements. The revised information is found to be appropriate by the DOE and in line with the requirements. 3) The DOE by assessing the revised section B.7.2. (and other sections of the DD documents) (IRL 99) confirms that all mentions of the parameter title 'ICS efficiency' include the "i" now. 4) Sample sizes for the three parameters (ICS in operation, SSy and ICS efficiency) are calculated as per Appendix A of EB69, Annex 05 now (following the multi-stage sampling method), hence the finding became irrelevant. Besides, PP applies for each parameter a minimum sample size of 30 (as per EB74, Annex 06). The DOE by assessing the revised sample size calculation confirms that the calculation is in line with the best practice examples for sample size calculations (as per Appendix A of EB69, Annex 05). 5) Flowchart has been revised excluding now 'CME' in the box which is to the left of the box with item 5. This is deemed to be appropriate by the DOE. 6) The revised section 'Objective and reliability requirements' clarifies now that guidance of EB 74 Annex 6 and of methodology AMS-II.G version 05 paragraph 28 is followed. EB65, Annex 2 (referred to in the finding) was replaced by EB74, Annex 6 in the meantime. 	
Adjustment on project design		

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Clarification Requests by the assessment team		

Clarification Requests by the assessment team		
	Comments and Results	Conclusion and IRL
Issue	<u>PP shall provide documents regarding the vintage of the stoves</u>	<input checked="" type="checkbox"/> Findings Closed IRL 99
Requirement	<u>PS 156</u>	
Clarification Request	<u>Clarification Request No. 12</u> PP shall explain that during the sampling plan for parameter $n_{y,i}$ (Number of stoves still in operation during the monitoring period), why the vintage of the stoves are not taken into account determining the Primary Sampling Unit.	
Response	<p>This was an error and vintage has therefore now been included in the sampling plan as a requirement to be considered when determining PSUs. The main changes to the sampling plan were in the sampling frame, the text of which is now as follows:</p> <p>1) Sampling frame for proportion of ICS still in operation ($n_{y,i}$) and percentage of continued baseline stove use among ICS households in the database (SS_y)</p> <p>The POA is open to different CPA Implementers and different models of ICS, of different vintages which introduces variability to the target population. To account for these differences, the first step is to identify homogeneous populations among the ICS population contained in the Database. In specific, homogeneous populations are CPAs which have:</p> <ol style="list-style-type: none"> 1. The same CPA Implementer 2. The same ICS model 3. The same vintage <p>ie. CPAs with the same CPA Implementer, same ICS model and same vintage can therefore</p>	

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Clarification Requests by the assessment team		
	be grouped together and form a Primary Sampling Unit. In the event the POA has CPAs with two different CPA Implementers using the same ICS model and vintage, these will form two distinct populations, or two different Primary Sampling Units. Same is true if the same CPA Implementer has two different ICS models being implemented in the same vintage – this will form two Primary Sampling Units. Finally, two primary sampling units will be formed by ICS from two different vintages and all other factors (ICS model and CPA Implementer) remaining equal.	
Assessment Means of validation /	PP ha submitted the revised DDs and the explanation given by PP is found satisfactory, the audit team has cross-checked the information and has wrote the validation opinion in section 3.6 of the validation report. Hence this CL is closed out.	
Adjustment on pro- ject design	PP has submitted the revised DDs.	

Annex 2

Information Reference List

Project title: Improved Cookstoves Program for Malawi and cross-border regions of Mozambique

Interviewed Persons during onsite assessment on 28/05/2012 to 07/06/2012:

Name	Function	Company
Mr. Ferreira, Eduardo	Operation manager	C-Quest Capital
Mr. Bunderson, Trent	Executive Director	Total LandCare Malawi
Mr. Sefas, Clayton	Field Coordinator	TotalLandcare Malawi
Mr. MacDonald, Banda	Reforestation& Irrigations specialist	TotalLandcare Malawi
Mr. Makhambera, Thomas	Deputy Director	Forestry Department, Malawi
Mr. Mhango Lewis B.	Deputy Director	Energy Department, Malawi
Mr. Kalowekano Joseph	Assistant Director	Energy Department, Malawi
Mrs. Najira Shamiso	Desk officer for CDM	Chief Environmental Officer, Environmental Affairs Department (DNA), Malawi

Other Interviewed Persons (not during onsite assessment):

Name	Function	Institution/Company	Date of Interview
Not applicable			

Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date(dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
0.	C-Quest Capital	GSP PoA-DD “Improved Cookstoves Program for Malawi and cross-border regions of Mozambique”, version 1 GSP CPA-DD (specific case) “Improved Cookstoves Program for Malawi and cross-border regions of Mozambique – CPA – MAL - 001”, version 1 GSP CPA (generic) “Improved Cookstoves Program for Malawi and cross-border regions of Mozambique – CPA – MAL - XXX” http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/8VJM0QG XO3L9ILYI45FEC06NV17J4X/view.html	28/04/2012	
1.	UNFCCC	Procedures for registration of a PoA as a single CDM project activity and issuance of certified emission reductions for a PoA	EB55, Annex 38	
2.	UNFCCC	Approved Small Scale Methodology AMS.II.G. ver. 03, “Energy efficiency improvement projects” Approved Small Scale Methodology AMS.II.G. ver. 05, “Energy efficiency improvement projects”	EB60 EB 70 Annex 30	
3.	UNFCCC	Clarifications regarding the “Procedures for registration of a PoA as a single CDM project activity and issuance of CERs for a PoA”.	EB60, Annex 26	
4.	UNFCCC	Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, version 02.0	EB70, Annex 5	
5.	UNFCCC	Standard for the sampling and surveys for CDM project activities and programme of activities, version 03.0	EB69, Annex 4	Sampling
6.	UNFCCC	Guidelines for demonstrating additionality of microscale project activities, version 03	EB63, Annex 23	
7.	UNFCCC	SSC WG in Clarification SSC_233 “Clarification on the threshold of	November 2008	

Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date(dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
		thermal energy savings”		
8.	UNFCCC	Best practices examples focusing on sample and reliability calculations, version 01.0	EB67, Annex 6	
9.	UNFCCC	Guidelines on assessment of debundling for SSC project activities (version 13)	EB 54, Annex 13	
10.	UNFCCC	List of LDC countries http://unfccc.int/cooperation_and_support/ldc/items/3097.php	Access on 01/05/2012	
11.	ECO-ZOOM	Technical Sheet ECO ZOOM Zoom Dura indicating thermal efficiencies 27% without skirt, 38% with skirt	Without date	
12.	ECO-ZOOM	Information Sheet ECO ZOOM Zoom Dura	Without date	
13.	Google Earth	Print-screen, GPS coordinates, Zambezia province, Mozambique	Without date	
14.	Google Earth	Print-screen, GPS coordinates, Tete province, Mozambique	Without date	
15.	Google Earth	Print-screen, GPS coordinates, Malawi	Without date	
16.	C-Quest	Tentative implementation schedule for PoA (for the first 10 of 28 years)		
17.	C-Quest Total LandCare	Exclusivity agreement between C-Quest and Total LandCare	07/03/2012	
18.	William J. Martin II, Roger I. Glass and others	A major environmental cause of death, in: SCIENCE, Volume 334	14/10/2011	

Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date(dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
19.	FAO	http://www.fao.org/docrep/004/ab585e/AB585E04.htm	Access on 03/05/2012	
20.	HED Consulting	Interviewer Field Guide: Baseline Fuel assessment Study developed by HED Consulting	December 2011	
21.	C-Quest Capital	Emission reduction calculation excel spreadsheet and sampling calculation for the 1 st CPA	28/04/2012 (1 st version) 09/12/2012 (version 02, final version)	Emission reduction calculation
22.	Aprovecho Research Center	Water Boiling Tests in laboratory of Ecozoom Dura ICS	03/05/2011 12/05/2012	
23.	C-Quest Capital	Self-declaration letter signed by the CME confirming that no public funding from Annex I parties to the United Nations Framework Convention on Climate Change (UNFCCC) are envisaged to be made available for the proposed PoA "Improved Cookstoves Program for Malawi and cross-border regions of Mozambique" or any CPA under the proposed PoA. The declaration states further, that if public funding from Annex I parties is provided, the CME shall confirm (prior to inclusion of the CPA) that the funding is not a diversion of ODA.	30/11/2012	
24.	Aprovecho Research Center	WBT 4.1.2 Testing report of the 16 brick TLC Rocket Stove with Pot skirt, grate and stick shelf	27/06/2012	
25.	C-Quest Capital	Improved Cook Stoves Monitoring Training Manual	October 2012	
26.	Aprovecho Research Center Shell Foundation	Partnership for Clean Indoor Air: Test Results of Cook Stove Performance	November 2011	

Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date(dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
	United States Environmental Protection Agency			
27.	C-Quest Capital	<p>Self declaration letter issued and signed by the CME (C-Quest Capital) regarding 1st CPA including information about</p> <ul style="list-style-type: none"> -promotion, installation of affordable ICS to individual rural households on a commercial or non-commercial basis in Malawi -starting date of the 1st CPA (01/02/2013) or the date of first installation of ICS whichever is later -installation mechanism (installation through CPA implementer's field team) -methods for collection of end-users' and stove related information through physical registration card, Information Communication Technology (ICT) or SMS -provisions by the CME and CPA implementer to ascertain the carbon right transfer from users (households) to the CME and affirmation that the household was not previously using an ICS -CPA is not a part of any other registered PoA or CDM project; -CME approval for 1st CPA inclusion and for CPA implementer (Total Land Care (TLC) Malawi) -confirmation by the CME that only new ICS will be installed under the PoA, hence guaranteeing that no ICS can be transferred from outside to any of the CPAs of this PoA and be part of the database. <p>Besides, the declaration further confirms that</p> <ul style="list-style-type: none"> -the PoA is a voluntary action 	30/11/2012	

Information Reference List	Validation of CDM Project	Page 6 of 16	 South Asia
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Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date(dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
		-C-Quest Capital Malaysia Global Stoves Limited is a wholly (100%) owned subsidiary of C-Quest Capital LLC and will act as the CME of the PoA		
28.	C-Quest Capital	Self declaration letter signed by CME (C-quest Capital) confirming that the PoA and 1 st CPA do not use ODA funds and that the majority of the current investment in the PoA and 1 st CPA is from 2 private investors	30/11/2012	CONFIDENTIAL
29.	NA (confidentiality)	Two letters from major investors (Submitted to DOE for review) regarding the programme “Improved Cook Stoves Program for Malawi and cross-border regions of Mozambique”	Without date [submitted in May 2012]	CONFIDENTIAL
30.	University of Malawi (P. Kambewa and L. Chiwaula)	Biomass energy use in Malawi	October 2010	Indicates that “up to 98% of the households use biomass in the form of firewood (91%) and charcoal (7%) for cooking”.
31.	Doane and Seward	Applied Statistics in Business and Economics, chapters: Sampling distributions and estimation and Descriptive statistics	2011	
32.	FAO, Forestry Department	Global Forest Resources Assessment, Country report, Malawi 2010	2010	
33.	Human Ecology 32, A. Biran, J. Abbot and R.	Families and firewood: A comparative analysis of the costs and benefits of children in firewood collection and use in two rural communities in Sub-Saharan Africa	2004	

Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date(dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
	Mace			
34.	World Health Organisation	World Health Report	2002	
35.	C-Quest Capital	Short CV of key personnel from C-Quest Capital	Without date	
36.	HED Consulting	Data entry guidelines	January 2012	Guide for entering data from questionnaires into an Excel spreadsheet
37.	EcoZoom	Lifetime of EcoZoom "Fast Fire" stove is expected to be up to 5 years as per the manufacturer	20/02/2012	
38.	C-Quest Capital	CME manual	18/10/2012 (version 1) 07/12/2012 (version 2)	
39.	ELSEVIER (C.A. Cuvilas, R.Jirjis, C. Lucas)	Energy situation in Mozambique: A review	02/02/2010	
40.	GTZ (ProBEC)	http://www.probec.org/displaysection.php?czacc=&zSelectedSectionID=sec1192750452 http://www.probec.org/displaysection.php?czacc=&zSelectedSectionID=sec1194855430	Accessed on 26/02/2012	
41.	IPCC	IPCC 1996 Guidelines indicating a CO ₂ emission factor for the biomass fuel of 109.6 tCO ₂ /TJ	1996	
42.	UNFCCC	Guidelines for sampling and surveys for CDM project activities and PoAs	EB69, Annex 5	Sampling


Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date(dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
43.	Environmental Affairs department, Malawi	National Environment Policy Malawi	June 2004	
44.	GS (GS 613)	Integrated Biomass energy conservation project-Malawi	4 th September 2009	
45.	Maps (C Quest)	Maps of Tete and Zambezia	No date	
46.	Rob Bailis (Household energy and health programme, Shell foundation)	Controlled cooking test (CCT)	August 2004	
47.	Ministry of Natural Resources (Government of Malawi)	National forest policy of Malawi	01/1996	
48.	Environmental affairs department Ministry for natural resources and environmental affairs, Malawi	Report on Malawi's Climate technology transfer and needs assessment	March 2003	
49.	Stockholm Environment Institute	A household energy economic analysis Model for the Market introduction of Bio-Ethanol cooking stoves in Ethiopia, Tanzania and Mozambique	2011	

Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date(dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
50.	Helder Chambal (Trade knowledge network)	Energy security in Mozambique (Series on Trade and energy security-Policy report 3)	2010	
51.	MICOA	Synthesis of the available information about the adverse effect of the climate change in Mozambique	March 2004	
52.	TLC	Constitution of the registered trustees of Total Land Care Malawi	No date	
53.	Total Land Care and C Quest Capital	Agenda of local Stakeholders consultation meeting	24 May 2012	
54.	Total Land Care and C Quest Capital	Question and answers during the cook stove Stakeholders meeting and evaluation forms	24 May 2012	
55.	Total Land Care and C Quest Capital	Email invitations to TLC-CQC stakeholder Consultation meeting on improved Cook stoves	04 May 2012	
56.	Total Land Care and C Quest Capital	List of invitees for stakeholder consultation meeting on 24/05/2012	No date	
57.	Total Land Care and C Quest Capital	Radio and Newspaper announcement (in 'The Nation' on 08/05/2012, 15/05/2012) regarding stakeholder Consultation meeting on improved Cook stoves	08/05/2012 and 15/05/2012	
58.	Total Land Care and C Quest Capital	List of participants regarding stakeholder consultation meeting on 24/05/2012.	24 May 2012	
59.	Total Land Care and C Quest Capital	Power Point Presentation regarding stakeholder Consultation meeting on improved Cook stoves	24 May 2012	
60.	Environmental affairs department,	Clean development mechanism project approval procedure for Malawi	No date	

Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date(dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
	Malawi			
61.	C4 EcoSolutions	Improved Cooking stove programme (Malawi): Report for the calculation of the national non-renewable biomass fraction (f_{NRB})	March 2012	NRB Malawi CONFIDENTIAL
62.	C4 EcoSolutions	Additional references and clarifications to the f_{NRB} report, Malawi including explanations regarding the differences between default value (as per EB67, Annex 22) and value calculated by the 3 rd party (C4 EcoSolutions)	May 2012 and June 2012	CONFIDENTIAL
63.	C4 EcoSolutions	NRB calculation excel spreadsheet Malawi	Submitted during onsite audit	CONFIDENTIAL
64.	UNFCCC	Default values of fraction of non-renewable biomass for least developed countries and small island developing states	11 May 2012	EB 67, Annex 22
65.	C-Quest Capital	Pilot study parameters and simulation, excel file	Submitted in December 2012	
66.	David Nangoma and Everhart Nangoma	Climate change and adaptation strategies: a case study of the Mulanje mountain forest reserve and its surroundings, Malawi	No date	
67.	C4 EcoSolutions	Additional references and clarifications to the f_{NRB} report, Mozambique	June 2012	CONFIDENTIAL
68.	C4 EcoSolutions	Improved Cooking stove programme (Mozambique): Calculation of the National non-renewable biomass fraction (f_{NRB})	April 2012	CONFIDENTIAL
69.	C4 EcoSolutions	NRB calculations Mozambique (Excel sheet)	No date	CONFIDENTIAL
70.	Forestry Department (FAO)	Global Forest Resources assessment 2010, country report, Mozambique	2010	
71.	National Statistical Office of Malawi	Malawi household census and energy info http://www.nso.malawi.net/index.php?option=com_content&view=article&i	2008	As per the information given in

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Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date(dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
		d=107%3A2008-population-and-housing-census-results&catid=8&Itemid=6 [Accessed on 07/06/2012]		this document 87.6% of households use firewood and 7.9% use charcoal for cooking.
72.	Lisa Feldmann and Agnes Klingshirn	Good prospects for clay stoves in Malawi – impact assessment shows benefits	2009	
73.	Government of Malawi	Malawi Biomass Energy Strategy	January 2009	
74.	Leo Charles zulu	The forbidden fuel: Charcoal, urban woodfuel demand and supply dynamic, community forest management and woodfuel policy in Malawi	30 th March 2010	
75.	Marie-Louise Barry, Herman Steyn and Alan Brent	Selection of renewable energy technologies for Africa: Eight case studies in Rwanda, Tanzania and Malawi	11 th April 2011	
76.	Gideon Nyirongo (Director Energy Affairs)	Financing Sustainable electrification, Africa Dialogues	April 13-15, 2010	
77.	Sushenjit Bandyopadhyay, Priya Shyamsundar and Alessandro Baccini	Forests biomass use and poverty in Malawi	September 2, 2011	
78.	Edited by Ralf Kwaschik	Proceedings of the “Conference on charcoal and communities in Africa”	16-18 June 2008	

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Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date(dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
	(Coordinator, Global non-timber forest products (NTFP) partnership and International network for Bamboo and Rattan (INBAR)			
79.	Peta_jane spong and Bryony Walmsley	EIA Country report, Malawi	No date	
80.	Ministry of Forestry, Fisheries and environmental affairs	Environmental Impact Assessment Guidelines http://www.sdn.org.mw/enviro/eia/foreword.html [accessed on 07/06/2012]	No date	
81.	John Hatton, Steven Telford and Hartmut Krugmann	EIA Country report, Mozambique	No date	
82.	Lori Seward (co-author of reference mentioned in IRL 33 and Sr. Instructor, M&E University of Colorado at Boulder)	Emails sent to SVA	25/02/2012 and 11/04/2012	Sampling

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Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date(dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
83.	UN-REDD Programme	UNDP UN Collaborative programme on reducing emissions from deforestation	09/2010-08/2013 (Start and end date of UNDP programme)	
84.	Website	The water boiling test (WBT) protocol, version 3.0 and 4.1.2 http://www.pciaonline.org/node/1048 [accessed on 30/11/2012]	No date	
85.	Government of Republic of Malawi	National Energy Policy for Malawi	01/2003	
86.	United Nations	Demographic Yearbook 2011 http://unstats.un.org/unsd/demographic/products/dyb/dyb2011.htm [accessed on 30/11/2012]	2011	
87.	Environmental Affairs Department, Malawi	Letter of No Objection, ICS Programme for Malawi and cross-border regions of Mozambique	21/06/2012	
88.	Luhanga, J.	Malawi, The timber trade, South Africa Resource Watch	29/05/2009	
89.	Brouwer, I.D. et al.	When households run out of fuel: responses of rural households to decreasing fuelwood availability, Ntcheu District, Central Region of Malawi	1997	
90.	FAO	Global Forest Resources Assessment 2010, Global Tables http://www.fao.org/forestry/fra/fra2010/en/ [accessed on 07/06/2012]	2010	
91.	HED Consulting Ltd.	Explanation demonstrating that a less frequent use than once per week of the baseline stove is statistically negligible	03/12/2012	
92.	HED Consulting Ltd.	Baseline firewood consumption study (survey) report	11/12/2012	Final version CONFIDENTIAL

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Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date(dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
		001", version 08 dated 16/10/2013 <ul style="list-style-type: none"> PoA-DD "Improved Cookstoves Program for Malawi and cross-border regions of Mozambique", version 09 dated 08/03/2014 CPA-DD (specific case) "Improved Cookstoves Program for Malawi and cross-border regions of Mozambique – CPA – MAL - 001", version 09 dated 08/03/2014 	08/03/2014	
100.	Worldbank Republic of Malawi	Malawi poverty and vulnerability assessment investing in our future	06/2006	
101.	Bright Sibale Gracian Banda	A study on livelihoods, governance and illegality: Law enforcement, illegality and the forest dependent poor in Malawi	13/05/2004	
102.	C-Quest Capital TLC Malawi	Modalities of Communication	Submitted to DOE on 22/12/2013	
103.	Environmental Affairs Department, Malawi (DNA of Malawi)	Host Country Letter of Approval, Republic of Malawi authorizing the participation of C-Quest Capital Malaysia Global Stoves Limited (CQC) and Total LandCare (TLC) Malawi as PPs in the PoA and authorizing C-Quest Capital Malaysia Global Stoves Limited as CME in the PoA.	25/01/2013	
104.	Netherlands' Ministry of Infrastructure and the Environment (DNA of the Netherlands)	Letter of Approval, Netherlands authorizing the participation of C-Quest Capital Malaysia Global Stoves Limited as a PP in the PoA	11/12/2012	
105.	C-Quest Capital	Letter from C-Quest Capital to the DNA of Malawi confirming that the recommendations made by the CDM Technical Committee for Malawi will	Submitted to DOE on 25/01/2013	

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Ref. No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date(dd/mm/yyyy)	Additional Information (Relevance in CDM Context)
		be followed by C-Quest Capital.		



South Asia

Annex 3

Appointment Certificates



South Asia

CERTIFICATE OF APPOINTMENT

Mr. TEKCHANDANI, Praveen fulfills the requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd to participate in audits.

Qualification applicable to					
Standard	CDM	GS	VCS	VER	Other
Date	04.12.12				

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date		04.12.12	04.12.12	04.12.12		13.1

Other qualification						
Country Expertise						
Region	1	2	3	4	5	Other
Date	04.12.12					
Further countries						
Financial Expertise						
Date						

Qualification in technical areas	
Technical Area	Date
13.1_Waste handling and disposal	04.12.12

This appointment is valid until 31.05.2014 and is bound by internal requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd.

In case of loss of validity of this certificate as per result of an assessment according to internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference no. CB-IND-CCP-0043/003.

Date	Signature
01.03.2013	
01.03.2014	



South Asia

CERTIFICATE OF APPOINTMENT

Mr. Agarwal, Nikunj fulfills the requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd to participate in audits.

Qualification applicable to					
Standard	CDM	GS	VCS	VER	Other
Date	23.11.12				

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date		23.11.12	23.11.12			1.2, 3.1, 13.1, 13.2, 15.2

Other qualification						
Country Expertise						
Region	1	2	3	4	5	Other
Date	23.11.12					
Further countries						
Financial Expertise						
Date	23.11.12					

Qualification in technical areas	
Technical Area	Date
1.2_Energy generation from renewable energy source	23.11.12
3.1_Energy demand	23.11.12
13.1_Waste handling and disposal	23.11.12
13.2_15.2_Animal waste management	23.11.12

This appointment is valid until 31.05.2014 and is bound by internal requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd.

In case of loss of validity of this certificate as per result of an assessment according to internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference no. CB-IND-CCP-0001/004.

Date	Signature
01.08.2013	
01.03.2014	



South Asia

CERTIFICATE OF APPOINTMENT

Mr. Sharma, Shivraj fulfills the requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd to participate in audits.

Qualification applicable to					
Standard	CDM	GS	VCS	VER	Other
Date	28.12.12				

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date		28.12.12	28.12.12	28.12.12	28.12.12	1.2, 3.1, 13.1

Other qualification						
Country Expertise						
Region	1	2	3	4	5	Other
Date	28.12.12					
Further countries						
Financial Expertise						
Date						

Qualification in technical areas	
Technical Area	Date
1.2_Energy generation from renewable energy source	28.12.12
3.1_Energy demand	28.12.12
13.1_Waste handling and disposal	01.03.13

This appointment is valid until 31.05.2014 and is bound by internal requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd.

In case of loss of validity of this certificate as per result of an assessment according to internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference no. CB-IND-CCP-0060/004.

Date	Signature
01.03.2013	
01.03.2014	