South Asia

Choose certainty.
Add value.

# Validation Report

## VALIDATION OF THE CDM-PROJECT: IMPROVED COOK STOVE PROJECT 1, NKHATA BAY DISTRICT, MALAWI

REPORT NO. 600501166

**7th Oct 2014**

TÜV SÜD South Asia Pvt. Ltd.
Environmental Technology
Carbon Management Service
Solitaire, I.T.I. Road, Aundh
Pune- 411007
INDIA

| Date of first issue of this report | Revision No. of this report |
|---|---|
| 10/11/2013 | 03 |
| **Project Participant(contractor):**<br>The Sigma Global Company Pty Ltd<br>PO Box 117<br>Bondi, NSW<br>Australia - 2026 | **Project Site(s):**<br>Mwaya Beach, Nkhata Bay District<br>The coordinates of this location are:<br>11°58'55.06"S 34°4'46.44"E<br>The geographical extents of the project area are approximately:<br>North: 11°31'49"S 34°16'2"E<br>East: 11°39'55"S 34°19'38"E<br>South: 12°14'57"S 33°59'41"E<br>West: 12°4 4'2"S 33°46'35"E<br>**Host Country:**<br>Malawi |
| **Applied Methodology / Version:** AMS-II.G / Version 05 | **Scope(s):** 3, 0<br>**Technical Area(s):** 3.1 |
| **First PDD Version (GSP):**<br>PDD version date: 14/05/2013<br>Version No.: 01<br>Starting Date of GSP 15/06/2013 | **Final PDD version:**<br>PDD version date: 15/09/2014<br>Version No.: 1.6 |

## VALIDATION OPINION

TÜV SÜD has performed a validation of the aforementioned CDM project activity.

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

The review of the project 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 project meets all relevant UNFCCC requirements for the CDM if the underlying assumptions do not change. TÜV SÜD recommends the project for registration by the CDM Executive Board.

An analysis, as provided by the applied methodology, demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are additional to any that would occur in the absence of the project activity. Considering that the project will be implemented as designed, the project is likely to achieve the estimated amount of annual emission reductions of 32,672 $tCO_2e$ and a total estimated of 326,715 $tCO_2e$ as specified within the final PDD version for the crediting period. The List of Findings describes total of (31) findings which include: *Sixteen (16)* Corrective Action Requests (CARs); *Fifteen (15)* Clarification Requests (CRs); No Forward Action Requests (FAR) was raised during this validation; and all findings have been closed satisfactorily.

The validation has been performed following the requirements (§143 - §146, VVS) of the latest version of the CDM VVS, PS, other EB requirements 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, 07/10/2014

(Eswar Murty)
Member
Certification Body “Environment and Energy”
TÜV SÜD South Asia

## Abbreviations

| | |
|---|---|
| **AM** | Approved Methodology |
| **AMS** | Approved Methodology Small scale |
| **BM** | Build Margin |
| **CAR** | Corrective Action Request |
| **CB** | Certification Body |
| **CDM** | Clean Development Mechanism |
| **CDM EB** | CDM Executive Board |
| **CER** | Certified Emission Reduction |
| **CM** | Combined Margin |
| **CMP** | Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol |
| **CL** | 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 |
| **PDD** | Project 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 |

## Table of Contents

**Page**

# 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 a proposed project activity against the applicable CDM requirements. The assessment involves the evaluation whether the proposed project activity complies with the requirements of paragraph 37 of the CDM M&Ps, the applicability conditions of the selected methodology and any applicable guidance issued by the Board. Validation is part of the CDM project cycle and results in a conclusion by the executing DOE on whether or not a project activity is valid to be submitted for registration to the CDM Executive Board (CDM-EB). The ultimate decision on the registration of a proposed project activity 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 project activities, 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 Project Design Document (CDM-PDD) and the Proposed New Baseline and Monitoring Methodology (CDM-NM)
- 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 CDM project activity
- 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 for the project participant (PP). However, stated requests for clarifications, corrective actions, and/or forward actions may provide input for improvement of the project design.

Once TÜV SÜD receives the PDD, 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 participants is assessed by applying the means of validation specified in the "Clean Development Mechanism Validation And Verification Standard" and where appropriate standard auditing techniques. In the absence of specific means of validation specified in the VVS the standard auditing techniques are applied.

Before the assessment begins a competent team to perform the validation is selected. The team is selected to cover the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the CDM project activity. Once the project 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 project activity meets the CDM requirements, and can achieve credible emission reductions findings are raised as specified in the VVS.

To recommend the project activity for registration all CARs and CLs must be resolved.

All CARs, CLs and FARs are found in Annex 1 to this validation report including the responses provided by the project participants, the means of validation of the responses and references to any resulting changes in the PDD 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 has 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 reviewer (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.

**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** | **-** | ☑ (3.1) | **-** | **-** | **-** |
| **Nikunj Agarwal*** | V & TE | ☑ | ☑ (3.1) | ☑ | ☑ | ☑ |

Technical Reviewer:

| Name | Qualification | Coverage of scope | Coverage of technical area | Coverage of financial aspect |
|---|---|---|---|---|
| **Shivraj Sharma** | **TR** | ☑ | ☑ | ☑ |
| Robert Mitterwallner† | TR | - | - | - |
| Yutaka Yoshida‡ | TE | ☑ | ☑ | ☑ |

Appointment certificates are attached to this report in Annex 3.

## 2.2 Review of Documents

The GSP-PDD and additional background documents related to the project 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 has been done as an initial step of the validation process. A complete list of all documents and evidence material reviewed is attached as Annex 2 to this report.

## 2.3 Follow-up Interviews

TÜV SÜD performed interviews, telephone conferences, and physical site inspections during 09/07/2013 to 10/07/2013 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 3 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 the CDM project activity. Project documentation has also been reviewed against the approved methodology/ies applied to confirm the appropriateness of formulae and correctness of calculations.

* He was ATL till 31st July 2013

† He was the TR till final Submission before Incompleteness. He had now left the Organisation.

‡ He was the part of TR team till final Submission before Incompleteness. He had now left the Organisation

## 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, clarifications, and any other outstanding issues which need to be clarified for TÜV SÜD`s conclusion on the project design. The CARs and CLs raised by TÜV SÜD are resolved during communication between the client 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 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 Clean Development Mechanism Validation and Verification Standard (VVS). The reference documents indicated in this section and Annex 1 are stated in Annex 2 of this report.

## 3.1 Global stakeholder consultation

***There were no comments raised by Stakeholder.***

| **Comment submitted by:**<br>None | **Date:**<br>DD/MM/YYYY |
|---|---|
| **Issue raised:**<br>**None** | |
| **Actions taken due account of the comment:** | |
| **Final conclusion:** | |

## 3.2 Approval, Authorization and Contribution to sustainable development

| Party / DNA | Authorized Project Participant(s) |
|---|---|
| Malawi | • The Sigma Global Company Pty Ltd<br>• Vimiti Limited |
| The Party issued a LoA (IRL 40) to The Sigma Global Company Pty Ltd & Vimiti Limited.<br>The Party´s DNA is included in the list available on the UNFCCC CDM.<br>As checked by TÜV SÜD the LoA is in accordance with paragraph 39-42 of the VVS.<br>The project participant mentioned above has been authorized by the aforementioned DNA.<br>TÜV SÜD received the LoA from the project participants and has confirmed authenticity.<br><br>The **host Party**´s DNA has confirmed the contribution of the project to the sustainable development of the host Party. | |

## 3.3 Modalities of Communications

TÜV SÜD used notarized documentation (IRL 41) to perform due diligence on the Modalities of Communication (MoC) statement (IRL 41). The notarized documentation (IRL 41) 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 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 Project design document

The PDD is compliant with relevant form and guidance as provided by UNFCCC. The most recent version of the PDD form was used.

## 3.5 Description of project activity

The information presented in the PDD on the technical design has been assessed for accuracy and completeness using standard auditing techniques including:

(a) Document review including

- A review of data and information;
- Cross checks between information provided in the PDD and information from sources other than those used, the DOE´s sectoral or local expertise. If necessary, independent background investigations were performed.

(b) Follow-up actions including:

- Interviews with relevant stakeholders in the host country, personnel with knowledge of the project 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 project activity under validation;

The closure of CARs/CRs/FARs/Stakeholder consultation performed in the validation cycle is reflected in the table below to comply with the requirement of §147 (c), VVS:

| Subject | Web-hosted PDD | Final PDD | Assessment and reason of acceptance |
|---|---|---|---|
| PDD (project title / participants involved/ project location /project technology etc.) | CAR 2 was raised I order to ask the further clarification regarding the project participant.<br>PDD template was not correct, and hence CAR 3 was raised.<br>CAR 5 was | PP has elaborated the role of PP in the revised PDD in response to CAR 2.<br>PP used the latest PDD Template.<br>PP has elaborated the technology details | This issue was successfully closed as explained in CAR 2, CAR 3 & CAR 5 in Annex 1 of this report. |

| | | | |
|---|---|---|---|
| | raised as the project technology was not clear. | in the revised PDD. | |
| Methodologies and tools applied (scope and version) | CAR 4 was raised as methodology version as not consistent in the PDD. | PP has amended the methodology version in the revised version of the PDD. | Revised PDD has been checked for the methodology version and hence CAR 4 was successfully closed out. |
| CER calculations (formula applied/ amount of emission reduction) | Leakage calculation and emission reduction calculation was not transparent in the PDD, hence CAR 6 was raised.<br><br>CL was raised as para 2 of section A.6 of the PDD states about 0.007%, while as per our calculation sheet, it was coming about 0.000056%,<br><br>PP did not submitted the ER calculation initially with the PDD, hence CL 10 was raised to request the ER sheet. | PP has revised the PDD as per equation 1 para 11 of the methodology.<br><br>PP has corrected the same in the revised PDD.<br><br>PP has submitted the ER calculation sheet. | CAR 6, CL 6, CL 10 was closed out, as PP has submitted the excel sheet by clarifying the calculation more transparently. |
| Additionality: (Benchmark / input | PP demonstrates the | PP has revised the PDD with | PP has demonstrated the additionality based on the EB 68 Annex 27 para 2c, and the size |

| | | | |
|---|---|---|---|
| values/ analysis type/ project start date/ IRR or NPV values etc.) | additionality based on the Barrier analysis which was not transparent and substantiated with the supporting documents,<br>Hence CAR 7 & CAR 8 was raised in order to ask the proper supporting regarding the additionality. | new additionality argument, and further PP demonstrates the additionilty based on the positive list, according to which project is additional. | of each unit is under 750 kW installed capacity or under 3000 MWh of energy savings per year<br>Hence CAR 7 & CAR 8 was closed out. |
| Monitoring<br>(parameters / frequency ) | CAR 10 was raised as Monitoring plan presented in section B.7.1 of the PDD was not consistent with applied methodology section 5 (para 22 to 27).<br>Also the requirements of para 26 a and b as well as the monitoring parameters mentioned in tables 3 to 7 of the applicable methodology was not covered in the MP. | In response of the CAR 10, PP has revised the PDD with further clarification as per the methodology. | CAR 10 was closed after checking the revised PDD and supporting documents as per the applied methodology. |

| | | | |
|---|---|---|---|
| Crediting period ( type / start date) | CAR 13 was raised as the start date of the project activity was not clear.<br>CAR 15 was raised as the start date of crediting period was not realistic | No changes was done regarding the start date of the project activity.<br>PP has changed the start date of crediting period in the revised PDD in section C.2.2 of the PDD. | CAR 13 and CAR 15 was closed based on the explanation provided in the revised PDD and in the Annex 1 of the report. |

In opinion of TÜV SÜD the project description, as included in the PDD, is accurate and complete; and it provides a correct understanding of the proposed project activity. Further this also complies with the requirement mentioned in § 69 of VVS.

## 3.6 Application of the selected baseline and monitoring methodology

### 3.6.1 Applicability of the selected baseline and monitoring methodology to the project activity

Compliance with each applicability condition as listed in the chosen baseline and monitoring methodology AND relevant tool has been demonstrated. Also requirements have been assessed to confirm the compliance to § 70 – 72, VVS.

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

| |
|---|
| **Applicability criteria from** AMS-II.G Version 05<br>This category comprises energy 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. |
| **Information from PDD:**<br>The project activity involves distribution of the Changu Changu Moto high efficiency improved cook stove throughout the project area. The improved cook stoves will replace existing inefficient cook stoves at eligible households using traditional 3 stone fires and will be used for cooking and heating water. The efficiency of the Changu Changu Moto improved cook stove has been assessed as being above 20% by the Malawi Bureau of Standards.The efficiency improvement over the traditional 3 stone fire, will reduce the use of non renewable biomass. |
| **Assessment:**<br>The validator compared the actual text of the applicable version of the methodology with the information stated in the PDD.<br>The PDD refers to “Malawi Bureau of Standards” (IRL 29) which was verified by the assessment team. 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. |

Also, it was checked during filed visit of households by the audit team, that the project activity involves distribution of high efficiency improved cook stove, this improved cook stoves will replace existing inefficient cook stoves which were using the traditional 3 stone fires and was being used for cooking and heating water (IRL 01).

**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.

**Information from PDD:**

The most recent information available relating to the region where the project activity is located is from the Nkhata Bay District Council.

The UN FAO Global Forest Resource Assessment 2010 country report for Malawi contains estimates of the total forest area in Malawi, reproduced in Table 1. The data is summarised by the opening paragraph in the report:

> *"The forest resources in Malawi seem to be declining steadily. The reasons for the decline are attributed to agriculture expansion, dependence on wood fuel for energy, high population growth and high levels of poverty.*

The FAO data shows that the forest area in Malawi in 1990 was 3,896,000 hectares. The forest area is reported to have declined to 3,237,000 hectares in 2010. The continual decline in forest area from 1990 to 2010 shows that biomass use has been non-renewable since 31st December 1989.

The use of biomass in Malawi has also been recognised as non-renewable prior to 1990. A UNDP/World Bank report from 1984 noted the country's dependence on firewood as a primary energy source, and stated "The rate of fuelwood consumption exceeds the sustainable yield and this, coupled with population growth, could seriously endanger Malawi's extensive forest resources in the future". The 1998 State of Environment Report it was stated that wood consumption increased from 8.5 million tonnes per year to about 12.5 million tonnes per year over the period 1983-1990, against a sustainable wood supply of 5.2 million $m^3$ per year.

Further evidence of the decline of forest stocks and use of NRB since 31st December 1989 in the project area is a recent report from the Nkhata Bay District Forestry Officer, "Forestry and carbon stocks in Nkhata Bay District". This report states that forest reserves in Nkhata Bay District have declined from 221,259 Ha in 1989 to 139,854 Ha in 2010.

**Table 1: Trends in forest area 1990–2010**

| **Malawi** | **1990** | **2000** | **2005** | **2010** |
|---|---|---|---|---|
| Forest area (1,000 ha) | 3896 | 3567 | 3402 | 3237 |

| | | | | |
|---|---|---|---|---|
| Area of primary forest (1,000 ha) | 1727 | 1330 | 1132 | 934 |
| Area of planted forest (1,000 ha) | 132 | 197 | 285 | 365 |

**Assessment:**

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

The PDD refers to "Malawi Bureau of Standards" (IRL 29) which was verified by the assessment team. 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.

Also, it was checked during field visit of households by the audit team, that the project activity involves distribution of high efficiency improved cook stove, this improved cook stoves will replace existing inefficient cook stoves which were using the traditional 3 stone fires and was being used for cooking and heating water (IRL 01).

Audit Team has also checked that the Biomass was non-renewable biomass, as per the definition in EB 23 Annex 18. The criteria of non-renewable biomass is inline with EB 23 Annex 18.

**Validation opinion:**

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

The applicability criteria is met by the project activity.

Audit Team further checks the above applicability criteria based on § 77 of VVS, as the Validating Team confirm the applicability criteria with his local and sectoral Expertise and also checked the same during the Interview with the Government official on physical site visit.

TÜV SÜD confirms the compliance in line with § 77, VVS that the chosen baseline and monitoring methodology is applicable to the project activity. TÜV SÜD also confirms that neither deviation nor clarification is sought (§ 78-81) from an applied methodology in this validation activity.

### 3.6.2 Project boundary

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

| **Aspect of the Boundary (**§ 83 – 85) | **Onsite Observation** | **Relevant Documents** |
|---|---|---|
| The project boundary is the physical, geographical site of the efficient systems that burn biomass".<br>The improved cook stove will be distributed throughout seven Traditional Authorities in Nkhata Bay District as detailed below:<br>**Traditional Authority**<br>Mkumbira<br>Mankhambira | Project Boundary was checked by the Audit Team during on site visit in Nkhata Bay District, during site audit, Audit Team meets with the District Officers and Traditional Authorities which confirmed the project boundary of the proposed cook stove project. | IRL 16<br>MoM on the Introductory meeting of the proect, signed by the the District Commisioner, where all the Traditional Authorities were also present in the meeting. |

| | | |
|---|---|---|
| <table><tr><td>Fukamalaza</td></tr><tr><td>Malanda</td></tr><tr><td>Malengamzoma</td></tr><tr><td>Fukamapiri</td></tr><tr><td>Zilakoma</td></tr></table> Therefore, the project boundary is defined by the improved cook stove distribution area of these seven Traditional Authorities. | | |

Therefore, TÜV SÜD confirms that the identified boundary, the selected sources, and gases as documented in the PDD are justified for the project activity and are fully in line with the requirements set by the applied methodology and § 86 – 87, VVS.

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 (§ 87).

If used, please provide justification with supporting evidence.

### 3.6.3 Baseline identification

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
- Others

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. | Baseline study report is approved by Baseline Survey and KPT Report approved by District Forestry Officer, IRL #13. | Interviews with government officials (IRL #1) and onsite assessment. During the meeting it was discussed with the official about the scenario of fuel used in past and current scenario for the use of fuel in the country.<br>Data and source used in the report (IRL 13) was also discussed and cross | 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 cross-checked by | Conclusion |
|---|---|---|---|
| | | checked during on site. | |

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

TÜV SÜD confirms the following statements:

(a) All the assumptions and data used by the project participants are listed in the PDD, including their references and sources;

(b) All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD;

(c) Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence, and can be deemed reasonable;

(d) Relevant national and/or sectoral policies and circumstances are considered and listed in the PDD;

(e) 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.

(f) The PDD 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.

The validation team confirms that the proposed project activity meets above requirements. Therefore, the baseline scenario as prescribed in the applied methodology AMS II G (version 05) is applicable to the proposed project activity. The validation tool is cognizance of § Section L (6) of VVS.

### 3.6.4 Algorithm 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 Algorithm and/or formulae provided by the applied methodology and respective emission reduction calculation spreadsheet. The parameters and equations presented in the PDD, 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 PDD, 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 PDD and all the sources have been reviewed. The following sources of information were used for crosscheck the information contained in the PDD:

| Assumption / Data / References used for estimating the emission reductions in the PDD | Information crosschecked (IRL XX) | Conclusion |
|---|---|---|
| Determination of quantity of woody biomass used in the absence of the project activity | Baseline KPTs, published literature [IRL 13] | PP has determined the the quantity of woody biomass used in the absence of the |

| Assumption / Data / References used for estimating the emission reductions in the PDD | Information crosschecked (IRL XX) | Conclusion |
|---|---|---|
| in tonnes per device | | project activity in tonnes, $B_{old}$, according para 13 of AMS II G with option (a).<br>PP has done a survey involving a questionnaire and a series of Kitchen Performance Tests has been conducted by the project implementer, RIPPLE Africa, within the project area to determine the quantity of woody biomass used in the absence of the project activity.<br>A sample of households from the project area were selected to participate in the survey PP has submtted a detailed description of the survey sampling plan and results is contained in the survey report mentioned in the Part A of Appendix 4 of the PDD. PP has not included this survey report in the Public version of the PDD, as PP wants to keep this as confidential.<br>PP has now added this survey report in the Confidential version of the PDD.<br>This survey report [IRL 20] has been validated by the audit team and Audit team has also interviewed the person involved in this survey report.<br>The KPT survey results in the survey report show that the conservative estimate for the annual consumption of woody biomass per household is 5.04 tonnes/household/year. The number of operating stoves in the project is limited to one per household, so $B_{old}$ = 5.04 tonnes/device/year.<br>The same report has been reviewed by Nkhata Bay |

| Assumption / Data / References used for estimating the emission reductions in the PDD | Information crosschecked (IRL XX) | Conclusion |
|---|---|---|
| | | District Forestry Officer.<br>Assumptions for the proportion value, unit variance and average of within district variance (for the parameter $n_y$), unit variance re taken from pilot tests. The DOE by assessing the pilot study parameters and calculations in the submitted excel file confirms that the assumptions for the aforementioned input values for sample size calculation are appropriate and plausible. Hence DoE is in opinion that the determination of Bold is representative of the average biomass consumption in the baseline scenario in the project boundary, including but not limited to: the design of the baseline sampling, the implementation of the sampling and KPT test.<br><br>The criteria in EB75, Annex 08, 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 ensure a random selection. |
| Determination of annual quantity of woody biomass used during the project activity in tonnes per device | *Ex-ante* estimate: pilot project KPTs<br>*Ex post*: Annual KPTs<br>IRL [1, 14, 35] | The annual quantity of woody biomass used per device during the project activity, $B_{y, new, KPT}$ will be determined by the PP *ex-post and frequency will be* yearly, PP will follow the Option 1 of para 12 of the applied methodology AMS-II.G. |

| Assumption / Data / References used for estimating the emission reductions in the PDD | Information crosschecked (IRL XX) | Conclusion |
|---|---|---|
| | | version 5.0.<br>The KPTs will be conducted at a sample of households drawn from the project area following the sampling plan.<br>The sampling plan also details the data collection and analysis procedures as discussed under the section 3.8 of this report. |
| Determination of the share of non-renewable biomass | Default value approved by CDM EB | The fraction of woody biomass saved by the project activity in year *y* is being established by PP as non-renewable biomass ($f_{NRB,y}$), as the same is defined under para 11 of AMS-II.G. version 5.0, which include the use of survey methods, government data or default country specific values.<br>The default fraction of non-renewable biomass of 81% is applied to this project and is supported by the following indicators:<br>• Survey results, national or local statistics, studies, maps or other sources of information, such as remote-sensing data, that show that carbon stocks are depleting in the project area.<br>• A trend showing an increase in time spent or distance travelled for gathering fuel-wood, by users (or fuel-wood suppliers) or alternatively, a trend showing an increase in the distance the fuel-wood is transported to the project area; |

| Assumption / Data / References used for estimating the emission reductions in the PDD | Information crosschecked (IRL XX) | Conclusion |
|---|---|---|
| | | This value was approved by the Malawi DNA on 15th June 2012 [IRL 38]. |
| Determination of the fossil fuel most likely to be used by similar consumers | AMS-II.G. default value | The emission factor for the substitution of non-renewable woody biomass by similar consumers, $EF_{projected\_fossilfuel}$ , is being used from the applied methodology AMS-II.G. as 81.6 $tCO_2/TJ$. |
| Determination of leakage | AMS-II.G. default value | Leakage factor is being used according to the para 20 of AMS II G.<br>The use/diversion of non-renewable biomass reserved for the project activity by non-project households/users that previously used renewable energy sources is being considered as a potential source of leakage.<br>Value of 0.95 is applied for $B_{old}$ to account for the source of leakage.<br>The same has been discussed during interview with PP at the time of on site visit. |
| Determination of the number of operating devices | *Ex-ante* estimate: implementation schedules<br>*Ex post*: Annual surveys<br>IRL [1, 2, 35] | As mentioned under paragraph 22 of AMS-II.G. version 5.0, this parameter will be determined expost each year.<br>The number of operating devices will be determined through multi-stage sampling using a self weighting sampling procedure.<br>The sample size is the total number of households selected to participate in the survey. The parameter of interest is the proportion of stoves operating in period y. The sample consists of 15 households from each of the 12 PSUs, giving a |

| Assumption / Data / References used for estimating the emission reductions in the PDD | Information crosschecked (IRL XX) | Conclusion |
|---|---|---|
| | | total sample size of 180 households.<br>Validator's action: The monitoring provisions was checked during on site visit by the Audit Team after the pilot phase of the project. Sample contracts/purchase agreements for the first distributed project stoves were checked and compared to the database entries made so far. Households using the project stoves were visited and was the unique IDs. The methodology was checked for monitoring and sampling requirements. Moreover, the<br><br>Standard for Sampling and the best practice examples for sampling published by the EB 69 Annex 04 and EB 70 Annex 06, EB 74 Annex 06 were compared to the PP's approach.<br>Conclusion: The monitoring provisions for the project activity are appropriate for the project activity and in line with relevant requirements of the methodology. The database to be maintained by PP is most likely to provide the necessary information on the project activity to ensure the correct (or conservative) calculation of the emission reductions. The selection of households is deemed appropriate. The confidence level (annual check: 90%) and the precision (10%) are in line with AMS.II.G. version 5.<br>Also, the audit team checked the sampling as per para 24 |

| Assumption / Data / References used for estimating the emission reductions in the PDD | Information crosschecked (IRL XX) | Conclusion |
|---|---|---|
| | | (acceptance sampling) of the sampling standard.<br>Hence the audit team declares that the requiremnt of Sampling standards para 21 to 27 has been met, |

Earlier PP had used the different approach in PDD version 1.3 to calculate the sampling size mentioned in the "Guideline Sampling and surveys for CDM project activities and programmes of activities v3.0.'

PP had now submitted the revised PDD using the approach mentioned in the Sampling guideline version 03. According to the Sampling Guidelines EB 75 annex 08 - Equation 55 applies to proportion parameters, which in the case of the project activity is the number of stoves operating. This formula has been applied in section B7.2.2. of the PDD.

The equation in EB75 annex 8 that applies to mean parameters, such as wood use, have been updated to apply this equation to calculate the sample size required for the project KPTs. This formula requires estimates of the results expected, and the results from the baseline KPTs in the report "Nkhata Bay District Wood Use Survey" have been used.

However, there is no change to the sample size required. Hence DoE is in opinion that the sample size calculation is in accordance to the sampling guidance version 03.

As of para 23b of Annex 11 of EB76, Audit Team confirms that the sources listed by the project participant in the PDD are comprehensive and, based on the Audit Team review and analysis as well as professional judgment, we confirm that the sources selected are appropriate and conservative based on the hierarchy of the documents, suitability of the data vintage, relevance of the source to the baseline and project scenario, and availability of relevant resources, among other criteria.

TÜV SÜD confirms the following statements in line with § 99 – 100, VVS:

(a) All assumptions and data used by the project participants are listed in the PDD, 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 PDD;

(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 PDD;

(f) Any estimates for monitored data or parameter are reasonable for estimating the emission reductions in the PDD

(g) IF applicable: Different options for equations AND parameters are selected appropriately.

(h) If applicable: The data AND parameters fixed ex-ante are conservative and appropriate.

## 3.7 Additionality

The demonstration of additionality for the project activity is determined in this section by the validation team. TÜV SÜD has assessed and verified the reliability and credibility of all data, rationales, assumptions, justifications and documentation provided by the PPs to support the demonstration of additionality to demonstrate compliance with § 101 – 130 of VVS. The results of this critical assessment are outlined in detail in the following sections addressing the various requirements of the additionality (i.e. prior CDM consideration, identification of alternatives, investment analysis, barrier analysis and common practice analysis). The relevant supporting documents are listed in these sections as well as in Annex 2 of this report.

The assessment the additionality included a desk review, various interviews with Mr. Geoffrey Furber from RIPPLE Africa as well as further verification of the available information using local knowledge as well as sectoral and financial expertise.

In the following table only include the issues that have been crosschecked (should be all the relevant information)

| Assumption / Data / documents used to present additionality | Information crosschecked by | Conclusion and opinion on why the evidence assessed is credible. |
|---|---|---|
| PDD:<br>The threshold limit of Type II small scale projects is annual energy savings of 180GWh thermal energy. | Emission Reduction Excel Sheet [IRL 22]. | The total annual thermal energy savings of the improved cook stoves is calculated by multiplying the biomass savings for a period of 1 year by the calorific value of wood.<br>Audit Team has checked the calculation of Threshold limit with its Sectoral and Technical Expertise, and found that the calculation presented in the PDD for the Threshold limit to prove additionality is correct.<br>Also, Audit Team has make the self-calculation with the data mentioned in the PDD and the data cross checked during on site visit, and found that the calculation mentioned in the Excel sheet is correct and found satisfactorily. |

Based on the aforementioned approach, TÜV SÜD confirms that the documentation provided is appropriate for this project.

### 3.7.1 Prior consideration of the clean development mechanism

The starting date of the project activity is determined by the date when the implementation of the project activity commenced with moulding of bricks to construct stoves [IRL 36]. In order to corroborate this information, the assessment team has reviewed the “Changu changu moto project launch ceremony report” and “Internal MoM against the implementation of the project activity commenced with

moulding of bricks to construct stoves", and has verified this information with interviews with the project owner.

The starting date of the project has been determined to be DATE which is AFTER 02 August 2008, but before the GSP. The DNA AND UNFCCC confirms through the document/links IRL 39 that the PPs have informed the entities about the commencement of the project activity. Also the same has been cross checked with the web link: http://cdm.unfccc.int/Projects/PriorCDM/notifications/index_html

Therefore, it is confirmed that the project complies with the requirements regarding prior consideration of CDM.

This confirms that the project complies with the requirements to demonstrate the prior consideration of the CDM.

### 3.7.2 Identifications of alternatives

Not applicable, where the baseline scenario is prescribed in the approved methodology (VVS/115).

### 3.7.3 Investment analysis

Not Applicable.

### 3.7.4 Barrier analysis

As per EB 68 Annex 27 para 2, all the barriers mention under para 1 of the same guidelines are not Valid for the project activities which comes under the positive list, as described under the options a, b, c, d of EB 68 Annex 27 guidelines.

Since this project activity falls under para 2c, according to which each cook stoves is an isolated unit used by a household, and is estimated to achieve annual energy savings of approximately 10 MWh thermal, which contributes approximately 0.007% to the overall savings.

Hence this project complies with the additionality guidelines and DOE is of the opinion that the project is additional.

### 3.7.5 Common practice analysis

Not Applicable for this project activity as this project comes under Positive list according to EB 68 Annex 27 para 2.

## 3.8 Monitoring plan

The monitoring plan is included in Section B.7 of the PDD /P02/ based on the approved monitoring methodology *AMS II G Version 05* titled "Energy efficiency measures in thermal applications of non-renewable biomass" and is correctly applied to the CDM project activity. This methodology stipulates that monitoring shall consist of monitoring of *parameter*. This confirms the requirement of § 131 of VVS. The validation team also confirm with representative of PP during onsite visit [IRL 01], whether the monitoring plan can be implemented in the context of the project activity and was satisfied with the implementation plan of the monitoring plan.

PP has elaborated the monitoring plan as per the para 54 of PS version 05 and had described the monitoring plan for the proposed CDM project activity in accordance with the AMS II G version 05, Audit team has cross checked the same and found satisfactorily.

PP has also elaborated the monitoring plan as per the para 56 of PS version 05 and had described the following in the revised PDD in section B.7 and Appendix 5, same has been cross checked in PDD and being discussed with PP by the Audit Team during site visit:

- Operational and Management Structure.
- Data will be archived two years after the end of the crediting period.
- Roles and Responsibilities.
- QA & QC Procedures
- Uncertainty and Accuracy Levels
- Calibration Frequency of the monitoring equipment's (there are no equipments used for the monitoring)

**Parameters determined ex-ante:**

| | |
|---|---|
| **Data / Parameter** | $NCV_{biomass}$ |
| **Unit** | TJ/tonne |
| **Description** | Net calorific value of the non-renewable woody biomass that is substituted |
| **Source of data** | IPCC default for wood fuel |
| **Value(s) applied** | 0.015 |
| **Choice of data or Measurement methods and procedures** | Default value provided in AMS-II.G. |
| **Purpose of data** | Calculation of baseline and project emissions |

| Data / Parameter | $EF_{projected\_fossilfuel}$ |
|---|---|
| **Unit** | $tCO_2/TJ$ |
| **Description** | Emission factor for the substitution of non-renewable woody biomass by similar consumers. |
| **Source of data** | Weighted average of the emission factors of substitution fuels likely to be used by similar consumers |
| **Value(s) applied** | 81.6 |
| **Choice of data or Measurement methods and procedures** | Default value provided in AMS-II.G. |
| **Purpose of data** | Calculation of baseline and project emissions |

| Data / Parameter | $f_{NRB}$ |
|---|---|
| **Unit** | Fraction |
| **Description** | Fraction of non-renewable woody biomass saved by the project activity |
| **Source of data** | UNFCCC CDM website |
| **Value(s) applied** | 0.81 |
| **Choice of data or Measurement methods and procedures** | Default Malawi specific value available on the CDM website as approved by CDM EB and the Malawi DNA. This value is fixed for the crediting period, so $f_{NRB,y} = f_{NRB} = 0.81$ |
| **Purpose of data** | Calculation of baseline and project emissions |

| | |
|---|---|
| **Data / Parameter** | $B_{old}$ |
| **Unit** | tonnes/device/yr |
| **Description** | Quantity of woody biomass used per device in the absence of the project activity |
| **Source of data** | Survey/testing of local usage |
| **Value(s) applied** | 5.04 |
| **Choice of data or Measurement methods and procedures** | The value of $B_{old}$ has been determined through a survey and series of Kitchen Performance Tests conducted by the project implementer, RIPPLE Africa, within the project area. A sample of households from the project area was selected to participate and the data collected during July-August 2012. A detailed description of the sampling plan and results of the survey is contained in Part A. |
| **Purpose of data** | Calculation of baseline emissions |

| | |
|---|---|
| **Data / Parameter** | $L_{NTG}$ |
| **Unit** | factor |
| **Description** | Net to gross adjustment factor to account for the use/diversion of non-renewable biomass saved under the project activity by non-project households/users that previously used renewable energy sources. |
| **Source of data** | Default value provided in AMS-II.G. |
| **Value(s) applied** | 0.95 |
| **Choice of data or Measurement methods and procedures** | The default adjustment factor is chosen to avoid conducting surveys of non-project households/users, a number of which could potentially be located outside the defined project area. |
| **Purpose of data** | Calculation of leakage |

The parameters for determining the GHG emissions reductions have been clearly demonstrated in section B.6.2.of the PDD.

The validation team has verified the value used against the sources and conclude that all relevant parameters to calculate the GHG emissions reductions of the project have been sufficiently considered and the value of the parameters are real, measureable and conservative.

**Parameters determined ex-post:**

The data required to be monitored ex-post include:

| Sr.No. | Parameters | Description |
|---|---|---|

| | | |
|---|---|---|
| 1. | $N_{y,CCM}$ | Number of operating Changu Changu Moto improved cook stoves in period y:<br>The ex-ante estimated values used for the purposes of calculating estimated emission reductions are shown in the table in PDD_section B.7.1. These values have been estimated by the Project Participants and project implementers based on the estimated number of eligible households (19,000), expected project implementation rate and estimated stove usage rates. Following implementation, including training, it is estimated that the stove usage rates will be approximately 80%, giving a maximum of 15,200 operating stoves in any one year. |
| 2. | $B_{y,new,KPT}$ | Quantity of woody biomass used per device during the project activity in period y:<br>The ex-ante estimate value used for the purposes of calculating estimated emission reductions is 2.62 tonnes/device/yr. This value has been calculated based on results from Kitchen Performance Tests conducted by the project implementers in households participating in the pilot project and the baseline average annual quantity of woody biomass used in the absence of the project activity. The calculation of this number is detailed in Appendix 4 and Appendix 5 of the PDD.<br>The primary sampling unit (PSU) includes all eligible households in the project area and is defined as each village under a chief (chief area) in the Traditional Authorities within the project area. The ultimate sampling units are defined as individual households within each chief area and include all households in the target population. |
| 3. | $f_{NRB}$ | PP has taken this value as Default Malawi specific value available on the CDM website as approved by CDM EB and the Malawi DNA. However, as per the requirement of methodology, during the project crediting period the parameter will be monitored from the CDM website annually. |
| 4. | $B_{old}$ | Fuel-wood consumption of baseline stoves<br>According to AMS.II.G version 5 paragraph 26, when the baseline stoves will be continue to be used, information on the monitoring will be extracted from the survey conducted to determine the number of operating stoves, i.e. the fuel-wood consumption of those stoves is excluded from Bold.<br>Same is included as monitoring parameter in the section B.7 of the revised PDD. |

Furthermore, Audit Team confirms that PP has demonstrated the monitoring pan as per para 97 and 98 of PS version 05 in the revised PDD.

The procedures have been reviewed by the assessment team through document review and/or interviews with the relevant personnel. The information provided and a physical inspection 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 PPs. Specifically;

these points include the location of meters, data management, and the quality assurance and quality control procedures to be implemented in the context of the project. Therefore, the PPs will be able to implement the monitoring plan and the achieved emission reductions can be reported ex-post and verified (conformation to the requirement of §133 of VVS).

## 3.9 Local stakeholder consultation

The relevant local stakeholders have been invited via letters to officials, community notices, phone calls, word of mouth and through Chiefs and members of the relevant Traditional Authorities. The evidence of these invitations is given by IRL 32. The assessment team has reviewed the documentation in order to validate the inclusion of relevant stakeholders. Team local expertise has confirmed that the communication method used to invite the stakeholders is appropriate. The summary of comments presented in the PDD has been verified with the documentation of the stakeholder consultation and has been found to be complete.

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

Hence, the local stakeholder consultation has been performed adequately according to the CDM requirements (§ 138 – 140, VVS).

## 3.10 Environmental impacts

As per the website http://www.sdnp.org.mw/enviro/eia/appendixB.html , it has been confirmed that an environmental impact assessment is not required for this type of project activity.

In conclusion, the PPs have followed the requirements (§ 134 – 137, VVS) of the host country with regards to addressing environmental impacts.

# Annex 1
# List of Findings

| 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):<br>Shall is used to indicate requirements to be followed;<br>Should is used to indicate that among several possibilities, one course of action is recommended as particularly suitable;<br>May 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):<br>(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;<br>(b) The applicable CDM requirements have not been met;<br>(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 | Letter of Approval need to be submitted to DoE | ☑<br>Finding Closed<br>IRL 40 |
| Requirement | VVS 38 & PS 70 | |
| Corrective Action Request | **Corrective Action Request No.1**<br>PP need to submit the Letter of Approval by the Host country as mentioned in section A.4 of the PDD. | |
| Response | The Letter of Approval by the Host country will be issued following the completion of the draft | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| | validation report. | |
| Assessment<br>Means of validation / | Pending, Draft Validation Report will be issued after closure of all other open issues except the LoA. | |
| Response | Please find attached the LoA issued by the DNA. | |
| Assessment<br>Means of validation / | PP has submitted the Letter of Approval issued by the DNA, the same has been checked and found satisfactorily. Hence this CAR is closed out. | |
| Adjustment on project design | Not Required | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | It is mentioned in the PDD (page 9, 14, 15 etc.) that Ripple Africa is the project proponent, while Ripple Africa is not mentioned in the section A.4 of the PDD as PP. | ☑<br>Finding Closed<br>IRL 17, 34 |
| Requirement | VVS 5 a | |
| Corrective Action Request | **Corrective Action Request No.2**<br>The PP is requested to ensure consistency throughout the PDD.<br>Also, please clarify the role of Ripple Africa in the project activity. | |
| Response | The PDD has been updated to clarify that RIPPLE Africa is the project implementer and not a project proponent. The MOU detailing the obligations of RIPPLE Africa is included as an attachment to this response. | |
| Assessment<br>Means of validation / | PP has explained in the revised PDD about the role of Ripple Africa, which is in line with the interview and discussion during onsite visit, the same is cross checked with the MoU submitted by PP. Hence this CAR is closed out. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| Adjustment on project design | PP has submitted the revised PDD. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | <u>The PDD Template is not the latest Template available on UNFCCC website.</u> | ☑ Finding Closed IRL 34 |
| Requirement | VVS 62 | |
| Corrective Action Request | **<u>Corrective Action Request No.3</u>**<br>Latest version of PDD Template is version 4.1 released on 11th April 2012, while PP has used the version 4, PP shall use the latest version of PDD Template available on the UNFCCC Website. | |
| Response | The PDD has been updated to use version 4.1 of the PDD form for small scale CDM project activities. | |
| Assessment<br>Means of validation / | PP has revised the PDD template, but PP shall also change the date of the revised PDD, as the date of PDD is still the same as it was mentioned on the previous version of PDD. | |
| Response | The date on the PDD has been updated. | |
| Assessment<br>Means of validation / | PP as updated the date and version of the revised PDD, Hence this CAR is closed out. | |
| Adjustment on project design | PP has submitted the revised PDD. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | <u>The version of the applied methodology is not consistent in PDD.</u> | ☑ Finding Closed IRL 34 |
| Requirement | VVS 70 | |
| Corrective Action Request | **<u>Corrective Action Request No.4</u>**<br>AMS II G version 05 is applied in the project activity, but in some places version 4 is mentioned in the PDD (e.g.: section A.1), please check and clarify the inconsistencies. | |
| Response | The PDD has been updated to ensure all references are to the applied methodology AMS-II.G version 5. | |
| Assessment<br>Means of validation / | PP has submitted the revised PDD, and the version of the methodology is now consistent in the PDD, Hence this CAR is closed out. | |
| Adjustment on project design | PP has submitted the revised PDD. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | The project design as of the PDD is mentioning biomass residues as fuel for the project cook stoves which is not eligible under the applied methodology. | ☑ Finding Closed IRL 34 |
| Requirement | VVS 73, PS 91 | |
| Corrective Action Request | **<u>Corrective Action Request No.5</u>**<br>As per the PDD page 9, it is mentioned that “maize cobs” and “cassava plant stems” will be used in the project activity, please clarify the compliance with the methodology section 2.1. | |
| Response | The PDD has been updated to clarify that savings from any increased use of biomass residues are not included in emission reductions under the project, thus ensuring compliance with sec- | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| | tion 2.1 of the methodology. | |
| Assessment<br>Means of validation / | PP has revised the PDD in section A.3 about the biomass residues, revised description has been cross checked with the discussion held during site and found satisfactory, Hence this CAR is closed out. | |
| Adjustment on project design | PP has submitted the revised PDD. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | The calculation of the parameter $B_{ysavings}$ is not transparent in the PDD. | ☑<br>Finding Closed<br>IRL 2, 15, 34, 35 |
| Requirement | VVS 97 | |
| Corrective Action Request | **Corrective Action Request No.6**<br>The calculation of emission reductions and the associated leakage emission as per the methodology is not provided transparently in the PDD section B.6, Kindly clarify the issue. | |
| Response | The PDD has been updated to explain that Equation 1 in paragraph 11 of the methodology has been modified to allow for monitoring periods that are not equal to one year, for example due to the phased implementation of the improved cook stoves.<br>This approach is recognised as required due to a lack of provisions in the methodology in section 1.2.1 of CDM SSC WG meeting 40 annex 05 “Questions for public inputs in relation to the top-down revision of AMS-II.G: Energy efficiency measures in thermal applications of non-renewable biomass” | |
| Assessment<br>Means of validation / | The “*section 1.2.1 of CDM SSC WG meeting 40 annex 05*” referred by PP is the draft version, PP shall submit the final version approved by UNFCCC. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| Response | The call for public inputs CDM SSC WG meeting 40 annex 05 identifies a deficiency in the current approved version of the methodology AMS-II.G. As yet, no revised version of AMS-II.G has been published to specify how monitoring periods that are not equal to one year should be treated. The approach implemented in the PDD gives a transparent and conservative emission reduction calculation.<br>The Call for public input in CDM SSC WG meeting 40 annex 05 was approved for opening in EB meeting 73 paragraph 63 without further revisions i.e. following EB 73, the document was no longer in draft status. | |
| Assessment<br>Means of validation / | Approach mentioned in the revised PDD is acceptable to the DoE, same has been approved by UNFCCC in EB 73 para 63 as well, Hence this CAR s closed out. | |
| Adjustment on project design | PP has submitted the revised PDD. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | <u>The Additionality as of the PDD is not sufficiently substantiated with the credible evidences.</u> | ☑<br>Finding Closed<br>IRL 4, 34 |
| Requirement | VVS 103 & EB 68 Annex 27 | |
| Corrective Action Request | **<u>Corrective Action Request No.7</u>**<br>In section B.5 of the PDD, PP shall use the latest guidelines for the additionality demonstration; PP has used EB 63 Annex 24 – which is not the latest guidelines to demonstrate the additionality for small scale project activity. | |
| Response | The PDD has been updated to apply the Guidelines on the demonstration of additionality of small-scale project activities v9.0 (EB 68 Annex 27). | |
| Assessment | PP has revised the additionality guideline in the revised PDD, Hence this CAR is closed out. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| Means of validation / | | |
| Adjustment on project design | PP has submitted the revised PDD. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | <u>The Barrier Analysis is not sufficiently substantiated as per EB 50 annex 13.</u> | ☑<br>Finding Closed<br>IRL 6, 24, 25, 34, 35 |
| Requirement | VVS 124 & 125 | |
| Corrective Action Request | **<u>Corrective Action Request No.8</u>**<br>Barrier Analysis mentioned in the section B.5 of the PDD to demonstrate Additionality, need to be further elaborated as per EB 50 Annex 13.<br><br>Please provide the supporting documents for all the Barriers mentioned in section B.5 of the PDD, in order to substantiate these barriers. | |
| Response | The PDD has been updated to further elaborate the barriers analysis and apply guideline 7 of the Guidelines For Objective Demonstration and Assessment of Barriers (EB 50 Annex 13). | |
| Assessment<br>Means of validation / | PP has amended the PDD as per para 7 of EB 50 Annex 13, but additionality shall be further substantiated according to EB 68 Annex 27. | |
| Response | The PDD has been updated to apply paragraph 2 (c) of EB 68 Annex 27 Guidelines on the Demonstration of Additionality of Small-Scale Project Activities. The project is therefore deemed automatically additional and documentation of barriers is not required. | |
| Assessment<br>Means of validation / | The PP has changed the additionality approach in the revised PDD, as per paragraph 2 (c) of EB 68 Annex 27, the project is automatically additional, Hence this CAR is closed out. | |
| Adjustment on pro- | PP has submitted the revised PDD. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| ject design | | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | <u>The Barriers Analysis is not transparent in the PDD.</u> | ☑<br>Finding Closed<br>IRL 6, 24, 25, 34, 35 |
| Requirement | VVS 126 | |
| Corrective Action Request | **<u>Corrective Action Request No.9</u>**<br>Please provide the credible evidences in order to demonstrate that:<br>• Demonstrated barriers are real.<br>• Demonstrated Barriers prevent the implementation of the proposed activity. | |
| Response | The PDD has been updated to provide further evidence for the barriers analysis and apply guideline 7 of the Guidelines For Objective Demonstration and Assessment of Barriers (EB 50 Annex 13). | |
| Assessment<br>Means of validation / | PP has amended the PDD as per para 7 of EB 50 Annex 13, but additionality shall be further substantiated according to EB 68 Annex 27. | |
| Response | The PDD has been updated to apply paragraph 2 (c) of EB 68 Annex 27 Guidelines on the Demonstration of Additionality of Small-Scale Project Activities. The project is therefore deemed automatically additional and documentation of barriers is not required. | |
| Assessment<br>Means of validation / | The PP has changed the additionality approach in the revised PDD, as per paragraph 2 (c) of EB 68 Annex 27, the project is automatically additional, Hence this CAR is closed out. | |
| Adjustment on pro-ject design | PP has submitted the revised PDD. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | The monitoring plan presented in section B.7.1 of the PDD is not consistent with the applied methodology. | ☑ Finding Closed IRL 2, 34 |
| Requirement | VVS 132 a & PS 55 | |
| Corrective Action Request | **Corrective Action Request No.10**<br>Monitoring plan presented in section B.7.1 of the PDD is not consistent with applied methodology section 5 (para 22 to 27), PP shall further clarify.<br>The requirements of para 26 a and b as well as the monitoring parameters mentioned in tables 3 to 7 of the applicable methodology are not covered in the MP. PP Shall further clarify. | |
| Response | The PDD has been updated to clarify the sections of the applied methodology section 5 that are not applicable due to the methodological choices made in section B.6.1 of the PDD for this project. | |
| Assessment<br>Means of validation / | PP has revised the PDD for the monitoring parameters, revised PDD contains the clearer and transparent description for the monitoring parameter in line with the applied methodology, Hence this CAR is closed out. | |
| Adjustment on project design | PP has submitted the revised PDD. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | The information about the Local Stakeholder Consultation presented in the PDD is not sufficient. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| Requirement | VVS 138 | ☑ Finding Closed IRL 32, 34 |
| Corrective Action Request | **Corrective Action Request No.11**<br>In section E.1 of the PDD, date of stake holder consultation is missing.<br>Also, it is not clear that when the invitation of the stake holder was sent by PP. | |
| Response | The PDD has been updated to include the dates of the meetings held for the local stake holder consultation. The details of the invitations have been provided in the local stake holder consultation report. | |
| Assessment<br>Means of validation / | PP has mentioned the date of the stake holder in the section E.1 of the revised PDD, stake holder consultation section has been further elaborated in the PDD. PP need to further submit the Local stake holder consultation report to DOE. | |
| Response | The Local Stakeholder consultation report is included as an attachment to this response. | |
| Assessment<br>Means of validation / | PP has submitted an excel sheet regarding the LSC Report. PP shall submit the authenticated copy of the LSC Report to the Audit Team.<br>Also, PP shall submit the 'signed participant List' in order to evidence the consultation. | |
| Response | The authenticated, signed Local Stakeholder Consultation Report is included as an attachment to this response and includes the participant list. | |
| Assessment<br>Means of validation / | PP has submitted the stake holder consultation report, Audit Team has interviewed some of the stake holder during on site visit, who confirmed that the stake holder process was done. Hence this CAR is closed out. | |
| Adjustment on project design | PP has submitted the revised PDD. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| Issue | The information about the Local Stakeholder Consultation presented in the PDD is not sufficient | ☑ Finding Closed IRL 16 |
| Requirement | VVS 138 | |
| Corrective Action Request | **Corrective Action Request No.12**<br>As per section E.2 of the PDD, the "District Commissioner" and the "District Executive Committee members" of Nkhata Bay District officially launched the project activity; please provide the supporting for the same. | |
| Response | The minutes of the District Executive Committee meeting approving the project are included as an attachment to this response. | |
| Assessment<br>Means of validation / | PP has submitted the MoM from DEC, the same has been checked by the audit team and found satisfactory, Hence this CAR is closed out. | |
| Adjustment on project design | No Changes Required. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | Project participants shall determine the start date of the proposed CDM project activity and provide a description of how this start date has been determined. | ☑ Finding Closed IRL 36 |
| Requirement | PS 57 | |
| Corrective Action Request | **Corrective Action Request No.13**<br>Start date of the project activity mentioned in section C.1.1 of the PDD is not transparently linked to the actual activity started on this date, please provide the supporting document in order to justify the start date of the project activity. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| Response | Copies of implementation monitoring forms that show records of Changu Changu Moto improved cook stove construction occurring shortly after the project start date of 1 February 2012 are included as an attachment to this response. | |
| Assessment<br>Means of validation / | 1st February 2012 is mentioned as the start date of the project activity in section C.1.1 of the PDD, it is still not clear that what was done on this date and how this date is in compliance with the Glossary of Terms for start date of the project activity.<br>Also, the construction records are not clear, and Audit Team is not able to trace out, whether these records are for project 1 or project 2.<br>PP shall further respond on the issue. | |
| Response | The start date of the project is based on the date that implementation of the project activity commenced with moulding of bricks to construct stoves. The project was officially launched on 20th January 2012 (project launch report and transcript of launch speech have been included as attachments to this response). Construction of bricks then commenced on 1st February 2012 (copy of email communication has been included as an attachment to this response).<br>The construction records provided are for chief areas in project 1. | |
| Assessment<br>Means of validation / | PP has submitted one document regarding the launch report, but this report is not signed by any one, PP shall submit the authenticated launch report.<br>From the email submitted by PP, It is clear that Construction of Bricks was started on 1st February 2012, and hence this date can be considered as start date of the project activity. | |
| Response | The authenticated, signed project launch report has been included as an attachment to this response. | |
| Assessment<br>Means of validation / | PP has submitted the project Launch report, which has been checked and found satisfactorily, Hence this CAR is closed out. | |
| Adjustment on project design | No Change in PDD. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | <u>The information about the Operational Life time of the project activity in the PDD is not backed by evidences.</u> | ☑ Finding Closed IRL 33 |
| Requirement | PS 58 | |
| Corrective Action Request | **<u>Corrective Action Request No.14</u>**<br>Please submit the supporting document in order to justify the operational life time of the CDM Project activity. | |
| Response | The manufacturer specifications of the stove have been provided that confirm that the lifetime of a Changu Changu Moto is in excess of 10 years, and that the use of virtually unlimited, locally available, natural materials to construct the cookstove allows repairs and re-builds of stoves to be conducted as required at no cost to the householder. Improved cook stoves that are re-built are considered to be operating as per paragraph 22 of the methodology. | |
| Assessment<br>Means of validation / | PP shall submit the manufacturer's specification to the DOE. | |
| Response | Manufacturer Technical specifications are included as an attachment to this response. | |
| Assessment<br>Means of validation / | PP have submitted the manufacturer specifications to the Audit Team, same has been checked, and found acceptable to the Audit Team, Hence this CAR is closed out. | |
| Adjustment on project design | Not Applicable. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| Issue | <u>The start date of the crediting period indicated in the PDD is not credible.</u> | ☑ Finding Closed IRL 34 |
| Requirement | PS 62 | |
| Corrective Action Request | **<u>Corrective Action Request No.15</u>**<br>PP shall put the realistic date for the start date of crediting period under the section C.2.2. of the PDD, as 01/07/2013 is not the realistic start date for the crediting period. | |
| Response | The proposed start date of the crediting period in the PDD has been updated. | |
| Assessment<br>Means of validation / | PP has updated the start date of crediting period in section C.2.2 of the revised PDD, Hence this CAR is closed out. | |
| Adjustment on project design | PP has submitted the revised PDD: | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | <u>In the PDD, generally, very old references are being referred.</u> | ☑ Finding Closed IRL 19, 34 |
| Requirement | VVS 215 | |
| Corrective Action Request | **<u>Corrective Action Request No.16</u>**<br>PP has used very old references in the PDD (example: footnote – 31, 39, 51, PP shall provide the latest available references for these data. | |
| Response | The PDD has been updated to provide additional references where there is more recent data available, or additional references confirming that there is no more recent data available. | |
| Assessment<br>Means of validation / | PP has updated the references in the revised PDD, and the same is found satisfactory now.<br>However there is one reference i.e. Footnote 56, which is not being found in detail (i.e. title) in the PDD, PP shall submit the same to DOE. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| Response | The PDD has been updated to include the correct reference (footnote 65 - Forestry Department, Food and Agriculture Organization of the United Nations,Rome, Italy . 1999. The role of Wood Energy in Africa, Wood Energy Today for Tomorrow Regional Studies.). This reference has previously been provided to the DOE. | |
| Assessment<br>Means of validation / | PP has submitted the relevant references to the Audit team, same has been checked and found satisfactorily, Hence this CAR is closed out. | |
| Adjustment on project design | PP has submitted the revised PDD. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | The monitoring plan presented in section B.7 of the PDD is not consistent with the applied methodology and PS. | ☑<br>Finding Closed<br>IRL 35 |
| Requirement | VVS 132 a & PS 55, 56 | |
| Corrective Action Request | **Corrective Action Request No.17**<br>The requirements of para 26 a and b of the applicable methodology are not covered in the MP. PP Shall further clarify.<br>PP shall further elaborate the Monitoring Plan with regards of PS para 56, 97, 98 as:<br>a. The operational and management structure to be put in place to implement the monitoring plan;<br>b. Definition of responsibilities and institutional arrangements for data collection and archiving;<br>c. Quality assurance and quality control (QA/QC) procedures;<br>d. Uncertainty levels, methods and the associated accuracy level of measuring instruments to be used for various parameters and variables; | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| Response | PP has updated the PDD to cover the requirements of para 26 of the applicable methodology and points a to d above. | |
| Assessment<br>Means of validation / | PP has submitted the updated PDD with the details in Appendix 5 of the PDD, the same is cross-checked and found satisfactorily, Hence this CAR is closed out. | |
| Adjustment on project design | PP has submitted the updated PDD. | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | The monitoring plan presented in section B.7 of the PDD is not consistent with the applied methodology and PS. | ☑<br>Finding Closed<br>IRL 35 |
| Requirement | PS 50 | |
| Corrective Action Request | **Corrective Action Request No.18**<br>The ex-ante estimation of emission reductions in section B.6.4 of the PDD is not matching with the Emission Reduction calculation Sheet. The inconsistency should be rectified. | |
| Response | The PP has corrected section B.6.4 of the PDD to rectify the inconsistency. | |
| Assessment<br>Means of validation / | PP has corrected the section B.6.4 of the revised PDD, but PP shall update the date and version of the revised PDD accordingly. | |
| Response | PP has updated the revised PDD | |
| Assessment<br>Means of validation / | PP has submitted the revised PDD with the update of date and version. Hence tis CAR is closed out. | |
| Adjustment on project design | PP has submitted the updated and revised PDD | |

| Corrective Action Requests by the assessment team | | |
|---|---|---|
| | | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | A timeline for the project activity does not exist in the PDD. | ☑ Finding Closed IRL 23 |
| Requirement | VVS 69 | |
| Clarification Request | **Clarification Request No. 1**<br>PP shall include the clear timeline for the each activity involved for the project activity in order to check the accuracy and completeness for the project activity. | |
| Response | The project timeline has been provided to the DOE. | |
| Assessment<br>Means of validation / | PP has submitted the project timeline to the DOE, the same has been checked and found satisfactorily. Hence this CL is closed out. | |
| Adjustment on project design | Not Applicable | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | The project boundary as presented in the PDD is not clear. | ☑ Finding Closed |
| Requirement | VVS 82 | |
| Clarification Request | **Clarification Request No. 2** | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| | Project Boundary is not clear in the PDD in terms of Source of Biomass, same need to be further elaborated along with supporting documents. | IRL 2,34 |
| Response | The PDD has been updated to clarify that the project boundary is defined as per paragraph 9 of the methodology and is the "physical, geographical site of the efficient devices the burn biomass". | |
| Assessment<br>Means of validation / | PP has revised the project boundary description in the revised PDD, the same has been cross checked during on site visit by the Auditor, and hence this CL is closed out. | |
| Adjustment on project design | PP has submitted the revised PDD. | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | <u>Supporting documents regarding the applicability criteria mentioned in section B.2 of the PDD.</u> | ☑<br>Finding Closed<br>IRL 2, 24, 26, 34 |
| Requirement | VVS 73 & PS 38 | |
| Clarification Request | **<u>Clarification Request No. 3</u>**<br><br>• PP shall submit the supporting documents regarding the applicability criteria mentioned in section B.2 of PDD.<br>• It is mentioned in section B.2 point 1 that "*The improved cook stoves will replace existing inefficient cook stoves (predominantly 3 stone fires)....",* This is contradictory with the statement above stating that 100% of baseline stoves in the project area are 3stone fires. PP shall further clarify.<br>• Also, the value of $NCV_{biomass}$ mentioned in the PDD page 12 is not matching with IPCCC value, PP shall further clarify. | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| Response | • All references in the PDD have been provided to the DOE.<br>• The PDD has been updated to clarify that the only eligible households are those currently using the traditional 3 stone fire.<br>• The PDD has been updated to clarify that all woody biomass usage figures from KPTs are converted to and quoted on a 0% moisture dry wood basis following the applied KPT procedures specified by the PCIA. The IPCC default NCV for wood fuel in AMS-II.G. version 5 paragraph 11 is quoted on a "wet basis". The application of a NCV on a wet basis to woody biomass weights converted to 0% moisture dry wood weight is a chosen for conservativeness and to ensure compliance with methodology and KPT procedures simultaneously. | |
| Assessment<br>Means of validation / | • PP has submitted the relevant document to the audit team, same has been discussed during on site as well (IRL 24, 26).<br>• PP has updated the revised PDD, in order to avoid the confusion on the issue of eligible households, the eligibility of households are more transparent in the revised PDD.<br>• Justification given by PP is clear and conservative, Hence the NCV value provided in the PDD is accepted to the audit team.<br><br>Based on the above justifications, this CL is closed out. | |
| Adjustment on project design | PP has submitted the revised PDD. | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | Supporting documents regarding the applicability criteria mentioned in section B.2 of the PDD. | ☑ |
| Requirement | VVS 73 | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| Clarification Request | **Clarification Request No. 4**<br><br>• Thermal Efficiency (25%) of cook stoves as mentioned in the PPD page 9 is not matching with the efficiency (greater than 20%) as issued by "Malawi Bureau of Standard" document.<br>• Number of household participating in the project activity is not matching in the PDD: In section A.1 it is mentioned that 19000 households will be participating, while under section A.6 - it is mentioned as 15200 Households will be participating, Please clarify the inconsistencies. | Finding Closed<br>IRL 2, 21, 22, 29, 34 |
| Response | The PDD has been updated to state that the efficiency of the stove is above 20% as per the test report from the Malawi Bureau of Standards.<br><br>The PDD has been updated to clarify that while 19000 households will be participating, the number of operating stoves is expected to be 15200. The number of operating stoves is used for emission reduction calculations, while the number of participating households is used for sample size calculations to give conservative results in both cases. | |
| Assessment<br>Means of validation / | PP has corrected the error of efficiency in the revised PDD.<br><br>Calculation sheet has been cross checked by the Audit team, where the operating stoves is considered for the emission reduction calculation. Hence this CR is closed out. | |
| Adjustment on project design | PP has submitted the revised PDD. | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |

| Clarification Requests by the assessment team | | |
|---|---|---|
| Issue | Approval from Local Authorities | ☑ Finding Closed IRL 16 |
| Requirement | VVS 93 | |
| Clarification Request | **Clarification Request No. 5**<br>PP shall submit the Approval Letter for the project activity from all the seven Authorities involves in the Project activity.<br>Also, please submit the approval for the project activity from District Commissioner. | |
| Response | The minutes of the District Executive Committee meeting approving the project, included as an attachment to this response, state that the projects roles and responsibilities of the District Council and the Traditional Authorities are to "*approve the project at District level before implementation can take place*" and "*report to the District Council and are responsible for project implementation at community level*" respectively.<br><br>Therefore, the District Executive Committee approves the project on behalf of the Traditional Authorities, and the minutes of the District Executive Committee meeting approving the project also represents approval for the project activity from all Traditional Authorities involved in the project activity. | |
| Assessment<br>Means of validation / | PP has submitted the approval letter from the district Executive committee, who approves this project on behalf of the Traditional Authorities. Hence this CR is closed out. | |
| Adjustment on project design | No Applicable | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | Para of Debundling Guidelines mentioned in section A.6 is not correct | ☑ |
| Requirement | PS 88 | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| Clarification Request | **Clarification Request No. 6**<br>• As of chapter A.6 of the PDD, PP has referred para 10 of the debundling guidelines, while the same paragraph is not correct, PP shall further clarify.<br>• AS per para 2 of section A.6 of the PDD, it is mentioned about 0.007%, while as per our calculation, it is coming about 0.000056%, PP shall further clarify. | Finding Closed<br>IRL 5, 22, 34 |
| Response | • The PDD has been updated to reference the correct paragraph number (7) of the Guidelines on Assessment of Debundling for SSC Project Activities version 3.<br>• The calculation of the contribution of each operating device to the overall limit is detailed in the Emission Reductions Calculation Excel spreadsheet for the project. It is based on the expected number of operating devices (15,200), rather than eligible households, and the figure of 0.007% is believed to be correct. | |
| Assessment<br>Means of validation / | PP has corrected the typo error regarding the de-bundling guideline in section A.6 of the PDD.<br><br>PP's justification on the calculation seems to be conservative and justified, Hence the figure of 0.007% is accepted, Hence this CR is closed out. | |
| Adjustment on project design | PP has submitted the revised PDD. | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | Procedure for omitting Pilot Project from the project activity | ☑ |
| Requirement | PS 50 | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| Clarification Request | **Clarification Request No. 7**<br>As per section A.2.3 of the PDD, It is mentioned that 2000 household received already project cook stoves under a pilot project and that these households will not be eligible to participate in this project. How will it be ensured? The procedure is not clear and there is a need for clarification. | Finding Closed<br>IRL 34 |
| Response | Section B.7.3 of the PDD has been updated to include details of the procedure that will be followed to ensure households that participated in the pilot project and other ineligible households are not included in the project. | |
| Assessment<br>Means of validation / | PP has revised the description in the section B.7.3 of the revised PDD, the same has been cross checked during site visit, Hence this CR is closed out. | |
| Adjustment on project design | PP has submitted the revised PDD: | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | Sampling Plan | ☑<br>Finding Closed<br>IRL 20, 34 |
| Requirement | PS 54 | |
| Clarification Request | **Clarification Request No. 8**<br>As of chapter B.4 of the PDD, the parameter $B_{old}$ is fixed ex-ante. Why then is it subject of the sampling plan? PP shall further clarify. | |
| Response | The sampling plan used to determine this parameter was incorrectly included in this section. The PDD has been updated and the sampling plan followed to determined this parameter is now included in Appendix 4 part A. | |
| Assessment | PP has corrected the typo error, parameter $B_{old}$ has now removed from the section B of the revised PDD, Appendix 4 of the PDD has been checked and the survey report has been cross | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| Means of validation / | checked during on site visit by the audit team, which is found satisfactorily, Hence this CR is closed out. | |
| Adjustment on project design | PP has submitted the revised PDD. | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | Energy Savings of 60 GWh per year or 180 GWh thermal per year in fuel input. | ☑ Finding Closed IRL 2, 22 |
| Requirement | PS 91 | |
| Clarification Request | **Clarification Request No. 9**<br>As per paragraph 4 of methodology AMS II G version 05, PP shall submit the evidence for "**The aggregate energy savings of a single project activity shall not exceed the equivalent of 60 GWh per year or 180 GWh thermal per year in fuel input**." | |
| Response | The calculation sheet for the aggregate energy savings has been provided to the DOE. | |
| Assessment<br>Means of validation / | PP has submitted the calculation sheet for the Energy Savings, the same is 153.3 GWh thermal, which is in compliance with the para 4 of the applied methodology. This CR is closed out. | |
| Adjustment on project design | Not Applicable. | |

| Clarification Requests by the assessment team |
|---|

| Clarification Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | Emission Reduction Sheet is missing | ☑ Finding Closed IRL 22 |
| Requirement | VVS 96 | |
| Clarification Request | **Clarification Request No. 10**<br><br>PP shall submit the emission reduction calculation sheet, which shall represent the clear calculation of the Emission reduction along with the source of raw data used. | |
| Response | The emission reduction calculation sheet has been provided to the DOE. | |
| Assessment<br>Means of validation / | PP has submitted the emission reduction calculation sheet, the same has been checked and found satisfactory, and hence this CR is closed out. | |
| Adjustment on project design | Not applicable. | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | Sampling Issue | ☑ Finding Closed IRL 8, 30, 34 |
| Requirement | PS 119 | |
| Clarification Request | **Clarification Request No. 11**<br>The sample survey and sample size presented in section B.7.2. of the PDD is not in line with “Guidelines for sampling and surveys for CDM project activities and programme of activities” (version 03.0) and as such the assumptions used in sampling approach are not reflected in ex-ante emission reduction calculation. Kindly clarify. | |
| Response | The PDD has been updated to clarify that the sampling plans have been designed in accor- | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| | dance with the Guidelines for sampling and surveys for CDM project activities and programme of activities version 03.0. | |
| Assessment<br>Means of validation / | The sampling plan in the revised PDD has been designed in accordance with Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities version 3.0.<br>The sampling method used in the revised PDD is multi-stage cluster sampling which is using a self-weighting sampling procedure as per as per section II.E of Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities version 2.0.<br>Nkhata Bay District covers an area of 4,071 km2. Transport infrastructure is limited, access to liquid fuels in Malawi is limited, and times and costs to travel within the district can be high. Cluster sampling was selected to significantly improve the efficiency and reduce the costs of the sampling compared to a simple random sample.<br>This approach has been discussed and cross checked during on site by the Audit team, Hence this CR is closed out. | |
| Adjustment on project design | PP has submitted the revised PDD. | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | <u>Baseline Survey</u> | ☑<br>Finding Closed<br>IRL 13, 20 |
| Requirement | VVS 132 | |
| Clarification Request | **<u>Clarification Request No. 12</u>**<br><br>PP shall submit the authentic copy of the baseline survey report which includes the signature of the signatory authority. | |
| Response | A copy of the signed report is included with this response. | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| Assessment<br>Means of validation / | PP has submitted the signed copy of the survey report, this report is also approved by the Nakhata Bay District Assembly, Ministry of Local Government & Rural Development. Hence this CR is closed out. | |
| Adjustment on project design | Not Applicable. | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | Environmental Impact Assessment | ☑<br>Finding Closed<br>IRL 28, 31, 34 |
| Requirement | VVS 135 & PS 63 | |
| Clarification Request | **Clarification Request No. 13**<br>PP shall submit the documentary evidences whether the project participants conducted an environmental impact assessment, as it is the requirement of para 63 of the PS. | |
| Response | The PDD has been updated to include references to the documents that confirm that an environmental impact assessment is not required by the host country for this project type. | |
| Assessment<br>Means of validation / | PP has provided the link in the revised PDD, which states that EIA is not required for these types of project.<br><br>The same has been cross checked by the Audit team via web link IRL31, Hence this CR is closed out. | |
| Adjustment on project design | PP has submitted the revised PDD. | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | Environmental Management Plan/Assessment | ☑ Finding Closed IRL 31, 35, 40 |
| Requirement | VVS 135 | |
| Clarification Request | **Clarification Request No. 14**<br>As per the con-call with DNA during on site, she proposed the PP to do the two activities as below:<br>• PP shall consider the Environmental management plan in order to check that what kind of soil is being used in the project activity.<br>• PP shall contact the Environmental Department to check that how the EIA/EMP can be done for these types of project activities. | |
| Response | An environmental management plan has been prepared for submission with the application for an LOA from the host country DNA. | |
| Assessment<br>Means of validation / | Pending the closure of CAR 1. | |
| Response | An environmental management plan submitted by the PP has been accepted by the DNA and hence the LOA has been issued from the host country DNA. | |
| Assessment<br>Means of validation / | PP has submitted the Letter of Approval issued by the DNA, Hence this CL is closed out. | |
| Adjustment on pro-ject design | PP has submitted the revised PDD. | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | QA/QC | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| Requirement | VVS 234 (e) | ☑ Finding Closed IRL 34 |
| Clarification Request | **Clarification Request No. 15**<br>It was found during on site visit, that some of the households are not using the stoves, and in some cases the stoves were not there, while these houses were reported fine in the survey report by the Coordinators or CVs, please clarify. | |
| Response | Section B.7.3 of the PDD has been updated to include the details of the improved monitoring procedures that have now been implemented for the project. Currently, all improved cook stoves are in the process of being checked by Coordinators in accordance with the new procedures, and no stoves will be marked as operating in the project database until they have been verified as operating by a Coordinator. | |
| Assessment<br>Means of validation / | PP has revised section B.7.3 of the revised PDD, QA/QC procedures has become more robust in the revised PDD as discussed during site audit. This issue shall be further verified during the verification of the project activity by the verifying DOE. | |
| Adjustment on project design | PP has submitted the revised PDD. | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| | Comments and Results | Conclusion and IRL |
| Issue | Sampling Issue | ☑ Finding Closed IRL 21, 35 |
| Requirement | PS 119 | |
| Clarification Request | **Clarification Request No. 16**<br>The sample survey and sample size presented in section B.7.2. of the PDD is not in line with "Guidelines for sampling and surveys for CDM project activities and programme of activities" (version 03.0), The PDD has introduced a different approach to calculate the sample size (e.g. design effect) other than those available in the Guideline Sampling and surveys for CDM pro- | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| | ject activities and programmes of activities v3.0. Kindly clarify. | |
| Response | PP has clarified this point in an email and has updated the PDD where appropriate. | |
| Assessment<br>Means of validation / | PP is requested to explain here that how the issue is addressed.<br>Also, please clarify that what are the changes being done in PDD and in which section are being done, in order to maintain the clarity and transparency. | |
| Response | The use of design effect to calculate the sample size came from the procedures in *Household Sample Surveys in Developing and Transition Countries*. This is referenced in footnote 4 on page 10 in Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities Version 03.0. Equation 55 in Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities Version 03.0 gives another method to calculate the sample size. We didn't use this as it wasn't published when the calculation was done.<br>PP has updated the Section B.7.2.1 of the PDD with this information so this point is clear to the reader. | |
| Assessment<br>Means of validation / | First version of the PDD is dated 14.05.2013, while the equation 55 in *Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities* is there from 2012. PP shall further clarify that why the different approach is being used to calculate the sample size. | |
| Response | Equation 55 in EB75A08 applies to proportion parameters, which in our case is the number of stoves operating. This formula has already been applied in section B7.2.2. of the PDD.<br><br>The equation in EB75A08 that applies to mean parameters, such as wood use, is equation 77. Section 7.2.1 of the PDD for project 1 and project 2 have been updated to apply this equation to calculate the sample size required for the project KPTs. This formula requires estimates of the results expected, and the results from the baseline KPTs in the report "Nkhata Bay District Wood Use Survey" have been used. These were not available at the time the PDD was originally drafted, hence this equation was not able to be used.<br>There is no change to the sample size required.<br><br>Updated spreadsheets including the sample size calculations have also been attached. | |

| Clarification Requests by the assessment team | | |
|---|---|---|
| Assessment<br>Means of validation | PP has submitted the revised calculation sheet, which includes the calculation based on the sampling guidelines version 03. Hence this CL is closed out. | |
| Adjustment on project design | PP has submitted the revised PDD. | |

# Annex 2
# Information Reference List

**Project title**: Improved Cook Stove Project 1, Nkhata Bay District, Malawi

**Interviewed Persons during onsite assessment:**

| Name | Function | Company |
|---|---|---|
| Mr. Geoffrey Furber | Director | Vimiti Limited |
| Mr. Charlie Knight | Project Manager | Ripple Africa |
| Mr. Ben Cirulis | Technical Manager | Sigma Global |
| Mr. Chief Fukamapiri | Chief | Traditional Authority - Fukamapiri |
| Mr. Force Ngwira | Environmental Programme Manager | Ripple Africa |
| Mr. Francis Matwere | District Officer | District Council – Nkata Bay |
| Mr. Goodly Taliana | District Forest Officer | Forest Department |
| Ms. Catherine Manda | Regional Manager (South) | Ripple Africa |
| Ms. Wezie Njikho | Coordinator - Zilakoma | Ripple Africa |
| Ms. Lucy Phiri | Community Volunteer | Chief Yaledi - Zilakoma |
| Ms. Daneline Milazi Chirwa | Community Volunteer | Chief Mphazamuka - Fukamapiri |
| Mr. Jimmy Mughogho | Coordinator - Mankhambira | Ripple Africa |
| Mr. Owen Nyirenda | Coordinator - Fukamapiri | Ripple Africa |
| Ms. Precious Banda | Coordinator - Malengamzoma | Ripple Africa |

**Other Interviewed Persons (not during onsite assessment):**

| Name | Function | Institution/Company | Date of Interview |
|---|---|---|---|
| Ms.Shamiso Najira | DNA | Malawi | 10/07/2012 |

| 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) |
|---|---|---|---|---|
| 1. | TÜV SÜD | On site visit | 9th & 10th July 2013 | |
| 2. | UNFCCC | AMS II G "Energy efficiency measures in thermal applications of non-renewable biomass" version 05 | 23rd November 2012 | |
| 3. | Environmental Affairs Department | Ministry of Natural Resources, Energy and Environment, Malawi Government. 2010. Malawi State of Environment and Outlook Report. s.l.: Environmental Affairs Department, 2010. | 2010 | |
| 4. | UNFCCC | GUIDELINES ON THE DEMONSTRATION OF ADDITIONALITY OF SMALL-SCALE PROJECT ACTIVITIES, version 09 | EB 68 Annex 27, 20th July 2012 | Additionality Compliance |
| 5. | UNFCCC | GUIDELINES ON ASSESSMENT OF DEBUNDLING FOR SSC PROJECT ACTIVITIES, version 03 | EB 54 Annex 13, 28th May 2010 | Compliance on Debundling Issue |
| 6. | UNFCCC | GUIDELINES FOR OBJECTIVE DEMONSTRATION AND ASSESSMENT OF BARRIERS, version 01 | EB 50 Annex 13, 16th October 2009 | |
| 7. | UNFCCC | INDICATIVE SIMPLIFIED BASELINE AND MONITORING METHODOLOGIES FOR SELECTED SMALL-SCALE CDM PROJECT ACTIVITY CATEGORIES, version 03 | EB 47 Annex 28 | Leakage |
| 8. | UNFCCC | STANDARD FOR SAMPLING AND SURVEYS FOR CDM PROJECT ACTIVITIES AND PROGRAMME OF ACTIVITIES, version 03 | EB 69 Annex 04 | Sampling Guidelines |
| 9. | UNFCCC | Guidelines for completing CDM-PDD and CDM-NM | | PDD Template requirements |
| 10. | IPCCC | Revised 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual | 2006 | |
| 11. | UNFCCC | Project Design Document Form (CDM PDD) – Version 04.1 | 11th April 2012 | PDD Template |
| 12. | UNFCCC | Validation and Verification Standard, version 03<br>Validation and Verification Standard, version 05 | EB 70 Annex 03, 23rd November 2013 | |

| 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) |
|---|---|---|---|---|
| 13. | Nakhata Bay District Assembly, Ministry of Local Government & Rural Development | Baseline Survey and KPT Report approved by District Forestry Officer | 25/07/2013 | Baseline |
| 14. | PP | sample size calculation v10 220313 BC | 09/07/2013 | Sample Size Calculation |
| 15. | UNFCCC | CDM SSC WG meeting 40 annex 05 http://cdm.unfccc.int/Panels/ssc_wg/meetings/040/ssc_040_an05.pdf | 03/05/2013 | Project Implementation |
| 16. | PP | The minutes of the District Executive Committee meeting | 08/01/2011 | Project Implementation |
| 17. | PP | MOU detailing the obligations of RIPPLE Africa | 23/03/2013 | Project Implementation |
| 18. | Ansari, H. Joint UNDP/World Bank Energy Sector Management Program | Energy Assessment Status Report – Malawi | 1984 | PDD Section B2 |
| 19. | Forestry Department, Food and Agriculture Organization of the United Nations | The role of Wood Energy in Africa, Wood Energy Today for Tomorrow Regional Studies, Rome, Italy | 1999. | Baseline |
| 20. | Sigma Global & Ripple Africa | Nkhata Bay District Wood Use Survey, September 2012 | September 2012 | Baseline |

| 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) |
|---|---|---|---|---|
| 21. | PP | sample size calculation v10 220313 BC<br>Revised Excel sheet for sample size calculation | July 2013<br>September 2014 | Sampling |
| 22. | PP | Emission Reduction calculations project 1 v5 020713 BC | July 2013 | ER Calculation |
| 23. | PP | RIPPLE Africa Improved Cook Stove Project 1 and 2 planning v16 | July 2013 | |
| 24. | Ditrict Commissioner, Nakhata Bay District Council | Forestry and carbon stocks in Nkhata Bay District. 2012. | May 2012 | Additionality |
| 25. | National Statistical Office, Government of Malawi | Statistical Yearbook 2010, NSO Malawi | 2010 | Additionality |
| 26. | Forestry Department, FAO, UN | Global forest resources assessment 2010 - Country Reports - Malawi – FAO | 2010 | Applicability of Methodology |
| 27. | Department of Energy Affairs, Government of Malawi | National Energy Policy. Lilongwe : s.n., 2003 | January 2003 | |
| 28. | Department of Environment | Malawi Environmental Protection Act | 05/08/1996 | |
| 29. | Malawi Bureau of Standards | [ISSU 12 AP 90 Quality check on Changu Changu Moto stove] Final report | 17/04/2012 | |
| 30. | Department of Economic and Social Affairs, Statistics Division, | Household Sample Surveys in Developing and Transition Countries. New York | 2005 | Section B7 of PDD |

| 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 Nations | | | |
| 31. | Environmental Protection Department | http://www.sdnp.org.mw/enviro/eia/appendixB.html | Last Assessed on 19th September 2013. | EIA requirement |
| 32. | PP | Local Stakeholder Consultation Report | | Stake Holder Consultation Process |
| 33. | Ripple Africa | Manufacturer Specification regarding the Stoves | | |
| 34. | PP | Revised PDD version 1.1 dated | | |
| 35. | PP | Revised PDD version 1.2 dated 25/09/2013<br>Revised PDD version 1.3 dated 01/03/2014<br>Revised PDD version 1.6 dated 15/09/2014 | | |
| 36. | PP | Changu changu moto project launch ceremony report<br>Internal MoM against the implementation of the project activity commenced with moulding of bricks to construct stoves | 20th January 2012<br>1st February 2012 | Start Date |
| 37. | UNFCCC | EB67, Annex 22 - InformFprioration note: Default values of fraction of non-renewable biomass for least developed countries and small island developing States (version 01.0) | | |
| 38. | UNFCCC | http://cdm.unfccc.int/DNA/fNRB/docs/malawi.pdf | 15th June 2012 | Project Implementation |
| 39. | PP | CDM Prior Consideration Notification sent to DNA & UNFCCC | 19th June 2012 | Prior Consideration of CDM |
| 40. | DNA | Host Country Approval | 17th January 2014 | Letter of Approval |
| 41. | PP | Modalities of Communication | | MoC |
| 42. | UNFCCC | Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities version 03 | EB 75 Annex 08 | |

# Annex 3
# Appointment Certificates

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

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 | ISO-14064-1: 2006 | Other |
| | ☒ | ☒ | ☒ | ☒ | ☐ |

| Qualification as | | | | | | |
|---|---|---|---|---|---|---|
| **Status** | Validator ☒ | Verifier ☒ | ATL ☒ | Technical Reviewer ☐ | Financial Expert ☐ | Technical Expert ☒ |
| **TA (s)** | 3.1 | | | | | |

| Country Expertise | | | | | | |
|---|---|---|---|---|---|---|
| **Region** | 1 | 2 | 3 | 4 | 5 | Other |
| | ☒ | ☐ | ☐ | ☐ | ☐ | |
| **Further countries** | | | | | | |

| Technical Area |
|---|
| 3.1_Energy demand |
| |
| |
| |
| |
| |

This appointment is valid until 31.12.2014and 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-0043/004.

| Date | Signature |
|---|---|
| 01/06/2014 | |



TÜV SÜD South Asia ● Solitaire, 4th Floor ● ITI Road, Aundh ● Pune – 411007 ● Tel.: +91 20 6684 1200 ● Fax: +91 20 6684 1261

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

TÜV SÜD
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 | ISO-14064-1: 2006 | Other |
| | ☒ | ☐ | ☒ | ☐ | ☐ |

| Qualification as | | | | | | |
|---|---|---|---|---|---|---|
| **Status** | Validator ☒ | Verifier ☒ | ATL ☐ | Technical Reviewer ☐ | Financial Expert ☒ | Technical Expert ☒ |
| **TA (s)** | 1.2, 3.1, 13.1. | | | | | |

| Country Expertise | | | | | | |
|---|---|---|---|---|---|---|
| **Region** | 1 | 2 | 3 | 4 | 5 | Other |
| | ☒ | ☐ | ☐ | ☐ | ☐ | |
| **Further countries** | | | | | | |

| Technical Area |
|---|
| 1.2_Renewables |
| 3.1_Energy demand |
| 13.1_Waste handling and disposal |
| |
| |
| |

This appointment is valid until 31.12.2014 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-0001/005.

| Date | Signature |
|---|---|
| 01/06/2014 | |



TÜV SÜD South Asia ● Solitaire, 4th Floor ● ITI Road, Aundh ● Pune – 411007 ● Tel.: +91 20 6684 1200 ● Fax: +91 20 6684 1261

ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

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 | ISO-14064-1: 2006 | Other |
| | ☒ | ☒ | ☒ | ☒ | ☐ |

| Qualification as | | | | | | |
|---|---|---|---|---|---|---|
| **Status** | Validator ☒ | Verifier ☒ | ATL ☒ | Technical Reviewer ☒ | Financial Expert ☒ | Technical Expert ☒ |
| **TA (s)** | 1.2, 3.1, 13.1. | | | | | |

| Country Expertise | | | | | | |
|---|---|---|---|---|---|---|
| **Region** | 1 | 2 | 3 | 4 | 5 | Other |
| | ☒ | ☐ | ☐ | ☐ | ☐ | |
| **Further countries** | | | | | | |

| Technical Area |
|---|
| 1.2_Renewables. |
| 3.1_Energy demand. |
| 13.1_Waste handling and disposal. |
| |
| |
| |

This appointment is valid until 31.12.2014 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-0060/005.

| Date | Signature |
|---|---|
| 01/06/2014 | |



TÜV SÜD South Asia ● Solitaire, 4th Floor ● ITI Road, Aundh ● Pune – 411007 ● Tel.: +91 20 6684 1200 ● Fax: +91 20 6684 1261