



VERIFICATION REPORT

(RETROACTIVE VERIFICATION)

for the GS-VER Project Activity

of Hestian Innovation

Integrated Biomass Energy Conservation Project
- Malawi

(GS Ref. No. GS613)

in

Republic of Malawi

Monitoring Period: 24-11-2008 to 01-10-2010
(incl.both days)

Report No. 2121 22251
Version No. 01.1, 2011-02-07

TÜV Rheinland Group

I. Project description:

Project title: **INTEGRATED BIOMASS ENERGY CONSERVATION PROJECT - MALAWI**

Host Country: Republic of Malawi

Methodology: Methodology for Improved Cook-stoves and Kitchen Regimes V.01

Emission reductions in the retroactive time frame 22,625 tCO₂e from 24/11/2008 to 01/10/2010 (197,645 tCO₂e/yr according to registered PDD)

☒ Large Scale ☐ Small Scale

GHG reducing measure/technology:

| Party | Project Participants | Party considered a project participant |
|-------------------------------------------------------|-------------------------|----------------------------------------|
| The project is voluntary: no Kyoto Party participates | Hestian Innovation Ltd. | N/A |

II. Retroactive Verification:

Contract party: Hestian Innovation Ltd.

Verification Team:

| Role | Full name | Appointed for Sectoral Scopes | Affiliation |
|---------------------------|-------------|-------------------------------|---------------------------------------------|
| Team Leader | Kurt Seidel | 1,2,3,13 | TÜV Rheinland Energie und Umwelt GmbH (TEU) |
| Technical Reviewer | Ralf Kober | 1, 7,13 | TEU |

Verification Phases:

☒ Desk Review Requested

☒ Follow up interviews Registration

☒ Resolution of outstanding issues

Verification Status:

☐ Corrective Actions / Clarifications

☒ Full Approval and Submission for

☐ Rejected

III. Verification Report:

| | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|------------------------------------------------|-------------------------------------------|
| Report No.: 2121 2251 | Current version No.: 01.1 | Date of current revision: 2011-02-07 | Date of first issue: 2011-01-07 |
| Distribution: <input checked="" type="checkbox"/> No distribution without permission from the Client or responsible organizational unit <input type="checkbox"/> Unrestricted distribution | | | |

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|-------------------------------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Final approval: <input type="checkbox"/> | Released on: 2010-02-07 | Designated Operational Entity (DOE): TÜV Rheinland Japan Ltd. Shin Yokohama Daini Center Bldg., 3-19-5, Shin Yokohama Kohoku-ku, Yokohama, JAPAN 222-0033 Tel.: +81 45 470 1850, Fax: +81 45 470-2361 E-mail: cdm@tuv.com |
|-------------------------------------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Summary:

Hestian Innovation Ltd. has commissioned TÜV Rheinland to perform a retroactive periodic verification of the VER project: Integrated Biomass Energy Conservation Project. The verification is based on the currently valid documentation of the UN Framework Convention on Climate Change (UNFCCC) and the Gold Standard Foundation.

The project reduces GHG emissions due to fuel-efficient wood-burning stoves and barns. It is owned and managed by highly educated and trained entrepreneurs and non-government organisations. This verification covers the period from November 24th 2008 to October 1st 2010 (including both days).

In the course of the verification [3] FARs were raised. The verification is based on the draft monitoring report, revised monitoring report, the monitoring plan as set out in the registered PDD, the validation report, emission reduction calculation spreadsheet and supporting documents made available to the TÜV Rheinland by the project participant.

As a result of this verification, the verifier confirms that:

- all operations of the project are implemented and installed as planned and described in the validated project design document.
- the monitoring plan is in accordance with the applied approved GS methodology, i.e., Indicative programme, baseline, and monitoring methodology for Improved Cook – Stoves and Kitchen Regimes
- the monitoring system is in place and functional. The project has generated GHG emission reductions.

As the result of the Retroactive periodic verification, the verifier confirms that the GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner.

TÜV Rheinland herewith confirms that the project has achieved emission reductions in the above mentioned reporting period as follows:

| | | |
|---------------------|-------------------------|-------------------------|
| Emission Reductions | 24/11/2008 – 31/12/2008 | 0 tCO ₂ |
| | 01/01/2009 - 31/12/2009 | 8,451 tCO ₂ |
| | 01/01/2010 - 01/10/2010 | 14,174 tCO ₂ |

| | | |
|---------------|--------------------------------------------|--------------|
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Abbreviations:

CA Corrective Action / Clarification Action
CAR Corrective Action Request
CDM Clean Development Mechanism
CER Certified Emission Reduction
CO₂ Carbon dioxide
CO₂eq Carbon dioxide equivalent
CL Clarification Request
ER Emission Reduction
FAR Forward Action Request
GHG Greenhouse gas(es)
MP Monitoring Plan
MR Monitoring Report
PDD Project Design Document
PP Project Participant
QA/QC Quality Assurance / Quality Control
UNFCCC United Nations Framework Convention on Climate Change
XLS Emission Reduction Calculation Spread Sheet

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1. INTRODUCTION

1.1. Objective

Hestian Innovation Limited has commissioned an independent retroactive periodic verification by TÜV Rheinland for its VER project: Integrated Biomass Energy Conservation Malawi. Verification is the periodic independent review by the TÜV of the monitored reductions in GHG emissions during the defined verification period.

The objective of the verification is the review and ex-post determination by an independent entity of the GHG emission reductions. It includes the verification of the:

- implementation and operation of the project activity as given in the PDD,
- compliance with applied approved methodology and the provisions of the monitoring plan,
- data given in the monitoring report by checking the monitoring records, the emissions reduction calculation and supporting evidence,
- quality of evidence,
- significance of reporting risks and risks of material misstatements.

1.2. Scope

Verification scope is defined as an independent and objective review and ex post determination of the monitored reductions in GHG emissions by the verifier. The verification is based on the project design document including baseline. These documents are reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. The verifier has, based on the recommendations in the Validation and Verification Manual, employed a risk-based approach in the verification, focusing on the identification of significant risks and reliability of project monitoring and generation of VERs.

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

1.3. GHG Project Description

The objective of the Integrated Biomass Energy Conservation Project Malawi is to reduce greenhouse gas emissions from non-renewable biomass fuel by dissemination of improved cook-stoves and fuel-efficient rocket barns to replace existing inefficient stoves and curing barns.

The project activity involves progressive installation of four types of improved cook stoves and an improved tobacco curing 'rocket barns' in all the three regions of Malawi i.e. Northern, Southern and Central regions.

Kitchen Tests and Kitchen Surveys have been conducted for fuel-efficient Portable Ceramic Stoves, Fixed Esperanza Stoves and Rocket Barns.

Urban Cook Stoves (UCS) and Institutional Cook Stoves (ICS) have been included in the project activity based on feedback received during local stakeholder consultation. Kitchen Surveys and Kitchen Tests have not been completed yet for UCS and ICS clusters but will be completed in the future.

This Verification Report covers only:

- (1) Portable Ceramic Stoves;
- (2) Fixed Esperanza Stoves; and
- (3) Rocket Barns

The applied methodology for the project is Gold Standard Methodology for Improved Cook–Stoves and Kitchen Regimes

The project has Gold Standard Registration Number 613. The project size is large scale.

The date of Gold Standard registration is October 1st 2010. The crediting period started in November 24th 2008. The retroactive monitoring period is November 24th 2008 to October 1st 2010.

2. METHODOLOGY

The project assessment aims at being a risk based approach and is based on the methodology developed in the Validation and Verification Manual, an initiative of all Applicant Entities, which aims to harmonise the approach and quality of all such assessments.

In order to ensure transparency, a verification protocol was customised for the project, according to the Validation and Verification Manual. The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results. The verification protocol serves the following purposes:

- It organises, details and clarifies the requirements a CDM/JI project is expected to meet;
- It ensures a transparent verification process where the verifier will document how a particular requirement has been proved and will deliver the result of the verification.

The verification protocol consists of two tables. The different columns in these tables are described in Figure 1.

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

| Table 1: GHG calculation procedures and management control testing / Detailed audit testing of residual risk areas and random testing | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Identification of potential reporting risk | Identification, assessment and testing of management controls | Areas of residual risks | Additional verification testing performed | Conclusions and Areas Requiring Improvement (including Forward Action Requests) |
| <i>The following potential risks were identified and divided and structured according to the possible areas of occurrence.</i> | <i>The potential risks of raw data generation have been identified in the course of the monitoring system implementation. The following measures were taken in order to minimise the corresponding risks.</i> <i>The following measures are implemented:</i> | <i>Despite the measures implemented in order to reduce the occurrence probability the following residual risks remain and have to be addressed in the course of every verification.</i> | <i>The additional verification testing performed is described. Testing may include:</i> - Sample cross checking of manual transfers of data - Recalculation - Spreadsheet 'walk throughs' to check links and equations - Inspection of calibration and maintenance records for key equipment | <i>Having investigated the residual risks, the conclusions should be noted here. Errors and uncertainties are highlighted.</i> |

| | | | | |
|--|--|--|----------------------------------------------------------------------------------------------------------------------------------------|--|
| | | | - Check sampling analysis results Discussions with process engineers who have detailed knowledge of process uncertainty/error bands | |
|--|--|--|----------------------------------------------------------------------------------------------------------------------------------------|--|

Table 2: Periodic verification checklist

| Checklist Item | Reference | Verification Team Comments | Draft Conclusion Final Conclusion | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <i>The checklist items in Table 2 are linked to the various requirements the monitoring of the project should meet. The checklist is organised in various sections as per the requirements of the topic and the individual project activity. It further includes guidance for the verification team.</i> | <i>Gives reference to the information source on which the assessment is based on.</i> | <i>The section is used to elaborate and discuss the checklist item in detail. It includes the assessment of the verification team and how the assessment was carried out. The reporting requirements of the VVM shall be covered in this section.</i> | <i>Assessment based on evidence provided if the criterion is fulfilled (OK), or a CAR, CL or FAR (see below) is raised.</i> | <i>In case of a corrective action or a clarification the final assessment at the final verification stage is given.</i> |

2.1. Review of Documents

The monitoring report submitted by the client and additional background documents related to the project performance were reviewed. Following documents are reviewed:

- the last revision of the PDD including the monitoring plan,
- the last revision of the validation report,
- the monitoring report, including the claimed emission reductions for the project,
- the emission reduction calculation spreadsheet,

Other supporting documents, such as publicly available information on the UNFCCC website and background information were also reviewed.

2.2. Follow-up Interviews

The initial follow-up was performed during on-site assessment and in follow-up interviews:

Lead auditor: Kurt Seidel

| | Date | Name | Organization | Topic |
|---------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| /i/ | 2009-10-20 until 2009-10-23 2009-10 to 2011-02 | O'Connor, John Fox, Conor | Hestian Innovation Ltd. Hestian Rural Innovation Development (HRID) | Project start, project implementation, additionality, supporting documents, status of project preparation and permits, environmental and social impacts, community benefits, common practice analysis, meeting with local stakeholders and visit manufacturing, construction sites, retailers, financial issues |
| /ii/ | 2009-10-20 | Malandi, Lloyd Kadutche, Mantaliwa | Tobacco Farmer Mpotachamba village Tobacco Farmer Mpotachamba village | Traditional tobacco barns and improved tobacco barns: Operational experiences. |
| /iii/ | 2009-10-20 | Mwanjaan, John | DeTAS Field Facilitator Esperanza Stove | Fixed esperanza stoves implementation and operation. |
| /iv/ | 2009-10-23 | Banda, Adson K Chamayere , Gift | HRID Team Supervisor Barns HRID Team Supervisor Barns | Features of traditional and improved barns, implementation and operation, barn tests and surveys.. |
| /v/ | 2009-10-20 | Chipek, Sarah Chigwenembe, Andrew Yolamu, Harlod | Concern Universal Field Facilitator Concern Universal Field Facilitator Concern Universal Field Facilitator | Features of traditional and improved barns, implementation and operation. |
| /vi/ | 2009-10-21 | Msukwa, Amulike | DeTAS, KT & KS Supervisor | Experiences with kitchen tests and kitchen surveys. |
| /vii/ | 2009-10-21 | Khonje, Maya Sibande, Rachel | HRID, Finance Procurement HRID, MIS Administrator | Project implementation, barn and kitchen tests and kitchen surveys, data base, records. |
| /viii/ | 2009-10-22 | Botha, Yamungu Connell, Tim Phamba, N. Mhura, Cosmal Mehekales o, L. Chileche, Brown Kraus, Philimon | Concern Universal, Manager Concern Universal, Deputy Country Director Concern Universal, BDMC Concern Universal Concern Universal, Field Facilitator Concern Universal, Field Facilitator Concern U. | Tasks of Concern Universal as cooperation partner of the project developer HRID, "Clay Stove Initiative", Gender consideration, Features of traditional and improved stoves and barns, implementation and operation, kitchen and barn tests and surveys, awareness and capacity building in Malawi. |

| | | | | |
|-------------|------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>/ix/</i> | 2009-10-22 | Galeta, Ephines Jackson, Ellena | Marketer Marketer | Portable ceramic stoves "Chitetezo Mbaula": Marketing and sales approach, benefits of the improved stoves. |
| <i>/xl/</i> | 2009-10-22 | Chiwaya, Lindiwe Kanjiriloa, Elina Pangani, Maliya Chikhwaya, Gift Faston, Masautso | Producer Producer Producer Producer | Portable ceramic stoves "Chitetezo Mbaula": Production of the stoves, Features of traditional and improved stoves, implementation and operation. |

On February 2nd, 2011 TÜV Rheinland's verification team performed additional interviews with project stakeholders to confirm selected information. The intention and the target of the audit were illustrated to the participants of the audit. Participants at the audit were the following persons:

Verification team

Lead auditor: Kurt Seidel

Interviewed persons:

Mr John O'Connor, Director, Hestian Innovation
 Mr. Conor Fox, Project Coordinator, Integrated Biomass Energy Conservation Project Malawi,
 Ms Maya Khonje, Manager, Hestian Rural Innovation Development,
 Mr Yamungu Botha, Portable Ceramic Stoves Manager, Concern Universal
 Mr Isaac Salima, Manager, Phukaphuka.

Duration of verification

Preparations: From 06-01-2011 to 07-01-2011
 On-siteverification: From 20-09-09 to 23-09-09
 Follow-up interviews: From 31-01-2011 to 02-02-2011
 Reporting: From 03-02-2011 to 07-02-2011

Interview topics

- Project design and implementation
- Technical equipment and operation
- Monitoring plan
- Monitored data
- Data uncertainty and residual risks
- GHG calculation
- Environmental impacts
- Compliance with national laws and regulations

2.3. Resolution of Clarification, Corrective and Forward Action Request

The objective of this phase of the verification was to resolve the requests for clarification and any other outstanding issues which needed to be clarified for TÜV Rheinland's positive conclusion on the GHG emission reduction calculation. The Clarification Requests, raised by TÜV Rheinland were resolved during communication between the client and TÜV Rheinland. Forward Action Requests are indicated issues which do not affect the generation of emission reductions in the verified period, but shall be improved in order to ensure the reliability of future data. To guarantee the transparency of the verification process, the concerns raised

and responses that have been given are summarized below and documented in more detail in the verification protocol in Annex 1.

3. VERIFICATION FINDINGS

In the following sections the findings of the verification are stated. The verification findings for each verification subject are presented as follows:

The findings from the desk review of the final monitoring report and the findings from interviews are summarised. A more detailed record of these findings can be found in the Verification Protocol in Annex 1.

Where TÜV Rheinland identified issues that needed clarification or that represented a risk to the fulfillment of the project objectives, a Corrective Action Request, Clarification Request or Forward Action Request, respectively, was issued. The Requests are stated, where applicable, in the following sections and are further documented in the Verification Protocol in Annex 1.

In the context of Forward Action Requests the focus is on identification and prevention of risks that might have effects on the verification of future VERs. As a consequence, such aspects should receive a special focus during the next consecutive verification. A FAR may originate from lack of data sustaining claimed emission reductions. Forward Action Requests are understood as hints for future project monitoring; they are stated, where applicable, in the following sections and are further documented in the Verification Protocol in Annex 1.

By the next periodic verification the client has confirmed that the monitoring report will have adapted all relevant issues of the requested monitoring data.

3.1. Project Implementation

A site visit was carried out by the verification team in October 2009. On the basis of this site visit, interviews and the reviewed project documentation it can be confirmed that the project implementation is with respect to the realized technology, the project equipments, as well as the monitoring equipment, the project has been implemented and operated as described in the registered PDD with GS secretariat. The monitoring and sustainable parameters are also monitored as per the registered PDD and GS guideline.

3.2. Project history

The Validation of the project identified 6 FARs.

Validation FAR 2 is considered as resolved and closed by the GS Secretariat. Validation FAR 5 ('upload detailed customer database') and Validation FAR 6 (check contracts have been signed with end-users) were both resolved during the Verification.

Each of:

- (a) Validation FAR 1 (Replacement NRB Fraction);
- (b) Validation FAR 3 (New clusters or device types within capacity limitation); and
- (c) Validation FAR 4 (additional periodic kitchen tests and kitchen surveys for ICS and UCS),

remain outstanding for the next periodic Verification and have been re-numbered as FARs 1, 2 and 3 respectively (as detailed in Section 3.10 below)

As this is the retroactive verification no issues from former verifications are to be considered.

3.3. Special events

No special events with effect on the monitoring of the project have been observed during the monitoring period.

3.4. Compliance with the monitoring plan

The monitoring system is in compliance with the applied monitoring methodology for Gold Standard Methodology for Improved Cook–Stoves and Kitchen Regimes and also in compliance with the registered PDD with GS secretariat.

3.5. Monitoring parameters

During the verification, the relevant monitoring parameters (as listed in the registered PDD) have been verified with regard to the appropriateness of the applied measurement / determination method, the correctness of the values applied for ER calculation, the accuracy, and applied QA/QC measures. Also the sustainable indicator parameters related to employment and human and institutional capacity was checked during the verification site visit. The results as well as the verification procedure are described parameter-wise in the project specific verification checklist.

3.6. Monitoring report

A monitoring report was submitted to the verification team by the project participants.

During the verification minor mistakes and needs for clarification were identified. The PP has carried out the requested corrections so that it can be confirmed that the Monitoring report is complete and transparent and in accordance with the registered PDD and other relevant GS requirements. Additional Forward Action Requests to be followed prior to the upcoming periodic verifications will contribute to a further improvement of the monitoring process and a minimization of inconsistencies or errors.

3.7. ER Calculation

During the verification the ER calculation was checked and found to be satisfactory. The ER calculations were in xlsx format (Excel 2007). Thus it is confirmed that the ER calculation is overall correct and as per the registered PDD and GS guidelines. It was concluded that the ER calculation is as per the registered PDD on GS secretariat and GS guideline.

3.8. Quality Management

Quality Management procedures for measurements, collection and compilation of data, data storage and archiving and training of personnel in the framework of this CDM project activity have been defined. The procedures defined can be assessed as appropriate for the purpose. No significant deviations there of have been observed during the verification.

3.9. Overall Aspects of the Verification

The project participants provided all necessary and requested documentation so that a complete verification of all relevant issues could be carried out. Access was granted to installations of the stoves and barns, which are relevant for the project performance and the monitoring activities. The assigned GHG auditor team of TÜV Rheinland Energie und Umwelt GmbH also checked the issue of double counting.

The DOE did a random sampling of stoves and Rocket Barns in end user house holds / farms and found the devices to be properly labeled these are not being used for any other project emission reduction, so there was no double counting of ERs from these project stoves.

Also, no other project with NRB in the baseline in Malawi could be identified by checking the GS, VCS and CDM registries.

No issues have been identified indicating that the implementation of the project activity and the steps to claim emission reductions are not compliant with the GS criteria and relevant guidance provided by the GS and the GS secretariat.

3.10. Suggestions for next periodic Verification

FAR 1 was raised for the ex-ante determined Non-Renewability Biomass (NRB) Fraction of woodfuel of 73.82 % is to be replaced by “a more actual official credible value as soon as such a value is publicly available for the Republic of Malawi”. This should be checked during the next verification.

FAR 2 was raised stating that: during the periodic surveys for new clusters or single larger types of rocket barns and institutional cook stoves it has to be checked if the capacity limitation of the applied GS methodology has been met.

FAR 3 was raised relating to newly incorporated Institutional Cook Stoves and Urban Cook Stoves (not included in the first Monitoring Report or this Verification).. For these devices, additional periodic kitchen tests and kitchen surveys have to be conducted prior to the first periodic verification of these devices.

4. REFERENCES

- PDD of the project
- Validation Report
- Monitoring Report
- KFM Consultants: Report on the Verification of Sales Records for the Portable Cook Stoves, Fixed Esperanza Stoves and Rocket Barns under the Integrated Biomass Energy Conservation Project in Malawi, dated February 1, 2011
- Calculation table of the GHG emission reduction
- Air quality excel
- Employment and Skills development excel
- Survey documents
- The Gold Standard Developers Manual, Version 5, dated May 2006
- The Gold Standard Validation and Verification Manual for Voluntary Offset Projects, dated June 2007
- Gold Standard Requirements for Gold Standard Version 2/2.1
- Gold Standard Toolkit for Gold Standard Version 2/2.1
- Gold Standard: Annex C to Toolkit Version 2.1: Project type eligibility
- The Gold Standard: Annex K to GS Toolkit: Outline of the Validation and Verification Report
- IPCC Good Practice Guidance & Uncertainty Management in National Greenhouse Gas Inventories, 2000
- Revised 2006 IPCC Guidelines for National Greenhouse Gas Inventories
- Kyoto Protocol (1997)
- Decision 3/CMP. 1 (Marrakesh – Accords)
- Indicative programme, baseline, and monitoring methodology for Improved Cook – Stoves and Kitchen Regimes (Version 1)
- UNFCCC Validation and Verification Manual
- www.cdmgoldstandard.org
- <http://cdm.unfccc.int>
- www.ipcc-nggip.iges.or.jp

Annex 1 – Verification Protocol

Table 1a: General Verification Requirements

(based on §56, §57 and §62 of the CDM Modalities and Procedures and on CDM Verification and Verification Manual, Annex 3 of EB44)

| Checklist question | Ref. | MoV ¹ | Findings, comments, references, data sources | Draft conclusion | Final conclusion |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------------|----------------------------------------------|------------------|------------------|
| 1. Implementation | | | | | |
| 1.1 Have all physical features proposed in the registered PDD been implemented at the project site? | | | | OK | OK |
| 1.2 Has the project activity been operated in accordance with the project scenario described in the registered PDD and relevant guidance? Reference: < http://cdm.unfccc.int/EB/033/eb33rep.pdf >, §75 | | | | OK | OK |
| 1.3 If the project activity is implemented on a number of different locations, has the Monitoring report provided the verifiable starting dates for each site? | | | | N/A OK | N/A OK |
| 2. Monitoring plan and methodology | | | | | |
| 2.1 Is the monitoring plan established in accordance with the monitoring methodology? | | | | OK | OK |
| 2.2 In case the implemented monitoring plan defers from the monitoring methodology, has any requests for revision to or deviation from the monitoring methodology been officially communicated to the CDM EB or the GS-TAC respectively? Reference: < http://cdm.unfccc.int/EB/033/eb33rep.pdf >, §84, §58 | | | | OK | OK |
| 2.2.1 Have the above changes to the monitoring plan been approved by the CDM EB? | | | | OK | OK |
| 3. Monitoring and the monitoring plan | | | | | |

¹ MoV = Means of Verification, DR = Document Review, I = Interview, www = internet search.

| Checklist question | Ref. | MoV ¹ | Findings, comments, references, data sources | Draft conclusion | Final conclusion |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------------|-------------------------------------------------------|---------------------|---------------------|
| 3.1 Is monitoring established in full compliance with the monitoring plan, contained in the registered PDD (or new monitoring plan approved by the CDM EB) or the GS-TAC respectively? | | | | OK | OK |
| 3.2 Are all baseline emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB decisions or GS-TAC decisions respectively? | | | | OK | OK |
| 3.2.1 Was the monitoring equipment for baseline emission parameters controlled and monitoring results recorded as per approved frequency? | | | | OK | OK |
| 3.2.2 Was the monitoring equipment for baseline emission parameters calibrated in accordance with QA&QC procedures described in the registered monitoring plan? | | | | OK | OK |
| 3.3 Are all project emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB or GS-TAC decisions respectively? | | | | OK | OK |
| 3.3.1 Was the monitoring equipment for project emission parameters controlled and monitoring results recorded as per approved frequency? | | | | OK | OK |
| 3.3.2 Was the monitoring equipment for project emission parameters calibrated in accordance with QA&QC procedures described in the registered monitoring plan? | | | | FAR 4 | FAR 4 |
| 3.4 Are all leakage emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB or GS-TAC decisions respectively? | | | | OK | OK |
| 3.4.1 Was the monitoring equipment for leakage emission parameters controlled and monitoring results recorded as per approved frequency? | | | | OK | OK |

| Checklist question | Ref. | MoV ¹ | Findings, comments, references, data sources | Draft conclusion | Final conclusion |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------|
| 3.4.2 Was the monitoring equipment for leakage emission parameters calibrated in accordance with QA&QC procedures described in the registered monitoring plan? | | | | OK | OK |
| 3.5 Were all monitoring parameters available and verifiable through the whole monitoring period? | | | | OK | OK |
| 3.5.1 In case, only partial monitoring data is available and PP(s) provide estimations or assumptions for the rest of data, was it possible to verify those estimations and assumptions? Reference: < http://cdm.unfccc.int/EB/026/eb26rep.pdf >, §109(b) | | | | OK | OK |
| 3.6 Was management and operation system established and operated in accordance with the monitoring plan? | | | | OK | OK |
| 3.7 Was it possible to verify that involved management and operation personnel is fully aware of the responsibilities and perform all operations according to the registered monitoring plan and internally developed manuals? | | | | OK | OK |
| 4. Parameters | | | | | |
| 4.1 Monitored parameter Title: Indication: Units: Estimated value (<i>ex-ante</i>): Measured value (<i>ex-post</i>): | | | Cross-check with independent source: <i>Value and source</i> Verification team's opinion on justification of the applied value. See Table 1b | OK | OK |

| Checklist question | Ref. | MoV ¹ | Findings, comments, references, data sources | Draft conclusion | Final conclusion |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------|
| 4.2 Default parameter Title: Indication: Units: Default/Used value: | | | Cross-check with independent source: <i>Value and source</i> Verification team's opinion on justification of the applied value. See Table 1b | OK | OK |
| <i>Add rows as necessary</i> | | | | | |
| 5. Calculations | | | | | |
| 5.1 Have all the calculations related to the baseline emissions been carried according to the formulae and methods described in the registered PDD and applied methodology? | | | The verification team confirms that appropriate formulae and methods have been used. | OK | OK |
| 5.2 Have all the calculations related to the project emissions been carried according to the formulae and methods described in the registered PDD and applied methodology? | | | | OK | OK |
| 5.3 Have all the calculations related to the leakage emissions been carried according to the formulae and methods described in the registered PDD and applied methodology? | | | | OK | OK |

Table 1b: Project-specific Verification Requirements

| Checklist Item | Reference | Comments | Draft Concl. | Final Concl. |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|
| 1. Project history | | | | |
| Open issues from GS validation <i>Check (esp. in case of 1st periodic verification) whether there are any open issues indicated in the validation report (e.g. FAR)?</i> | | <p>The Validation of the project identified 6 FARs. Validation FAR 2 is considered as resolved and closed by the GS Secretariat.</p> <p>Validation FAR 5 is considered resolved as PP has uploaded the 'detailed customer database' and Validation FAR 6 is considered resolved as the DOE has checked that contracts have been signed with end-users pursuant to a review of the Monitoring Report and the Report of External Auditors KFM.</p> <p>Each of: (a) Validation FAR 1 (Replacement NRB Fraction); (b) Validation FAR 3 (New clusters or device types within capacity limitation); and (c) Validation FAR 4 (additional periodic kitchen tests and kitchen surveys for ICS and UCS) are dealt with below (and have been re-numbered as FARs 1, 2 and 3 respectively</p> | OK | OK |
| Open issues from previous verification <i>Check in case of further periodic verifications whether there are any open issues indicated in previous verification (FAR)?</i> | | No open issues were identified in the course of this retroactive verification. This conclusion is made by reviewing the validation report and the Gold Standard webpage. | OK | OK |
| Requests for Deviations / Revisions of Monitoring Plan <i>Check if there have been any requests for deviations from the registered CDM / GS monitoring plan or requests for revisions of the CDM / GS monitoring plan. If any, make sure that they are considered during verification?</i> | | No request for deviations / revisions of the registered monitoring plan / PDD has been made. | OK | OK |

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| <p>Initial project implementation</p> <p><i>In case of first / retroactive GS verification: Assess whether the project has been implemented and operated as per the registered PDD and are all physical features of the project in place?</i></p> <p><i>In case of further periodic verifications: Go to next chapter.</i></p> | | <p>The project activity includes the installation of stoves and rocket barns. The verification team conducted spot checks in households and farms and observed that the fuel-efficient Portable Ceramic Stoves, Fixed Esperanza Stoves and Rocket Barns are installed as described in the PDD.</p> | OK | OK |
| <p>2. Update on Changes and Incidents</p> | | | | |
| <p>Technical equipment</p> <p><i>Check if relevant technical equipment of the project activity has been exchanged or modified during the monitoring period.</i></p> <p><i>Check whether any changes occurred that may have impact on the GS qualification of the project, in particular with reference to any potential changes in key parameters leading to an overall impact on the emission reductions or the project's contribution to sustainable development.</i></p> <p><i>Consider e.g. interviews with operational personnel, QMS records, maintenance records, instrument specifications.</i></p> <p><i>In case of changes, check whether the project is still in line with the registered PDD and assure that these changes have been considered in the monitoring report, the emission reduction calculation and/or the scoring of the sustainability indicators.</i></p> | | <p>Any exchange of relevant technical equipment of the project activity has not been observed during the site visit. Since the technology is simple by nature those incidents are unlikely to occur in this project activity.</p> <p>No changes in the project activity's design concerning Gold Standard qualification have been observed in the course of verification.</p> | OK | OK |
| <p>Operation modes</p> <p><i>Check if relevant operation modes of the project activity have been exchanged or modified during the monitoring period.</i></p> <p><i>Check whether any changes occurred that may have impact on the GS qualification of the project, in particular with reference to any potential</i></p> | | <p>Changes in operation modes of the project activity have not been observed during the site visit. Since the technology is simple by nature those incidents are unlikely to occur in this project activity.</p> | OK | OK |

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| <p><i>changes in key parameters leading to an overall impact on the emission reductions or the project's contribution to sustainable development.</i></p> <p><i>Consider e.g. interviews with operational personnel, operation log sheets, data management system records.</i></p> <p><i>In case of changes, check whether the project is still in line with the registered PDD and assure that these changes have been considered in the monitoring report, the emission reduction calculation and/or the scoring of the sustainability indicators.</i></p> | | | | |
| <p>Incidents <i>Identify if there have been any significant incidents, deviant operation modes and / or downtimes of the equipment?</i></p> <p><i>Consider e.g. interviews with operational personnel, operational log sheets, analysis of performance data.</i></p> | | No incidents impacting the occurred ERs or sustainability of the project were observed. | OK | OK |
| <p>Personnel <i>Find out, if relevant personnel with respect to monitoring has been exchanged?</i></p> <p><i>In case of changes, assure that the implemented monitoring procedures have not been affected.</i></p> | | As per interviews with the PP, monitoring of ERs, sustainability indicators as well as surveys is carried out by Project Staff every six months for stove users and every year for rocket barn users. | OK | OK |
| <p>Legislation Find out whether relevant legislation with effect on the project activity in the host country has been changed.</p> | | No changes in legislation with affect on the project activity could be identified. | OK | OK |
| <p>3. Monitoring Report – General</p> | | | | |
| <p>Monitoring period <i>Check if the monitoring period is in line with a) the crediting period and/or b) previous monitoring periods?</i></p> | | The registration date of the project activity is October 1st 2010. As per the PDD and the Monitoring Report the crediting period starts at 24 th November 2008, less than 2 years before the registration date, which is in line with the Gold Standard rules and procedures. | OK | OK |

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| References Check if the carbon monitoring report and sustainability monitoring report provides the correct references. | | References to evidences in the carbon monitoring report and sustainability monitoring report have been reviewed and found to be precise. | OK | OK |
| Completeness Assess if the carbon monitoring report and sustainability monitoring report are complete, i.e. have all relevant issues been addressed? | | Monitoring report mentions the roles and responsibilities for monitoring procedures, obtaining of data, data handling, processing and storage, responsibilities for the preparation of the monitoring report as well as the Trouble shooting procedure. | OK | OK |
| Transparency Assess if the carbon monitoring report and sustainability monitoring report are transparent, i.e. clear and unequivocal in all respect? | | The Monitoring report and Sustainability report are clear and unequivocal. | OK | OK |
| Misstatements on general issues Assess whether the carbon monitoring report and sustainability monitoring report are free of material misstatements regarding issues other than the monitoring parameters. Discuss the monitoring parameters in detail in chapter "Monitoring Parameters". | | The carbon monitoring report and sustainability monitoring report are free of material misstatements. | OK | OK |
| Deviations from the validated monitoring plan and GS monitoring matrix Assess whether the carbon monitoring report and sustainability monitoring report are in line with the validated monitoring plan and the GS monitoring matrix? | | There is no deviation from the validated monitoring plan and GS monitoring matrix. | OK | OK |
| Deviations from the approved methodology Assess whether the Monitoring Report is in line with the applied monitoring methodology? | | The Monitoring Report mainly follows the methodology considering data monitoring and processing and with the registered PDD and Monitoring methodology | OK | OK |
| 4. Monitoring Parameters (List all parameters of the PDD chapter B.7.1 and the GS monitoring matrix; pl. copy | | | | |

| <i>the 6 lines below for each parameter)</i> | | | | |
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| GHG emission parameters | | | | |
| 4.1. Xnrb,bl,y (Non-renewability status of woody biomass fuel in year y in baseline scenario) | | | | |
| Measurement / Determination method <i>Describe how the monitoring parameter was measured / determined.</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used.</i> <i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i> | | <p>The Parameter is monitored by the PP. This needs to be monitored once in two years as per registered PDD monitoring plan.</p> <p>The ex-ante determined Non-Renewability Biomass (NRB) Fraction of woodfuel of 73.82 % is to be replaced by a more actual official credible value as soon as such a value is publicly available for the Republic of Malawi. Hence FAR 1 is raised.</p> | FAR 1 | OK |
| Correctness <i>Determine whether the value given in the carbon monitoring report is correct.</i> <i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i> | | <p>The value mentioned in periodic surveys are found to be correct and in line with Baseline survey report.</p> | FAR 1 | OK |
| QA/QC Procedure <i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</i> | | <p>The QA/QC procedures are found to be OK. This was discussed during site visit and during interviews.</p> | FAR 1 | OK |
| Accuracy <i>In case of measured (or estimated) values, check whether significant inaccuracies occur; in this case, make sure that appropriate discounts have been considered for ER calculation.</i> | | <p>There is no inaccuracy in the parameter at present but this will be checked during next verification by DOE on the basis of next survey due in Sep 2011.</p> | FAR 1 | OK will be checked during next verification |
| Verification | | <p>The value was verified from</p> | FAR 1 | OK will be checked |

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| Describe how the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences. | | Baseline survey. | | during next verification |
| 4.2. Xnrb,pj,y (Non-renewability of woody biomass fuel in year y in project scenario) | | | | |
| Measurement / Determination method Describe how the monitoring parameter was measured / determined. Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology. | | Conditions are unchanging during the project period, the project proponent established a single baseline fixed in time (the pre-project situation) of the type "fixed baseline". The fixed-baseline approach has been Validated and Registered. | OK | OK |
| Correctness Determine whether the value given in the carbon monitoring report is correct. In case of mistakes pl. provide details and descriptions of the CARs raised. | | | OK | OK |
| QA/QC Procedure Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel. | | | OK | OK |
| Accuracy In case of measured (or estimated) values, check whether significant | | | OK | OK |

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| inaccuracies occur; in this case, make sure that appropriate discounts have been considered for ER calculation. | | | | |
| Verification Describe how the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences. | | | OK | OK |
| 4.3. Xre,bl,y (Woody biomass combustion avoided due to renewable energy form in year y in baseline) | | | | |
| Measurement / Determination method Describe how the monitoring parameter was measured / determined. Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology. | | See above | OK | OK |
| Correctness Determine whether the value given in the carbon monitoring report is correct. In case of mistakes pl. provide details and descriptions of the CARs raised. | | | OK | OK |
| QA/QC Procedure Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment | | | OK | OK |

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| <i>has been carried out by competent personnel.</i> | | | | |
| Accuracy <i>In case of measured (or estimated) values, check whether significant inaccuracies occur; in this case, make sure that appropriate discounts have been considered for ER calculation.</i> | | | OK | OK |
| Verification <i>Describe how the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences.</i> | | | OK | OK |
| 4.4. Xre,pj,y (Woody biomass combustion avoided due to renewable energy form in year y in project) | | | | |
| Measurement / Determination method <i>Describe how the monitoring parameter was measured / determined.</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used.</i> <i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i> | | See above | OK | OK |
| Correctness <i>Determine whether the value given in the carbon monitoring report is correct.</i> <i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i> | | | OK | OK |

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| QA/QC Procedure Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel. | | | OK | OK |
| Accuracy In case of measured (or estimated) values, check whether significant inaccuracies occur; in this case, make sure that appropriate discounts have been considered for ER calculation. | | | OK | OK |
| Verification Describe how the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences. | | | OK | OK |
| 4.5. Leakage (Potential GHG emissions outside project boundary caused by project activity) | | | | |
| Measurement / Determination method Describe how the monitoring parameter was measured / determined. Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology. | | There is no leakage in the project activity at present. This was also checked from the six-monthly and annual surveys as well.. | OK | OK |
| Correctness | | There is no leakage in the | OK | OK |

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| <p><i>Determine whether the value given in the carbon monitoring report is correct.</i></p> <p><i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i></p> | | <p>project activity at present. This was as per the interviews, the on site and physical check by the verifier. This was also checked from the six-monthly and annual surveys as well.</p> | | |
| <p>QA/QC Procedure</p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</i></p> | | See above | OK | OK |
| <p>Accuracy</p> <p><i>In case of measured (or estimated) values, check whether significant inaccuracies occur; in this case, make sure that appropriate discounts have been considered for ER calculation.</i></p> | | See above | OK | OK |
| <p>Verification</p> <p><i>Describe how the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences.</i></p> | | See above | OK | OK |
| <p>4.6. Bbl,y (Mass of woody biomass combusted in the baseline in year y)</p> | | | | |
| <p>Measurement / Determination method</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used.</i></p> <p><i>Assess whether the measurement / determination</i></p> | | <p>This was from the baseline survey report.</p> | OK | OK |

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| method is in line with the registered monitoring plan of the PDD and the applied methodology. | | | | |
| Correctness Determine whether the value given in the carbon monitoring report is correct. In case of mistakes pl. provide details and descriptions of the CARs raised. | | The correctness was checked through interviews and during the site visit. The baseline report was also checked. Hence accepted. | OK | OK |
| QA/QC Procedure Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel. | | The QA/QC procedures are followed. | OK | OK |
| Accuracy In case of measured (or estimated) values, check whether significant inaccuracies occur; in this case, make sure that appropriate discounts have been considered for ER calculation. | | The value utilized for calculations is accurate and as per Report. Hence accepted. | OK | OK |
| Verification Describe how the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences. | | The verification was done on the basis of baseline report which was checked. Hence accepted. | OK | OK |
| 4.7. Bp_{j,y} (Mass of woody biomass combusted in the project in year y) | | | | |
| Measurement / Determination method Describe how the monitoring parameter was measured / determined. Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other | | This was from the baseline survey report. This was also checked from the six-monthly and annual surveys. | OK | OK |

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| <p>measurement / determination methods have been used.</p> <p>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</p> | | | | |
| <p>Correctness</p> <p>Determine whether the value given in the carbon monitoring report is correct.</p> <p>In case of mistakes pl. provide details and descriptions of the CARs raised.</p> | | <p>The correctness was checked through interviews and during the site visit. The baseline report was also checked. Hence accepted.</p> | OK | OK |
| <p>QA/QC Procedure</p> <p>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</p> | | <p>The QA/QC procedures are followed.</p> | OK | OK |
| <p>Accuracy</p> <p>In case of measured (or estimated) values, check whether significant inaccuracies occur; in this case, make sure that appropriate discounts have been considered for ER calculation.</p> | | <p>The value utilized for calculations is accurate and as per Report. Hence accepted.</p> | OK | OK |
| <p>Verification</p> <p>Describe how the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences.</p> | | <p>The verification was done on the basis of baseline report which was checked. Hence accepted.</p> | OK | OK |
| 4.8. Usage in year y | | | | |
| <p>Measurement / Determination method</p> <p>Describe how the monitoring parameter was measured / determined.</p> | | <p>The validity of the parameter was verified on the basis of the registered PDD. Hence accepted by the Verifier.</p> | OK | OK |

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| <p>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used.</p> <p>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</p> | | | | |
| <p>Correctness</p> <p>Determine whether the value given in the carbon monitoring report is correct.</p> <p>In case of mistakes pl. provide details and descriptions of the CARs raised.</p> | | <p>This was checked during the site visit. Hence accepted by the Verifier.</p> | OK | OK |
| <p>QA/QC Procedure</p> <p>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</p> | | <p>QA/QC procedures are in place as checked during the site visit.</p> | OK | OK |
| <p>Accuracy</p> <p>In case of measured (or estimated) values, check whether significant inaccuracies occur; in this case, make sure that appropriate discounts have been considered for ER calculation.</p> | | <p>This was checked during the site visit. Hence accepted by the Verifier.</p> | OK | OK |
| <p>Verification</p> <p>Describe how the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences.</p> | | <p>This was checked during the site visit. Hence accepted by the Verifier.</p> | OK | OK |
| 4.9. Age | | | | |
| <p>Measurement / Determination method</p> | | <p>The validity of the parameter was verified on the basis of</p> | OK | OK |

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| <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p> | | the registered PDD.Hence accepted by the Verifier. | | |
| <p>Correctness</p> <p><i>Determine whether the value given in the carbon monitoring report is correct.</i></p> <p><i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i></p> | | This was checked during the site visit.Hence accepted by the Verifier. | OK | OK |
| <p>QA/QC Procedure</p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</i></p> | | QA/QC procedures are in place as checked during the site visit. | OK | OK |
| <p>Accuracy</p> <p><i>In case of measured (or estimated) values, check whether significant inaccuracies occur; in this case, make sure that appropriate discounts have been considered for ER calculation.</i></p> | | This was checked during the site visit. Hence accepted by the Verifier | OK | OK |
| <p>Verification</p> <p><i>Describe how the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences.</i></p> | | This was checked during the site visit. Hence accepted by the Verifier | OK | OK |

| 4.10. New Stove (Adjustment to values of B _{pl,y} and A _f for new stove models) | | | | |
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| <p>Measurement / Determination method</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p> | | <p>There are no new stove models during this monitoring period up to the 1st of October 2010.</p> <p>New stoves (Urban Cook Stoves and Institutional Stoves) must be checked to ensure the capacity limitation of the applied GS methodology (150kW) is met at the time of periodic survey for new clusters. Hence FAR 2 is raised.</p> <p>FAR 3 is raised relating to newly incorporated Institutional Cook Stoves and Urban Cook Stoves (not included in the first Monitoring Report or this Verification). For these devices, additional periodic kitchen tests and kitchen surveys have to be conducted prior to the first periodic verification of these devices.</p> | <p>FAR 2 & FAR 3</p> | <p>OK</p> |
| <p>Correctness</p> <p><i>Determine whether the value given in the carbon monitoring report is correct.</i></p> <p><i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i></p> | | <p>The value is correct at present and for the present monitoring period.</p> | <p>OK</p> | <p>OK</p> |
| <p>QA/QC Procedure</p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</i></p> | | <p>QA / QC are in place.</p> | <p>OK</p> | <p>OK</p> |
| <p>Accuracy</p> <p><i>In case of measured (or estimated) values, check whether significant inaccuracies occur; in this case, make sure that</i></p> | | <p>The data is accurate for the present scenario.</p> | <p>OK</p> | <p>OK</p> |

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| appropriate discounts have been considered for ER calculation. | | | | |
| Verification Describe how the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences. | | Cross checks of baseline survey sheets with the data obtained during the user interviews have been undertaken. Please refer to the check list items above. | OK | OK |
| 4.11. Stove Sales (Number of stoves sold by project activity) | | | | |
| Measurement / Determination method Describe how the monitoring parameter was measured / determined. Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology. | | Sales registration / monitoring was determined on the basis of software into which operation data of each device are entered. This is done upon receipt of the reports by the PP. Data handling and processing, for all the devices promoted by the project, is undertaken by Hestian Rural Innovation Development. | OK | OK |
| Correctness Determine whether the value given in the carbon monitoring report is correct. In case of mistakes pl. provide details and descriptions of the CARs raised. | | This was checked on the basis of reports along with the daily reports of sales by marketing personnel, supervised by the project coordinator. | OK | OK |
| QA/QC Procedure Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel. | | QA/QC procedure are in place by Hestian Rural Innovation Development and the PP. | OK | OK |
| Accuracy | | No inaccuracies could be | OK | OK |

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| <i>In case of measured (or estimated) values, check whether significant inaccuracies occur; in this case, make sure that appropriate discounts have been considered for ER calculation.</i> | | observed during the site visit and Desk review. | | |
| Verification <i>Describe how the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences.</i> | | The verification took place on the basis of daily sales reports. | OK | OK |
| 4.12. Eligibility of Project database for KPT sampling (KS) | | | | |
| Measurement / Determination method <i>Describe how the monitoring parameter was measured / determined.</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used.</i> <i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i> | | <p>The parameter is monitored on the basis of periodic survey reports (six-monthly for stoves and annual for barns). During this monitoring period there were no new KPT done and it was not required as per the results of kitchen surveys.</p> <p>This was checked by interviewing end-users and on the basis of the KFM External Auditor's Report (attached to the Monitoring Report) . Hence accepted by DOE.</p> | OK | OK |
| Correctness <i>Determine whether the value given in the carbon monitoring report is correct.</i> <i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i> | | This correctness was checked by interviewing end-users and on the basis of the KFM External Auditor's Report (attached to the Monitoring Report) Hence accepted by DOE. | OK | OK |
| QA/QC Procedure <i>Describe whether all applicable QA/QC procedures are met. Assess further if the</i> | | QA/QC Procedures are in Place. | OK | OK |

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| calibration and maintenance of the monitoring equipment has been carried out by competent personnel. | | | | |
| Accuracy <i>In case of measured (or estimated) values, check whether significant inaccuracies occur; in this case, make sure that appropriate discounts have been considered for ER calculation.</i> | | There was no inaccuracy during this monitoring period. | OK | OK |
| Verification <i>Describe how the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences.</i> | | This verification was done by interviewing end-users and on the basis of the KFM External Auditor's Report (attached to the Monitoring Report). Hence accepted by DOE. | OK | OK |
| 4.13. Air Quality | | | | |
| Measurement / Determination method <i>Describe how the monitoring parameter was measured / determined.</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used.</i> <i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i> | | This was monitored Qualitatively by periodic surveys (six-monthly for stoves and annual for rocket barns). Quantitative studies were also carried out on stove users using DUSTTRAK™ Aerosol Monitor Model 8520 as documented in the Air Quality excel. | OK | OK |
| Correctness <i>Determine whether the value given in the carbon monitoring report is correct.</i> <i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i> | | See comment above. | OK | OK |
| QA/QC Procedure | | | | |

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------|----|----|
| Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel. | | See comment above. | OK | OK |
| Accuracy In case of measured (or estimated) values, check whether significant inaccuracies occur; in this case, make sure that appropriate discounts have been considered for ER calculation. | | See comment above. | OK | OK |
| Verification Describe how the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences. | | See comment above. | OK | OK |
| 4.14. Livelihood of the Poor | | | | |
| Measurement / Determination method Describe how the monitoring parameter was measured / determined. Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology. | | This is monitored on the basis of fuel cost saving in the year. This is done by the periodic surveys. | OK | OK |
| Correctness Determine whether the value given in the carbon monitoring report is correct. | | Validity of data has been reviewed using the periodic surveys. | OK | OK |

| | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|
| <i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i> | | | | |
| QA/QC Procedure <i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</i> | | It is deemed that the periodic surveys are reliable document, internally reviewed before publishing. | OK | OK |
| Accuracy <i>In case of measured (or estimated) values, check whether significant inaccuracies occur; in this case, make sure that appropriate discounts have been considered for ER calculation.</i> | | The periodic surveys are reliable documents, internally reviewed before publishing. This was checked by the verification team by interviewing monitoring and evaluation staff. | OK | OK |
| Verification <i>Describe how the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences.</i> | | The periodic surveys are reliable documents, internally reviewed before publishing. This was checked by the verification team by interviewing monitoring and evaluation staff. | OK | OK |
| 4.15. Employment | | | | |
| Measurement / Determination method <i>Describe how the monitoring parameter was measured / determined.</i> <i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used.</i> <i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i> | | The Employment and Skills development excel, as mentioned in Monitoring Report, was checked by the verification team. HRID personal was interviewed for this project. Internal QA/QC was also followed as checked by verification team. | OK | OK |
| Correctness | | See comment above. The PP provided the Employment | OK | OK |

| | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|
| <p><i>Determine whether the value given in the carbon monitoring report is correct.</i></p> <p><i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i></p> | | <p>and Skills development excel which was checked by the verification team. HRID personal was interviewed by the verification team and found that the correctness of data is there and internal QA/QC measures are followed by HRID. Hence accepted by verification team.</p> | | |
| <p>QA/QC Procedure</p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</i></p> | | <p>See comment above. HRID personal was interviewed during the site visit by the verification team and found that the correctness of data is there and internal QA/QC measures are followed by HRID. Hence accepted by verification team.</p> | OK | OK |
| <p>Accuracy</p> <p><i>In case of measured (or estimated) values, check whether significant inaccuracies occur; in this case, make sure that appropriate discounts have been considered for ER calculation.</i></p> | | <p>See comment above. As QA/QC measures are followed hence accuracy of data is there. HRID personal was interviewed about this during the site visit by the verification.</p> | OK | OK |
| <p>Verification</p> <p><i>Describe how the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences.</i></p> | | <p>See comment above. The PP provided the monitoring report, which was checked by the verification team. HRID personal was interviewed during the site visit by the verification team and found that the correctness of data is there and internal QA/QC measures are followed by HRID. Hence accepted by verification team.</p> | OK | OK |
| <p>4.16. Human and Institutional capacity</p> | | | | |
| <p>Measurement / Determination method</p> <p><i>Describe how the monitoring parameter was measured / determined.</i></p> <p><i>Check if relevant equipment has been exchanged and if in cases of failures / downtimes</i></p> | | <p>The Employment and Skills development excel provided by Hestian Rural Innovation Development (HRID), as mentioned in Monitoring Report, were checked by the verification team. HRID personal was interviewed for this project. Internal QA/QC</p> | OK | OK |

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|
| <p><i>of standard equipment other measurement / determination methods have been used.</i></p> <p><i>Assess whether the measurement / determination method is in line with the registered monitoring plan of the PDD and the applied methodology.</i></p> | | <p>was also followed as checked by verification team.</p> | | |
| <p>Correctness</p> <p><i>Determine whether the value given in the carbon monitoring report is correct.</i></p> <p><i>In case of mistakes pl. provide details and descriptions of the CARs raised.</i></p> | | <p>See comment above. The PP provided the Employment and Skills development excel, which was checked by the verification team. HRID personal was interviewed during the site visit by the verification team and found that the correctness of data is there and internal QA/QC measures are followed by HRID. Hence accepted by verification team.</p> | OK | OK |
| <p>QA/QC Procedure</p> <p><i>Describe whether all applicable QA/QC procedures are met. Assess further if the calibration and maintenance of the monitoring equipment has been carried out by competent personnel.</i></p> | | <p>See comment above. HRID personal was interviewed during the site visit by the verification team and found that the correctness of data is there and internal QA/QC measures are followed by HRID. Hence accepted by verification team.</p> | OK | OK |
| <p>Accuracy</p> <p><i>In case of measured (or estimated) values, check whether significant inaccuracies occur; in this case, make sure that appropriate discounts have been considered for ER calculation.</i></p> | | <p>See comment above. As QA/QC measures are followed hence accuracy of data is there. HRID personal was interviewed about this during the site visit by the verification.</p> | OK | OK |
| <p>Verification</p> <p><i>Describe how the value was verified. Consider the measurement / determination procedure, accuracies, QA/QC procedures. Consider as well plausibility checks as far as possible. Check if the applied value could be backed up by corresponding evidences.</i></p> | | <p>See comment above. The PP provided the monitoring report, which was checked by the verification team. HRID personal was interviewed during the site visit by the verification team and found that the correctness of data is there and internal QA/QC measures are followed by HRID. Hence accepted by verification team.</p> | OK | OK |

| 5. ER Calculation | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|
| Traceability <i>Assess if the calculation is fully traceable. In case of complex calculations an Excel calculation spread- sheet shall be used. All applied formulae must be visible.</i> | | The ER calculation provided in the monitoring report is providing equivalent figures as the ER-calculation in xls-format. The formulas applied are traceable and the calculation can be reconstructed having the applied methodology as well as the PDD at hand and the monitoring report provides descriptions to the parameters used in the calculation and is therefore sufficient. | OK | OK |
| | | | | |
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| | | | | |
| | | | | |
| Parameter consistency <i>Assess whether all internal and external parameters and data used for calculation are applied consistently in the carbon monitoring report and the calculation spreadsheet? Consider only the correct data exchange between the carbon monitoring report and the calculation spreadsheet (if any). The evaluation of the correctness of the parameter values itself should be discussed in the chapter "Monitoring Parameters".</i> | | All parameters as well as relevant formulas in ER-spreadsheet are copied into the monitoring report. | OK | OK |
| Applied formulae <i>Check if the applied formulae are in accordance with the monitoring plan and / or the approved methodology.</i> | | See comment above. The spreadsheet was reviewed and found that the xlsx i.e. MS excel 2007 was used and the data was found to be in accordance with the registered Monitoring Plan of GS PDD. The calculations and formulae are also mentioned in revised MR. These were matching with the data surveyed and checked during site visit. | OK | OK |
| Completeness of calculation <i>Assess whether the provided calculations are complete and reflect all requirements of the monitoring plan.</i> <i>Check especially that no standard or old values have been used for calculation where calculations based on up-to-date data is required.</i> | | See comment above. The data was found to be in accordance with the registered Monitoring Plan of GS PDD. The calculations and formulae are also mentioned in revised MR. These were matching with the data surveyed and checked during site visit. | OK | OK |

| 6. Quality Management; defined organisational structure, responsibilities and competencies Internal QA/QC and document control | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|
| Management System Check if the GHG data and sustainability monitoring system is embedded in a (certified) company quality management system, if so; check if all CDM and / or GS monitoring procedures have been fully integrated in the project participant's quality management system. If not check how the GHG management system has been implemented. | | The GHG data and sustainability monitoring is embedded in performance monitoring of the Stoves and Barns, and also in a company quality management system. | OK | OK |
| Roles and Positions Check if all roles and positions of each person in the GHG data management and sustainability monitoring process are clearly defined and implemented, from raw data generation to submission of the final data. Check further if only duly qualified personnel is involved in the monitoring procedures. | | Roles and responsibilities are clearly defined in the monitoring report. | OK | OK |
| Trainings Check if initial trainings have been carried out, in case deemed necessary. | | Trainings for masons, supervisors and users have been conducted. Clear description of the institution providing the training is included in the MR. | OK | OK |
| Troubleshooting procedures Assess whether troubleshooting procedures have been implemented. | | Troubleshooting procedures are in place. | OK | OK |
| Maintenance procedures Are appropriate maintenance procedures in place? | | Repair and maintenance takes place upon request by the user or identification during monitoring. E.g. included in the one-year warranty of the Rocket Barns is maintenance service conducted to repair barns affected by wear and tear. | OK | OK |
| Internal QA/QC | | Internal audit procedures are | OK | OK |

| | | | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|
| Assess whether there are any procedures in place on when, where and how checks and reviews are to be carried out, and what evidence needs to be documented? (This might include spot checks by a second person not performing the calculations over manual data transfers, changes in assumptions and the overall reliability of the calculation processes.) | | defined in MR and checked with the PP during site visit. | | |
| Data archive Check whether all records of monitoring parameters are archived according to the monitoring plan. | | Data archiving is properly performed by the PP in soft and Hardcopy. | OK | OK |
| Data protection Assess whether appropriate measures have been taken in order to avoid unintended or intended manipulation of the measured data. | | Data system is backed-up by archived hard copies of background documentation for each end-user and has been externally audited as detailed in Monitoring Report. | OK | OK |

**Table 2: List of Requests for Corrective Action (CAR)
from Retroactive Verification**

| No. | Type of request | Observation | Reference | Summary of project owner response | Verification team conclusion |
|-----|-----------------|--------------------------------------------------------------------------------------------------|-----------|-----------------------------------------------------------------|------------------------------|
| 1. | CAR | Please revise data values in tables 2.2.3. and 2.2.4. of the monitoring report | MR | The mistakes (project activity / baseline) have been corrected. | OK |
| 2. | CAR | Please submit the report of the external auditor KFM consultants on audited project database | MR, Annex | The report is attached as annex to the monitoring report | OK |
| 3. | CL | Please clarify the inconsistency of values in the latest kitchen survey reports for PCS and FES. | KS | The typo errors have been corrected. | OK |

Table 3: List of forward action requests (FARs) from Retroactive Verification

| FAR number | Observation | Reference | Summary of project participants' response | Verification team conclusion |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| FAR1 | The ex-ante determined Non-Renewability Biomass (NRB) Fraction of woodfuel of 73.82 % is to be replaced by a more actual official credible value as soon as such a value is publicly available for the Republic of Malawi. Hence FAR1 is raised. | Validation Report | FAR1 is resulting from the validation report of the registered PDD. | OK |
| FAR2 | New stoves (Urban Cook Stoves and Institutional Stoves must be checked to ensure the capacity limitation of the applied GS methodology (150kW) is met at the time of periodic survey for new clusters. Hence FAR2 is raised. | Validation Report | FAR2 is resulting from the validation report of the registered PDD. | OK |
| FAR3 | FAR3 is raised relating to newly incorporated Institutional Cook Stoves and Urban Cook Stoves (not included in the first Monitoring Report or this Verification). For these devices, additional periodic kitchen tests and kitchen surveys have to be conducted prior to the first periodic verification of these devices. | Validation Report | FAR3 is resulting from the validation report of the registered PDD. | OK |
| FAR4 | The monitoring manual has to be updated with regard to the periodic calibration of the spring balance and the moisture meter in order to secure the manufacturer's measuring tolerance for the determination of the weight and moisture of the wood used in the improved stoves/barns. | Monitoring Manual | The monitoring manual will be updated and will be made available to the DOE prior to the next periodic verification. | OK |
| FAR5 | Prior to the periodic verifications by a global DOE additional verifications of the database and sales records of HRID have to be undertaken by a local independent consultant or chartered accountant. | Review of Database | The first review of the database of the Integrated Biomass Energy Conservation Project has been undertaken by KFM Consultants from 28 th to 31 st of January 2011 for the initial monitoring period 24/11/2008 to 01/10/2010. | OK |

Annex 2 - GHG ER Calculation for period 24/11/2008 to 1/10/2010

Emission Reductions of Integrated Biomass Energy Conservation Project Malawi GS 613, November 24 2008 to October 1 2010.

| IBECP Malawi Offset Summary - 24 November, 2008 - 1 October 2010 | | | | | | |
|------------------------------------------------------------------|------|-----------------|-------|-------|--------|----------------|
| | Yr | Date | PCS | FES | RB | Vintage Totals |
| Offset generation (tonnes CO2e) | 2008 | | | | | |
| | | 24 Nov - 31 Dec | 0 | 0 | 0 | 0 |
| | 2009 | Quarter 1 | 734 | 0 | 2,361 | 8,451 |
| | | Quarter 2 | 244 | 0 | | |
| | | Quarter 3 | 2,262 | 0 | 0 | |
| | | Quarter 4 | 1,801 | 1,049 | 0 | |
| | 2010 | Quarter 1 | 374 | 1,416 | 11,434 | 14,174 |
| | | Quarter 2 | 574 | 0 | | |
| | | Quarter 3 | 376 | 0 | 0 | |
| | | 1 Oct - 23 Nov | 0 | 0 | 0 | |
| Total | | | 6,366 | 2,465 | 13,794 | 22,625 |

TÜV Rheinland confirms for the period November 24 2008 to October 1 2010 a total emission reduction of 22,625 tonnes.

Appendix A - Certification statement

The assigned verification team of TÜV Rheinland Energie und Umwelt GmbH has performed an initial retroactive verification of the registered GS-VER project activity № GS613, “Integrated Biomass Energy Conservation Malawi” in the Republic of Malawi, which has been registered on 14th of January 2011.

The project activity is designed to generate emission reductions by dissemination of improved household and institutional cook-stoves and fuel-efficient rocket barns in order to replace inefficient cook stoves for domestic use, cook stoves for institutional use and inefficient tobacco curing barns.

The verification was performed to identify the compliance of the project activity with implementation and monitoring requirements, and to verify the actual amount of achieved emission reductions in the first retroactive monitoring period.

The verification is based on:

- PDD version 03, registered with the CDM Executive Board on 14-01-2011;
- Approved baseline and monitoring methodology GS-Methodology for Improved Cookstoves and Kitchen Regimes V.01 “Indicative Programme, Baseline, and Monitoring Methodology for Improved Cook-Stoves and Kitchen Regimes”;
- Monitoring report version 01, dated 30/01/2011 and revised Monitoring report version 01.1, dated 31/01/2011 and 02/02/2011.

This statement covers verification period of < 2 years between 24-11-2008 and 01-10-2010.

The verifier has raised several clarification and corrective action requests, all of which have been successfully resolved by PPs. Forward action requests have been also raised and shall be addressed and verified during the next periodic verification.

The DOE, herewith certifies that the project activity, achieved emission reductions by sources of GHG equal to 22,625 tCO₂ in above time frame and all monitoring requirements have been fulfilled.

Verifier Signature

Cologne, 2011-02-07



Kurt Seidel
TÜV Rheinland
CDM Auditor and Validation Team Leader

Appendix B

Certificates of Competence

Assigned CDM-Auditor-Team:

Qualification

Seidel, Kurt Friedrich /

Emission Trading

United Nations Framework Convention on Climate Change

(The following data is set
by the certification body)

Auditor No.:
(AuditorenRegNr)

Appointed:
(Zugelassen)

ja

Qualification Level:
(Qualifikationsstufe)

Auditor

External:
(Externer)

Add. reviewer:
(Zusätzlicher Prüfer)

yes

EAC Scopes:
(EAC Branchen)

CDM 01 - Energy Industries
CDM 02 - Energy
Distribution
CDM 03 - Energy Demand
CDM 13 - Waste handling
and disposal

Technical Reviewer:

Qualification

Kober, Ralf /

Emission Trading

United Nations Framework Convention on Climate Change

(The following data is set by the certification body)

Auditor No.:
(AuditorenRegNr)

Appointed:
(Zugelassen)

ja

Qualification Level:
(Qualifikationsstufe)

Auditor

External:
(Externer)

Add. reviewer:
(Zusätzlicher Prüfer)

EAC Scopes:
(EAC Branchen)

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

CDM 07 - Transport

CDM 13 - Waste handling
and disposal