# WORKPLAN

## GOLD STANDARD VERIFICATION

## INTEGRATED BIOMASS ENERGY CONSERVATION PROJECT, MALAWI

## HESTIAN INNOVATION LTD.

Project No. 13GS01012 – GS 613

Date: 2013-01-28

TÜV NORD CERT GmbH
JI/CDM Certification Program
Langemarckstraße, 20
45141 Essen, Germany
Phone: +49-201-825-3335
Fax: +49-201-825-3290
www.tuev-nord.de
www.global-warming.de

## *Table of Contents* *Page*

# INTRODUCTION

This Verification Workplan for the project activity "***Integrated Biomass Energy Conservation Project, Malawi***" poses an integrated part of the verification process. It serves as relevant document in order to increase the transparency of the verification process according to the Gold Standard requirements.
It is developed to describe a tentative verification time frame, how local expertise is integrated into the verification process and which auditors are in charge of the verification. Furthermore, the verification steps and expected tasks for the on-site audit are addressed herein.

Finally, it provides information on QA/QC procedures and the way of communicating the final verification opinion to the Gold Standard.

## TECHNICAL PROJECT DESCRIPTION

The proposed project activity involves the dissemination of efficient cook stoves for rural and residential communities in Malawi.

The project is implementing five technologies, namely: (1) Portable Ceramic Stoves; (2) Fixed Esperanza Stoves; (3) Rocket Barns; (4) Institutional Cook Stoves and (5) Urban Cook Stoves.

The project aims at reducing GHG emissions by 77,541 $tCO_2$ for the 2011-10-02 to 2012-11-23 monitoring period due to a more efficient use of non-renewable biomass in comparison to the baseline situation.

Beside the reduction of use of non-renewable biomass the project reduce exposure to indoor air pollution as well as relief from high fuel costs, time spent hand-gathering domestic fuel-wood and reduced burden for farmers to transport wood over distances that are increasing. Public benefits of the devices promoted come in the form of reduced pressure on Malawi's natural resources.

## GHG PROJECT DESCRIPTION

### Project Characteristics

Essential data of the project is presented in the following Table 3-1.

**Table 1-1:** Project Characteristics

| Item | Data | | |
|---|---|---|---|
| Project title | Integrated Biomass Energy Conservation Project, Malawi | | |
| Project size | ☐ Large Scale | ☒ Small Scale | |
| Project Scope *(according to UNFCCC sectoral scope numbers for CDM)* | ☐ | 1 | Energy Industries (renewable- /non-renewable sources) |
| | ☐ | 2 | Energy distribution |
| | ☒ | 3 | Energy demand |
| | ☐ | 4 | Manufacturing industries |
| | ☐ | 5 | Chemical industry |
| | ☐ | 6 | Construction |
| | ☐ | 7 | Transport |
| | ☐ | 8 | Mining/Mineral production |
| | ☐ | 9 | Metal production |
| | ☐ | 10 | Fugitive emissions from fuels (solid, oil and gas) |
| | ☐ | 11 | Fugitive emissions from production and consumption of halocarbons and hexafluoride |
| | ☐ | 12 | Solvents use |
| | ☐ | 13 | Waste handling and disposal |
| | ☐ | 14 | Afforestation and Reforestation |
| | ☐ | 15 | Agriculture |
| Applied Methodology | *Gold Standard Technologies and Practices to Displace Decentralised Thermal Energy Consumption ver.1.0* | | |
| Technical Area(s) | 3.1 | | |
| GS registration No. | GS 613 | | |

| Item | Data |
|---|---|
| Crediting period | ☒ Renewable Crediting Period (7 y)<br>☐ Fixed Crediting Period (10 y) |

## Involved Parties and Project Participants

The following project participants are involved in this project:

**Table 1-2:** Project Participants

| Characteristic | Party | Project Participant |
|---|---|---|
| Host party | Malawi | Hestian Innovation Ltd. |
| Other involved party/ies | - | - |

## Project Location

The details of the project location are given in table 2-4:

**Table 1.3:** Project Location

| No. | Project Location |
|---|---|
| Host Country | Malawi |
| Region: | Southern, Central and Northern Provinces |
| Project location address: | Lilongwe, Malawi |

# METHODOLOGY AND VERIFICATION SEQUENCE

## 1. VERIFICATION STEPS

The verification consists of the following steps:

- Appointment of team members and technical reviewer
- A desk review of PDD, the Gold Standard Documentation and additional supporting documents submitted by the client
- On-Site assessment
- Background investigation and follow-up interviews with personnel of the project proponent and its contractors
- Draft verification reporting
- Technical review
- Resolution of corrective and clarification actions (if any)
- Final verification reporting
- Technical review
- Final approval of the verification.

The sequence of the verification is given in the table 1.4 below:

**Table 1.4:** Verification sequence

| Topic | Time |
|---|---|
| Assignment of verification | 2013-01-28 |
| Document Review | 2013-01-30 to 2013-01-31 |
| On-site visit | 2013-02-06 to 2013-02-08 |
| Draft reporting finalised | 2013-02-28 |
| Final reporting finalised | - |
| Technical review finalised | - |

### 1.1. Appointment of team members and technical reviewers

On the basis of a competence analysis and individual availabilities a verification team, consistent of one team leader and 2 additional team members, has been appointed. Furthermore also the personnel for the technical review and the final approval have been determined.

The list of involved personnel, the tasks assigned and the qualification status are summarized in the table 1 below.

**Table 1.5:** Involved Personnel

| | Name | Company | Function 1) | Qualification Status 2) | Scheme Competence 3) | Technical Competence 4) | Verification Competence 5) | Host country Competence | On-site visit |
|---|---|---|---|---|---|---|---|---|---|
| ☒ Mr. ☐ Ms. | Ulrich Walter | TNC | TL A) | LA | ☒ | 3.1 | ☒ | ☐ | ☐ |
| ☒ Mr. ☐ Ms. | Grzegorz Kochaniewicz | TNSA | TM A) | A | ☒ | | ☐ | ☒ | ☒ |
| ☐ Mr. ☒ Ms. | Davinah Milenge | TNSA | ETE B) | TE | ☐ | | ☐ | ☒ | ☒ |
| ☒ Mr. ☐ Ms. | David Lubanga | TNC | OR B) | A | ☒ | | ☐ | ☒ | ☐ |
| ☐ Mr. ☐ Ms. | Stefan Winter | TNC | TR/FA B) | SA | ☒ | 3.1 | ☒ | ☐ | ☐ |

1) TL: Team Leader; TM: Team Member, TR: Technical review; FA: Final approval
2) GHG Auditor Status: A: Assessor; E: Expert; SA: Senior Assessor; T: Trainee; TE: Technical Expert
3) No team member
4) As per S01-MU03 or S01-VA070 A2 (such as A, B, C.....)

## 1.2. Desk review

During the desk review all documents initially provided by the client and publicly available documents relevant for the verification will be reviewed. The main documents are listed below:

- the latest version of the Monitoring Report for the project,
- the latest version of valid PDD and the Gold Standard Passport,
- Unit sales data
- the emission reduction calculation spreadsheet.

Other supporting documents, such as publicly available information on the Gold Standard website, UNFCCC website and background information will also be reviewed in the verification process.

## 1.3. On-site assessment

An essential part of this verification exercise is the visit on site in order to investigate the project's implementation in accordance with applicable Gold Standard criteria. Furthermore the on-site assessment is deemed necessary to project in order to assess the information included in the project documentation a. Investigation of the selected key sustainable development indicators and its achievement is an integral part of the on-site assessment as well.

In the course of verification, particular during the on-site visit the validators of TÜV NORD JI/CDM CP perform interviews with the project participants to confirm selected information and to resolve issues identified in the document review.

Keeping in mind the principles of materiality and quality of evidence, typical activities on-site include but are not limited to:

- Introduction meeting, explain objectives of the verification,
- Investigation of whether identified monitoring measures are adequate in order to achieve reliable monitoring results.
- Review of organisation charts, personnel competency and training plans.
- Check of the project activity’s impact on environmental and social aspects.
- Interviews with the staff of the PP (Solar Lights), being responsible for data collection and processing in order to operate an appropriate monitoring system for the project activity, so as to check the risks for inappropriate data collection and management (including social & environmental parameters as detailed in the Gold Standard Passport).
- Review calculations and spreadsheets used to quantify the baseline and project scenarios.
- Final meeting to present the results and findings.

## 1.4. Reporting of Findings

On the basis of the desk review, the on-site visit, follow-up interviews and further background investigation a draft verification report will be prepared, including a general project and procedural description of the verification and a detailed list of the verification findings.

The verification team will formally communicate to the client the findings in the form of Corrective Action Requests (CARs) and /or Forward Action Requests (FARs) and / or Clarification Requests (CLs).

Corrective Action Requests (CARs) are issued, if:

- there is a clear deviation concerning to the above mentioned applicable criteria (esp. the monitoring plan).
- requirements set by the monitoring plan or qualifications in the verification opinion have not been met; or
- there is a risk that the project would not be able to deliver emission reductions or the project activity does not meet the sustainable development claims.

Forward Action Requests (FAR) indicate essential risks for further periodic verifications. Forward Action Requests are issued, if:

- the actual status requires a special focus on this item for the next consecutive verification, or
- an adjustment of the monitoring plan is recommended.

The verification team also uses the term Clarification Request (CL), which is issued if:

- additional information is needed to fully clarify an issue.

The draft verification report will be sent to the client for resolution of raised CARs, CLs and FARs.

The communication between both the parties will take place via e-mail.

## 1.5. Final reporting

Upon successful closure of all raised CARs, CLs the final verification report including a positive verification opinion can be issued. The final report summarizes the final assessments w.r.t. all applicable criteria.

In this case the assessment performed during the verification enables the validator to arrive at a positive conclusion regarding the project's implementation and realization of measureable and quantifiable emission reductions

In case not all essential issues could finally be resolved a final report including a negative verification opinion is issued.

## 1.6. Technical review and final approval

Before submission of the draft / final verification report a technical review of the whole verification procedure is carried out. The technical reviewer is a competent GHG auditor being appointed for the scope this project falls under. The technical reviewer is not considered part of the verification team and thus not involved in the decision making process up to the technical review.

As a result of the final technical review process the verification opinion and the topic specific assessments as prepared by the verification team leader may be confirmed or revised. Furthermore reporting improvements might be achieved.

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

After this step the verification team will submit the verification report including the verification opinion to the client via e-mail and to Gold Standard via the GS registry.

# 2. GOLD STANDARD VERIFICATION TIME FRAME

TÜV NORD CERT GmbH is prepared to begin the work on the verification of this GS project upon receipt of all necessary documentation.

The on-site visit will be performed within 2 weeks after receipt of all necessary documentation at the same time as the verification under the GS project cycle.

The verification team plans to provide the draft verification report including CARs, FARs & CLs (if any) and submit it to the client within four weeks after the on-site visit (in case every topic as given in the audit plan can be properly audited and no additional efforts are necessary to obtain the relevant information. If such efforts are necessary the verification team plans to submit the draft verification report to the client four weeks after completion of these additional tasks).

After resolving all raised CARs & FARs & CLs (if any) the verification team will prepare the verification report and submit it to the client and Gold Standard.