VALIDATION OPINION FOR REVISION OF REGISTERED MONITORING PLAN

Climate Change Capital Limited

Biomass generation project, in Sheyang county, Jiangsu province, P.R. China

UNFCCC Ref. No. 1366

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Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CL	Clarification Request
CO2	Carbon Dioxide
CO2e	Carbon Dioxide Equivalent
DOE	Designated Operational Entity
GHG	Greenhouse Gas(es)
MP	Monitoring Plan
NCV	Net Calorie Value
PDD	Project Design Document
PP	Project Participant
SGS	Société Générale de Surveillance
UNFCCC	United Nations Framework Convention on Climate Change

Table of Content

1. Validation Opinion

Paragraph 57 of the modalities and procedures for the CDM allows project participants to revise monitoring plans in order to improve accuracy and/or completeness of information, subject to the revision being validated by a Designated Operational Entity.

SGS United Kingdom Ltd has been contracted by Climate Change Capital Limited to perform such a validation of the revision of monitoring plan according to the procedure detailed in annex 34 to EB 26 meeting report; the original monitoring plan is part of the PDD of registered CDM project: Biomass generation project, in Sheyang county, Jiangsu province, P.R. China, UNFCCC reference number 1366. The purpose of a validation is to have an independent third party assessment of the revision of monitoring plan. In particular, the level of accuracy and/or completeness in the proposed revision of the monitoring plan, and the conformity with approved monitoring methodology applicable to the project activity.

By applying the proposed revision of monitoring plan, the quantity ($BF_{k,y}$) and the net calorie value (NCV_k) of all types of biomass residues consumed by the project will be monitored and the average CO_2 emission factor for the trucks during the year y ($EF_{km,CO2,y}$) will be calculated using CO_2 emissions from fuel consumption multiplying with appropriate net calorific values and CO_2 emission factors, or alternatively choose from the literature in a conservative manner, in accordance with the approved methodology ACM0006 version 04. This revision improves the accuracy of information provided and consistency in the registered PDD and the monitoring plan.

Furthermore, we confirm that:

(a) the proposed revision of the monitoring plan ensures that the level of accuracy or completeness in the monitoring and verification process is not reduced as a result of the revisions;

(b) the proposed revision of the monitoring plan is in accordance with the approved monitoring methodology applicable to the project activity;

(c) there's no finding from previous verification report as this is the first periodic verification.

Signed on Behalf of the Validation Body by Authorized Signatory

Signature: Siddharth

Name: Siddharth Yadav

Date: 26th January 2009

2. Introduction

2.1 Objective

Paragraph 57 of the modalities and procedures for the CDM allows project participants to revise monitoring plans in order to improve accuracy and/or completeness of information, subject to the revision being validated by a Designated Operational Entity.

SGS United Kingdom Ltd has been contracted by Climate Change Capital Limited to perform such a validation of the revision of monitoring plan according to the procedure detailed in annex 34 to EB 26 meeting report; the original monitoring plan is part of the PDD of registered CDM project: Biomass generation project, in Sheyang county, Jiangsu province, P.R. China, UNFCCC reference number 1366. The purpose of a validation is to have an independent third party assessment of the revision of monitoring plan. In particular, the level of accuracy or completeness in the proposed revision of the monitoring plan, and the conformity with the approved monitoring methodology applicable to the project activity.

The Validation was performed in accordance with the UNFCCC criteria for the Clean Development Mechanism (CDM) and the host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

SGS reviewed the project design documentation, using a risk based approach and conducted follow-up interviews.

2.2 Scope

The scope of the validation is defined as an independent and objective review of the project design document, the project baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against the Kyoto Protocol requirements, the UNFCCC rules and associated interpretations. SGS has employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.

The validation is not meant to provide any consulting towards the Client/the project. However, SGS may issue requests for clarifications and/or corrective actions which may provide input for improvement of the project design.

2.3 GHG Project Description

As per the registration information of the project on the CDM website: http://cdm.unfccc.int/Projects/DB/TUEV-SUED1190986543.01, there is no change in the project activity description. The project was registered on 1st April 2008 under UNFCCC reference number 1366.

2.4 The Names and Roles of the Validation Team Members

Name	Role	Affiliate
Simon Zhao Xinguang	Lead Assessor	SGS CN
Michael Wu Shimin	Assessor (Trainee)	SGS CN
Grace Han Huijuan	Local Assessor (Trainee)	SGS CN

Simon Zhao Xinguang is a Lead Assessor of the SGS Climate Change Programme with extensive experience in the validation and verification of CDM and VCS2007 projects in China. He is based in Beijing.

Michael Wu Shimin is an Assessor in training of SGS Climate Change Programme. He is based in Shanghai and has participated in a number of CDM projects in China.

Grace Han Huijuan is an Assessor in training of SGS Climate Change Programme. She is based in Shanghai and has participated in a number of CDM projects in China.

3. Methodology

3.1 Review of CDM-PDD and Additional Documentation

The validation is performed primarily as a document review of the publicly available project documents. The assessment is performed by trained assessors using a validation protocol.

A site visit is usually required to verify assumptions in the baseline.

3.2 Use of the Validation Protocol

The validation protocol used for the assessment is partly based on the templates of the IETA / World Bank Validation and Verification Manual and partly on the experience of SGS with the validation of CDM projects. It serves the following purposes:

- it organises, details and clarifies the requirements the project is expected to meet; and
- it documents both how a particular requirement has been validated and the result of the validation.

The validation protocol consists of several tables. The different columns in these tables are described below.

Checklist Question	Ref ID	Means of Verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements are linked to checklist questions the project should meet.	Lists any references and sources used in the validation process. Full details are provided in the table at the bottom of the checklist.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (Y), or a Corrective Action Request (CAR) due to non-compliance with the checklist question (See below). A Clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

3.3 Findings

As an outcome of the validation process, the team can raise different types of findings

In general, where insufficient or inaccurate information is available and clarification or new information is required the Assessor shall raise a **Clarification Request (CL)** specifying what additional information is required.

Where a non-conformance arises the Assessor shall raise a **Corrective Action Request (CAR).** A CAR

is issued, where:

I. .Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;

II. Mistakes have been made in applying assumptions, data or calculations of emission reductions which will impair the estimate of emission reductions;

III. Issues identified in a FAR during validation to be verified during verification have not been resolved by the project participants.

A **Forward Action Request (FAR)** is raised during verification for actions if the monitoring and reporting require attention and/or adjustment for the next verification period.

The validation process may be halted until this information has been made available to the assessors' satisfaction. Failure to address a CL/FAR may result in a CAR. Information or clarifications provided as a result of an CL/FAR may also lead to a CAR.

Corrective Action Requests, Clarification Requests and Forward Action Requests are raised in the draft validation protocol and detailed in a separate form (Findings Overview). In this form, the Project Developer is given the opportunity to address and "close" outstanding CARs and respond to CLs and FARs.

3.4 Internal Quality Control

Following the completion of the assessment process and a recommendation by the Assessment team, all documentation will be forwarded to a Technical Reviewer. The task of the Technical Reviewer is to check that all procedures have been followed and all conclusions are justified. The Technical Reviewer will either accept or reject the recommendation made by the assessment team.

4. Validation Findings

4.1 Modifications to the Registered Monitoring Plan

The modifications to the registered monitoring plan are as follows:

4.1.1 Parameter $BF_{k,y}$

In the original registered PDD, the description of parameter $BF_{k,y}$ was "Electrical Weight", which was possibly a mistake. It is revised as "Quantity of biomass residue type k combusted in the project plant during the year y" in the proposed revision of monitoring plan. The type of biomass residues to be monitored will be all kinds of biomass residues combusted in the project plant during the year y, not only limited to cotton straw. The monitoring equipments will be calibrated annually according to related national standards, not only JJG555-96. The accuracy of the electrical weights will be III, the uncertainty of which is the same as that indicated in the registered PDD, 1.0e for 0-500e, 2.0e for 500-2000e and 3.0e for >2000e.

4.1.2 QA/QC procedures to be applied for parameter Moisture content of the biomass residues:

In the original registered PDD, the accuracy of the moisture content monitoring equipment is 12 (±4), which was probably a mistake. In the proposed revision of monitoring plan, the accuracy class of the monitoring equipment of moisture content of the biomass residues will be 5.0, or subject to related national standard.

4.1.3 Comment to parameter DPK_y:

In the proposed revision of monitoring plan, a comment is added to parameter DPF_y, that is the parameter DPK_y is applicable only when $EF_{km,CO2,y}$ is calculated.

4.1.4 Parameter $EF_{km,CO2,y}$:

The approved methodology ACM0006 version 04, against which the project was registered, allows project participants to use emission factors applicable for the truck types used from the literature in a conservative manner for the average CO2 emission factor for the trucks during the year y ($EF_{km,CO2,y}$), but it wasn't mentioned in the original registered PDD. In the proposed revision of monitoring plan, this option of methodology is added as an alternative option.

4.1.5 Description of parameter NCV_d:

In the proposed revision of monitoring plan, the description of parameter NCV_d is changed from "Net calorie value of diesel used for straws transportation and on-site fuel use" to "Net calorie value of diesel oil used for biomass residue transportation".

4.1.6 Description of NCV_i:

In the proposed revision of monitoring plan, the description of NCV_i is changed from "Net calorie value of diesel" to Net calorific value of the fossil fuel type i".

4.1.7 Parameter NCV_k:

In the original registered PDD, the parameter was NCV_c and the description of parameter was "The net calorie value of cotton straws consumed by the proposed project". Actually, the project consumes several kinds of biomass residues, not only cotton straws. In the proposed revision of monitoring plan, the code name of the parameter is changed from NCV_c to NCV_k, and the description of the parameter is changed into "Net calorific value of biomass residue type k consumed by the project". That means the net calorific value of all kinds of biomass residues consumed by the project will be monitored, not only limited to cotton straws. The source of date to be used for the parameter is changed from "Power plant and the department who is responsible for the straw collection and transportation" to "Power plant and the department who is responsible for the biomass residue collection and transportation".

The methodology ACM0004 version 04 requires the monitoring frequency of NCV_k to be at least 6 months, but the in the original registered PDD, the parameter would be monitored annually. This was incompliance. In the proposed revision of monitoring plan, the monitoring frequency is changed to be once 6 months.

The description of equipment for monitoring NCV_k is deleted as the parameter will be tested by a qualified testing institution.

4.1.8 The requirement of monitoring plan:

In Section B.7.2 of the original registered monitoring plan, the sentence "The monitoring frequency is at least 6 months" was unclear. As per the requirement of the methodology ACM0006 version 04, the monitoring frequency of different parameters is different. This sentence is deleted in the proposed revision of monitoring plan.

Rest of the monitoring plan remains the same as mentioned in the registered PDD available at UNFCCC website: http://cdm.unfccc.int/Projects/DB/TUEV-SUED1190986543.01, and the revised monitoring plan is attached with the revised validation opinion.

This revision improves the accuracy of information provided and consistency in registered PDD and the monitoring plan and is in accordance with the approved methodology applicable to the project, i.e. ACM0006 version 04.

4.2 Findings of Previous Verification Reports

There's no finding from precious verification report as this is the first periodic verification.

5. List of Persons Interviewed

Date	Name	Position	Short Description of Subject Discussed
21/11/2008	Mr. Zhang Wenyi	Senior Manager, Climate Change Capital Limited	Revision of the monitoring plan
21/11/2008	Ms. Geng Haixia	CDM Commissioner, National Bio Energy Co., Ltd., Sheyang Branch	Actual implementation of the project activity
21/11/2008	Mr. Li Chenggui	General Manager, National Bio Energy Co., Ltd., Sheyang Branch	Actual implementation of the project activity

6. Document References

Category 1 Documents (documents provided by the Client that relate directly to the GHG components of the project, (i.e. the CDM Project Design Document, confirmation by the host Party on contribution to sustainable development and written approval of voluntary participation from the designated national authority):

/1/ Revised Monitoring Plan, dated 12th January 2009.

Category 2 Documents (background documents used to check project assumptions and confirm the validity of information given in the Category 1 documents and in validation interviews):

/2/ Registered PDD version 3.3, dated 20th July 2007.
/3/ Validation Report, issued by TÜV SÜD, dated 20th March 2008
/4/ ACM0006 version 04, dated 1st November 2006.
/5/ Annex34 to EB26 meeting report.
/6/ Validation and Verification Manual.

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Appendix: Team Members Statements of Competency

Statement of Competence

Name: Simon Zhao Xinguang　　　　SGS Affiliate: SGS China

Status

- Product Co-ordinator ☐
- Operations Co-ordinator ☐
- Technical Reviewer ☐
- Expert ☐

	Validation	Verification
- Local Assessor	☒	☒
- Lead Assessor	☒	☒
- Assessor / Trainee Lead Assessor	☒	☒

Scopes of Expertise

1. Energy Industries (renewable / non-renewable) ☒
2. Energy Distribution ☐
3. Energy Demand ☒
4. Manufacturing ☐
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 Sulphur Hexafluoride ☒
12. Solvent Use ☐
13. Waste Handling and Disposal ☐
14. Afforestation and Reforestation ☐
15. Agriculture ☐

Approved Member of Staff by Siddharth Yadav　　Date: 20/10/2008