



Voluntary Carbon Standard 2007.1 Validation Report

18 November 2008

Validation Report:

Name of Verification company:	Date of the issue:
Germanischer Lloyd Certification GmbH	18 November 2009
Report Title:	Approved by:
Additional Validation Report of Fuzhou Hongmiaoling landfill Gas to Electricity Project	Mr. Markus Weber
Client:	Project Title:
Climate Bridge Ltd.	Fuzhou Hongmiaoling landfill Gas to Electricity Project
Summary:	

Climate Bridge Ltd. has commissioned the Germanischer Lloyd Certification to carry out the Validation of the project Fuzhou Hongmiaoling Landfill Gas to Electricity Project, with regard to the relevant requirements of VCS 2007.1 Standard.

The project activity is a landfill gas (LFG) utilization project which generates electricity by flaring LFG collected from Fuzhou Hongmiaoling Landfill. The electricity generation will be supplied to East China Power Grid (ECPG). Thus, the project activity achieves GHG emission reductions by displacing the electricity generated by fossil fuel based power plants and using the LFG released to the atmosphere in the absence of project activity.

Germanischer Lloyd Certification performed a thorough evaluation and validation during Nov.13th to Nov.15th 2009 based on VCS 2007.1. As the project was registered as CDM project on Nov.17th 2008, after having checked thoroughly, Germanischer Lloyd Certification can confirm, the actual situation is total consistent with the registered PDD.

Germanischer Lloyd Certification has validated and hereby confirms that following 5 VCS clauses 1.12, 1.13, 1.14, 8.1, and 8.2 of the VCS Project Description Template are met and in compliance with the VCS requirements.

1.12 Demonstration to confirm that the project was not implemented to create GHG emissions primarily for the purpose of its subsequent removal or destruction.

The project is a landfill gas (LFG) collection and utilization project. It collects and utilizes methane that is released to atmosphere in the absence of the project to generate electricity. And the electricity is exported to East China Power Grid to replace electricity generation through coal-fired power plants. Therefore, the implementation of the proposed project is not created for the purpose of its subsequent removal or destruction.

1.13 Demonstration that the project has not created another form of environmental credit (for example renewable energy certificates).

The project has been applied for as a CDM project and was registered on 17 Nov 2008. The project started construction on 12 Feb 2007 and began generating electricity on 19 Nov 2007. The suggested crediting period for pre-CDM registration VCU under VCS 2007 started from 19 Nov 2007 to 16 Nov 2008 which complies with VCS policy and has no overlap with any other form of environmental crediting period.

1.14 Project rejected under other GHG programs (if applicable):

The only GHG program that Fuzhou Hongmiaoling Landfill Gas to Electricity Project ever applied is CDM program and it was registered on 17 Nov 2008.

8.1 Proof of Title:

The owner of the project is Fujian TianYi Renewable Energy Technology & Utilization Co., Ltd. LoA issued by NDRC of China shows that Fujian TianYi Renewable Energy Technology & Utilization Co., Ltd. is permitted to transfer the CERs to buyer, so Fujian TianYi Renewable Energy Technology & Utilization Co., Ltd. has the ownership of reductions from the project.

8.2 Projects that reduce GHG emissions from activities that participate in an emissions trading program (if applicable):

The project was only registered under CDM. The emission reduction after CDM registration date will be counted as CER and the emission reduction before CDM registration date will be counted as VCU.

Work carried out by:	Number of pages:
Ruifeng Li(Auditor) Markus Weber (Lead Auditor) Anu Chaudhary (Technical Reviewer)	7

1 Introduction

Climate Bridge Ltd. has commissioned the Germanischer Lloyd Certification to carry out the Validation of the project Fuzhou Hongmiaoling Landfill Gas to Electricity Project, with regard to the relevant requirements of VCS 2007.1 Standard.

This report summarizes the findings of the validation, performed on the basis of both the Voluntary Carbon Standard – 2007.1 (VCS 2007.1) as well as applicable criteria (in this case CDM requirements) given to provide for consistent project operations, monitoring and reporting.

1.1 Objective

The purpose of a VCS validation is to have an independent third party assess the project design in particular the project's compliance with relevant criteria of VCSA rules (Voluntary Carbon Standard 2007.1 and the Voluntary Carbon Standard Program Guidelines 2007.1) and applicable CDM criteria (as the applicable approved GHG programs). Validation is a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of Voluntary Carbon Units (VCUs).

1.2 Scope and Criteria

The current project was already validated by DNV and was registered as a CDM project on November 17th, 2008. Since the VCS allows that in case a project has been validated under the CDM, a further validation shall be completed of clauses 1.12, 1.13, 1.14, 8.1 and 8.2 of the VCS Project Description projects and can use their specific GHG Program validation report for project validation the current validation has been conducted following this approach and thus focusing on these five clauses. Furthermore the current report must be considered in conjunction with DNV's CDM validation report No. 2007-1055, "Fuzhou Hongmiaoling Landfill Gas to Electricity Project in China" Revision No. 02.

The validation is not meant to provide any consulting towards the project proponents. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of both the project design and the VCS PD.

1.3 VCS Project Description

The project activity is a landfill gas (LFG) utilization project which generates electricity by flaring LFG collected from Fuzhou Hongmiaoling Landfill. The electricity generation will be supplied to East China Power Grid (ECPG). Thus, the project activity achieves GHG emission reductions by displacing the electricity generated by fossil fuel based power plants and using the LFG released to the atmosphere in the absence of project activity.

2 Validation Team

A competent team with relevant knowledge and experience in the specific scopes and sectors was appointed.

The validation team consists of the following members:

Table 2-1: Validation Team

	Name	Location	Function 1)	Scope Specific Knowledge	Sector Specific Knowledge	Host Country Knowledge
☒ Mr. ☐ Ms.	Ruifeng Li	China	A	Y	Y	Y
☒ Mr. ☐ Ms.	Markus Weber	Germany	ATL	Y	Y	Y
☐ Mr. ☒ Ms.	Anu Chaudhary	India	TR	Y	Y	Y

1) ATL: Assessment Team Leader; A: Auditor, E: Expert.; TR: Technical Reviewer

The final validation report underwent a technical review before the final version was issued. The technical review was performed by a qualified and independent technical reviewer.

3 Methodology

The validation consisted of the following three phases:

- I a desk review of the project design documentation and additional documentation
- II site visit
- III the resolution of outstanding issues and the issuance of the final validation report and opinion.

This final validation report summarizes the findings after all phases of the validation. The following sections outline each step in more detail.

3.1 Review of Documents

A complete list of documentation reviewed during the validation is presented as Annex 1.

3.2 Site Visit

A site visit was conducted on 14-15 November 2009, which focused on the validation of the clauses 1.12, 1.13, 1.14, 8.1 and 8.2 of the VCS Project Description.

3.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation was to resolve any outstanding issues which needed to be clarified prior to GLC's positive conclusion on the project design as described in the VCS Project Description Document (VCS PD) and supporting documentation.

Findings established during the validation can either be seen as a non-fulfillment of criteria of VCS 2007.1, applicable CDM baseline and monitoring methodology, and/or applicable relevant applicable criteria of the CDM (as the approved GHG program of which the baseline and monitoring methodology is used) or where a risk to the fulfillment of project objectives is identified.

Corrective action requests (CAR) are issued, where:

- i) mistakes have been made with a direct influence on project results;
- ii) specific requirements of VCS 2007.1, applicable baseline and monitoring methodology, and/or applicable relevant criteria of the CDM (as the GHG program of which the baseline and monitoring methodology is used) have not been met; or
- iii) there is a risk that the project would not be accepted as a VCS 2007.1 project or that emission reductions will not be verified and/or certified.

A request for clarification (CL) may be used where additional information is needed to fully clarify an issue.

4 Validation Findings and Conclusion

The findings of the validation are stated in the following sections which are structured and numbered in accordance with the relevant clauses:

4.1 Validation Findings concerning Clauses 1.12, 1.13, 1.14, 8.1 and 8.2

1.12 Demonstration to confirm that the project was not implemented to create GHG emissions primarily for the purpose of its subsequent removal or destruction:

The project is a landfill gas (LFG) collection and utilization project. It collects and utilizes methane that is released to atmosphere in the absence of the project to generate electricity. And the electricity is exported to East China Power Grid to replace electricity generation through coal-fired power plants. Therefore, the implementation of the proposed project is not created for the purpose of its subsequent removal or destruction.

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1.14 Project rejected under other GHG programs (if applicable):

The only GHG program that Fuzhou Hongmiaoling Landfill Gas to Electricity Project ever applied is CDM program and it was registered on 17 Nov 2008.

8.1 Proof of Title:

The owner of the project is Fujian TianYi Renewable Energy Technology & Utilization Co., Ltd. LoA issued by NDRC of China shows that Fujian TianYi Renewable Energy Technology & Utilization Co., Ltd. is permitted to transfer the CERs to buyer, so Fujian TianYi Renewable Energy Technology & Utilization Co., Ltd. has the ownership of reductions from the project.

8.2 Projects that reduce GHG emissions from activities that participate in an emissions trading program (if applicable):

The project was only registered under CDM. The emission reduction after CDM registration date will be counted as CER and the emission reduction before CDM registration date will be counted as VCU.

4.2 Nonconformities or Clarification Requests

GLC has not identified any issues that needed clarification or that represented a risk to the fulfilment of the project objectives and hence no Clarification or Corrective Action Requests were raised.

4.3 Validation Conclusion

Germanischer Lloyd Certification has validated and hereby confirms that following 5 VCS clauses 1.12, 1.13, 1.14, 8.1, and 8.2 of the VCS Project Description Template are met and in compliance with the VCS requirements.

The validation of the above mentioned clauses was based on the information made available to GLC and the engagement conditions detailed in this report. Germanischer Lloyd Certification GmbH (GLC) thus can not fully guarantee the accuracy or correctness of this information. Hence, GLC can not be held liable by any party for decisions made or not made based on the validation opinion. All information provided in the Validation Report is true and accurate in all material respects.

Hamburg, 2009-11-18



Markus Weber
Validation Team Leader
And Head of GLC's GHG Services Department

Annex 1 Reviewed Documents

No	Title	Date
01	Registered PDD "Fuzhou Hongmiaoling Landfill Gas to Electricity Project" issued by Easy Carbon Consultancy Co. Ltd.	25-02-2008
02	Approved consolidated baseline methodology ACM0001 , version5, issued by UNFCCC	18-12-2006
03	Validation report issued by DNV, Report No. 2007-1055, Revision No. 02.	17-11-2008
04	VCS Monitoring Report "Fuzhou Hongmiaoling Landfill Gas to Electricity Project" Monitoring periods: Nov. 19th 2007 to Nov.16th 2008, issued by Climate bridge.	03-06-2009
05	Business Licence of the Project Owner: Fujian Tianyi Renewable Energy Technology & Utilization Co., Ltd. Issued by Fuzhou industrial and commercial bureau	29-05-2006 to 28-05-2026
06	Monthly and daily records of main parameters(LFG, EL, MD)	19-11-2007 to 16-11-2008
07	Power sales invoice, issued by Fuzhou electric power bureau	09-10-2008, 13-10-2008, 05-02-2009
08	Feasibility study report	Oct.2005
09	Environmental Impact Assessment Report	Oct.2005
10	Project Commencing record of grid connection, issued by Fuzhou electric power bureau	19-11-2007
11	Thermometers and Manometers calibration record, issued by Shanghai instrument and automatic system inspection and testing institute	Thermometers: 05-01-2007, 26-12-2007 to 25-12-2008, 08-12-2008 Manometers:05-01-2007, 24-12-2007 to 23-12-2008, 10-12-2008
12	Flow meters calibration record, issued by Quality and technology supervision bureau of Jiangsu	2007 to 2009
13	Gas Analyser calibration record, issued by Nanjing Specialty gas Co.,Ltd.	12-11-2007 to 13-12-2008
14	Electricity meter calibration record, issued by Fuzhou electric power bureau measurement center	18-06-2007
15	Operation and Maintenance Manual, issued by Fujian Tianyi Renewable Energy Technology & Utilization Co., Ltd.	Oct.2007
16	Staff Training and Competence Records, issued by Shanghai Qiyao power technical Co.,Ltd	05-09-2007
17	Technical specifications of Turbine and Generator, issued by GE Jenbacher	09-06-2006
18	Layout of monitoring meters, issued by Fujian Tianyi Renewable Energy Technology & Utilization Co., Ltd	
19	VER calculation spreadsheet, issued by Climate bridge	12-08-2009
20	The letter of construction permission by supervision company	30-09-2006
21	The letter that Fuzhou Sanitation Department commissioned Fujian Tianyi Renewable Energy Technology & Utilization Co., Ltd. to develop the proposed project.	July 2006
22	China electric Power yearbook 2001 to 2005	
23	China energy statistical yearbook 2003 to 2005	
24	Revised 1996 IPCC Guidelines for national GHG Inventories	
25	VCSA: Voluntary Carbon Standard 2007.1, Program Guidelines	
26	VCSA: Voluntary Carbon Standard 2007.1	