
VERIFICATION AND CERTIFICATION REPORT

**China National Water Resources &
Electric Power Materials & Equipment
Co., Ltd**

Fujian Zhangpu Liuaio 45MW Wind Power Project

Monitoring period: 28/05/2008 to 27/05/2009

SGS Climate Change Programme

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SGS United Kingdom Limited		China National Water Resources & Electric Power Materials & Equipment Co., Ltd	
Publication of Monitoring Report:			
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Summary:			
SGS United Kingdom Ltd has performed the GS-CDM periodic verification of the Gold Standard CDM project Fujian Zhangpu Liuaio 45MW Wind Power Project (UNFCCC Ref. No. 1318, GS Project ID. GS375). The verification includes confirming the implementation of the monitoring plan of the registered PDD Version 06 dated 12/11/2007 and the application of the monitoring methodology as per ACM0002 Version 06 dated 19/05/2006. A site visit was conducted to verify the data submitted in the monitoring report. Fujian Zhangpu Liuaio 45MW Wind Power Project utilizes wind to generate electricity. The electricity generated from the project is fed to the East China Power Grid (ECPG). As per the registered PDD of the project, the project involves the installation of 36 sets of turbines with unit capacity of 1,250kW reaching a total installed capacity of 45MW. SGS confirms that the project is implemented in accordance with the validated and registered Project Design Document. The monitoring system is in place and the emission reductions are calculated without material misstatements. Our opinion relates to the projects GHG emissions and the resulting GHG emission reductions reported and related to the valid and registered project baseline and monitoring and its associated documents. Based on the information seen and evaluated we confirm that the implementation of the project has resulted in 70,019tCO₂e Emission Reductions during period 28/05/2008 up to 27/05/2009.			
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CDM Verification			
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Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEF	Carbon Emission Factor
CER	Certified Emission Reductions
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
CL	Clarification Request
DNA	Designated National Authority
DOE	Designated Operational Entity
DRR	Daily Reading Records
ECPG	East China Power Grid
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
GS	Gold Standard
GS-CDM	Gold Standard CDM
GS-CDM-PDD	Gold Standard Clean Development Mechanism Project Design Document
GS-TAC	Gold Standard Technical Advisory Committee
IPCC	Intergovernmental Panel on Climate Change
MP	Monitoring Plan
MR	Monitoring Report
MRR	Monthly Reading Records
ODA	Official Development Assistance
PDD	Project Design Document
PP	Project Participant
PPA	Power Purchase Agreement
SGS	Société Générale de Surveillance
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manuel

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1. Introduction

1.1 Objective

SGS United Kingdom Ltd has been contracted by China National Water Resources & Electric Power Materials & Equipment Co., Ltd to perform an independent verification of its GS-CDM project Fujian Zhangpu Liuaio 45MW Wind Power Project. GS-CDM projects must undergo periodic audits and verification of emission reductions as the basis for issuance of Certified Emission Reductions (CERs).

The objectives of this verification exercise are, by review of objective evidence, to establish that:

- The emissions report conforms with the requirements of the monitoring plan in the registered PDD and the approved methodology; and
- The data reported are complete and transparent.

1.2 Scope

The scope of the verification is the independent and objective review and ex post determination of the monitored reductions in GHG emission by the project activity. The verification is based on the validated and registered project design document and the monitoring report. The project is assessed against the requirements of the Kyoto Protocol, the CDM Modalities and Procedures, related rules and guidance from the CDM EB and the GS-TAC.

SGS 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 reporting risks and the reliability of project monitoring.

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 Project Activity and Period Covered

This engagement covers emissions and emission reductions from anthropogenic sources of greenhouse gases included within the project boundary of the following project and period.

Title of Project Activity:	Fujian Zhangpu Liuaio 45MW Wind Power Project
UNFCCC Registration Number:	UNFCCC Ref. No. 1318&GS Project ID. GS375
Monitoring Period Covered in this Report	28/05/2008 to 27/05/2009
Project Participants	Datang Zhangzhou Wind Power Co., Ltd (P.R.China) Essent Energy Trading BV (Netherlands)
Location of the Project Activity:	Liuaio Town, Zhangpu County, Fujian Province, P. R. China

Fujian Zhangpu Liuaio 45MW Wind Power Project utilizes wind to generate electricity. The electricity generated from the project is fed to the East China Power Grid (ECPG). As per the registered PDD of the project, the project involves the installation of 36 sets of turbines with unit capacities of 1,250kW reaching a total installed capacity of 45MW. The first set of wind turbines started operation on 25/06/2007. All 36 sets of wind turbines were put into operation in January 2008.

2. Methodology

2.1 General Approach

SGS's approach to the verification is a two-stage process.

In the first stage, SGS completed a strategic review and risk assessment of the projects activities and processes in order to gain a full understanding of:

- Activities associated with all the sources contributing to the project emissions and emission reductions, including leakage if relevant;
- Protocols used to estimate or measure GHG emissions from these sources;
- Collection and handling of data;
- Controls on the collection and handling of data;
- Means of verifying reported data; and
- Compilation of the monitoring report.

At the end of this stage, SGS produced a Periodic Verification Checklist which, based on the risk assessment of the parameters and data collection and handling processes for each of those parameters, describes the verification approach and the sampling plan.

Using the Periodic Verification checklist, SGS verified the implementation of the monitoring plan and the data presented in the Monitoring Report for the period in question. This involved a site visit and a desk review of the monitoring report. This verification report describes the findings of this assessment.

2.2 Verification Team for this Assessment

Name	Role	SGS Office
Joe Sun Guozhong	Lead Assessor/ Expert	SGS China
Simon Zhao Xinguang	Assessor	SGS China
Grace Han Huijuan	Assessor	SGS China

2.3 Means of Verification

2.3.1 Review of Documentation

The validated PDD, the monitoring report submitted by the client and additional background documents related to the project performance were reviewed. A complete list of all documents reviewed is attached in section 8 of this report.

2.3.2 Site Visits

As part of the verification, the following on-site inspections have been performed

Location: Liuaio Town, Zhangpu County, Fujian Province, P. R. China	
Date: 17/06/2009	
Coverage:	Source of Information / Persons Interviewed
1. Review of the monitoring report, metering reading records, invoices and monthly reading records.	Zhai Wenfeng, Datang Zhangzhou Wind Power Co., Ltd;
2. An interview with project participants including reviewing the installation plan and key physical components of the project, CDM monitoring report and staff training records.	Jiang Lifang, Datang Zhangzhou Wind Power Co., Ltd;
3. Collection of the calibration certificates for all the meters involved and the accreditation certificate of the calibration entity.	Xia Xiaoshu, China National Water Resources & Electric Power Materials & Equipment Co., Ltd;
4. Inspection of the control room, instrument room and step-up substation in the wind farm.	Qiu Shuangping, China National Water Resources & Electric Power Materials & Equipment Co., Ltd;

2.4 Reporting of Findings

As an outcome of the verification 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 team shall raise a Clarification Request (CL) specifying what additional information is required.

Where a non-conformance arises the team shall raise a Corrective Action Request (CAR). A CAR is issued, where:

- I. the verification is not able to obtain sufficient evidence for the reported emission reductions or part of the reported emission reductions. In this case these emission reductions shall not be verified and certified;
- II. the verification has identified misstatements in the reported emission reductions. Emission reductions with misstatements shall be discounted based on the verifiers ex-post determination of the achieved emission reductions

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

Observations may be raised which are for the benefit of future projects and future verification actors. These have no impact upon the completion of the verification activity.

Corrective Action Requests and New Information Requests are detailed in Periodic Verification Checklist. The Project Developer is given the opportunity to "close" outstanding CARs and respond to CLs and Observations.

2.5 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.

3. Verification Findings

3.1 Project Documentation and Compliance with the Registered PDD

Based on the project information available on the UNFCCC website, <http://cdm.unfccc.int/Projects/DB/TUEV-SUED1188562976.71/view>, the project was registered on 21/01/2008 and the first crediting period for the project is from 21/01/2008 to 20/01/2015. From the information available on the Gold Standard website, <https://gs1.apx.com/mymodule/ProjectDoc/EditProjectDoc.asp?id1=375>, the project is also approved as a GS-CDM project with GS Project ID of GS375.

The first GS-CDM periodic verification for the project covers from 21/01/2008 to 27/05/2008 and this is the second GS-CDM periodic verification for the project covering the period from 28/05/2008 to 27/05/2009. The start date of this monitoring period is the day after the end date of the last monitoring period.

The project was registered against the approved consolidated methodology ACM0002 Version 06 dated 19/05/2006 (/1/). The monitoring methodology has been correctly applied and the documents for this monitoring period are complete and transparent. The project boundary is consistent with the registered PDD. Management and operational system is in place. QA/QC procedures stipulated in the registered PDD have been followed. The project has been implemented in compliance with the registered PDD.

3.2 Monitoring Results

3.2.1 Emission Reductions

According to the registered PDD Version 06 dated 12/11/2007 of the project (/2/), parameter EGy, net electricity delivered to the grid during year y needs to be monitored.

Net electricity delivered to the grid is the electricity exported to the Grid by the project minus the electricity imported from the Grid by the project.

As per the registered PDD of the project and the Power Purchase Agreement (PPA) (/15/) signed between the wind farm company and Fujian Province Zhangpu County Electric Power Company (the Grid Company), one bidirectional main meter has been installed at the wind farm to measure the electricity exported to the Grid and the electricity imported from the Grid. One backup meter has been installed at the wind farm for reference when the main meter is out of order.

Designated personnel read the readings of the main meter and manually transcribed the readings into Daily Reading Records (DRRs) (/10/) on a daily basis. Accumulated data were transcribed into Monthly Reading Records (MRRs) (/11/) on a monthly basis.

At the designated time of every month, the grid company and the wind farm company both read and recorded the readings of the main meter at 24:00 hour on the 27th day of every month. Based on the readings of the main meter, the Grid Company issued Electricity Transaction Notes (ETNs) to the wind farm company for the exported electricity to the Grid by the project. After confirming the numbers on the ETNs, the wind farm company issued sales invoices to the Grid Company subsequently on a monthly basis. The Grid Company issued sales receipts to the wind farm company for the imported electricity by the wind farm based on the readings of the main meter.

Data in the Monthly Reading Records (MRRs) were used to calculate the net electricity delivered to the Grid by the project. ETNs and sales invoices, serving as sales receipts (/13//14/), were used for double check by SGS assessors. Data in the Daily Reading Records (DRRs) and the logbooks of wind turbine generation (/12/) were randomly checked for cross reference.

Additional checking has been done for the period 28/01/2009 to 25/02/2009, 26/02/2009 to 27/03/2009 due to the fact that generally the monthly cut-off time of invoicing electricity supplied and imported by the project is at 24:00 hour on the 27th day of every month. Because the electricity power system was updated on 28/02/2009, the date of recording the meters measuring the electricity exported to the grid and the electricity imported from the grid was moved to 25/02/2009, which has been confirmed by a statement issued by the

Grid Company (/21/) which also serves as additional evidence to support the amount of electricity exported to the grid and imported from the grid for these particular periods in concern.

During the site visit, it was found that the values of exported electricity and imported electricity by the project from 28/01/2009 to 27/02/2009 and 28/02/2009 to 27/03/2009 in version 01 of the monitoring report (/7/) are actually the values of exported electricity and imported electricity by the project from 28/01/2009 to 25/02/2009 and 26/02/2009 to 27/03/2009 respectively. The verification team **raised CAR #1** requiring the PP to make relevant corrections in the monitoring report to reflect the actual status of the project. After relevant corrections were made in the monitoring report version 02, **CAR #1 was closed out**.

The verified values of the electricity exported to the grid by project from 28/05/2008 to 27/11/2008 on the sales receipts and those used for ERs calculation and the electricity imported from the grid by the project from 28/11/2008 to 27/05/2009 on the sales receipts are different from the reported values in the monitoring report version 01. The verification team **raised CAR #2** requiring the PP to make relevant corrections. After relevant the corrections were made in the monitoring report version 02, **CAR #2 was closed out**.

Following above CAR #1 and CAR #2, **FAR #3 was raised**. It is in SGS' opinion that the QA/QC of the project shall be improved. The observation (equivalent to FAR) raised during the previous verification remains open. The improvement of the QA/QC will be observed during the next periodic verifications.

Reactive power was deducted from the electricity exported to the grid on the sales receipts for exported electricity from 28/05/2008 to 27/11/2008 which was also the case during the previous monitoring period verified. Line losses were deducted from the electricity exported to the grid on the sales receipts from 28/11/2008 to 27/05/2009, which has been reflected on page 10 of the PPA signed on 28/12/2008 between the project owner and Grid Company. The differences between the values on the sales receipts and meter readings for exported electricity are within a range of 0.001% to 0.11% from 28/05/2008 to 27/11/2008 and 0.105% to 0.237% from 28/11/2008 to 27/05/2009. This range is considered reasonable by the verification team based on our local sectoral expertise.

Original meter readings and sales receipts for electricity exported to and imported from the grid in this monitoring period have been provided and checked by the assessors. It has been verified that the reported values of electricity exported to and imported from the grid in the monitoring report are accurate and the PP adopted a conservative approach by using the smaller values for electricity exported to the grid between the two sources of meter readings and sales receipts for ERs calculation.

As per the registered PDD, the metering equipment will be properly configured and checked annually.

The main meter and backup meter were calibrated on 01/12/2007 and 01/12/2008 by Fujian Provincial Electric Power Company Metrological Verification Center. The calibration was implemented in accordance with related Chinese national technical standard JJG596-1999. Calibration certificates (/8/) and the accreditation certificate for the calibrator (/9/) have been verified by SGS assessors.

There were no fossil fuels used for electricity generation by the project activity during the monitoring period.

Supporting references and data required to determine the net electricity delivered to the grid by the project are found to be complete and transparent.

3.2.2 SD Indicators

As per the requirement and the toolkit of Gold Standard V2, sustainable development indicators relevant to the project should be monitored. The verification team raised CAR #4 requiring the PP to provide relevant information about the monitoring of sustainable development indicators in the MR. After relevant monitoring information about SD indicators have been provided in the MR version 02, CAR #4 was closed out.

SD indicators, Employment (number and quality) and Raptantation, were monitored for the project. Employment (number and quality) was monitored by the employment contracts, salary payment sheets and records of social welfare (/17/). Raptantation was prescribed in the construction contract for replantation signed on 20/09/2008 between the Datang Zhangzhou Wind Power Co., Ltd and Zhangpu County Forestry Bureau (/18/) and implemented by the PP, which was verified by the verification team during on-site visit.

Sixty-six temporary job positions were created by the project during the construction period of the project. A total of 871,500Yuan RMB was paid to the sixty-six employees.

Seven permanent employees have been employed by the project company for the operation and maintenance of the project. During this monitoring period, the annual salary for the seven members of staff is 31,500yuan/person, above the local average salary which is 22,270yuan/person according to the statistics from Zhangzhou Statistic Bureau (/19/).

It is stated in the GS-Annex (/3/) submitted during validation that the construction of the power plant is estimated to provide around 300 jobs and a dozen jobs are created for power plant operation and maintenance. The PP clarified that 300 jobs is the number of job opportunities that may be provided by the Liuaio Wind Farm which includes three phases. The Fujian Zhangpu Liuaio 45MW Wind Power Project is the phase 2 project. It was a misunderstanding about the project activity at validation stage. 66 jobs were created during construction and 7 jobs during the operation and maintenance. The supporting materials have been provided to and verified by the SGS assessment team.

Taking into account of the actual numbers of job opportunities provided by the project activity, it is verified that the initial sustainable development assessment carried out during validation is not significantly affected by this difference.

3.2.1 Public Consultation Indicators

As per the registered PDD and the Gold Standard validation report for the project, no indicators relevant for the issues of potentially significant importance raised in the public consultations need to be monitored.

3.2.2 Potential Mitigation/Compensation Measures

As per the registered PDD and the Gold Standard validation report for the project, no potential mitigation/compensation measures need to be monitored.

3.3 Remaining Issues, CAR's, CL's from Previous Validation or Verification

This is the second periodic GS-CDM verification for the project. The observation regarding QA/QC (equivalent to FAR) raised during the previous verification (/4//5//6/) remains open.

3.4 Project Implementation

Project was implemented and equipment installed as described in the registered PDD.

3.5 Completeness of Monitoring

The reporting procedures reflect the content of the monitoring plan. The monitoring mechanism is effective and reliable.

3.6 Accuracy of Emission Reduction Calculations

The calculation of emission reductions is found to be correct in the monitoring report version 02. Two CARs regarding accuracy of emission reduction calculation (CAR #1 and CAR #2) and the responses to CARs were satisfactory and findings were closed. The details of the reported and the verified values for all parameters are listed in section 4.

3.7 Quality of Evidence to Determine Emission Reductions

Critical parameters used for the determination of the Emission Reductions are discussed above in section 3.2 above. All the data recorded is in compliance with the monitoring report.

3.8 Management System and Quality Assurance

Management system and quality assurance procedures have been stipulated in the CDM monitoring plan (/16/) and have been implemented during daily operation. This has been verified by on-site visit and document review following the VVM (/20/). Therefore we can affirm that the management system of the CDM project is in place; with the responsibilities properly identified and in place.

3.9 Data from External Sources

The baseline emission factor (EF_y) was determined ex-ante and fixed for the first crediting period as per the registered PDD Version 06 dated 12/11/2007. The value of the baseline emission factor used in the monitoring report version 02 dated 04/08/2009 is 0.880tCO₂e/MWh. It complies with the calculated value of the baseline emission factor in the registered PDD Version 06 dated 12/11/2007.

4. Calculation of Emission Reductions

Table 1 Reported and Verified Data of Electricity exported to the Grid

Period	Reported Value(kWh)	Verified Value(kWh)
	Electricity exported to the Grid(A)	Electricity exported to the Grid
28/05/2008- 27/06/2008	4,325,068	4,325,024
28/06/2008- 27/07/2008	3,169,452	3,169,320
28/07/2008- 27/08/2008	4,558,312	4,556,992
28/08/2008- 27/09/2008	4,013,548	4,009,148
28/09/2008- 27/10/2008	7,199,808	7,197,872
28/10/2008- 27/11/2008	8,531,424	8,531,424
28/11/2008- 27/12/2008	8,291,844	8,291,844
28/12/2008- 27/01/2009	10,198,836	10,198,836
28/01/2009- 25/02/2009	5,268,470	5,268,470
26/02/2009- 27/03/2009	8,389,289	8,389,289
28/03/2009- 27/04/2009	9,561,426	9,561,426
28/04/2009- 27/05/2009	6,475,872	6,475,872
Total	79,983,349	79,975,517

Table 2 Reported and Verified Data of Electricity Imported from the Grid

Period	Reported Value(kWh)	Verified Value(kWh)
	Electricity imported from the Grid(B)	Electricity imported from the Grid
28/05/2008- 27/06/2008	33,924	33,924
28/06/2008- 27/07/2008	54,032	54,032
28/07/2008- 27/08/2008	49,016	49,016
28/08/2008- 27/09/2008	54,472	54,472
28/09/2008- 27/10/2008	24,024	24,024
28/10/2008- 27/11/2008	16,060	16,060
28/11/2008- 27/12/2008	5,280	5,280
28/12/2008- 27/01/2009	11,352	11,352
28/01/2009- 25/02/2009	49,984	49,984
26/02/2009- 27/03/2009	30,580	30,580
28/03/2009- 27/04/2009	26,972	26,972
28/04/2009- 27/05/2009	52,316	52,316
Total	408,012	408,012

Table 3 Reported and Verified Data of Net Electricity Delivered to the Grid

Period	Reported Value(kWh)	Verified Value(kWh)
	Net Electricity delivered to the Grid(C=A-B)	Net Electricity delivered to the Grid
28/05/2008-27/05/2009	79,575,337	79,567,505

The net electricity delivered to the Grid (EGy) by the project during the monitoring period from 28/05/2008 to 27/05/2009 is 79,567.505MWh (79,567,505kWh);

The baseline emission factor (EFy) is 0.880tCO₂e/MWh;

Baseline emissions (BEy) for the monitoring period from 28/05/2008 to 27/05/2009 are
 $BEy = EGy \times EFy = 79,567.505 \text{ MWh} \times 0.880 \text{ tCO}_2\text{e/MWh} = 70,019 \text{ tCO}_2\text{e};$

This is a wind farm-a renewable energy project activity.

As per the ACM0002 version 06, for the most renewable energy project activity:

Project emissions(PEy) is 0;

Leakage(Ly) is 0;

Emission Reductions (ERy) for the monitoring period from 28/05/2008 to 27/05/2009 is $ERy = BEy - PEy - Ly = 70,019 \text{ tCO}_2\text{e} - 0 \text{ tCO}_2\text{e} - 0 \text{ tCO}_2\text{e} = 70,019 \text{ tCO}_2\text{e}.$



5. Recommendations for Changes in the Monitoring Plan

No recommendation for changes in the monitoring plan was made during this periodic verification.

6. Overview of Results

Assessment Against the Provisions of Decision 17/CP.7:

Is the project documentation in accordance with the requirements of the registered PDD and relevant provision of decision 17/CP.7, EB decisions and guidance and the COP/MOP?

Yes. The results of the compliance assessment are recorded in the verification checklist which is used as an internal report only.

Have on-site inspections been performed that may comprise, inter alia, a review of performance records, interviews with project participants and local stakeholders, collection of measurements, observations of established practices and testing of the accuracy of monitoring equipment?

Yes. Joe Sun Guozhong (Lead Assessor/ Expert) and Grace Han Huijuan (Assessor) visited the sites and undertook interviews, collected data, audited the implementation of procedures, checked calibration certificates and checked data, inter alia.

The results of the site visits are recorded in the verification checklist which is used as an internal report only.

The evidences have been checked and collected. The revised monitoring report is attached with this verification report.

Has data from additional sources been used? If yes, please detail the source and significance.

Yes. Baseline emission factor, 0.880tCO₂e/MWh, was determined using external sources at validation stage. Baseline emission factor is ex-ante determined and fixed for the first crediting period.

Please review the monitoring results and verify that the monitoring methodologies for the estimation of reductions in anthropogenic emissions by sources have been applied correctly and their documentation is complete and transparent.

Yes. The monitoring methodology has been correctly applied and the monitoring report and supporting references are complete and transparent.

Have any recommendations for changes to the monitoring methodology for any future crediting period been issued to the project participant?

No.

Determine the reductions in anthropogenic emissions by sources of greenhouse gases that would not have occurred in the absence of the CDM project activity, based on the data and information using calculation procedures consistent with those contained in the registered project design document and the monitoring plan.

The data used in anthropogenic emission reduction calculation is consistent with those contained in the registered PDD and monitoring plan. The emission reduction was 84,130tCO₂ for the period 28/05/2008 to 27/05/2009 as per the estimation made in the registered PDD. The actual annual emission reduction has been verified as 70,019tCO₂ for the same period.

Identify and inform the project participants of any concerns related to the conformity of the actual project activity and its operation with the registered project design document. Project participants shall address the concerns and supply relevant additional information.

No such unconformity of the actual project activity and its operation with the registered project design document has been observed.

Post monitoring report on Gold Standard Registry website

Yes, the monitoring report is available at GS375 on GS registry website



<https://gs1.apx.com/mymodule/ProjectDoc/EditProjectDoc.asp?id1=375>

7. Verification and Certification Statement

SGS United Kingdom Ltd has been contracted by China National Water Resources & Electric Power Materials & Equipment Co., Ltd to perform the verification of the emission reductions reported for the GS-CDM project Fujian Zhangpu Liuaio 45MW Wind Power Project (UNFCCC Ref. No. 1318, GS Project ID GS375) in the period 28/05/2008 to 27/05/2009.

The verification is based on the validated and registered project design document and the monitoring report for this project. Verification is performed in accordance with section I of Decision 3/CMP.1, and relevant decisions of the CDM EB, CoP/MoP and GS-TAC. The scope of this engagement covers the verification and certification of greenhouse gas emission reductions generated by the above project during the above mentioned period, as reported in Monitoring Report Version 02 dated 04/08/2009 of Fujian Zhangpu Liuaio 45MW Wind Power Project.

The management of the China National Water Resources & Electric Power Materials & Equipment Co., Ltd is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project Monitoring Report Version 02 dated 04/08/2009. Calculation and determination of GHG emission reductions from the project is the responsibility of the management of the Fujian Zhangpu Liuaio 45MW Wind Power Project. The development and maintenance of records and reporting procedures are in accordance with the monitoring report.

It is our responsibility to express an independent GHG verification opinion on the GHG emissions and on the calculation of GHG emission reductions from the project for the period 28/05/2008 to 27/05/2009 based on the reported emission reductions in the Monitoring Report Version 02 dated 04/08/2009 for the same period.

Based on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these, SGS planned and performed our work to obtain the information and explanations that we considered necessary to provide sufficient evidence for us to give reasonable assurance that this reported amount of GHG emission reductions for the period is fairly stated.

SGS confirms that the project is implemented as described in the validated and registered project design documents. Based on the information we have seen and evaluated, we confirm the following:

Project Title:	Fujian Zhangpu Liuaio 45MW Wind Power Project
UNFCCC Reference Number:	UNFCCC ref No. 1318&GS project ID GS375
Registered PDD and Approved Used for Verification:	Version 06 dated 12/11/2007
Methodology Used for Verification:	ACM0002 Version 06 dated 19/05/2006
Applicable Period:	28/05/2008 to 27/05/2009
Total GHG Emission Reductions Verified:	70,019tCO ₂ e

Signed on behalf of the Verification Body by Authorized Signatory



Signature:

Name: Siddharth Yadav

Date: 7th September 2009

8. Document References

- /1/ ACM0002 Version 06 dated 19/05/2006
- /2/ Registered PDD Version 06 dated 12/11/2007

(<http://cdm.unfccc.int/UserManagement/FileStorage/XVTJ5IQH8GAPD0BH1QC4MWCMMH6TM A7>)
- /3/ Gold Standard Validation report for Fujian Zhangpu Liuaio 45MW Wind Power Project issued by TUV-SUD revision 1 dated 30/08/2007 report No. 948571

(<https://gs1.apx.com/mymodule/ProjectDoc/EditProjectDoc.asp?id1=375>)
- /4/ Monitoring Report for the first monitoring period Version 01 dated 04/06/2008, Version 02 dated 18/06/2008, Version 03 dated 26/09/2008 and Version 04 dated 22/10/2008
- /5/ CDM Verification and Certification report for the first monitoring period of Fujian Zhangpu Liuaio 45MW Wind Power Project issued by SGS revision no. 0 dated 20/06/2008

(<http://cdm.unfccc.int/UserManagement/FileStorage/JKQM5WI6GLWV4SK0JR9EE3OGYAM36 Y>)

GS-CDM verification report for the first monitoring period Fujian Zhangpu Liuaio 45MW Wind Power Project issued by SGS revision no. 1 dated 22/10/2008

(<https://gs1.apx.com/mymodule/ProjectDoc/EditProjectDoc.asp?id1=375>)
- /6/ GS-VERs Verification and Certification report for Fujian Zhangpu Liuaio 45MW Wind Power Project issued by SGS revision no. 1 dated 07/09/2008
- /7/ Monitoring report for the second monitoring period version 01 dated 12/06/2009 and version 02 dated 04/08/2009.
- /8/ Calibration certificates of the main meter and backup meter issued by Fujian Provincial Electric Power Company Metrological Verification Center in 2007 and 2008.
- /9/ Accreditation Certificate of Fujian Provincial Electric Power Company Metrological Verification Center issued by Quality and Technology Supervision Bureau of Fujian Province (Certificate No.: 2006 Min Metrology Standard 152-2006)
- /10/ Daily Reading Records (DRRs) of the wind farm (From 28/05/2008 to 27/05/2009)
- /11/ Monthly Reading Records(MRRs) of the wind farm (From 28/05/2008 to 27/05/2009)
- /12/ Wind turbine generation logbooks of the wind farm (From 28/05/2008 to 27/05/2009)
- /13/ Sales receipts of electricity exported to the grid by the wind farm covering the period 28/05/2008 to 27/05/2009
- /14/ Sales receipts of electricity imported from the grid by the wind farm covering the period 28/05/2008 to 27/05/2009

- /15/ Power Purchase Agreement signed between the Grid Company and the wind farm company dated 28/05/2007 and 28/12/2008
- /16/ Monitoring plan and staff training records
- /17/ Employment contracts, salary payment sheets and records of social welfare for employees of the project;
- /18/ Construction contract for replantation signed on September 20, 2008 between the Datang Zhangzhou Wind Power Co., Ltd and Zhangpu County Forestry Bureau
- /19/ <http://zztjj.zhangzhou.gov.cn/tjfx/200804/t2541.htm>
- /20/ Validation and Verification Manual version 01 dated 28/11/2008
- /21/ Letter from the grid company about the meter recording shifted to an earlier date due to the upgrading of the marketing system

A.1 Appendix: Findings Overview

Findings Overview Summary

	CARs	CLs	FARs
Total Number raised	3	0	1

Date:	22/06/2009		Raised by:	Grace Han	
Type:	CAR	Number:	CAR #1	Reference:	Section 3
Lead Assessor Comment:			Date: 22/06/2009		
During the site visit, it was found that the value of exported electricity and imported electricity by the project from 28/01/2009 to 27/02/2009 in the version 1 of monitoring report is actually the value of exported electricity and imported electricity by the project from 28/01/2009 to 25/02/2009 and the value of export electricity and imported electricity by the project from 28/02/2009 to 27/03/2009 in the version 1 of monitoring report is actually the value of exported electricity and imported electricity by the project from 26/02/2009 to 27/03/2009. Please make relevant correction in the monitoring report to reflect the actual status of the project.					
Project Participant Response:			Date: 25/06/2009		
The relevant date in the monitoring report version 02 is revised accordingly. The value of export electricity and imported electricity by the project from 28/01/2009 to 27/02/2009 in the version 01 of monitoring report is actually the value of exported electricity and imported electricity by the project from 28/01/2009 to 25/02/2009 and the value of export electricity and imported electricity by the project from 28/02/2009 to 27/03/2009 in the version 1 of monitoring report is actually the value of exported electricity and imported electricity by the project from 26/02/2009 to 27/03/2009.					
Documentation Provided as Evidence by Project Participant:					
the version 02 of the monitoring report; the sales receipts of export electricity and imported electricity by the project from 28/01/2009 to 27/03/2009					
Information Verified by Lead Assessor:					
the version 02 of the monitoring report; the sales receipts of export electricity and imported electricity by the project from 28/01/2009 to 27/03/2009					
Reasoning for not Acceptance or Acceptance and Close Out:					
The value of exported electricity and imported electricity by the project from 28/01/2009 to 27/02/2009 and 28/02/2009 to 27/03/2009 in the version 01 of monitoring report are verified to be the value of exported electricity and imported electricity by the project from 28/01/2009 to 25/02/2009 and 26/02/2009 to 27/03/2009 respectively. The relevant date in the monitoring report version 02 is revised accordingly and verified to be correct. Thus, CAR #1 was closed out.					
Acceptance and Close out by Lead Assessor:			Date: 07/07/2009		
Joe Sun Guozhong					

Date:	25/07/2009		Raised by:	Grace Han	
Type:	CAR	Number:	CAR #2	Reference:	Section 3
Lead Assessor Comment:			Date: 25/06/2009		

The verified values of the electricity exported to the grid by project from 28/05/2008 to 27/11/2008 on the sales receipts and those used for ERs calculation and the electricity imported from the grid by the project from 28/11/2008 to 27/05/2009 on the sales receipts are different from the reported values in the monitoring report version 01. Please make relevant correction.	
Project Participant Response:	Date: 26/06/2009
Relevant corrections have been made in version 02 of the MR. Please find the revised MR.	
Documentation Provided as Evidence by Project Participant:	
The version 02 of the monitoring report; Sales receipts of the electricity exported to the grid by the project and the electricity imported from the grid by the project.	
Information Verified by Lead Assessor:	
The version 02 of the monitoring report; Sales receipts of the electricity exported to the grid by the project and the electricity imported from the grid by the project..	
Reasoning for not Acceptance or Acceptance and Close Out:	
The sales receipts of the electricity exported to the grid by the project have been provided for verification. The values of the meter readings of the electricity exported to the grid by the project have been verified and double checked by the sales receipts and the conservative values were adopted correctly by the PP for the ERs calculation in the monitoring report version 02. Thus, CAR #2 was closed out.	
Acceptance and Close out by Lead Assessor: Joe Sun Guozhong	Date: 02/08/2009

Date:	22/06/2009		Raised by:	Grace Han		
Type:	FAR	Number:	FAR #3		Reference:	Section 2
Lead Assessor Comment:				Date: 22/06/2009		
Following above CAR #1 and CAR #2, it is SGS' opinion that the QA/QC of the project shall be improved. The observation (equivalent to FAR) raised during the previous verification remains open. The improvement of the QA/QC will be observed during the next periodic verification.						
Project Participant Response:				Date: 26/06/2009		
This issue will be addressed during the next monitoring periods.						
Documentation Provided as Evidence by Project Participant:						
NA						
Information Verified by Lead Assessor:						
NA						
Reasoning for not Acceptance or Acceptance and Close Out:						
NA						
Acceptance and Close out by Lead Assessor: NA				Date: NA		

Date:	22/06/2009		Raised by:	Grace Han		
Type:	CAR	Number:	CAR #4		Reference:	Section 3
Lead Assessor Comment:				Date: 22/06/2009		
As per the requirement and the toolkit of Gold Standard V2, the sustainable development indicators relevant to the project should be monitored. Please provide relevant information about the monitoring of sustainable development indicators in the MR.						
Project Participant Response:				Date: 25/06/2009		
The sustainable development indicators- employment, replantation are monitored and reported in the monitoring report version 02. As a result of the project, not only jobs are created, employment quality is also quite high. Replantation has been carried out at the lifting site of the 36 wind turbines (onshore windbreaks). The monitoring shows that the project indeed has a positive contribution to the sustainable development in the local area.						
Documentation Provided as Evidence by Project Participant:						

1. Employment contracts, salary payment sheets and records of social welfare for employees of the project 2. Construction contract for replantation signed on September 20, 2008 between the Datang Zhangzhou Wind Power Co., Ltd and Zhangpu County Forestry Bureau. 3. Monitoring report version 02.	
Information Verified by Lead Assessor:	
1. Employment contracts, salary payment sheets and records of social welfare for employees of the project 2. Construction contract for replantation signed on September 20, 2008 between the Datang Zhangzhou Wind Power Co., Ltd and Zhangpu County Forestry Bureau. 3. Monitoring report version 02.	
Reasoning for not Acceptance or Acceptance and Close Out:	
The sustainable development indicators-employment, replantation are verified and monitored by the employment contracts, salary payment sheets and records of social welfare for employees of the project , construction contract for replantation on September 20, 2008 between the Datang Zhangzhou Wind Power Co., Ltd and Zhangpu County Forestry Bureau. And all the indicators involved have been verified and reported in the monitoring report version 02. Thus, CAR #4 was closed out.	
Acceptance and Close out by Lead Assessor: Joe Sun Guozhong	Date: 07/07/2009

A.2 Appendix 2: Team Members Statements of Competency

Statement of Competence

Name: Joe Sun Guozhong

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: 10/03/2009

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

Statement of Competence

Name: Grace Han Huijuan

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 Joe Sun and Siddharth Yadav

Date: 04/05/2009

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