Monitoring Report

Start monitoring period: 31 March 2006
End monitoring period: 30 August 2008

Title: Shibeishan Wind Power Generation Project in Huilai County, Guangdong Province

Project developer:

Guangdong Yudean Shibeishan Wind Power Development Co. Ltd

This Monitoring Report is approved by: **Mr Chun Cai** **General Manager**

Date: 3 September 2008 **Project advisor: MD ENERGY Co.Ltd**	**Management** **Verifier: Xiaobin**

Table of Contents

1 Introduction 1

2 Project description 1

3 Project timeline..... 1

4 Baseline 1

5 Monitoring methodology and procedure..... 1

6 Quality assurance and quality control measures..... 3

7 Emission reduction calculations..... 4

Annex 1:Contact details.....5

1 Introduction

The purpose of this Monitoring Report is to calculate the emission reductions achieved by the project activity in the period covered by this report, and to serve as the basis for the verification of these reductions and issuance of the VCUs.

1.1 Monitoring period

31 March 2006 to 30 August 2008

1.2 Verification standard applied

This Monitoring Report is based on the Voluntary Carbon Standard 2007.

1.3 Document details

Version: 2

Date: 3 September 2008

2 Project description

2.1 Title

Shibeishan Wind Power Generation Project in Huilai County, Guangdong Province

2.2 Project summary

Shibeishan Wind Power Generation Project (hereafter referred as the proposed project) is a grid connected renewable energy project. The objective of the proposed project is to generate electricity using state-of-the-art wind power generation technology and to sell into China Southern Power Grid. The proposed project will achieve CO_2 emission reduction by replacing electricity supplied by fossil fuel fired power plant connected into China Southern Power Grid.

The proposed project is to be located in Huilai County, Guangdong Province, South China. Totally 167 wind turbines with a nominal capacity of 600 KW has been installed, providing a total capacity of 100.2MW. With an average annual 198.96GWh supplied to the power grid, the proposed project is estimated to deliver 177,333 tonnes CO_2 emission reduction annually. A more detailed description is available in the VCS Project Description Template and related documentation. The total generated electricity is 303,657 MWh and the total emission recduction is 270,648tCO_2e in the crediting period (from 30 March 2006 to 30 August 2008).

2.3 Category of project activity

The project type and category are defined as follows:

- Scope I: Energy industries. (renewable-/non-renewable sources)

3 Project timeline

Starting date of the project activity 28 September 2005

Start of monitoring period 31 March 2006

End of monitoring period 30 August 2008

Table 1 lists the commissioning dates of turbines installed in the Shibeishan Wind Power Generation Project

Table 1 Commissioning dates of turbines

Turbine number	Commissioning date
1#	2005.9.28

4 Baseline

4.1 Methodology

The methodology applied for this project is the approved consolidated baseline methodology ACM0002 (Version 6) “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”
Using applied methodology, the emission reductions achieved by the project activity can be calculated by multiplying the net electricity supplied to the grid and the appropriate emissions factor of the grid.

4.2 Calculations

The emission reductions ERy by the project activity during a given year y is:
ERy = BEy =EGy * EFy
where EGy is the net electricity supplied to the grid, EFy is the CO_2 emission factor of the grid and BEy is the baseline emissions.
The emission factor EFy of the grid is represented as a combination of the Operating Margin and the Build Margin, and was fixed for the duration of the crediting period in the VCS Project Description Template.

4.2.1 Calculation of emission factor for emission reductions during 2006-2008:
The Operating Margin emission factor EF_OMy was calculated in the VCS Project Description Template as 0.9998tCO_2e/MWh. The Build Margin emission factor EF_BMy was calculated as 0.5658tCO_2e/MWh. The weighted average of Operating and Build Margin emission factors is: $EF = w_{OM} * EF_{OM} + w_{BM} * EF_{BM} = 0.75 * 0.9998 + 0.25 * 0.5658 = 0.8913$ tCO_2e/MWh.

5 Monitoring methodology and Procedure

5.1 Monitored data

The monitored data for the project activity only includes the net electricity generation from this project.

ID	Variable	Source of data
1	EG: net electricity supplied to the grid	Electricity meter

5.2 Baseline data

5.2.1 EG: net electricity supplied to the grid

Electricity supplied to the grid has been monitored with the electricity meter as indicated in 5.1 above and in the VCS Project Description Template. Net generations, therefore were drawn from metered generation and metered consumption as shown in Table 2 below.

Table 2 Net Electricity Supplied to the Grid (EG, MWh)

Period	Meter Generation (MWh)	Consumption (MWh)	Net power Supply (MWh)
Mar 31st 06- Dec 30st 06	57,328	1,188	56,140
Dec 31st 06- Dec 30st 07	148,579	7,29	147,850
Dec 31st 07- Aug 30st 08	100,188	5,21	99,667
Total	306,095	2,438	303,657

6 Quality assurance and quality control measures

6.1 Roles and responsibilities

Overall responsibility for monitoring and carrying out the monitoring following this monitoring procedure lies with the Guangdong Yudean Shibeishan Wind Power Development Co. Ltd. Mr Chun Cai, General Manager, is responsible for the operation and maintenance, which includes the monitoring, of the plant. Ms. Xiaobin is responsible for the daily monitoring and reporting.

6.2 Types of data and information to be reported, including units of measurement

The emission reduction of the Project is the result of multiplying the emission factor by the net quantity of electricity supplied to the grid by the Project. The emission factor of CSPG has been issued and has been updated periodically by China DNA. The data can be obtained in the official website of China DNA, http://cdm.ccchina.gov.cn. Therefore, the monitoring procedure is focused on the net electricity supply, which is the difference between the electricity supplied to and purchased from CSPG by the Project. The data of monthly record is the meter value, which was recorded at 19:00 on the second last day every month. The generation and assumption was calculated by meter value and meter multiple. The unit of the generation and assumption is KWh.

6.3 Training

The staff who is responsible for electricity meter reading and recording, and who is responsible for auditing these metered data have been trained according to the VER monitoring and management manual for Shibeishan Wind Power Generation Project.

6.4 Calibrations

The Power Interchange Agreement between Guangdong Yudean Shibeishan Wind Power Development Co. Ltd and Jieyang Power Bureau of Guandong Power Grid Company Limited defines the metering arrangements and the required quality control procedures to ensure accuracy. The metering equipments have been calibrated and checked for accuracy based on the local industrial requirement with a permissible limit for the meter of 0.5% accuracy class. The metering equipment has sufficient accuracy so that any error resulting from such equipment shall not exceed local industrial standard. The net energy output registered by the meters alone will suffice for the purpose of billing and emission reduction verification as long as the error in the meters is within the agreed limits. Calibration is carried out by Sichuan Electric Power Test and

Research Institute with the records being supplied to Guangdong Yudean Shibeishan Wind Power Development Co. Ltd. and these records has been maintained by Test and Research Institute of Guangdong Electric Power Bureau. Both meters has been jointly inspected and sealed on behalf of the parties concerned and not been interfered with by either party except in the presence of the other party or its accredited representatives. All the meters installed has been tested by Jieyang Power Bureau of Guandong Power Grid Company within 10 days after:

- the detection of a difference larger than the allowable error in the readings of both meters;
- the repair of all or part of meter caused by the failure of one or more parts to operate in accordance with the specifications; and/or If any errors has been detected the party owning the meter has repaired, recalibrated or replaced the meter giving the other party sufficient notice to allow a representative to attend during any corrective activity.

Should any previous months' reading of the main meter be inaccurate by more than the allowable error, or otherwise functioned improperly, the net energy output has been determined by (a) first, by reading backup meter, unless a test by either party reveals it is inaccurate; (b) if the backup system is not with acceptable limits of accuracy or is otherwise performing improperly, Jieyang Power Bureau of Guandong Power Grid Company shall jointly prepare an estimate of the correct reading; and (c) if Jieyang Power Bureau of Guandong Power Grid Company and Guangdong Yudean Shibeishan Wind Power Development Co. Ltd. fail to agree then the matter has been referred for arbitration according to agreed procedures. No errors occurred during the operations of the Guangdong Yudean Shibeishan Wind Power Development Co. Ltd. Calibration took place as per schedule. Calibrations were carried out by Test and Research Institute of Guangdong Electric Power Bureau on the date 1th March 2007 and November 2007. The calibration results show that all meters operate in accordance with the industry standards and are qualified to measure the electricity supplied to the grid and consumed by the wind power station.

6.5 Quality control

Net generation data has been approved and signed off by staffs who are responsible for recording meter reading in hydropower station side, and cross checked with receipts from Jieyang Power Bureau of Guangdong Power Grid Company.

7 Emission reduction calculations

7.1 Project emissions

As a wind power generation project, project emissions are zero.

7.2 Baseline emissions

Table 3 Baselin Emission

Period	Net power Supply (MWh)	EF (tCO_2e/MWh)	Baseline Emission (tCO_2e)
Mar 31st 06- Dec 30st 06	56,140	0.8913	50,037
Dec 31st 06- Dec 30st 07	147,850	0.8913	131,778
Dec 31st 07- Aug 30st 08	99,667	0.8913	88,833
Total	303,657		270,648

7.3 Leakage emissions

As a wind power generation project, leakage from the project is considered zero.

7.4 Summary of emission reductions during the monitoring period

Table 4 Emission reduction calculation (tCO_2e)

Period	Baseline Emission (tCO_2e)	Project Emission (tCO_2e)	Leakage (tCO_2e)	Emission Reduction (tCO_2e)
Mar 31st 06- Dec 30st 06	50,037	0	0	50,037
Dec 31st 06- Dec 30st 07	131,778	0	0	131,778
Dec 31st 07- Aug 30st 08	88,833	0	0	88,833
Total	270,648	0	0	270,648

Annex 1: Contact details

Project developer

Organization:	Guangdong Yudean Shibeishan Wind Power Development Co. Ltd
Street/P.O.Box:	Shibeishan, Jinghai County, Huilai Town
Building:	-
City:	Jieyang
State/Region:	Guangdong Province
Postfix/ZIP:	515223
Country:	P.R.China
Telephone:	0663-6872222 ext. 2848
FAX:	0663-6874987
E-Mail:	shibeishan@163.com
URL:	-
Represented by:	Cai chun
Title:	Department Assistant
Salutation:	Ms.
Last Name:	Cai
Middle Name:	-
First Name:	Chun
Department:	Dept.of General Affairs
Mobile:	13622234266
Direct FAX:	020-85138604
Direct tel:	020-85138605
Personal E-Mail:	caichun@gdyd.com