



VCS VERIFICATION / CERTIFICATION REPORT

VOLUNTARY CARBON STANDARD 2007



5TH VCS VERIFICATION OF “CHENGDE HONGSONG WINDFARM PROJECT

REPORT No. 2010-0339

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DET NORSKE VERITAS



VCS VERIFICATION / CERTIFICATION REPORT

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Summary:

Det Norske Veritas Certification AS has performed a verification of emission reductions reported from the 'Chengde Hongsong Windfarm Project' (CHWP), managed by Hebei Hong-Song Wind Power Share Holding Ltd. for the period 1 January 2009 to 31 December 2009.

This being the fifth verification, the project was initially validated and verified under VCS draft, version 2.0 by DNV for the first period from 1 January 2005 to 31 August 2006, for the second period from 1 September 2006 to 31 December 2006, and the third period verification report under VCS version 1.0 by DNV from 1 January 2007 to 31 December 2007. The fourth and fifth monitoring period has also been verified as per VCS 2007.1.

In our opinion the GHG emissions reductions reported for the project in the VCU monitoring report dated 22 January 2010 are fairly stated. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology (ACM0002, version 6) and the Voluntary Carbon Standard 2007.1 (VCS 2007.1).

Det Norske Veritas Certification AS is able to certify that the emission reductions from the 'Chengde Hongsong Windfarm Project', a wind farm project in Hebei Province, managed by Hebei Hong-Song Wind Power Share Holding Ltd. during the period 1 January 2009 to 31 December 2009 amount to 118 807 tonnes CO₂ equivalent.

DNV does not assume any responsibility towards the issuance and utilization of VCUs hereby verified and certified. Request for issuance of VCUs shall be made by the project proponent to an approved VCS Program Registry based on the requirements set out under the most recent version of the VCS Program Guidelines clause on VCS Registration. The verification of reported emission reductions is based on the information made available to DNV and the engagement conditions detailed in this report. Hence, DNV can not be held liable by any party for decisions made or not made based on this report.

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Report title: 5 th VCS Verification of "Chengde Hongsong Windfarm Project"									
Work carried out by: Tao Li, Zhi Ang (Walter) Tang, Qing Liu									
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Table of Content	Page
1 INTRODUCTION	1
1.1 Objective	1
1.2 Scope and Criteria	1
1.2.1 Scope of the verification	1
1.2.2 Verification Criteria	2
1.3 VCS Project Description	2
1.3.1 Project Category	2
1.3.2 Geographic Location	2
1.3.3 Project Background	2
1.4 Level of assurance	3
2 VERIFICATION METHODOLOGY	3
2.1 Review of Documentation	4
2.2 Site Visits	4
2.3 Assessment	4
2.4 Report of Findings	5
3 VERIFICATION FINDINGS	6
3.1 Remaining issues, including any material discrepancy, from previous validation	6
3.2 Project Implementation	6
3.2.1 Eligible GHGs	6
3.2.2 Project Start Date and Emission Reduction Start Date	6
3.2.3 Public Funding and Grants	6
3.2.4 Project Boundary/GHG Assessment Boundary	6
3.2.5 Baseline Determination	6
3.2.6 Project Additionality	7
3.2.7 GHG Emission	7
3.2.8 Secondary Effects	7
3.2.9 Impacts on Sustainable Development	8
3.3 Completeness of Monitoring	8
3.4 Accuracy of emission reduction calculations	8
3.5 Quality of evidence to determine emission reductions	9
3.6 Management System and Quality Assurance	10
4 VERIFICATION STATEMENT	11
5 REFERENCES	12
Clarification of clauses 1.12, 1.13, 1.14, 8.1 and 8.2 of the VCS PDD	14

**Abbreviations**

BM	Build Margin
CEF	Carbon Emission Factor
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DNV	Det Norske Veritas
NCPG	North China Power Grid
GHG	Greenhouse gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
MP	Monitoring Plan
ODA	Official Development Assistance
OM	Operating Margin
PDD	Project Design Document
PPA	Power Purchase Agreement
UNFCCC	United Nations Framework Convention for Climate Change
VCS	Voluntary Carbon Standard
VER	Verified Emission Reductions



1 INTRODUCTION

Carbon Resource Management Ltd has commissioned Det Norske Veritas Certification AS to carry out the verification of emission reductions generated by the “Chengde Hongsong Windfarm Project” for the period 1 January 2009 to 31 December 2009. The report was carried out as per Voluntary Carbon Standard (VCS) version 2007.1 /17/. This report contains the findings from the verification and a statement for the verified emission reductions.

1.1 Objective

Verification is the independent review and *ex-post* determination by the Designated Operational Entity (DOE) of the monitored reductions in GHG emissions that have occurred as a result of the project activity during a defined verification period.

Certification is the written assurance by a Certification Entity that, during a specific period in time, a project activity achieved the emission reductions as verified. According to the *Validation and Verification Manual*, version 1.1 /14/, the Certification Entity is defined as an entity which has been accredited as a DOE by the CDM Executive Board for the particular scope into which the project falls or has been accredited as an approved Certification Entity by the VCS Steering Committee. DNV is an accredited DOE for the particular scope into which the project falls.

1.2 Scope and Criteria

1.2.1 Scope of the verification

The Verification scope is:

- Verify whether the reductions generated by the project are in line with the Voluntary Carbon Standard and the information provided by the project participants contains all the necessary information to evidence the project's compliance with all criteria in the Voluntary Carbon Standard.
- Review of the calculation of the relevant grid carbon emission factor for the North China Power Grid (NCPG) and the additionality of the project activity.
- To verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan for the project activity.
- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement.
- To verify that the reported GHG emission data is sufficiently supported by evidence.

The verification is meant to ensure that reported emission reductions are complete and accurate and is based on generation of renewable energy that replaces fossil-based electricity generation in the grid.

According to the VCS, the verification also includes an independent third party assessment of the project design. In particular, the project baseline, monitoring plan and the project's compliance with relevant applicable protocols and criteria (i.e. UNFCCC, VCS, host Party and others) are to



be validated in order to confirm that the project design, as documented, is sound and reasonable and meets the applicable criteria.

1.2.2 Verification Criteria

According to the requirements and guidance of VCS 2007.1 /17/ the criteria of this verification include the relevant applicable rules and steps for CER verification under the CDM excluding:

- The public availability of the VER/VCS Monitoring Report;
- The public availability the Verification Report and VCU Certification Statement.

The project design, baseline determination, additionality have been assessed and validated against VCS v 2.0 by DNV during the first validation, and it is accepted that the Chengde Hongsong Windfarm Project, as described in the PDD version 1.2 dated 21 December 2006 /3/, meets all relevant UNFCCC, VCS, host Party and other criteria and correctly applies the baseline and monitoring methodology ACM0002, version 06 15/.

A clarification is made by the project participant in the monitoring report of version 1 dated 22 January 2010 /2/, covering the compliance of the project with all the requirements set out in the VCS 2007.1. It can be confirmed by DNV that the project is implemented in accordance with the VCS PDD and all the requirements set out in the VCS 2007.1 /17/.

1.3 VCS Project Description

1.3.1 Project Category

According to the VCS 2007.1 Guidelines and the list of Sectoral Scopes of the UNFCCC, the project is applicable under the following activity categories:

- category 1 – Renewable energy (wind, PV, solar, thermal, biomass, liquid biofuels, geothermal, run-of-river hydro).

According to Annex A of the Kyoto Protocol, the project is applicable under the sectoral scope 1

- Energy Industries (renewable/ non-renewable sources).

1.3.2 Geographic Location

The project is located in the north of Weichang County, Chengde City in Hebei Province of China. The exact location of the project is defined using GPS coordinates: Latitude 42°35' N and longitude 117°40' E.

1.3.3 Project Background

The project is a windfarm power plant developed by Hebei Hong-Song Wind Power Share Holding Ltd. The installed capacity is 51.3 MW. The details of the turbines with respect to their numbers, type and model of the machines have been verified to be as per details provided in PDD.

The electricity generated is supplied to NCPG (which is dominated by coal-fired power plants) under Power Purchase Agreements (PPAs) /5/. The 84 turbines of the proposed project are connected with NCPG through the Shanwanzi substation.



The crediting period claimed in the PDD is from 1 January 2005 to 31 December 2014. The first monitoring period is from 1 January 2005 to 31 August 2006, the second monitoring period is from 1 September 2006 to 31 December 2006, the third monitoring period is from 1 January 2007 to 31 December 2007 and the fourth monitoring period is from 1 January 2008 to 31 December 2008. According to the monitoring report of version 1 dated 22 January 2010 /2/, this is the fifth periodic verification of the monitoring period from 1 January 2009 to 31 December 2009, which is consistent with previous monitoring period and the crediting period indicated in the PDD. The projects emission reductions are determined by multiplying the net amount of electricity generated by the project with an estimated *ex-ante* fixed grid emission coefficient of 0.952 tCO₂e/MWh.

Title of the project activity:	Chengde Hongsong Windfarm Project
Location of the project activity:	the north of Weichang County, Chengde City in Hebei Province of China
Verification period:	1 January 2009 to 31 December 2009
Crediting period:	1 January 2005 to 31 December 2014

1.4 Level of assurance

The level of assurance of the verification report is reasonable assurance engagements. Based on the process and procedures conducted, the GHG assertion

- is materially correct and is a fair representation of the GHG data and information, and
- is prepared in accordance with the related International Standard on GHG quantification, monitoring and reporting, or to relevant national standards or practices.

2 VERIFICATION METHODOLOGY

The verification of the emission reductions has assessed all factors and issues that constitute the basis for emission reductions from the project, including,

- The net electricity supplied by the project activity to NCPG multiplied by the estimated grid emission factor

Verification Team:

Mr. Tao Li,	DNV Beijing	Team leader, CDM Verifier
Ms. Qing Liu	DNV Beijing	GHG auditor
Mr. Zhi Ang (Walter) Tang	DNV Beijing	GHG auditor with sector working experience
Mr. Weidong Yang	DNV USA	Technical reviewer

***Duration of the verification:***

Preparation – (monitoring report review
baseline grid factor estimations etc.) : 25-29 January 2010
Site visit : 1-2 February 2010
Reporting & QA : 8 February -13 March 2010

2.1 Review of Documentation

The monitoring report /2/ and the monthly electricity generation receipts /8/ from Chengde City Power Supply Company on behalf of NCPG were assessed as a part of the verification. The project design document (PDD) Version 1.2 of 21 December 2006 /3/, in particular the baseline estimations and the monitoring plan contained in the PDD were assessed. In addition, the 1st verification report /4/, the 2nd, 3rd and 4th verification reports /7/ were also assessed, in particular the monitoring implementation of the project was also assessed.

2.2 Site Visits

In the period of 1-2 February 2010, DNV auditor Li Tao performed a site visit at Chengde Hongsong Windfarm Project. During this visit, DNV verified the actual implementation of the project as described in the PDD. The electricity meters and calibration records of the meters /19/ were checked and found to be in order. The electricity generated is measured on a hourly basis, recorded monthly and the net electricity generation is cross-checked by the receipt from Chengde City Power Supply Company to be correct /18/.

The project design, baseline determination and additionality have been assessed and validated by DNV during the previous validation and verification under VCS draft Version 2.0 and VCS v1 and the more current and applicable version VCS2007.1 /2/ /7/, and it is confirmed that the “Chengde Hongsong Windfarm Project”, as described in the PDD version 1.2 dated 21 December 2006 /2/ together with the clarification in the monitoring report of the third verification version 01 dated 28 April 2008, meets all relevant UNFCCC, VCS, host Party and other criteria, and the additionality of the project is correctly demonstrated and applied.

2.3 Assessment

The analysis of documentation, interviews and site visit allowed the assessment of the following processes and assumptions (including QA/QC related issues):

- Monitoring of electricity generated, consumed and exported to the grid is hourly monitored. The amount of electricity exported to the grid was assessed with internal measurement records and cross checked using electricity sales receipts. The quantity of electric energy exported to the grid is multiplied by the grid emission factor (0.952 tonCO₂/MWh) defined ex-ante in the PDD.

The verification of reported data and information was carried out by means of:

- Checking individual internal measuring records for electricity generation;



- Confirmation of the correct compilation of emission reduction calculation spreadsheets (values included in the spreadsheet were individually checked against the records listed above);
- Verifying the effectiveness of the data quality assurance and control;

2.4 Report of Findings

Findings established during the verification may be that:

- 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 material misstatements in the reported emission reductions.

While aiming to resolve any outstanding issues which needed be clarified about the project design, findings established during the verification can either be seen as a non-fulfilment of the VCS requirements or where a risk to the fulfilment of project objectives is identified. Emission reductions with material misstatements shall be discounted based on the verifiers' *ex-post* determination of the achieved emission reductions.

Corrective action requests (CAR) are issued, where:

- i) mistakes have been made with a direct influence on project results requiring adjustments of the VERs/VCU monitoring report;
- ii) applicable methodological specific requirements have not been met.

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

A forward action request (FAR) should be issued, where:

- i) the actual project monitoring and reporting practices requires attention and /or adjustment for the next consecutive verification period, or
- ii) an adjustment of the MP is recommended.

In the context of FARs, risks have been identified, which may endanger the delivery of high quality emissions reductions in the future, i.e. by deviations from standard procedures as defined by the monitoring plan. As a consequence, such aspects should receive a special focus during the next consecutive verification. A FAR may originate from lack of data sustaining claimed emission reductions.

No CAR, CL and FAR) was identified for the verification of Voluntary Emission Reductions (VERs) under the Voluntary Carbon Standard (VCS) 2007.1.



3 VERIFICATION FINDINGS

3.1 Remaining issues, including any material discrepancy, from previous validation

There are no missing steps, open issues or material discrepancy from previous validation and verifications.

3.2 Project Implementation

According to the 1st, 2nd, 3rd and 4th verification report /4/ /7/, the project has been implemented as planned. DNV has verified the capacity of the turbines to be 51.3 MW. DNV is also able to confirm that the same has not changed during the 5th verification period i.e. from 1 January 2009 to 31 December 2009. This data has been verified with the generation details in the Form 'Power Station Running Recording' /1/, and as certified by the Chengde City Power Supply Company for receipts. The meter test reports of the project have been verified and found to be in order /18/.

3.2.1 Eligible GHGs

The project activity contributes to reductions in the emissions of carbon dioxide (CO₂) by generating electricity using a renewable source, thus, displacing electricity generation based on fossil fuels in the NCPG.

3.2.2 Project Start Date and Emission Reduction Start Date

The starting date of the project activity and consequently emission reduction start date was September 2004.

3.2.3 Public Funding and Grants

As addressed in the 1st Verification Report by DNV, the proposed project did not reveal any information that indicated that the project received any public funding /4/.

3.2.4 Project Boundary/GHG Assessment Boundary

The project boundary is clearly defined as the site of the project activity and the North China Power Grid (NCPG), which consists of Beijing, Tianjin, Hebei, Shanxi, Shandong and Inner Mongolia power grids.

3.2.5 Baseline Determination

As the project design was previously assessed by the Designated Operational Entity (DOE) DNV and addressed in the 1st Verification Report /4/ (in particular in terms of the project's baseline, the monitoring plan, and the project's compliance with relevant UNFCCC and host Party criteria), it is thus confirmed that:

- i) The project correctly applies the approved baseline and monitoring methodology ACM0002 (version 06 dated 19 May 2006) titled "*Consolidated baseline methodology for grid-connected electricity generation from renewable sources*".
- ii) The baseline and monitoring methodologies have been correctly applied and the assumptions made for the selected baseline scenario are sound.



3.2.6 Project Additionality

As the project design was previously assessed by DNV in its 1st verification report /4/, and the project's compliance with relevant UNFCCC and host Party criteria, it is thus confirmed that project is not a likely baseline scenario, and that emission reductions resulting from the project are additional.

According to the 1st Verification Report /4/, the investment analysis demonstrates that the most plausible scenario is an equivalent amount of electricity that would, in absence of the project activity, have been generated by the operation of the grid-connected thermal power plants belonging to the north China grid and that the emission reductions by the project are additional to any emission reductions occurring in absence of the project.

Detailed information regarding project additionality is available at:

- i) PDD version 1.2 of 21 December 2006 /3/
- ii) DNV 1st Verification Report of Chengde Hongsong Windfarm Project dated 10 January 2007 /4/

3.2.7 GHG Emission

As the project design has been previously assessed by DNV in 1st verification report /4/ (in particular in terms of the project's baseline, the monitoring plan, and the project's compliance with relevant UNFCCC and host Party criteria), it is confirmed that the approach for determining project and baseline emissions are appropriate and in accordance with the selected baseline and monitoring methodologies.

The calculation of the baseline emission factor was performed as required by the methodology. The parameters were calculated *ex-ante*. The Operating Margin (OM) emission factor calculation was based on the simple OM method, option (a) of the ACM0002. This method was selected because low cost/ must run resources constitute less than 50% of total grid generation in average of the five most recent years.

The Build Margin (BM) emission factor was also calculated *ex-ante* based on the most recent information available at the time of PDD submission (data from 2003 to 2005). Details about the data used for calculation of OM and BM emission factors were presented in the PDD and the sources of data were verified by the local assessor during the site visit.

The grid emission factor calculated *ex-ante* from OM and BM emission factors above mentioned and applied for baseline emission reductions estimative was 0.952 tCO₂/MWh.

The reported GHG emission reductions from the project are 118 807 tonnes CO₂ equivalent (tCO₂) during the period from 1 January 2009 to 31 December 2009.

3.2.8 Secondary Effects

Regarding secondary effects (leakage), although no leakage calculation is needed, as explained in the applicable methodologies, no sources of leakage were identified given that the electricity generating equipment is not transferred from any other activity



3.2.9 Impacts on Sustainable Development

As the project design was previously assessed by DNV in its 1st verification report /4/ (in particular in terms environmental impacts and comments by local stakeholder, parties and NGOs in order to comply with relevant UNFCCC and host Party criteria), it is DNV's contention that the project's social and environmental impacts have been sufficiently addressed. In addition, the Environmental Protection Bureau of Hebei province China has provided confirmation that the project assists in achieving sustainable development, through the Letter of Approval of EIA issued on 16 July 2003 /11/.

3.3 Completeness of Monitoring

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

The monitoring indicator, i.e., the net electricity generation, has been monitored with calibrated energy meters as described in the monitoring plan of the PDD and monitoring report.

3.4 Accuracy of emission reduction calculations

DNV assessed the different areas that can affect the final emission reduction calculations. All the possible areas were assessed thoroughly to check the accuracy of calculations:

- a) *Electricity generation readings:* The electricity meters, which can measure the electricity supplied to grid and self consumed at the same time, are installed by Chengde City Power Supply Company. The ownership of the meter has after commissioning been transferred to Chengde City Power Supply Company for future maintenance. The type of the meter is Hunan Weisheng Electrics DSSD331 and the permissible limit for the meter is 0.5% accuracy class. The calibration meter records were verified to be satisfactory /19/.
- b) *Date Recording:* Monthly meter readings are taken jointly by the parties on the last day of the every month at 24:00. At the conclusion of each meter reading an appointed representative of the Chengde City Power Supply Company on behalf of NCPG and Hebei Hong-Song Wind Power Share Holding Ltd. sign a document indicating the number of kWh indicated by the meter. This is then forwarded by Chengde City Power Supply Company to Hebei Hong-Song Wind Power Share Holding Ltd. This document clearly indicates the net electricity exported and this again becomes the basis for emission reduction calculations. The meter is jointly inspected and sealed on behalf of the parties and is not interfered with by either party except in the presence of the other party or its accredited representatives. The general conditions set out for metering, recording, meter readings, meter inspections, test & checking and communication are as per the PPA (power purchase agreement) with Chengde City Power Supply Company /5/. Test and joint inspection reports have been verified /6/.
- c) *Grid emission factor:* The emission factor is determined ex-ante as 0.952 tCO₂e/MWh as per the validated PDD version 1.2 of 21 December 2006 /2/ .

Based on the above discussion, DNV is of the opinion that for the current verification period (1 January 2009 to 31 December 2009), the project developer has taken sufficient steps to ensure the accuracy of reported emission reductions.



3.5 Quality of evidence to determine emission reductions

The emission reduction for this project is determined by emission factor multiplied by power supplied to grid. The emission factor was fixed for the 10 year crediting period from 2005 to 2014, therefore, the only parameter to be monitored for this project is the power supplied to grid.

The emission reduction ER_y by the project activity during the current verification period is the difference between baseline emissions (BE_y), project emissions (PE_y) and emissions due to leakage (L_y), as follows:

- 1) Baseline emissions: Baseline emissions (BE_y in tCO_2) are the product of the baseline emissions factor (EF_y in tCO_2/MWh) times the electricity supplied by the project activity to the grid (EG_y in MWh).
- 2) Project emissions: The project emissions are regarded as zero.
- 3) Leakage: No leakage has to be considered for the proposed project activity.

As in the previous verifications, the combined margin for this fifth verification too is 0.952 tCO_2e/MWh . This is so because the project addresses a fixed crediting period of ten years with the combined margin of 0.952 tCO_2e/MWh established and validated *ex-ante*.

The total electricity generated is 124 959.846 MWh and the captive power by the project is 161.898 MWh. The net amount of electricity is 124 797.948 MWh and thus the claimed emission reductions of 118 807 tCO_2e reported for the period 1 January 2009 to 31 December 2009 was verified by reviewing the presented electricity generation receipts of Chengde City Power Supply Company./18/

The average load factor for this period is 27.81% ($124\,959.846\,MWh / (51.3\,MW * 365\,days * 24\,h/day)$), is higher than the estimated load factor with 24.41% ($110\,000\,MWh / (51.3\,MW * 365\,days * 24\,h/day)$) in the PDD /3//10/. DNV was able to verify the actual factor of 27.81% (average annual) was within the allowable range comparing with the designed value, although some monthly factors were over the designed value which is reasonable due to abundant wind resource in those months /10/. Hence, DNV was able to confirm the power generated during this monitoring period was reasonable.

The energy generated and emission reductions claimed for the proposed period were as shown in the following table:

Period	Power Generated (MWh)	Power Consumed (MWh)	Net Power Supplied (MWh)	Emission Reductions (tCO_2)	Plant load factor (%)
Jan-09	15 154.458	24.222	15 130.236	14 403.98	39.71%
Feb-09	13 952.532	14.190	13 938.342	13 269.30	40.47%
Mar-09	14 001.900	12.672	13 989.228	13 317.75	36.69%
Apr-09	7 133.016	11.220	7 121.796	6 779.95	19.31%
May-09	10 179.114	7.722	10 171.392	9 683.17	26.67%
Jun-09	9 044.838	7.788	9 037.05	8 603.27	24.49%
Jul-09	3 886.674	28.380	3 858.294	3 673.10	10.18%



Aug-09	4 331.976	20.724	4 311.252	4 104.31	11.35%
Sep-09	7 272.804	10.362	7 262.442	6 913.84	19.69%
Oct-09	9 456.480	11.022	9 445.458	8 992.08	24.78%
Nov-09	15 373.974	12.276	15 361.698	14 624.34	41.62%
Dec-09	15 172.080	1.320	15 170.76	14 442.56	39.75%
Total	124 959.846	161.898	124 797.948	118 807.65	Average 27.81%

The monthly invoices of project owner to the power grid /8/ were presented for the reported net electricity generation.

3.6 Management System and Quality Assurance

The management system for the project is in place. In order to make the monitoring system more efficient, before operation of this project, the project owner edited the VER Monitoring Manual /9/. In the manual, the organization structure with the responsibilities, personnel competencies, monitoring procedure and monitoring management have been properly identified and put in place. By interviewing with some staff, site visit and records check, DNV can confirm that the monitoring management system is implemented following the VER Monitoring Manual /9/.

Monitoring and reporting of electricity generation is part of normal operations of Hebei Hong-Song Wind Power Share Holding Ltd. The quality of meter readings is assured through calibration of electricity meters /19/ and through cross checking of readings between the meter and the receipts.



4 VERIFICATION STATEMENT

Det Norske Veritas Certification AS (DNV) has performed a verification of emission reductions reported for the “Chengde Hongsong Windfarm Project” managed by Hebei Hong-Song Wind Power Share Holding Ltd. for the period 1 January 2009 to 31 December 2009 according to the Voluntary Carbon Standard (VCS) version 2007.1.

Hebei Hong-Song Wind Power Share Holding Ltd. is responsible for the collection of data in accordance with the validated monitoring plan and the reporting of GHG emissions reductions from the project. It is DNV’s responsibility to express an independent verification statement on the reported GHG emission reductions from the project.

In DNV’s opinion the GHG emissions reductions reported for the project in the monitoring report of 22 January 2010 are fairly stated and the project design meets all the requirement of VCS 2007.1

The GHG emission reductions were calculated correctly on the basis of the baseline and monitoring methodology, ACM0002 version 06 and the monitoring plan provided in the PDD.

The emission reductions are claimed as Voluntary Carbon Units (VCU) under the Voluntary Carbon Standard (VCS) version 2007.1.

Det Norske Veritas Certification AS is able to certify that the emission reductions from the ‘Chengde Hongsong Windfarm Project’, managed by Hebei Hong-Song Wind Power Share Holding Ltd. during the period 1 January 2009 to 31 December 2009 amount to 118 807 tCO₂e.

The verification of reported emission reductions is based on the information made available to us and the engagement conditions detailed in this report. DNV can not guarantee the accuracy or correctness of this information. Hence, DNV cannot be held liable by any party for decisions made or not made based on this report.

Beijing, 13 March 2010

Tao Li

CDM Verifier

Climate Change Services

Det Norske Veritas Certification AS

Kumaraswamy Chandrashekara

Regional Manager (South Asia & Oceania)

Climate Change Services

Det Norske Veritas Certification AS



5 REFERENCES

Category 1 Documents:

Documents provided by the Project Participants that relate directly to the GHG components of the project. These have been used as direct sources of evidence for the initial verification conclusions, and are usually further checked through interviews with key personnel.

- /2/ Monitoring Report of 5th Chengde Hongsong Windfarm Project version 1 dated 22 January 2010.
- /3/ PDD for Chengde Hongsong Windfarm Project, Version 1.2 of 21 December 2006.
- /4/ DET NORSKE VERITAS CERTIFICATION AS: 1st Verification Report of Chengde Hongsong Windfarm Project dated 10 January 2007.
- /5/ Power Purchase Agreement between Hebei Hong-Song Wind Power Share Holding Ltd. Chengde City Power Supply Company on behalf of NCPG in May 2007.
- /6/ Turbine Test and Joint Inspection Report in May 2006.
- /7/ DET NORSKE VERITAS CERTIFICATION AS: 2nd Verification Report of Chengde Hongsong Windfarm Project, dated 21 February 2007.
DET NORSKE VERITAS CERTIFICATION AS: 3rd Verification Report of Chengde Hongsong Windfarm Project, dated 28 April 2008.
DET NORSKE VERITAS CERTIFICATION AS: 4th Verification Report of Chengde Hongsong Windfarm Project, dated 29 April 2009.
- /8/ Monthly receipts and subsequent monthly electricity clearance table (1 January 2009 to 31 December 2009) to the grid company.
- /9/ The VER Monitoring Manual of the project.
- /10/ The project feasibility study report in March 2003 and the approval letter by the Hebei government on 12 November 2003.
- /11/ The project environmental impact assessment report in March 2003 and the approval letter by Environmental Protection Bureau of Hebei Province on 16 July 2003.
- /12/ Business License of Hebei Hong-Song Wind Power Share Holding Ltd. valid from 16 February 2001.
- /13/ The form for "Power Station Running Recording" from 1 January 2009 to 31 December 2009.

Category 2 Documents:

Background documents related to the design and/or methodologies employed in the design or other reference documents. Where applicable, Category 2 documents have been used to cross-



check project assumptions and confirm the validity of information given in the Category 1 documents and in verification interviews.

- /14/ CDM Executive Board: “*Validation and Verification Manual*”, version 1.1.
- 15/ ACM0002 version 6 – Approved Consolidated baseline and monitoring methodology Date 19 May 2006.
- /16/ Declaration of the accreditation and transaction of VCS between the project owner and the VCUs buyer.
- /17/ Voluntary Carbon Standard 2007.1 (VCS 2007.1), 18 November 2008.
- /18/ Sales receipts from 1 January 2009 to 31 December 2009 by Chengde City Power Supply Company.
- /19/ Electricity meter calibration reports dated 16 July 2008 and 12 July 2009 for main meter 101.
Electricity meter calibration reports dated 16 July 2008 and 16 April 2009 for main meter 102.
Electricity meter calibration reports dated 13 August 2008 and 22 July 2009 for backup meter.

Persons interviewed:

Persons interviewed during the initial verification, or persons contributed with other information that are not included in the documents listed above.

- /20/ Mr. He Zhiyuan, Manager of the wind farm, Hebei Hong-Song Wind Power Share Holding Ltd.
- /21/ Mr. Shi Xiangfeng, Technical Manager, Carbon Resource Management Ltd.
- /22/ Mr. Ma Qian, Project Manager, Carbon Resource Management Ltd.

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Annex 1

Clarification of clauses 1.12, 1.13, 1.14, 8.1 and 8.2 of the VCS PDD

The proposed project has been validated and verified for the 1st monitoring period (1 January 2005 to 31 August 2006) under the VCS draft v2.0 in January 2007 by an accredited validator and verifier (DNV). The 2nd monitoring period was verified under the VCS draft v2.0 in February 2007. The 3rd monitoring period was verified under the VCS 1.0 in April 2008. The 4th and this 5th monitoring period shall be verified against the VCS2007.1 in terms of the VCS 2007.1. This clarification is annexed to cover all the requirements set out in the VCS2007.1 for project validation together with the validated PDD (version 1.2, dated 21 December 2006), according to the Policy Announcement from the VCS Association.

(<http://www.v-c-s.org/documents.html>)

Clarification of clauses 1.12, 1.13, 1.14, 8.1 and 8.2 of the VCS PDD are as follows:

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.

Clarification: As a wind energy project, the proposed project will produce clean electricity using wind power resources and will generate GHG emission reductions by avoiding CO₂ emissions from electricity generation of fossil fuel fired power plants. Operation of this project does not lead to GHG emissions. It is confirmed that the project was not implemented to create GHG emissions primarily 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 is located in China and is developed and operated by Hebei Hong-Song Wind Power Share Holding Ltd., which has been validated by DNV via FSR and the approval letter of FSR, the Turbine Test and Joint Inspection Report, PPA, etc./5/ /6/ /10/. It has been verified by DNV that there is no mandatory program defined for renewable energy in China, and there are no carbon trading scheme in China. Thus, it can be confirmed that there is no other environmental credit which has or will be produced by or obtained for the project /16/.

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

It has been verified by DNV that this project has only been registered under VCS program without rejection /16/.

8.1 Proof of Title:

Evidences of proof of title have been verified via documentation proving ownership of the plant and equipment at the site, such as Business License and Nameplate of the equipment. The



project's design and implementation have been verified in compliance with all relevant and national legislations in China /5/ /6/ /10/ /12/. The declaration letter from the project owner and Carbon Resource Management Ltd, has been obtained. It has been confirmed that the project owner will not apply for other VERs (VER+, GS etc.) and that all credits are transferred to the buyer, Carbon Resource Management Ltd. It also has been confirmed that the buyer will only sell the VCUs once /16/.

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

The proposed project is not included in an emissions trading program, and does not take place in a jurisdiction or sector in which binding limits are established on GHG emissions. The proposed project does not reduce GHG emissions from activities that participate in an emissions trading program, so this clause is not applicable.

**History of the document**

Version	Date	Nature of Revision
1.2	5 May 2010	1. The revision clarifies that “Turbine Test and Joint Inspection Report “ was issued in May 2006, instead of May 2005 on reference 6. 2. The revision clarifies that “the approval letter of FSR” was issued on 12 November 2003, instead of 12 November 2005 on reference 10.
1.1	4 May 2010	1. The revision clarifies that date of first issue in Page 1 is 8 February 2010, instead of 8 February 20010. 2. The revision clarifies that the persons interviewed Mr. Shi Xiangfeng is the Technical Manager instead of “Technical Director”
1.0	28 April 2010	Initial report