



# VALIDATION OPINION HUANENG SHOUGUANG WIND POWER Co., LTD

## VALIDATION OF POST REGISTRATION CHANGES OF THE SHANDONG HUANENG SHOUGUANG 49.5MW WIND FARM PROJECT

REPORT No.CHINA-PRC/8804/2013

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BUREAU VERITAS CERTIFICATION

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## VALIDATION OPINION

Date of first issue: <b>05/03/2013</b>		Organizational unit: <b>Bureau Veritas Certification Holding SAS</b>	
Client: <b>Huaneng Shouguang Wind Power Co., Ltd</b>		Client ref.: <b>Mr. Liu Ruixuan</b>	
Project reference No.: <b>3391</b>	Date of registration: <b>19/07/2010</b>	Registered PDD version and date <b>Version 04, 08/01/2010</b>	Revised PDD version and date <b>Version 05, 04/03/2013</b>
Monitoring period to which the request applies.: <b>From 25/12/2011 onwards</b>		PRC tracks <input type="checkbox"/> Prior approval track <input checked="" type="checkbox"/> Issuance track	
The DOE conducted validation of the changes: <input type="checkbox"/> Prior to commencement of a verification for the project activity or PoA. <input checked="" type="checkbox"/> When performing a verification for the project activity or PoA.			
Types of Changes <input type="checkbox"/> A. Temporary deviations from the monitoring plan as described in the registered PDD, PoA-DD or generic CPA-DD, or the monitoring methodology <input checked="" type="checkbox"/> B. Corrections that do not affect project/ programme design <input type="checkbox"/> C. Change to the start date of the crediting period <input checked="" type="checkbox"/> D. Permanent changes from the monitoring plan as described in the registered PDD or the monitoring methodology <input type="checkbox"/> E. Changes to the project or programme design of a registered project activity or PoA <input type="checkbox"/> F. Changes specific to afforestation or reforestation project activities			

Report No.: <b>China-PRC/8804/2013</b>	Subject Group: <b>CDM</b>
Project title: <b>Shandong Huaneng Shouguang 49.5MW Wind Farm Project</b>	
Work carried out by: <b>Ms. Jasmine Tang Xuemei - Team Leader</b>	
Internal Technical Review carried out by: <b>Ms. Li Yiting</b>	
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## Indexing terms

Work approved by:

Matthieu Martini

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## Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reductions
CL	Clarification Request
CO <sub>2</sub>	Carbon Dioxide
CO <sub>2</sub> e	Carbon Dioxide Equivalent
DOE	Designated Operational Entity
FAR	Forward Action Request
GHG	Green House Gas(es)
MoV	Means of Verification
MP	Monitoring Plan
PDD	Project Design Document
PLF	Plant Load Factor
PP	Project Participant
PPA	Power Purchase Agreement
PRC	Post-Registration Changes
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard



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## 1. INTRODUCTION

Huaneng Shouguang Wind Power Co., Ltd has commissioned Bureau Veritas Certification to validate the post-registration changes of CDM project Shandong Huaneng Shouguang 49.5MW Wind Farm Project (hereafter called “the Project”) in Shouguang county, Weifang city, Shandong Province, P.R.China.

This report summarizes the findings of the validation of the post-registration changes, performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

### 1.1. Objective

The objective of a validation is to provide a thorough and independent third party assessment of the post-registration changes. In particular, the changes’ compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the changes meet the applicable CDM requirements and the identified criteria.

### 1.2. Scope

The validation scope is defined as an independent and objective review of the revised project design document and other relevant documents. The information in these documents is reviewed against the requirements of paragraph 37 of the CDM M&Ps, the applicability conditions of the selected methodology and guidance issued by the Board.

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

### 1.3. Validation Team

The assessment team and internal technical reviewer team consist of the following personnel:

FUNCTION	NAME	TA 1.2	TASK PERFORMED*
Team Leader	Ms.Jasmine Tang Xuemei	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> DR <input checked="" type="checkbox"/> SV <input checked="" type="checkbox"/> RI <input type="checkbox"/> TR
Team Member	N.A.	<input type="checkbox"/>	<input type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI <input type="checkbox"/> TR
Technical Specialist	N.A.	<input type="checkbox"/>	<input type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI <input type="checkbox"/> TR
Internal Technical Reviewer (ITR)	Ms. Li Yiting	<input checked="" type="checkbox"/>	<input type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI <input checked="" type="checkbox"/> TR
Specialist supporting ITR	N.A.	<input type="checkbox"/>	<input type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI <input type="checkbox"/> TR

\*DR = Document Review; SV = Site Visit; RI = Report issuance; TR = Internal Technical Review



## 2. METHODOLOGY

The overall validation, from Contract Review to Validation Opinion, was conducted using Bureau Veritas Certification internal procedures.

In order to ensure transparency, a validation protocol was customized for the project, according to the version 03.0 of the Clean Development Mechanism Validation and Verification Standard, issued by CDM Executive Board at its 70<sup>th</sup> meeting on 23/11/2012 (/1/). The protocol shows, in a transparent manner, criteria (requirements), means of validation and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organizes, details and clarifies the requirements the post-registration changes are expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The completed validation protocol is enclosed in Appendix A to this report.

### 2.1. Review of Documents

The Revised Project Design Document (PDD) submitted by Beijing Changjiang River International Holding and additional background documents related to the project design and monitoring plan were reviewed.

Furthermore, cross checks were made between information provided in the revised PDD and information from sources other than those used.

To address Bureau Veritas Certification corrective action and clarification requests, Beijing Changjiang River International Holding revised the PDD and resubmitted it on 04/03/2013.

The validation conclusions presented in this report relate to the project as described in the revised PDD version 05.

### 2.2. Follow-up Interviews

On 26/02/2013, Bureau Veritas Certification performed a site visit and interviews with the project owner to confirm selected information and to resolve issues identified in the document review. Representatives of Huaneng Shouguang Wind Power Co., Ltd and Beijing Changjiang River International Holding were interviewed (see References).

### 2.3. Resolution of Clarification, Corrective and Forward Action Requests

The objective of this phase of the validation is to resolve issues that require further elaboration, research or expansion prior to Bureau Veritas Certification's positive conclusion on the post-registration changes.

A Corrective Action Request (CAR) is raised, if one of the following situations occurs:



- (a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable, verifiable and additional emission reductions;
- (b) The applicable CDM requirements have not been met;
- (c) There is a risk that emission reductions cannot be monitored or calculated.

A Clarification Request (CL) is raised, if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

A Forward Action Request (FAR) may also be raised during validation, to identify issues related to project implementation that require review during the first verification of the project activity.

To guarantee the transparency of the validation process, the issues raised, the responses provided by the project participants, the means of validation of such responses and references to any resulting changes in the PDD or supporting annexes are documented in the Validation Protocol in Appendix A.

## 2.4. Internal Technical Review

The validation opinion underwent an Internal Technical Review (ITR) before requesting approval of the post-registration changes.

The ITR is an independent process performed to examine thoroughly that the process of validation has been carried out in conformance with the requirements of the validation scheme as well as internal Bureau Veritas Certification procedures.

The Team Leader provides a copy of the validation opinion to the reviewer, including any necessary validation documentation. The reviewer reviews the submitted documentation for conformance with the validation scheme. This will be a comprehensive review of all documentation generated during the validation process.

When performing an Internal Technical Review, the reviewer ensures that:

- The validation activity has been performed by the team by exercising utmost diligence and complete adherence to the CDM rules and requirements.
- The review encompasses all aspects related to the project which includes project design, baseline, additionality, monitoring plans and emission reduction calculations, internal quality assurance systems of the project participant as well as the project activity, closure of CARs and CLs during the validation exercise, review of sample documents.

The reviewer may raise Clarification Requests to the validation team and will discuss these matters with the Team Leader.

After the agreement of the responses to the Clarification Requests from the validation team as well as the PP(s), the finalized validation opinion is accepted for further processing such as uploading via the UNFCCC interface.



### 3. VALIDATION CONCLUSIONS

In the following sections, the conclusions of the validation are stated.

The findings from the desk review of the revised project design documents and the findings from interviews during the follow up visit are described in the Validation Protocol in Appendix A.

The Clarification, Corrective and Forward Action Requests are stated, where applicable, in the following sections and are further documented in the Validation Protocol in Appendix A. The validation of the Project resulted in 0 CAR, 0 CL and 0 FAR.

The CARs and CLs were closed out based on adequate responses from the Project Participant(s) which meet the applicable requirements. They have been reassessed before their formal acceptance and closure.

The number between brackets at the end of each section corresponds to the VVS paragraph.

#### 3.1. Temporary deviations from the registered monitoring plan and/or monitoring methodology (255-256)

N.A.

#### 3.2. Corrections (259)

##### [Reason of the changes]

The construction start date of 15/04/2007 indicated in the registered PDD is inconsistent with the one in the construction contract, which had been provided during on site visit.

##### [Summary of the changes]

Section B.5, table 2: the start construction date has been revised to 15/04/2008.

##### [Assessment on the changes]

Bureau Veritas Certification has checked the provided construction contract [4] and can be confirmed that the actual construction start date is 15/04/2008 instead of 15/04/2007 shown in the registered PDD, which is a typo error.

#### 3.3. Changes to the start date of the crediting period (261)

N.A.

#### 3.4. Permanent changes from the registered monitoring plan or monitoring methodology (267-268)

##### [Reason of the changes]

As per registered monitoring plan, In Section B.7.1 of registered PDD, it is indicated that "Source of data to be used" is "measured by a bidirectional meter M1" for both parameters of  $EG_{out,y}$  and  $EG_{in,y}$ , while "description of measurement methods and procedures to be applied" is "the readings of meter M2 will be monitored continuously and recorded monthly, and then





crosschecked with the readings of meter M1 installed and owned by the grid company" and similar sentence can be found in Page 29 of Section B.7.2. It is not clear which meter is the main meter.

Bureau Veritas Certification checked the reasons above as per the methodology, and has the opinion that the monitoring plan has to be improved to reflect the actual monitoring practice.

#### **[Summary of the changes]**

Section B7.1: removed the information of M2, and only leave M1 as the main monitoring equipment.

#### Section B7.2

##### Installation of meters

The location and function of electricity meters have been specified that: the main meter (M1) has been installed at Fengtai Substation to monitor electricity exported to the grid and imported from the grid. And the backup meter (M2) has been installed at the project site. When the main meter M1 is out of order, the readings from the back-up meter M2 which is operated by the project owner are used for reference.

#### **[Assessment on the changes]**

Bureau Veritas Certification has checked the proposed revision of the monitoring plan, and found it complies with the methodology ACM0002 Ver. 9, and the emission reductions can be calculated accurately.

The proposed revision to the monitoring plan mainly aims to make the monitoring system more clear than the one in the registered PDD, and clarify which meter is the main meter to calculate baseline emissions. Bureau Veritas Certification has checked the PPA signed between the PP and grid company [5] and confirms that the revised monitoring plan consistent with the PPA. And there is no change in the revised MP with respect to accuracy of the monitoring equipment. Therefore, the proposed revision can ensure that the level of accuracy and completeness in the monitoring and verification process is not reduced as a result of the revision.

### **3.5. Changes to the project design of a registered project activity (277-282)**

N.A.



#### 4. VALIDATION OPINION

Bureau Veritas Certification has performed a validation of post-registration changes of the Shandong Huaneng Shouguang 49.5MW Wind Farm Project, which is located in Shouguang county, Weifang city, Shandong Province, P.R.China. The validation was performed on the basis of UNFCCC criteria for the CDM, and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The validation consisted of the following three phases: i) desk review of the project design document and additional background documents; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final validation report and opinion.

The review of the revised project design document, relevant additional information and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the post-registration changes meet all relevant UNFCCC requirements for the CDM and the relevant host country criteria. Bureau Veritas Certification thus requests the approval of post-registration changes of the project activity.

Ms. Li Yiting  
Internal Technical Reviewer  
05/03/2013

Ms. Jasmine Tang Xuemei  
Team Leader  
05/03/2013



## 5. REFERENCES

### Category 1 Documents:

Documents provided by project participants that relate directly to the GHG components of the project.

- [1] Revised PDD of the Project (version 05) dated 04/03/2013.
- [2] Registered PDD (version 04) dated 08/01/2010
- [3] Validation Report (version 01.4), dated 10/02/2010.
- [4] Construction contract
- [5] Power purchase agreement signed between the PP and grid company which can cover this monitoring period.

### Category 2 Documents:

Background documents related to the design and/or methodologies employed in the design or other reference documents used for cross-check.

- /1/ CDM Validation and Verification Standard Version 03.0 (EB70 Annex 3)
- /2/ CDM Project Standard Version 02.1 (EB70 Annex 2)
- /3/ CDM Project Cycle Procedure Version 03.1 (EB70 Annex 4)

### Persons interviewed:

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

Huaneng Shouguang Wind Power Co., Ltd

Mr. Yang Liang  
Mr. Zhao Ziyue  
Mr. Zhang Wei

Beijing Changjiang River International Holding

Ms. Zhangping  
Ms. Tu Li



## 6. CURRICULA VITAE OF THE DOE'S VALIDATION TEAM MEMBERS

Ms.Jasmine Tang Xuemei	Bureau Veritas Certification, China	<p>Team Leader, Climate Change Lead Verifier</p> <p>She holds a Master Degree in Environmental Engineering. Before joining BV in 2008, she gained two years of CDM technical working experience in P.R China. She obtained the certificate of CDM Verifier, Lead Auditor for ISO 14001. She has completed the course assessment for the ISO 14064:2006.</p>
Ms. Li Yiting	Bureau Veritas Certification, China	<p>Technical Reviewer, Climate Change Lead Verifier.</p> <p>She holds a Master Degree in Environmental Science. Before joining BV in 2009, she gained two and a half years of CDM technical working experience in P.R China. She obtained the certificate of CDM Lead Verifier, Lead Auditor for ISO 14001 and ISO 14064.</p>

## APPENDIX A: VALIDATION PROTOCOL FOR POST REGISTRATION CHANGES

Table 1 Validation requirements based on VVS section 9.5 (EB70 Annex3) and PS section 12.8 (EB70 Annex2)

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
<b>1. Corrections</b>					
a. Are the corrections to project information or parameters fixed at validation, as described in the registered PDD, made by PPs in a revised PDD comply with the requirements of the Project standard?	VVS	257	Yes.	OK	OK
b. Is the corrected information an accurate reflection of actual project information?	VVS	258 (a)	Yes.	OK	OK
c. Are the corrected parameters in accordance with the applied methodology and/or selected monitoring plan?	VVS	258 (b)	Yes.	OK	OK
<b>2. Permanent changes from the registered monitoring plan or monitoring methodology</b>					
a. Is it ensured that the changes to the monitoring plan contained in the	VVS	263	Yes The changes to the monitoring plan contained in the registered PDD are in compliance with the applied	OK	OK



## VALIDATION OPINION

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
registered PDD are in compliance with the applied methodology and do not reduce the level of accuracy of the monitoring compared with the requirements contained in the registered monitoring plan?			methodology and do not reduce the level of accuracy of the monitoring compared with the requirements contained in the registered monitoring plan.		
b. If the proposed changes refer to a later version of the applied methodology in the registered PDD, does the application of any later version of the applied methodology and tools impact the conservativeness of the monitoring and verification process, including the related emission reduction calculation?	VVS	264	N.A.	OK	OK
c. If the PPs are unable to implement the registered monitoring plan and it will not be possible to monitor the registered CDM project activity in accordance with a monitoring plan that would comply with the applied methodology and any applicable tools or the relevant provisions of appendix 1 of the Project standard, is any guidance (prior approval) requested from the Board concerning	VVS	265	N.A.	OK	OK



## VALIDATION OPINION

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
the acceptability of the permanent changes?					
d. If the permanent changes will lead to a reduction in the accuracy of the calculation of ERs, are conservative assumptions or discount factors to the calculations applied to the extent required to ensure that ERs will not be over-estimated as a result of the permanent change?	VVS	266	<p>No.</p> <p>Bureau Veritas Certification has checked the proposed revision of the monitoring plan, and found it complies with the methodology ACM0002 Ver.9, and the emission reductions can be calculated accurately.</p> <p>The proposed revision to the monitoring plan mainly aims to make the monitoring system more clear than the one in the registered PDD, and clarify which meter is the main meter to calculate baseline emissions. Bureau Veritas Certification has checked the PPA signed between the PP and grid company and confirms that the revised monitoring plan consistent with the PPA. And there is no change in the revised MP with respect to accuracy of the monitoring equipment. Therefore, the proposed revision can ensure that the level of accuracy and completeness in the monitoring and verification process is not reduced as a result of the revision.</p>	OK	OK



## VALIDATION OPINION

**Table 2 Resolution of Corrective Action /Clarification /Forward Action Requests**

Draft report clarifications and corrective action requests by verification team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
-	-	-	-