



VALIDATION REPORT

CARBON RESOURCE MANAGEMENT LTD.

VALIDATION OF THE CECIC ZHANGBEI GAOJIALIANG WIND FARM PROJECT

BUREAU VERITAS CERTIFICATION
REPORT NO. **BVC/CHINA-Val/0134/2008**

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Summary:

Bureau Veritas Certification has made the validation of CECIC Zhangbei Gaojialiang Wind Farm Project of CECIC Wind Power (Zhangbei) Yunwei Co., Ltd. The Project is a newly built wind farm located at Zhangbei County, Hebei Province, P.R.China on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

The validation scope is defined as an independent and objective review of the project design document, the project's baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final validation report and opinion. The overall validation, from Contract Review to Validation Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the validation process is a list of Clarification and Corrective Actions Requests (CL and CAR), presented in Appendix A. Taking into account this output, the project proponent revised its project design document.

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies the baseline and monitoring methodology ACM0002 version 09 and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.

Report No.: BVC/CHINA-Val/0134/2008	Subject Group: CDM
Project title: CECIC Zhangbei Gaojialiang Wind Farm Project	
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Indexing terms

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Abbreviations

BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reductions
CH ₄	Methane
CL	Clarification Request
CO ₂	Carbon Dioxide
CRM	Carbon Resource Management Ltd.
DECC	Department of Energy and Climate Change
DIS	Draft of International Standard
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
DRC	Development & Reform Commission
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
ERPA	Emission Reduction Purchase Agreement
FSR	Feasibility Study Report
GHG	Green House Gas(es)
GSP	Global Stakeholders Process
GWP	Global Warming Potential
I	Interview
IETA	International Emissions Trading Association
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
ISCH	International Stakeholder Consultation
ISO	International Organization for Standardization
LoA	Letter of Approval
MoV	Means of Verification
MP	Monitoring Plan
NCPG	North China Power Grid
NDRC	National Development Reform Commission
NEPG	Northeast Power Grid
NGO	Non Government Organization
ODA	Official Development Assistance
PDD	Project Design Document
PLF	Plant Load Factor
PP	Project Proponent (project owner)
PPA	Power Purchase Agreement
SWPC	Statistics of wind power installed capacity in China
UNFCCC	United Nations Framework Convention for Climate Change
VVM	Validation & Verification Manual
WTG	Wind Turbine Generator



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1 INTRODUCTION

Carbon Resource Management Ltd. (CRM) has commissioned Bureau Veritas Certification to validate the CDM project CECIC Zhangbei Gaojialiang Wind farm Project(hereafter called “the Project”) of CECIC Wind Power (Zhangbei) Yunwei Co.,Ltd. at Hebei Province, P.R.China.

This report summarizes the findings of the validation of the project, 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 validation serves as project design verification and is a requirement of all projects. The validation is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the project design, as documented, is sound and reasonable, and meet the stated requirements and identified criteria. Validation is a requirement for all CDM projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

1.2 Scope

The validation scope is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

The validation 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 Validation team

The validation team consists of the following personnel:

(Jasmine) Tang	Team Leader, Bureau Veritas Certification, Climate Change Verifier
Liao Ling	Team Member, Bureau Veritas Certification, Climate Change Verifier
Zeng Ziyuan	Team Member, Bureau Veritas Certification, Climate Change Verifier

2 METHODOLOGY

The overall validation, from Contract Review to Validation Report & 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 01 of the Clean Development Mechanism Validation and Verification Manual



issued by the Executive Board at its 44 meeting on 28/11/2008.^[02] The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organizes, details and clarifies the requirements a CDM project is 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 validation protocol consists of five tables. The different columns in these tables are described in below **Figure 1**. The completed validation protocol is enclosed in Appendix A to this report.

Validation Protocol Table 1: Requirements checklist					
Checklist Question	Reference	Means of verification(MoV)	Comment	Draft and/or Final Conclusion	
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organized in several sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question. (See below). Clarification Request (CL) is used when the validation team has identified a need for further clarification.	

Validation Protocol Table 2: Resolution of Corrective Action and Clarification Requests			
Report clarifications and corrective action requests	Ref. to checklist question in tables 1	Summary of project owner response	Validation conclusion
If the conclusions from the Validation are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	Reference to the checklist question number in Tables 1 where the Corrective Action Request or Clarification Request is explained.	The responses given by the Client or other project participants during the communications with the validation team should be summarized in this section.	This section should summarize the validation team's responses and final conclusions. The conclusions should also be included in Tables 1 under "Final Conclusion".

Figure 1. Validation Protocol Tables



2.1 Review of Documents

The Project Design Document (PDD) submitted by Carbon Resource Management Ltd. (CRM) and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for Completing the Project Design Document (CDM-PDD), Approved methodology, Kyoto Protocol, Clarifications on Validation Requirements to be Checked by a Designated Operational Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests CRM revised the PDD and resubmitted it on 05/04/2009 and the validation findings presented in this report relate to the Project as described in the PDD Version 1.1. (Ref-2)

2.2 Follow-up Interviews

On 21/01/2009 Bureau Veritas Certification performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of the PP, the consultant and local stakeholders were interviewed (see Section 6-References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview Topics

Interviewed organization	Interview topics
CECIC Wind Power (Zhangbei) Yunwei Co.,Ltd. (Project owner)	<ul style="list-style-type: none"> ➤ Project background information and CDM consideration. ➤ Project technology, operation, maintenance and monitoring capability. ➤ Project monitoring and management plan. ➤ Stakeholder consultation process. ➤ Project approval status (incl. EIA approval, CDM project approval status) ➤ Wind power development in the area ➤ Government policies related to wind power projects
Local Stakeholder	<ul style="list-style-type: none"> ➤ Project background in details ➤ Stakeholder comments ➤ Social and environmental impact of the project
CRM (CDM Consultant)	<ul style="list-style-type: none"> ➤ Applicability of selected methodology. ➤ Baseline determination. ➤ Emission reductions calculation. ➤ Emission reduction monitoring plan.

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the project design.



Corrective Action Requests (CAR) is issued, where:

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

The validation team may also use the term Clarification Request (CL), if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

To guarantee the transparency of the validation process, the concerns raised are documented in more detail in the validation protocol in the Appendix A.

3 VALIDATION CONCLUSIONS

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

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

The Clarification and Corrective 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 **3** Corrective Action Requests and **8** Clarification Requests.

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

3.1 Approval

The letter of approval has been received and the following support documentation:

- ✍ The China's DNA has issued the Letter of Approval (No. 528) on 18/02/2009, authorizing CECIC Wind Power (Zhangbei) Yunwei Co.,Ltd. as the Project Participant and confirmed that the CECIC Zhangbei Gaojialiang Wind farm Project contributes to China's Sustainable development. (Ref-3)
- ✍ The UK's DNA has issued a Letter of Approval dated 26/03/2009, authorizing Carbon Resource Management Ltd. as the Project Participants for the Project. (Ref-4)

Bureau Veritas Certification received the above letters from the PP and does not doubt its authenticity by checking the relevant official information.

The letters of approval do not contain a specific version of both the PDD and the validation report.

- ✍ Complying with **para.49, 50 and 125/VVM**, Bureau Veritas Certification recognizes that CECIC Zhangbei Gaojialiang Wind farm Project of CECIC Wind Power (Zhangbei) Yunwei Co.,Ltd. is helping country fulfill its goals of promoting sustainable development. The Project is expected to be in line with host-country specific CDM requirements because it-
 - Reducing CO₂, SO₂ and NO_x emissions produced by fossil fuel fired power plants;
 - Creating local employment opportunity during the assembly and installation of wind



turbines, and for operation of the Project;

- Reducing other particulate pollutants resulting from the fossil fuel fired power plants compared with a business-as-usual scenario.

There is also evident in various approvals issued by the local government of host country China. There are as below,

- ✍ The project activity of Grid connected wind power and the development of such Grid connected wind power is listed in the Renewable Energy Law, in the 2005 Guiding Catalogue of Industrial Structure Regulation Issued by National Development and Reform Commission and the Development Plan in New Energy Sources and Renewable Energy Sources from Year 2000 to 2015 as development priority of China. (Ref-5)
- ✍ Environment Impact Assessment (EIA) approved by Environmental Protection Bureau of Hebei Province by in April 2008 (Code: Ji Huan Biao [2008]235#). (Ref-8)
- ✍ Feasibility Study Report (FSR) of the Project approved by Development and Reform Commission of Hebei Province approved on 29/10/2008 (Ji Fa Gai Neng Yuan He Zi [2008] 135#). (Ref-7)

The Project Scenario is considered additional in comparison to the baseline scenario, and therefore eligible to receive Certified Emissions Reductions (CERs) under the CDM, based on the investment analysis and prevailing practice, addressed in the PDD.

The overall layout of the Project is sound and the geographical (Zhangbei County, Hebei Province, People's Republic of China) and temporal (7 years) boundaries of the Project are clearly defined.

- ✋ The validation did not reveal any information that indicates that the Project can be seen as a diversion of official development assistance (ODA) funding towards the host country.

3.2 Participation

The participation for each project participant has been approved by a Party of the Kyoto Protocol.

- ✋ Complying with **para.54/VVM**, Bureau Veritas Certification hereby confirms that by referring to the information on UNFCCC website i.e.
<http://maindb.unfccc.int/public/country.pl?country=CN>; and
<http://maindb.unfccc.int/public/country.pl?country=GB>

3.3 Project design document

- ✋ Complying with para.57/VVM, Bureau Veritas Certification hereby confirms that the PDD complies with the latest Project Design Document Form (CDM-PDD) version 03.2 and guidance documents for completion of PDD version 07.

3.4 Project description



The Project is sited in Zhangbei County, Hebei Province, People's Republic of China which has geographical coordinates with East longitude 114°27'3.89" to 114°31'23.38", and North latitude 41°9'22.52" to 41°13'35.76".

The total installed capacity of the Project is 49.5MW with 66 wind turbines of unit capacity 750kW (WD49/750kW) supplied by Zhejiang Windey Wind Generating Engineering Co.,Ltd. The estimated annual electricity supplied is about 94,050MWh, which will be sold to the North China Power Grid (NCPG). As the NCPG is dominated by thermal power generation, the establishment of the Project is expected an annual emission reduction of 99,204tCO₂e during the first seven years of its renewable crediting period.

The process undertaken to validate the accuracy and completeness of the project description was including the document review and cross-check with the relevant approvals issued by local government by the validation team.

☞ Complying with **para.64/VVM**, Bureau Veritas Certification hereby confirms that the project description in PDD (Ref-2) is accurate and complete in all respects.

3.5 Baseline and monitoring methodology

3.5.1 Baseline and monitoring methodology

The Project uses the approved consolidated baseline and monitoring methodology ACM0002 version 09– "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" valid from 27/02/2009.^[01]

The assessment of the relevant information contained in the PDD against each applicability condition is described below:

- The proposed project involves electricity capacity addition from wind sources; and
- The project is connected to the grid; and
- The proposed project does not involve switching from fossil fuels to renewable energy at the site of the project activity; and
- The geographic and system boundaries for the North China Power Grid (NCPG) can be clearly identified and information on the characteristics of the grid is available.

Bureau Veritas Certification hereby confirms that the selected baseline and monitoring methodology is previously approved by the CDM Executive Board, and is applicable to the Project, which complies with all the applicability conditions therein.

Based on the on-site assessment, Bureau Veritas Certification hereby confirms that, as a result of the implementation of the proposed CDM project activity, there are no greenhouse gas emissions occurring within the proposed project boundary, which are expected to contribute more than 1% of the overall expected average annual emissions reductions, which are not addressed by the applied methodology.



3.5.2 Project boundary

The spatial extent of the Project boundary is clearly defined in line with ACM0002 version 09 as the physical, geographical site of Project and all other power plants connected physically to the NCPG that the Project is connected to.

- ☞ Complying with **para.57/VVM**, Bureau Veritas Certification hereby confirms that the identification of Project boundary is in line with the delineation of grid boundaries as provided in the latest version of “Notification on Determining Baseline Emission Factor of China’s Grid” published by China’s DNA on 18/07/2008 (hereafter called “Notification of China-Grid EF”). (Ref-9)

3.5.3 Baseline identification

As the Project is the installation of a newly built and grid-connected renewable power plant that delivers the generated electricity to the grid (NCPG), hence, according to methodology ACM0002, the baseline scenario is determined properly as:

The electricity delivered to the grid by the Project would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the “Tool to calculate the emission factor for an electricity system” version 01.1 dated 19/12/2007 (hereafter called “Tool-Grid EF”).^[03]

According to the “Notification of China-Grid EF”, the delineation of grid boundaries of the Project is the NCPG. Furthermore, the baseline of the Project determined in the PDD i.e. “electricity delivered to the grid by the Project would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources” is transparent and deemed to be reasonable.

- ☞ Complying with **para.80 and 81/VVM**, Bureau Veritas Certification hereby confirms that:
- (a) All the assumptions and data used by the project participants are listed in the PDD, including their references and sources;
 - (b) All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD;
 - (c) Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable;
 - (d) Relevant national and/or sectoral policies and circumstances are considered and listed in the PDD;
 - (e) The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.

3.6 Additionality



3.6.1 Prior consideration of the CDM

The additionality of the Project has been assessed in accordance with the “Tool for Demonstration and Assessment of Additionality” version 05.2 dated 26/08/2008 (hereafter called “Tool-Additionality”). ^[04]

The start date of the Project identified in the PDD is 30/11/2008, on which the PP launched the construction of the Project.(Ref-25) The PDD was published for global stakeholder consultation on 27/11/2008 before the start date (Ref-11). Furthermore, the PDD addressed the serious consideration on the incentives from CDM prior to the project implementation in compliance with the latest glossary of CDM terms and “Guidance on the demonstration and assessment of prior consideration of the CDM” version 01 (Annex 46, EB 41) (hereafter called “Guidance-Prior Consideration”). ^[05]

☞ Complying with **para.102/VVM**, Bureau Veritas Certification verified this issue which was considered much related to the additionality of the Project and can conclude that the serious consideration under the context of the Project has been addressed appropriately in accordance with the above guidance, consequently, the chronological events described with the relevant documented evidences can form the objective basis of the validation opinions of Bureau Veritas Certification. Accordingly Bureau Veritas Certification summarized a timeline as Table 2 below and raised Clarification Requests for submission of the corresponding documented evidences.

Table 2 - Timeline of the Project

Date	Actions	Reasons or Impacts	Evidences verified
Jun.2008	Completion of FSR with consideration of CDM	The project IRR is lower than the benchmark without CDM revenue.	Ref-6✓
03/07/2008	CDM decision made in PP's board meeting	The PP decided to apply for CDM support.	Ref-21✓
28/09/2008	Emission Reduction Purchase Agreement signed (ERPA)	Seek the support of CDM to make the Project to be financially feasible	Ref-22✓
29/10/2008	Hebei Development & Reform Commission	Permit implementation of the Project	Ref-7✓
21/11/2008	Applying for Letter of Approval from Chinese DNA	Secure the progress of the CDM development in parallel with the implementation of the Project.	Ref-24✓
27/11/2008	PDD was published for global stakeholder consultation at EB's website	Secure the progress of the CDM development in parallel with the implementation of the Project.	Ref-1✓ Ref-11✓
30/11/2008	launch of construction	Take real actions based on CDM development initiated	Ref-25✓



Jan.2009	WTG purchase contract signed with the manufacturer		
18/02/2009	Letter of Approval issued by China's DNA	Secure the progress of the CDM development in parallel with the implementation of the Project.	Ref-3✓ Ref-9✓

The validation team has checked all physical documents mentioned above and was able to verify that all documents are substantial at that situation in the host country. From the table above, validation team confirms that the start date of project activity is 30/11/2008 (the launch date of the construction), which is the earliest date at which the implementation or construction or real action of the project activity began.

According to the FSR, the Project is financially unfeasible as its project IRR is lower than the benchmark without CDM revenue; while with regard to the CDM revenue the project IRR can reach the benchmark 8%. Therefore, based on the conclusion of the FSR, the PP finally made the investment decision of the Project based on the seriously consideration on the incentives from CDM and then was pushing the CDM development continuously for CDM support in parallel with the implementation of the Project.

The Validation team was therefore able to verify that the incentives of CDM were seriously considered prior to the start of the project activity and continuing and real action were taken to secure CDM status for the project in parallel with its implementation, which are evident accordance with the "Guidance-Prior Consideration".^[05]

✎ By assessing the material actions taken by the PP, Bureau Veritas Certification confirmed that the PP considered seriously the incentives from CDM in the context of the Project before taking its real actions, which is in accordance with the requirements of "Guidance –Prior consideration".^[05]

✎ According to the latest Glossary of CDM terms Ver.04 and the Paragraph 67 of EB 41 meeting ^[07], Bureau Veritas Certification was able to verify the start date of the Project of 30/11/2008 identified in the PDD is appropriate

3.6.2 Identification of alternatives

Subsequently, Bureau Veritas Certification validated the additionality as addressed in the PDD of the Project.

The plausible and credible alternatives to the Project were identified as per the ACM0002 version 09:

Alternative a: The proposed project not undertaken as a CDM project;

Alternative b: Thermal power plant with comparable capacity or electricity generation;

Alternative c: Other renewable energy with comparable capacity or electricity generation;

Alternative d: Continuation of the current situation: Electricity delivered to the grid by the



project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources.

Alternative (b) was correctly eliminated through examination of current practice in China in which the laws or regulations applies. According to the Notice on Strictly Prohibiting the Installation of Thermal Generators with the Capacity of 135MW or below issued by the General Office of the State Council, Decree No. 2002-6 (Ref-12), construction of thermal power plants of less than 135MW are prohibited to be built in the areas covered by the large grid such as provincial grids in China.

Alternative (c) was eliminated by analyzing the availability of local renewable energy resources including Solar PV, geothermal, biomass and hydropower as addressed in the PDD. Realizing the technology development status and the high cost for power generation from solar PV, geothermal and biomass is unfeasible in China. However, due to dry climate and the lack of water resource recently years in project area, there is no enough hydro resource which can be utilized. (Ref-13 to Ref-14)

☞ Complying with para.105/VVM, Bureau Veritas Certification was able to verify that the Project scenario and the baseline scenario defined to the Project are credible and hence found Step 1 of “Tool-Additionality” was applied appropriately.

3.6.3 Investment analysis

Considering the baseline scenario as above identified, the Benchmark Analysis was applied in the Investment analysis as per the Sub-step 2b of Step 2 of “Tool-Additionality”.

☞ Bureau Veritas Certification verified the applicability of the benchmark that project IRR of 8% used in the Project and can confirm that the data sources mentioned in the PDD, viz. “*Interim Rules on Economic Assessment of Electrical Engineering Retrofit Projects*” issued by State Power Corporation of China in 2002, (Ref-16) is a national standard and project IRR of 8% is a current practice in the power sector in China.

Before reviewing the IRR calculation, Bureau Veritas Certification firstly validated the basic parameters listed in the PDD in accordance with the Guidance of **EB 38th paragraph 54.06**

a) The input values used in the Project were taken from the FSR completed by China Power Engineering Consulting Company in June 2008 (Ref-6) and approved by Hebei Development & Reform Commission on 29/10/2008 (Ref-7). The FSR was developed in compliance with the relevant national standards or guidance made by the NDRC. (Ref-17/31/32) As FSR concluded that, based on the investment situation of Project at that time, the project IRR is 6.12% lower than the benchmark 8% and the Project is thus considered not financially attractive without financial supports like the revenue from CDM. The FSR was finalized in June 2008, and the Board Meeting on 03/07/2008 (Ref-21) decided to seek CDM support, and then the Project launched construction on 30/11/2008 (Ref-25), the period of time between the finalization of the FSR and the PP’s final decision is thus considered sufficient short.



☞ Therefore, Bureau Veritas Certification can confirm that the input values used in the financial analysis are credible and reliable, and it is unlikely that the input values would have materially changed.

b) All input values are sourced from the approved FSR.

Furthermore, validation team has reviewed the IRR calculation sheet and cross checked the relevant regulations/laws/evidences and confirmed that:

- According to the document issued by NDRC on 03/12/2007 (Code: FaGaiJiaGe [2007] No.3303) (Ref-11), the government guiding tariff for projects in Hebei Province is 0.54 CNY/kWh for the first 30,000 hours of its operation; after the 30,000 hours, the tariff will be set as the average tariff in the same region, currently is 0.3453CNY/kWh (incl.VAT) 40% lower than the government guiding tariff of the Project. (Ref-28)

The same value of 0.54CNY/kW has been used for all 20 years long operating period of the Project in the financial analysis of the PDD for conservative purpose.

- Realizing the Project is still during the construction stage, the actual values of total investment of the Project cannot be verified exactly, and then the validation team reviewed the WTG Purchase Contract (Ref-23) signed with the equipment supplier and found that the already signed contract value is little higher than that estimated in the approved FSR. The main reason is the increase of the cost both of the materials and manpower in recent two years. (Ref-30)
- The operating period of 20 years were selected reasonably following the requirements of “Interim Rules on Economic Assessment of Electric Power Engineering Retrofit Projects” and Para. 3 of “Guidance on the Assessment of Investment Analysis” version 02, i.e. “a minimum period of 10 years and a maximum of 20 years will be appropriate”. (Ref-16)
- The annual supplied power of the Project was determined in compliance with the relevant national standards (Ref-32) and turbine’s characteristics provided by the WTG manufacturer:
 - ☞ Determining the parameters of wind speed based on the wind resource data of the latest 35 years (1971 to 2006) in the region;
 - ☞ Integrating the generation efficiency of the WTGs and the captive power of the wind farm, the annual power supplied to NCPG will be 94,050MWh;
 - ☞ The Load Factor is thus determined as 0.217 (94050MWh/(8760hoursx49.5MW)).
- The value of Average Annual O&M Cost was studied based on the “Codes on Compiling Feasibility Study Report of Wind Farms” issued by NDRC on 25/05/2005.(Ref-17) Similarly to the total investment of the Project, the actual costs spent on the operation of the Project is unlikely to be less than the values used in the



FSR.

- Bureau Veritas Certification also verified values of various taxes through cross-check with the taxation rules conducted by local government and found to be fully consistent.
- ✎ In summary, based on the above reliable data sources, the validation team was able to confirm that the input values from the approved FSR are valid and applicable at the time of making the investment decision. Therefore, Bureau Veritas Certification confirmed that the input values used in the PDD meet the guidance of EB 38 paragraph 54 (a),(b) and (c).

Based on the above conclusion, Bureau Veritas Certification reviewed the IRR calculation and found that the calculation is correct and in accordance with “Guidance on the assessment of investment analysis” Version 02 (as the annex of “Tool- Additionality” Ver.05.2) As it shows, without CDM revenue, the project IRR of the Project is 5.47%, which is lower than the benchmark (8%). (Ref-18)

In the step of Sensitivity analysis, four financial indicators were identified with a variation range over $\pm 10\%$ for evaluation:

- [a] Static investment
- [b] Annual O&M cost
- [c] Tariff
- [d] Annual supplied power

As it shows, the IRR will remain below the benchmark from -10% to +10%.

Bureau Veritas Certification reviewed the sensitivity analysis in the FSR and confirmed that the indicators identified and the variation range employed in the PDD are consistent with the approved FSR and also in accordance with the prescription of the “Codes on Compiling Feasibility Study Report of Wind Farms” issued by NDRC on 25/05/2005. (Ref-17) Then, the validation team reproduced the calculation based on the IRR spreadsheet and worked out the same outcomes as it shows.

Furthermore, an elaboration was presented in the PDD to show the variables range so as to the IRR of the project could reach the benchmark. However, all these four parameters will not change at so wide range, because:

[a], [b],

As described above, the value of signed WTG purchase contract (Reg-14) has been verified a little higher than that estimated in the FSR, and with regard to the increasing price level of construction materials and employee wages, the validation team can confirm that neither the Static investment nor the annual O&M cost would be decreased over -10%, let alone the more decrease to make the project IRR over the benchmark.(Ref-30)

[c],



The supporting evidence of the tariff i.e. document issued by NDRC on 03/12/2007 (Code: Fa GaiJiaGe [2007] No.3303) (Ref-20) indicated that the government guiding tariff for projects in Hebei Province is 0.54CNY/kWh, subsequently, the same value used in the FSR and the PDD of the Project for all operating period without considering the decrease (more than 40% as current pricing) of the tariff after the first 30,000 hours of the full generation.(Ref-28) Therefore, the validation team can confirm that the tariff of the Project is unlikely increased by more than 10%.

[d]

As the FSR, the annual supplied power is estimated by a professional third party with the qualification in power sector viz. China Power Engineering Consulting Company based on the 35 years historical data of local wind resources and on-site measured wind data and in compliance with the national standard for wind farm designing.(Ref-31/32). The historical wind resources are measured by the Zhangbei Observatory which is one of the basic observatories of China established in 1955 and the data is reliable. The annual supplied power was based on the long-term wind resource with considering the variation and it reflects the average available wind source. Along with the impact of the increasing urban development and planting area, the average wind speed measured by the Zhangbei Observatory has a declined tendency, e.g. 4.03m/s from 1971 to 2006, 3.8m/s 1977 to 2006, 3.45m/s from 1987 to 2006 and 3.21m/s from 1997 to 2006. Therefore the validation team confirms that the annual supplied power of the Project is unlikely increases over 10% during its life time of 20 years. (Ref-6)

Considering of the CERs sales revenues (calculated with 90CNY/tCO₂e), the project IRR of the Project can be improved to 8.13% exceeding the benchmark.

☞ Complying with **para.112/VVM**, Bureau Veritas Certification can conclude that both of the variation range and relevant assumptions stated in the PDD are robust and the investment of the Project is deemed to be financially unfeasible.

3.6.4 Barrier analysis

The Step 3 Barrier analysis was not applied for the Project.

3.6.5 Common practice analysis

The Common practice analysis was addressed as per Step 4 of “Tool-Additionality” and latest rules issued by EB.

Taking into account the geographical location of wind resources in China, north area of Hebei Province is known as the one of the six typical wind resources areas in China, hence Bureau Veritas Certification considered that delineating Hebei Province as the border is large enough to the analysis.

The Project is a large scale wind farm, therefore wind farms with an installed capacity larger than 15MW are considered as similar activities to the Project, this is reasonable.

Subsequently, Bureau Veritas Certification identified the similar projects in terms of:



- a) Wind farm in Hebei Province,
- b) With total installed capacity larger than 15MW.

Following this criteria, Bureau Veritas Certification verified the wind farms as identified in the PDD by cross-checking the public statistics i.e. “Statistics of wind power installed capacity in China” (hereafter refer to as SWPC) Version 2006 dated 18/03/2007 and Version 2007 dated 28/02/2008 conducted by Mr. Shi Pengfei, the authoritative Expert in the wind power sector. (Ref-26)

According to the data of SWPC there are only two wind farms can be searched out per the criteria. There are two wind farms were enjoyed the benefits from the carbon funding that rendered it financially attractive, which are deemed to be the essential distinctions to the Project. In addition to the above two, all the projects under the same investment environment in Hebei Province have been gained the CDM registration or published on the UNFCCC website for global stakeholder consultation as part of the validation process, and thus excluded in this analysis.

They are essentially different to the Project in the investment environment. Bureau Veritas Certification verified the description in the PDD and found that it is consistent with the sectoral statistics and therefore can conclude that the Project is not common practice in the region.

- ☞ Complying with **para.119/VVM**, Based on above demonstration that in accordance with “Tool-Additionality” and supported by reliable data sources, it is the opinion of Bureau Veritas Certification that the Project is thus additional.

3.7 Calculation of GHG Emissions

According to the baseline methodology ACM0002 Version 09 and “Tool-Grid EF” version 01.1, the emission reductions from the Project were calculated as following six steps. In addition, the calculation in the PDD refers to the latest “Notification of China-Grid EF” published by China’s DNA on 18/07/2008 which is valid at the time of the validation. (Ref-10)

As per “Tool-Grid EF” version 01.1, six steps therein are applied to calculate the emission factor:

Step 1.-Identify the relevant electric power system.

North China Power Grid (NCPG) is selected as the electric power system of the Project and, the Northeast Power Grid (NEPG) and Central China Power Grid (CCPG) are identified as connected electric power system. There is electricity transferring from the NEPG and CCPG to NCPG. The weighted average operating margin (OM) emission rate of the exporting grids (NEPG and CCPG) is selected to calculate the CO2 emission factor(s) for net electricity imports.

- ☞ Bureau Veritas Certification was able to verify the data sources of “Notification of China-Grid EF”, and confirmed that the identified electric power systems are appropriate.

**Step 2.-Select an operating margin (OM) method.**

For the calculation of the OM emission factor, the simple OM emission factor calculation method is selected because low cost/ must-run projects constitute less than 50% of the total grid generation during the last 5 years.

- ✎ Bureau Veritas Certification has checked the calculation for low cost/must-run constitution of the total grid generation and confirmed the calculation is correct. Therefore, simple OM emission factor calculation method is selected reasonable. Data from China Electric Power Yearbook 2003-2007 has been applied correctly.

Step 3.-Calculate the operating margin emission factor according to the selected method.

The data on electricity generation and auxiliary electricity consumption are obtained from the China Electric Power Yearbook from 2005 to 2007 (published annually). The data on different fuel consumptions for power generation and the net caloric values of the fuels are obtained from the China Energy Statistical Yearbook from 2005 to 2007. The emission factors of the fuels adopted are obtained from Table 1-2 and Table 1-4 of the "2006 IPCC Guidelines for National Greenhouse Gas Inventories: Workbook."

The renewable crediting period is adopted for the Project and the OM will be fixed for the first crediting period.

- ✎ The data source are deemed reasonable and Bureau Veritas Certification confirms that the calculation can be replicated using the data and parameter provided in the PDD.

Step 4.-Identify the cohort of power units to be included in the build margin (BM).

The set of power capacity additions in the electricity system that comprise 20% of the system generation (in MWh) and that have been built most recently (Option b) is adopted properly for the Project.

Considering data availability, deviation accepted by EB was used in the PDD i.e.

- 1) Use of capacity additions during the last 1~3 years for estimating the build margin emission factor for grid electricity.
- 2) Use of weights estimated using installed capacity in place of annual electricity generation.

- ✎ Bureau Veritas Certification hereby confirms that the data source and approaches taken are deemed reliable.

Step 5.-Calculate the build margin emission factor.

The BM emission factor of the power grid is calculated by multiplying the emission factor of the thermal power with the share of the thermal power in the most recently added approach to 20% of total installed capacity. The emission factor for thermal power is determined based on the most advanced and commercially available technology endorsed by China's DNA.

- ✎ Bureau Veritas Certification hereby confirms that the data sources are deemed reliable and calculation is appropriate.



Step 6.-Calculate the combined margin (CM) emissions factor.

According to the “Tool-Grid EF” the default weights: $\omega_{OM}=0.75$ for Operating Margin and $\omega_{BM}=0.25$ for build Margin in the first crediting period of Wind Power Projects are adopted.

As per baseline methodology ACM0002 and “Tool-Grid EF”, the baseline emission sources considered are the emission reduction ER_y during the crediting period is the difference between baseline emissions, project emissions and leakage. These are:

- 1) Baseline emissions: baseline emissions BE_y (tCO_2) are equal to baseline emission factor $EF_{grid,CM,y}$ (tCO_2/MWh) times the net electricity supplied to the grid EG_y (MWh).
- 2) Project Emissions: the project emissions are regarded as zero for wind power projects as per the ACM0002 version 09.
- 3) Leakage: no leakage has to be considered for the proposed project activity since no energy generating equipment is transferred from or to the project site.
- 4) Emission reductions:

$$ER_y = BE_y - PE_y - LE_y = BE_y = EF_{grid,CM,y} \times EG_y$$

With reference to the Tool-Grid EF, the Simple OM emission factor ($EF_{grid,OM,y}$) of NCPG is calculated as $1.1169 tCO_2e/MWh$. Similarly, the build margin emission factor ($EF_{grid,BM,y}$) of the NCPG is calculated ex-ante as $0.8687 tCO_2e/MWh$.

Therefore the combined baseline emission factor is determined ex-ante and will remain fixed during the first crediting period, viz.

$$EF_{grid,CM,y} = 1.1169 \times 0.75 + 0.8687 \times 0.25 = 1.0548 (tCO_2e/MWh)$$

According to the estimated annual electricity delivered to the grid $94,050 MWh$, the estimated annual emission reductions of the Project is $99,204 tCO_2e$ during the first crediting period represents a reasonable estimation using the assumptions given by the Project.

☞ Complying with **para.91 and 92/VVM**, Bureau Veritas Certification hereby confirms that:

- a) All assumptions and data used by the project participants are listed in the PDD, including their references and sources;
- b) All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD; (Ref-19)
- c) All values used in the PDD are considered reasonable in the context of the proposed CDM project activity;
- d) The baseline methodology ACM0002 and “Tool-Grid EF” has been applied correctly to calculate project emissions, baseline emissions, leakages and emission reductions;
- e) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD.

3.8 Monitoring Plan



The Project uses the approved consolidated monitoring methodology ACM0002 version 09 for grid-connected electricity generation from renewable sources.

Applicability of this methodology is justified in PDD as it involves grid connected renewable power generation using wind energy. Refer discussions on the validity of the methodology at Section 3.5.1 above.

The combined margin emission factor is determined ex-ante based on the most recent information available. Accordingly the monitoring plan includes quantity of electricity exported to and quantity of electricity imported from the grid.

According to ACM0002 version 09 no leakage need to be considered for the Project since no energy generating equipment is transferred from or to the site, viz. $LE_y=0$.

Operational management for the project activity is comprehensively detailed in PDD and this include description of the responsibility, training, procedure reference, equipment details, calibration frequency and maintenance needs are clearly mentioned. Archiving of the records was indicated and the validation team is of the opinion that the retrievability of relevant CDM project activity records is pro-actively considered satisfactorily.

The data will be continuously measured and recorded on a monthly basis; and double checked by receipt of sales or commercial data.

According to the signed agreement of power connection with the grid company, the electricity supplied to the grid and the electricity imported from the grid will be measured by both of the main and backup metering system installed in Zhangbei 220kV sub-station (grid side). In addition to the electricity of the Project, the main meter will be shared by another registered CDM wind farm (Ref. no.1855) as the figure shown in the PDD. So the meter readings recorded by the main meter should be the sum of the two wind farms. The electricity supplied to the grid will be calculated based on the monitoring data of the main meter and together with the data of the on-site meters of each wind farm.

$$EG_{\text{export}} = EG_{\text{total}} \frac{E_I}{E_I + E_{II}}$$

EG_{total} - the total electricity supplied to the grid by the two wind farms.

EG_{export} -the electricity supplied by the Project.

E_I - the reading records of the on-site meter installed in the 110kV output end of the Project.

E_{II} -the reading records of the on-site meter installed in the 110kV output end of another future wind farm.

To be conservative, the imported electricity measured by the main meter is considered as the electricity imported by the Project.

Monitoring of sustainable development indicators is not required for such Projects in China in the light of minor environmental impacts.



- ☞ Complying with **para.122/VVM**, Bureau Veritas Certification hereby confirms that the project participants are able to implement the monitoring plan.

3.9 Environmental Impacts

The validation team has ensured that the Environmental Impact Assessment was carried out by Hebei Province Engineering Consulting Institute in November 2007, and approved by the Environmental Protection Bureau of Hebei Province in April 2008. (Code No. JiHuanBiao[2008] 235#). (Ref-08)

The environmental impact results from the Project have been identified and analyzed in the PDD. By checking the EIA report the validation team is able to ensure that the environment impacts occurs mainly in the construction period due to waste water, dust and exhaust gas, noise pollution and solid waste. All above impacts would be within an acceptable limit by carrying out corresponding mitigation measures as per the statement of the EIA.

- ☞ Complying with **para.131/VVM**, Bureau Veritas Certification hereby confirms that the Project will not have any significant impacts on the environment by means of measures of pollution avoidance and control as well as ecological recovery.

3.10 Local Stakeholder consultation

In June 2008, the Project owner introduced the Project to local stakeholders and invited comments from the local stakeholders prior to the publication of the PDD on the UNFCCC website. The survey was conducted by distributing 50 copies of questionnaires and collecting responses made by the interviewee from Zhangbei County villagers and residents near the project area, and all 50 questionnaires were recovered. (Ref-27)

The survey shows that the proposed project has strong local support among the local people. They all believe the proposed project will promote the local economic development and agree the project construction. No negative comments received. The validation team interviewed the local stakeholders during the on-site visit of the validation process and received the consistent responses. Furthermore, the validation team also assessed the questionnaires answered by the stakeholders, and found the adequacy of the local stakeholder consultation.

- ☞ Complying with **para.128/VVM**, Bureau Veritas Certification hereby confirms that the local stakeholder consultation was performed, the Project will benefit to the local sustainable development without positively affect to the local stakeholders.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

According to the modalities for the Validation of CDM projects, the DOE shall make publicly available the project design document and receive, within 30 days, comments from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available. (Ref-11)

No comments were received during this period.



- ☞ Complying with **para.166/VVM**, Bureau Veritas Certification published the project documents on the UNFCCC CDM website on 27/11/2008 and invited comments within 26/12/2008 by Parties, stakeholders and non-governmental organizations.

5 VALIDATION OPINION

Bureau Veritas Certification has performed a validation of the CECIC Zhangbei Gaojialiang Wind farm Project in P.R.China. The validation was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

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

Project participant/s used the latest Tool for demonstration and assessment of additionality (version 05.2), Paragraph 54 of EB 38 and the “Guidance-Prior consideration” -Guidance on the demonstration and assessment of prior consideration of the CDM (version01) to demonstrate the additionality of the Project. In line with this tool, the PDD provides analysis of financial barriers to determine that the project activity itself is not the baseline scenario. The latest Tool to calculate the emission factor for an electricity system (version 01.1) is also applied to determine the emission factor of North China Power Grid.

By synthetic description of the project, the Project is likely to result in reductions of GHG emissions partially. An analysis of the financial barriers demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The review of the project design documentation (version 1.1) 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 project correctly applies and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.

The validation is based on the information made available to us and the engagement conditions detailed in this report.

6 REFERENCES

Category 1 Documents:

Documents provided by Type the name of the company that relates directly to the GHG components of the project.

Ref-1 PDD Version 1.0 dated 08/11/2008

Ref-2 PDD Version 1.1 dated 05/04/2009

Ref-3 Letter of Approval from DNA of China (Host country) dated 18/02/2009



- Ref-4 Letter of Approval from DNA of UK (Annex I party) dated 26/03/2009
- Ref-5 National Renewable Energy Law issued by NDRC of China effective from 01/01/2006.
http://www.windpower.org.cn/news/links/fl_2005_0510_02.htm
- Ref-6 Feasible Study Report (FSR) conducted by China Power Engineering Consulting Company in June 2008
- Ref-7 The FSR approval issued by Hebei Development & Reform Commission on 29/10/2008 (JiFa GaiNeng YuanHe Zi [2008] 135#)
- Ref-8 EIA report conducted by Hebei Province Engineering Consulting Institute In November 2007 and Approval issued by Environmental Protection Bureau of Hebei Province in April 2008 (Code: Ji Huan Biao [2008]235#)
- Ref-9 Public information of Letter of Approval issued by NDRC
<http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File2133.pdf>
- Ref-10 Notification on Determining Baseline Emission Factor of China's Grid dated on 18/07/2008.
<http://cdm.ccchina.gov.cn/web/NewsInfo.asp?NewsId=3239>
- Ref-11 The PDD Version 1.0 dated 08/11/2008 available for public comments (GSP) on 27/11/2008.
<https://cdm.unfccc.int/Projects/Validation/DB/FQP844X1S4VH9VPZABHP4M7XSVIHSZ/view.html>
- Ref-12 Notice on Strictly Prohibiting the Installation of Thermal Generators with the Capacity of 135MW or below issued by the General Office of the State Council, Decree No. 2002-6.
http://www.gov.cn/gongbao/content/2002/content_61480.htm
- Ref-13 Evidences of high Cost on Solar Generation
<http://finance.people.com.cn/GB/1038/59942/59949/6294546.html>
- Ref-14 Difficulty Faced by China Biomass Generation
http://www.sdpc.gov.cn/zjgx/t20071123_174054.htm
- Ref-15 Available Hydro Resources in China
<http://www.shuidianzhan.net/snzy/250.html>
- Ref-16 Data source of Benchmark (Interim Rules on Economic Assessment of Electrical Engineering Retrofit Projects)
- Ref-17 The Codes on Compiling Feasibility Study Report of Wind Farms issued by NDRC on 25/05/2005.
http://www.windpower.org.cn/news/links/js_2005_0508.htm
- Ref-18 IRR calculation spreadsheet of the Project
- Ref-19 Emission Factor calculation spreadsheet
- Ref-20 Document issued by NDRC on 03/12/2007, (Code: Fa Gai Jia Ge [2007] No. 3303)
http://www.gov.cn/zwgk/2008-02/19/content_892937.htm
- Ref-21 PP's Board Meeting Minutes made on 03/07/2008.
- Ref-22 Emission reduction purchase agreement signed (ERPA) with CRM on 28/09/2008
- Ref-23 WTG Purchase contract signed with Zhejiang Windey Wind Generating Engineering Co. Ltd. in January 2008
- Ref-24 Bulletin on 58th Meeting of National CDM Board issued by China's DNA.
<http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File2105.pdf>
- Ref-25 Permit of launch construction issued by the supervising entity on 30/11/2008.
- Ref-26 "Statistics of wind power installed capacity in China" conducted by Professor Shi Pengfei



Version 2006 dated 18/03/2007

<http://www.nwtc.cn/Article/UploadSoft/200605/20060508061645569.doc>

Version 2007 dated 28/02/2008

<http://www.gsec.gov.cn/ClassNews.asp?newsID=664>

Ref-27 Evidence of 50 pieces of stakeholder survey questionnaires

Ref-28 China Electricity Price executive report 2007 issued by State Electricity Regulatory Commission

http://www.dianliz.com/article/20081030/3032_2.html

Ref-29 GDP Growth Rate in 2008, Asia Develop Bank

http://www.jndpc.gov.cn/E_ReadNews.asp?NewsID=2351

Ref-30 Commodity Retail Price Index in 2008, National bureau of Statistics of China

http://www.stats.gov.cn/was40/gjtj_detail.jsp?searchword=%C9%CC%C6%B7%C1%E3%CA%DB%BC%DB%B8%F1%D6%B8%CA%FD&channelid=6697&record=7

Ref-31 Methodology and Calculation Standard of Budget Estimation on Feasibility Study Report of Wind Farm Project" issued by National Development and Reform Committee (NDRC)

http://www.windpower.org.cn/news/links/js_2005_0525_2.pdf

http://www.windpower.org.cn/news/links/js_2005_0525_3.pdf

Ref-32 GB/T18710-2002, "Assessment Method of Wind Resources of Windfarm"

Category 2 Documents:

Background documents related to the design and/or methodologies employed in the design or other reference documents.

- 01 ACM0002 version 09 valid from 27/02/2009
- 02 Validation and Verification Manual Version 01 dated 28/11/2008 EB 44th Annex 3
- 03 Tool to calculate the emission factor for an electricity system Version 01.1 dated 29/07/2008
- 04 Tool for demonstration and assessment of additionality Version 05.2 dated 26/08/2008
- 05 Guidance on the demonstration and assessment of prior consideration of the CDM Version 01 (Annex 46, EB 41st)
- 06 Paragraph 54 of EB 38th dated 14/03/2008.
- 07 Glossary of CDM terms Version.04.and paragraph.67 of EB 41st

Persons interviewed:

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

- /1/ Ms. Chen Dongjuan Manager of CECIC Wind Power (Zhangbei) Yunwei Co., Ltd.
- /2/ Mr. Zhu Hailei Project Manager of CRM
- /3/ Ms. Li Ning Project Manager of CRM
- /4/ Mr. Zhang Man Farmer lives nearby the Project.
- /5/ Ms. Zhao Xiaohui Farmer lives nearby the Project

**APPENDIX A: CDM PROJECT VALIDATION PROTOCOL****Table 1 Validation requirements based on the Validation and Verification Manual (EB44 Annex 3)**

CHECKLIST QUESTION	Ref.	§	comments		Draft Concl	Final Concl
1 Approval			COUNTRY A (China)	COUNTRY B (UK)		
1.1 Have all Parties involved approved the project activity?	VVM	44	Project participant from host party is: CECIC Wind Power (Zhangbei) Yunwei Co.,Ltd.(Host) CAR-1 Letter of Approval from China's DNA has not been presented yet.	Project participant from Annex I party is: Carbon Resource Management Ltd. CAR-2 Letter of Approval from UK's DNA has not been presented yet.	CAR-1 CAR-2	OK
1.2 Has the DNA of each Party indicated as being involved in the proposed CDM project activity in section A.3 of the PDD provided a written letter of approval? (If yes, provide the reference of the letter of approval, any supporting documentation, and specify if the letter was received from the project participant or directly from the DNA)	VVM	45	Pending close CAR-1	Pending close CAR-2	Pending	OK
1.3 Does the letter of approval from DNA of each Party involved:	VVM	45	Pending on CAR-1	Pending on CAR-2	Pending	OK



CHECKLIST QUESTION	Ref.	§	comments		Draft Concl	Final Concl
1.3.1 Confirm that the Party is a Party of the Kyoto Protocol?	VVM	45.a	P. R. China has ratified the Kyoto Protocol on 30/08/2002,	United Kingdom of Great Britain and Northern Ireland has ratified the Kyoto Protocol on 31/05/2002,	OK	OK
1.3.2 Confirm that participation is voluntary?	VVM	45.b	Pending on CAR-1	Pending on CAR-2	Pending	OK
1.3.3 Confirm that, in the case of the host Party, the proposed CDM project activity contributes to the sustainable development of the country?	VVM	45.c	Pending on CAR-1	Pending on CAR-2	Pending	OK
1.3.4 Refers to the precise proposed CDM project activity title in the PDD being submitted for registration?	VVM	45.d	Pending on CAR-1	Pending on CAR-2	Pending	OK
1.4 Is(are) the letter(s) of approval unconditional with respect to (1.3.1) to (1.3.4) above?	VVM	46	No. It is conditional in China	No. It is conditional in UK.	OK	OK
1.5 Has(ve) the letter(s) of approval been issued by the respective Party's designated national authority (DNA)?	VVM	47	China's DNA is NDRC	The Secretary of State for Energy and Climate Change	OK	OK
1.6 If there is doubt with respect to (1.5) above, was verified with the DNA that the letter of approval is valid for the proposed CDM project activity under validation?	VVM	47	Pending on CAR-1	Pending on CAR-2	Pending	OK
2 Participation						



CHECKLIST QUESTION	Ref.	§	comments		Draft Concl	Final Concl
2.1 Have all project participants been listed in a consistent manner in the project documentation?	VVM	51	Pending on CAR-1	Pending on CAR-2	Pending	OK
2.2 Has the participation of the project participants in the project activity been approved by a Party to the Kyoto Protocol?	VVM	51	Yes. Refer to http://maindb.unfccc.int/public/country.pl?country=CN	http://maindb.unfccc.int/public/country.pl?country=GB	OK	OK
2.3 Are the project participants listed in tabular form in section A.3 of the PDD?	VVM	52	Yes	Yes	OK	OK
2.4 Is the information in section A.3 consistent with the contact details provided in Annex 1 of the PDD?	VVM	52	Yes	Yes	OK	OK
2.5 Has the participation of each of the project participants been approved by at least one Party involved, either in a letter of approval or in a separate letter specifically to approve participation? (Provide reference of the approval document for each of the project participants)	VVM	52	Pending on CAR-1	Pending on CAR-2	Pending	OK
2.6 Are any entities other than those approved as project participants included in these sections of the PDD?	VVM	52	No.		OK	OK
2.7 Has the approval of participation issued from the relevant DNA?	VVM	53	Pending on CAR-1	Pending on CAR-2	Pending	OK
3 Project design document						



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
3.1 Is the PDD used as a basis for validation prepared in accordance with the latest template and guidance from the CDM Executive Board available on the UNFCCC CDM website?	VVM	55	Yes. Latest Version 03.2. per the GUIDELINES FOR COMPLETING CDM-PDD, CDM-NMB and CDM-NMM – Version 07 – 2 Aug, 2008	OK	OK
3.2 Is the PDD in accordance with the applicable CDM requirements for completing the PDD?	VVM	56	Yes	OK	OK
3.3 In CDM-PDD section A.1, are the following provided?	EB 41	Ann 12	Yes	OK	OK
3.3.1 Title of project	EB 41	Ann 12	CECIC Zhangbei Gaojialiang Wind farm Project	OK	OK
3.3.2 Current version number and date of document	EB 41	Ann 12	GSP Version number: 1.0, dated 08/11/2008 Final Version number: 1.1 dated 05/04/2009	OK	OK
3.4 In CDM-PDD section A.2, are following provided (max. one page)?	EB 41	Ann 12			



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
3.4.1 A brief description of the project activity covering purpose which includes the scenario existing prior to the start of project, present scenario and baseline scenario	EB 41 - VVM	Ann 12 - 58 59 60	Yes. The proposed CDM project activity is a newly –built large scale wind farm project. Thus the baseline scenario is the same with the scenario existing prior to the start of the project, viz. generation of electricity by grid connected power plants. The Project involves the installation of 66 wind turbines of 750kW, which amount to a total capacity of 49.5MW, and expected to supply 94,050MWh electricity power to the North China Power Grid (NCPG) annually.	OK	OK
3.4.2 Does the proposed CDM project activity involve the alteration of an existing installation or process?	VVM	63	No. It is a newly –built project.	OK	OK
3.4.3 Explanation on how the GHG emission reductions are effected	EB 41	Ann 12	Yes. To utilize the wind resource for power generation which will be delivered to the NCPG and displace the power from thermal power plants.	OK	OK
3.4.4 The PP's vies on the contribution of project activity to sustainable development	EB 41	Ann 12	Yes. The contribution to sustainable development is included in Section A.2 of the PDD has been checked against the approved FSR of the Project.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
3.5 In CDM-PDD section A.3, are following provided in the tabular format?					
3.5.1 List of project participants and parties	EB 41	Ann 12	Yes. The private entities involved in the project activity are listed at section A.3 of the PDD. Host Party (P.R.China): CECIC Wind Power (Zhangbei) Yunwei Co.,Ltd. Annex I Party (UK): Carbon Resource Management Ltd.	OK	OK
3.5.2 Identification of Host Party			Yes. P.R. China	OK	OK
3.5.3 Indication whether the Party wishes to be considered as project participant	EB 41	Ann 12	Not considered as PP.	OK	OK
3.6 In CDM-PDD section A.4.1, are following provided?	EB 41	Ann 12			
3.6.1 Technical description, location, host party(ies) and address as required	EB 41	Ann 12	Yes. Zhangbei County, Wulanchabu City Hebei Province, People's Republic of China, The turbines are manufactured by a domestic manufacture- Zhejiang Windey Wind Generating Engineering Co. Ltd.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
3.6.2 Detailed physical location with unique identification of the project activity (e.g. Longitude/latitude)	EB 41	Ann 12	Yes. The geographical coordinates is: East longitude 114°27'3.89" to 114°31'23.38" and North latitude 41°9'22.52" to 41 °13'35.76".	OK	OK
3.7 In CDM-PDD section A.4.2, is the list of categories of project activities provided?	EB 41	Ann 12	Scope 1: Energy Industries (renewable sources)	OK	OK
3.8 In CDM-PDD section A.4.3, are following provided?	EB 41	Ann 12			
3.8.1 A description of how environmentally safe and sound technology, and know-how, is transferred to the Host Party(ies)	EB 41	Ann 12	Yes. The technology reflects the current good practice in the host country. The turbines are considered good practice in China.	OK	OK
3.8.2 Explanation of purpose of project activity with scenario existing prior to the start of project, scope or present activities and the baseline scenario	EB 41	Ann 12	The project is a newly built wind farm. The baseline scenario is the same with the scenario existing prior to the start of the project, viz. generation of electricity by grid connected power plants.	OK	OK
3.8.3 List and arrangement of the main manufacturing/production technologies, systems and equipments involved	EB 41	Ann 12	Refer the specification listed in A.4.3. CL 1. Average lifetime of the equipments is required to be addressed.	CL 1	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
3.8.4 The emissions sources and GHGs involved	EB 41	Ann 12	Yes. To reduce greenhouse gas emissions of CO ₂ produced in fossil fuel fired power plants of NCPG.	OK	OK
3.9 In CDM-PDD section A.4.4, is the estimation of emission reductions provided as requested in a tabular format?	EB 41	Ann 12	7×3 renewable crediting periods were chosen; Annual emission reductions of 99,204tCO ₂ e are estimated for the first crediting period;	OK	OK
3.10 In CDM-PDD section A.4.5, is information regarding public funding provided?	EB 41	Ann 12	Yes. No public funding involved confirmed with the approved FSR	OK	OK
3.11 In CDM-PDD section B.1, are following provided?	EB 41	Ann 12			
3.11.1 The approved methodology and version number	EB 41	Ann 12	Yes. ACM0002 version 07 was applied in the PDD Version 1.0 dated 08/11/2008: “Consolidated methodology for grid-connected electricity generation from renewable sources” The ACM0002 version 09 was applied in the PDD Version 1.1 dated 05/04/2009	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
3.11.2 Any methodologies or tools which the above approved methodology draws upon and their version number	EB 41	Ann 12	Yes. "Tool for the Demonstration and Assessment of Additionality ver. 05.2" and "Tool to calculate the emission factor for an electricity system" ver. 01.1	OK	OK
3.12 In CDM-PDD section B.2, is justification of the choice of methodology that the project activity meets each of the applicability conditions provided?	EB 41	Ann 12	Yes	OK	OK
3.13 In CDM-PDD section B.3, are following provided?	EB 41	Ann 12			
3.13.1 Description of all sources and gases included in the project boundary in the table	EB 41	Ann 12	Yes. Only emission of CO2 is considered in baseline emission.	OK	OK
3.13.2 A flow diagram of the project boundary physically delineating the project activity	EB 41	Ann 12	Yes.	OK	OK
3.13.3 The flow diagram with all equipments, systems and flows of mass and energy etc	EB 41	Ann 12	Yes.	OK	OK
3.14 In CDM-PDD section B.4, are following provided?	EB 41	Ann 12			



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
3.14.1 Explanation how the most plausible baseline scenario is identified in accordance with the selected baseline methodology	EB 41	Ann 12	Not applicable, as methodology ACM0002 prescribes the baseline scenario and no further analysis required, therefore, there is no need to take steps to identify the baseline scenarios.	OK	OK
3.14.2 Justification of key assumptions and rationales	EB 41	Ann 12	Not applicable.	OK	OK
3.15 In CDM-PDD section B.5, are following provided?	EB 41	Ann 12			
3.15.1 Explanation of how and why this project activity is additional and therefore not the baseline scenario in accordance with the selected baseline methodology	EB 41	Ann 12	Yes. Investment analysis used for demonstration of the additionality.	OK	OK
3.15.2 Justification of key assumptions and rationales	EB 41	Ann 12	Yes.	OK	OK
3.15.3 Transparent illustration of all data used to determine the baseline scenario (variables, parameters, data sources etc)	EB 41	Ann 12	Yes. See PDD B.5, Step 2.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
3.15.4 Evidence that the incentive from the CDM was seriously considered in the decision to proceed with the project activity, if the starting date of the project activity is before the date of validation	EB 41	Ann 12	<p>The start date of the project activity is identified as 30/11/2008, the date of the launch construction. Then, in Jan. 2009 the PP signed WTG purchase contract. Therefore, the start date is after the date of PDD was published for GSP.</p> <p>CL 2.</p> <p>The detailed timeline is required to identify the start date of the project activity and the evidences of PP's formal decision to proceed with the investment in the project are required to be presented.</p>	GL-2	OK
3.16 In CDM-PDD section B.6.1, are following provided?	EB 41	Ann 12			
3.16.1 Explanation as to how the procedures, in the approved methodology to calculate project emissions, baseline emissions, leakage emissions and emission reductions are applied to the proposed project activity	EB 41	Ann 12	Complying with ACM0002, the "Tool to calculate the emission factor for an electricity system" ver. 01.1 is used. (referred to as "Tool-Grid EF" in the report)	OK	OK
3.16.2 Equations used in calculating emission reductions	EB 41	Ann 12	The equations of "Tool-Grid EF" are used.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
3.16.3 Explanation and justification for all relevant methodological choices, including different scenarios or cases, options and default values	EB 41	Ann 12	The official data of Chinese power grid issued by NDRC annually are used. (referred to as “Notification of China Grid EF” in the report)	OK	OK
3.17 In CDM-PDD section B.6.2, are following provided?	EB 41	Ann 12			
3.17.1 A compilation of information on the data and parameters that are not monitored throughout the crediting period but that are determined only once and thus remains fixed throughout the crediting period AND that are available when validation is undertaken	EB 41	Ann 12	Yes. Complying with “Tool-Grid EF”, the necessary official data of power grid made publically by NDRC are available and determined during validation.	OK	OK
3.17.2 Explanation and justification for the choice of the source of data	EB 41	Ann 12	The official data i.e. Notification of China Grid EF were based on the data of China Energy Statistical Yearbook and China Power Yearbook, and authorities’ expertise.	OK	OK
3.17.3 Clear and transparent references or additional documentation in Annex 3	EB 41	Ann 12	Yes.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
3.17.4 Where values have been measured, a description of the measurement methods and procedures (e.g. which standards have been used), indicated the responsible person/entity having undertaken the measurement, the date of measurement(s) and the measurement results	EB 41	Ann 12	It is not applicable in this case as the emission factor is determined ex-ante as per the options in ACM0002	OK	OK
3.18 In CDM-PDD section B.6.3, are following provided?	EB 41	Ann 12			
3.18.1 A transparent ex ante calculation of project emissions, baseline emissions (or, where applicable, direct calculation of emission reductions) and leakage emissions expected during the crediting period, applying all relevant equations provided in the approved methodology	EB 41	Ann 12	Yes. The calculation process is in line with the steps taken prescribed in "Tool-Grid EF" and addressed in PDD B.6.3 and Annex 3.	OK	OK
3.18.2 Documentation how each equation is applied, in a manner that enables the reader to reproduce the calculation	EB 41	Ann 12	Yes. The emission reduction calculation spreadsheet has been provided and checked.	OK	OK
3.18.3 Additional background information and or data in Annex 3, including relevant electronic files (i.e. spreadsheets)	EB 41	Ann 12	Yes. The calculation spreadsheet has been presented for re-produce.	OK	OK
3.19 In CDM-PDD section B.6.4 are, the results of the ex ante estimation of emission reductions for all years of the crediting period, provided in a tabular format?	EB 41	Ann 12	Yes. From 2009 to 2015 with year-wise data of emission reductions.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
3.20 In CDM-PDD section B.7.1, are following provided?	EB 41	Ann 12			
3.20.1 Specific information on how the data and parameters that need to be monitored would actually be collected during monitoring for the project activity	EB 41	Ann 12	Yes. EG _y : Net electricity supplied by the project activity to the grid.	OK	OK
3.20.2 For each parameter the following below information, using the table provided:	EB 41	Ann 12			
3.20.2.1 The source(s) of data that will be actually used for the proposed project activity (e.g. which exact national statistics). Where several sources may be used, explain and justify which data sources should be preferred.	EB 41	Ann 12	N/A No other outside source(s) of data should be used.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
3.20.2.2 Where data or parameters are supposed to be measured, specify the measurement methods and procedures, including a specification which accepted industry standards or national or international standards will be applied, which measurement equipment is used, how the measurement is undertaken, which calibration procedures are applied, what is the accuracy of the measurement method, who is the responsible person/entity that should undertake the measurements and what is the measurement interval; (i) A description of the QA/QC procedures (if any) that should be applied; (ii) Where relevant: any further comment. Provide any relevant further background documentation in Annex 4.	EB 41	Ann 12	According to the signed agreement of power connection with the grid company, the electricity supplied to the grid and the electricity imported from the grid will be measured by both of the main and backup metering system installed in Zhangbei 220kV sub-station (grid side). In addition to the electricity of the Project, the main meter will be shared by another registered CDM wind farm (Ref. no. 1855) as the figure shown in the PDD. So the meter readings recorded by the main meter should be the sum of the two wind farms. The electricity supplied to the grid will be calculated based on the monitoring data of the main meter and together with the data of the on-site meters of each wind farm. The data will be continuously measured with accuracy class no less than 0.5s.	OK	OK
3.21 In CDM-PDD section B.7.2, are following provided?	EB 41	Ann 12			
3.21.1 A detailed description of the monitoring plan	EB 41	Ann 12	Yes. The relevant details are addressed.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
3.21.2 The operational and management structure that the project operator will implement in order to monitor emission reductions and any leakage effects generated by the project activity	EB 41	Ann 12	Yes. No project emission and leakage need to be considered as per ACM0002.	OK	OK
3.21.3 The responsibilities for and institutional arrangements for data collection and archiving	EB 41	Ann 12	Yes. The structure covered from general management to meters recorder.	OK	OK
3.21.4 Indication that the monitoring plan reflect good monitoring practice appropriate to the type of project activity	EB 41	Ann 12	Yes Widely applied in power sector.	OK	OK
3.21.5 Relevant further background information in Annex 4	EB 41	Ann 12	Not addressed separately. Same to PDD Section B.7.2	OK	OK
3.22 In CDM-PDD section B.8, are following provided?	EB 41	Ann 12	Yes		
3.22.1 Date of completion of the application of the methodology to the project activity study in DD/MM/YYYY	EB 41	Ann 12	Yes Date of completion of the PDD Version 1.0 dated 08/11/2008. Date of completion of the PDD Version 1.1 dated 05/04/2009.	OK	OK
3.22.2 Contact information of the person(s)/entity(ies) responsible for the application of the baseline and monitoring methodology to the project activity	EB 41	Ann 12	Yes. Carbon Resource Management Ltd. (The consultant) is responsible for the application of baseline and monitoring methodology.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
3.22.3 Indication if the person/entity is also a project participant listed in Annex 1	EB 41	Ann 12	Yes. The person/entity is also the project participant (Annex I party)	OK	OK
3.23 In CDM-PDD section C.1.1, are following provided?	EB 41	Ann 12			
3.23.1 The starting date of a CDM project activity, which is the earliest of the date(s) on which the implementation or construction or real action of a project activity begins/has begun (EB33, Para 76/CDM Glossary of terms/EB41, Para 67)	EB 41	Ann 12	Pending CL-3	Pending	OK
3.23.2 A description of how this start date has been determined, and a description of the evidence available to support this start date	EB 41	Ann 12	Pending on CL-3	Pending	OK
3.23.3 If this starting date is earlier than the date of publication of the CDM-PDD for global stakeholder consultation by a DOE, description in Section B.5 contain a explanation of how the benefits of the CDM were seriously considered prior to the starting date (EB41, Para 67).	EB 41	Ann 12	Pending on CL-3	Pending	OK
3.24 In CDM-PDD section C.1.2, is the expected operational lifetime of the project activity in years and months provided?	EB 41	Ann 12	Yes. 20 years 0 month.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
3.25 In CDM-PDD section C.2, is it stated whether the project activity will use a renewable or a fixed crediting period and is C.2.1 or C.2.2 completed accordingly?	EB 41	Ann 12	Yes. A renewable crediting period is chosen and C.2.1 was completed accordingly.	OK	OK
3.26 In CDM-PDD section C.2.1, is it indicated that each crediting period shall be at most 7 years and may be renewed at most two times, provided that, for each renewal, a designated operational entity determines and informs the Executive Board that the original project baseline is still valid or has been updated taking account of new data where applicable?	EB 41	Ann 12	Yes. 3x7 years This baseline determination is for the first 7 years.	OK	OK
3.27 In CDM-PDD section C.2.1.1, are dates in the following format: (DD/MM/YYYY) provided?	EB 41	Ann 12	Yes. 01/07/2009.	OK	OK
3.28 In CDM-PDD section C.2.1.2, is the length of the first crediting period in years and months provided?	EB 41	Ann 12	Yes. 7 years and 0 month	OK	OK
3.29 In CDM-PDD section C.2.2, is the fixed crediting period at most ten (10) years provided?	EB 41	Ann 12	N/A.		
3.30 In CDM-PDD section C.2.2.1, are the dates provided in the following format: (DD/MM/YYYY)?	EB 41	Ann 12	N/A.		
3.31 In CDM-PDD section C.2.2.2, is the length of the crediting period in years and months provided?	EB 41	Ann 12	N/A.		



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
3.32 In CDM-PDD section D.2, are the conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the Host Party, if environmental impacts are considered significant by the project participants or the Host, provided?	EB 41	Ann 12	The conclusion stated. The support document has been provided during on-site assessment.	OK	OK
3.33 In CDM-PDD section E.1, are the following provided?	EB 41	Ann 12			
3.33.1 The process by which comments by local stakeholders have been invited and compiled. An invitation for comments by local stakeholders shall be made in an open and transparent manner, in a way that facilitates comments to be received from local stakeholders and allows for a reasonable time for comments to be submitted.	EB 41	Ann 12	Yes. Local villagers and residents in the area were interviewed by distributing questionnaires to household June 2008.	OK	OK
3.33.2 The project activity is described in a manner, which allows the local stakeholders to understand the project activity, taking into account confidentiality provisions of the CDM modalities and procedures.	EB 41	Ann 12	Yes. By distributing questionnaires	OK	OK
3.33.3 The local stakeholder process has been, completed before submitting the proposed project activity to the DOE for validation.	EB 41	Ann 12	Yes Completed in June 2008	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
3.34 In CDM-PDD section E.2, are following provided?	EB 41	Ann 12			
3.34.1 Identification of local stakeholders that have made comments	EB 41	Ann 12	Yes. Local villagers and residents in the area were interviewed.	OK	OK
3.34.2 A summary of these comments.	EB 41	Ann 12	Yes. See PDD Section E.2	OK	OK
3.35 In CDM-PDD section E.3 is the explanation of how due account have been taken of comments received from local stakeholders provided?	EB 41	Ann 12	Yes. The stakeholders are all supportive of the proposed project and to date there has been no need to modify the project design according to the comments received.	OK	OK
3.36 In CDM-PDD Annex 1, are the following provided?	EB 41	Ann 12			
3.36.1 Contact information of project participants	EB 41	Ann 12	Yes.	OK	OK
3.36.2 For each organisation listed in section A.3 the following mandatory fields: Organization, Name of contact person, Street, City, Postfix/ZIP, Country, Telephone and Fax or e-mail	EB 41	Ann 12	Yes.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
3.37 In CDM-PDD Annex 2, is information from Parties included in Annex I on sources of public funding for the project activity which shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties provided?	EB 41	Ann 12	Yes.	OK	OK
3.38 In CDM-PDD Annex 3, is the background information used in the application of the baseline methodology provided?	EB 41	Ann 12	Yes.	OK	OK
3.39 In CDM-PDD Annex 4, is the background information used in the application of the monitoring methodology provided?	EB 41	Ann 12	No. Refer to PDD Section B.7.2.	OK	OK
4 Baseline and monitoring methodology					
4.1 General requirement					
4.1.1 Is the baseline and monitoring methodologies selected by the project participants previously approved by the CDM Executive Board?	VVM	65	Refer to 4.2.1 below	OK	OK
4.1.2 Is the selected methodology applicable to the project activity?	VVM	66	Refer to 4.2. below	OK	OK
4.1.3 Had the selected methodology been correctly applied?	VVM	66	Refer to 4.2.3 below	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
4.1.4 Had the selected methodology been correctly applied with respect to project boundary?	VVM	67	Refer to 4.2 below	OK	OK
4.1.5 Had the selected methodology been correctly applied with respect to baseline identification?	VVM	67	Refer to 4.2 below	OK	OK
4.1.6 Had the selected methodology been correctly applied with respect to Algorithms and/or formulae used to determine emission reductions?	VVM	67	Refer to 4.5 below	OK	OK
4.1.7 Had the selected methodology been correctly applied with respect to additionality?	VVM	67	Yes.	OK	OK
4.2 Applicability of the selected methodology to the project activity					
4.2.1 Is the selected baseline and monitoring methodology, previously approved by the CDM Executive Board, applicable to the project activity?	VVM	68	Yes. ACM0002 version 07 Valid from 14/12/2007 to 04/12/2008 was applied in the PDD Version 1.0 dated 08/11/2008; ACM0002 version 09 valid from 27/02/2009 was applied in the PDD Version 1.1 dated 05/04/2009;	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
4.2.2 Is the methodology correctly quoted?	VVM	69	Yes. The Project fulfills the criteria of ACM0002 version 07 and version 09. The proposed project involves electricity capacity addition from wind sources; and The project is connected to the grid; and The proposed project does not involve switching from fossil fuels to renewable energy at the site of the project activity; and The geographic and system boundaries for the North China Power Grid (NCPG) can be clearly identified and information on the characteristics of the grid is available.	OK	OK
4.2.3 Are the applicability conditions of the methodology met?	VVM	70	Yes.	OK	OK
4.2.4 Is the project activity expected to result in emissions other than those allowed by the methodology?	VVM	70	No other emissions other than CO2 are identified.	OK	OK
4.2.5 Is the DOE, based on local and sectoral knowledge, aware that comparable information is available from sources other than that used in the PDD?	VVM	70	Yes. Public information has been checked and found the consistency.(Ref.9 of the report)	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
4.2.6 If yes, was the PDD cross checked against the other sources to confirm that the project activity meets the applicability conditions of the methodology? (provide the reference to these choices)	VVM	70	Yes.	OK	OK
4.2.7 Can a determination regarding the applicability of the selected methodology to the proposed CDM project activity be made?	VVM	71	Yes.	OK	OK
4.2.8 If no, clarification of the methodology was requested, in accordance with the guidance provided by the CDM Executive Board?	VVM	71	N/A	OK	OK
4.2.9 If answer to (4.B.c) above is "no", revision or deviation from the methodology was requested, in accordance with the guidance provided by the CDM Executive Board?	VVM	72	N/A	OK	OK
4.3 Project boundary					



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
4.3.1 Does the PDD correctly describe the project boundary, including the physical delineation of the proposed CDM project activity included within the project boundary for the purpose of calculating project and baseline emissions for the proposed CDM project activity?	VVM	77	Yes. In Section B.3 of the PDD, the Project boundary is clearly identified that includes the physical, geographical site of the project activity and all power plants connected physically to the NCPG that the project is connected to. And all emission sources and GHGs have been included in the project boundary.	OK	OK
4.3.2 Is the delineation in the PDD of the project boundary correct?	VVM	78	Yes, confirmed by cross-checking with official boundary definitions published by the China's DNA http://cdm.ccchina.gov.cn/english/NewsInfo.asp?NewsId=3406	OK	OK
4.3.3 Does the delineation in the PDD of the project boundary meet the requirements of the selected baseline?	VVM	78	Yes.	OK	OK
4.3.4 Have all sources and GHGs required by the methodology been included within the project boundary?	VVM	78	Yes. For wind power projects only CO ₂ emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
4.3.5 Does the methodology allow project participant to choose whether a source or gas is to be included within the project boundary?	VVM	78	Not applicable	OK	OK
4.3.6 If yes, have the project participants justified that choice?	VVM	78	Not applicable	OK	OK
4.3.7 If yes, is the justification provided reasonable? (provide reference to the supporting documented evidence provided by the project participants)	VVM	78	Not applicable	OK	OK
4.4 Baseline identification					
4.4.1 Does the PDD identify the baseline for the proposed CDM project activity, defined as the scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed CDM project activity?	VVM	80	Yes. The baseline scenario was clearly identified in PDD B.4. in accordance with ACM0002 that it is "generation of electricity by grid connected power plants".	OK	OK
4.4.2 Has any procedure contained in the methodology to identify the most reasonable baseline scenario, been correctly applied?	VVM	81	Not applicable, as methodology ACM0002 prescribes the baseline scenario and no further analysis required, therefore, it does not need to take steps to identify the baseline scenarios.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
4.4.3 Does the selected methodology require use of tools (such as the “Tool for the demonstration and assessment of additionality” and the “Combined tool to identify the baseline scenario and demonstrate additionality”) to establish the baseline scenario?	VVM	81	No.	OK	OK
4.4.4 If yes, was the methodology consulted on the application of these tools? (In such cases, the guidance in the methodology shall supersede the tool.)	VVM	81	N/A		
4.4.5 Does the methodology require several alternative scenarios to be considered in the identification of the most reasonable baseline scenario?	VVM	82	No. Refer to 4.4.2 above	OK	OK
4.4.6 If yes, are all scenarios that are considered by the project participants and are supplementary to those required by the methodology reasonable in the context of the proposed CDM project activity?	VVM	82	N/A.		
4.4.7 Has any unreasonable alternative scenario been excluded?	VVM	82	N/A.		
4.4.8 Are the documents and sources referred to in the PDD correctly quoted and interpreted?	VVM	83	Not applicable. There are no other documents and sources referred to in the PDD to identify the baseline scenario.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
4.4.9 Was the information provided in the PDD cross checked with other verifiable and credible sources, such as local expert opinion, if available? (identify the sources)	VVM	83	Yes. Cross-checked with national regulations and sectoral information that publically available.	OK	OK
4.4.10 Have all applicable CDM requirements been taken into account in the identification of the baseline scenario for the proposed CDM project activity?	VVM	84	N/A		
4.4.11 Have all relevant policies and circumstances been identified and correctly considered in the PDD, in accordance with the guidance by the CDM Executive Board?	VVM	84	N/A		
4.4.12 Does the PDD provide a verifiable description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed CDM project activity?	VVM	85	Yes. It is identified in the PDD B.4 that: the baseline scenario, according to methodology ACM0002, is the following: "Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the "Tool to calculate the emission factor for an	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
			electricity system"		
4.5 Algorithms and/or formulae used to determine emission reductions					
4.5.1 Do the steps taken and equations applied to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected baseline and monitoring?	VVM	88	Yes. Tool to calculate the emission factor for an electricity system is required to be used by ACM0002.	OK	OK
4.5.2 Have the equations and parameters in the PDD been correctly applied with respect those in the select approved methodology?	VVM	89	The steps and equations applied are consistent with the Tool and ACM0002.	OK	OK
4.5.3 Does the methodology provide for selection between different options for equations or parameters?	VVM	89	Yes. Options in Step 1, 2 and 3. are used for OM factor determination	OK	OK
4.5.4 If yes, has adequate justification been provided (based on the choice of the baseline scenario, context of the proposed CDM project activity and other evidence provided)?	VVM	89	Yes. The relevant justifications in Step 1, 2 and 3.	OK	OK
4.5.5 If yes, have correct equations and parameters been used, in accordance with the methodology selected?	VVM	89	Yes. CL 3. The determination of w_{OM} and w_{BM} should be specified.	CL 3	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
4.5.6 Will data and parameters be monitored throughout the crediting period of the proposed CDM project activity?	VVM	90	Not applicable as the emission factor is determined ex ante for the Project.	OK	OK
4.5.7 If no, and these data and parameters will remain fixed throughout the crediting period, are all data sources and assumptions:	VVM	90			
4.5.7.1 Appropriate and correct?	VVM	90	The data issued by China's DNA. However the web link stated in PDD Section B.6. is not the latest one available prior to the validation	CAR-3	OK
4.5.7.2 Applicable to the proposed CDM project activity?	VVM	90	Yes.	OK	OK
4.5.7.3 Resulting in a conservative estimate of the emission reductions?	VVM	90	Yes.	OK	OK
4.5.8 Will data and parameters be monitored on implementation and hence become available only after validation of the project activity?	VVM	90	Not applicable	OK	OK
4.5.9 If yes, are the estimates provided in the PDD for these data and parameters reasonable?	VVM	90	Not applicable	OK	OK
5 Additionality of a project activity					
5.1 General checklist for additionality					



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
5.1.1 Does the PDD describe how a proposed CDM project activity is additional?	VVM	93	Pending close out all Findings in this section.	Pending	OK
5.1.2 Does the CDM-PDD state the latest version of the additionality tool being used?	VVM	94	Yes. The approved "Tool for the Demonstration and Assessment of Additionality" version 05.2 is used.	OK	OK
5.1.3 Were the steps taken of the "Tool for the Demonstration and Assessment of Additionality" to assess additionality used:	EB 39	Ann 10	Yes. Step 1-identification of alternatives of the project activity, Step 2-Investment analysis (Step 3 -Barrier analysis was not used) Step 4-common practice analysis	OK	OK
5.1.3.1 Identification of alternatives to the project activity? (Step 1)	EB 39	Ann	Yes, all plausible and credible alternative scenarios have been identified in the PDD, including: Alternative a: The proposed project not undertaken as a CDM project; Alternative b: Thermal power plant with comparable capacity or electricity generation; Alternative c: Other renewable energy with comparable capacity or electricity generation; Alternative d: Continuation of the current	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
			situation: Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources.		
5.1.3.2 Investment analysis to determine that the proposed project activity is either: (1) not the most economically or financially attractive, or (2) not economically or financially feasible? (Step 2)	EB 39	Ann	Yes, (2) is used. The appropriate analysis method is clearly discussed and determined in the PDD. Option III (benchmark analysis) is chosen for investment analysis.	OK	OK
5.1.3.3 Barriers analysis?	EB 39	Ann 10	Not used.	OK	OK
5.1.3.4 Common practice analysis?	EB 39	Ann 10	Yes. The Project is located in Hebei Province. As projects of same type developed within the same region face a similar regulatory framework that makes them comparable. Therefore, activities similar to the Project should be wind farm located in Hebei Province with an installed capacity larger than 15MW which is the CDM definition of large scale.	OK	OK
5.1.4 In step 1 (i) have all the sub-steps as below been followed?	EB 39	Ann 10	Yes.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
5.1.4.1 Sub-step 1a: Define alternatives to the project activity	EB 39	Ann 10	Yes.	OK	OK
5.1.4.2 Sub-step 1b: Consistency with mandatory laws and regulations	EB 39	Ann 10	Yes.	OK	OK
5.1.5 Have the following alternatives been included while defining alternatives as per sub-step 1a?	EB 39	Ann 10	Yes.	OK	OK
5.1.5.1 (a) The proposed project activity undertaken without being registered as a CDM project activity;	EB 39	Ann 10	Yes. Refer to 5.1.3.1 above	OK	OK
5.1.5.2 (b) Other realistic and credible alternative scenario(s) to the proposed CDM project activity scenario that deliver outputs services or services with comparable quality, properties and application areas, taking into account, where relevant, examples of scenarios identified in the underlying methodology;	EB 39	Ann	Yes. Refer to 5.1.3.1 above.	OK	OK
5.1.5.3 (c) If applicable, continuation of the current situation (no project activity or other alternatives undertaken).	EB 39	Ann 10	Yes. Refer to 5.1.3.1 above.	OK	OK
5.1.6 Has the outcome of Step 1a: Identified realistic and credible alternative scenario(s) to the project activity done correctly? Please briefly mention the outcome.	EB 39	Ann	Yes. Alternative c is not a feasible alternative as per local geographical and/or economical environment.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
5.1.7 Is the alternative(s) in compliance with all mandatory applicable legal and regulatory requirements, even if these laws and regulations have objectives other than GHG reductions, e.g. to mitigate local air pollution.?	EB 39	Ann 10	Yes. Alternative b is prohibited by the current regulations in China: Notice on Strictly Prohibiting the Installation of Fuel fired Generators with the Capacity of 135MW or below issued by the General Office of the State Council, Decree No. 2002-6.(Ref.12) Consequently, alternative b is excluded.	OK	OK
5.1.8 If an alternative does not comply with all mandatory applicable legislation and regulations, has it been shown that, based on an examination of current practice in the country or region in which the law or regulation applies, those applicable legal or regulatory requirements are systematically not enforced and that noncompliance with those requirements is widespread in the country?	EB 39	Ann 10	Yes. Alternative b Thermal power plant with comparable capacity or electricity generation. is enforced and generally that noncompliance with those requirements is not appeared in the country.	OK	OK
5.1.9 Has the outcome of Step 1b: Identified realistic and credible alternative scenario(s) to the project activity that are in compliance with mandatory legislation and regulations taking into account the enforcement in the region or country and EB decisions on national and/or sectoral policies and regulations done correctly? Please state the outcome.	EB 39	Ann 10	Yes. Alternative b is not consistent with mandatory laws and regulations	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
5.1.10 Has PP selected Step 2 (Investment analysis) or Step 3 (Barrier analysis) or both Steps 2 and 3?	EB 39	Ann 10	Yes.	OK	OK
5.1.11 In step 2, have all the sub-steps as below been followed?	EB 39	Ann 10	Yes.	OK	OK
5.1.11.1 Sub-step 2a: Determine appropriate analysis method;	EB 39	Ann 10	Yes. The three analysis methods suggested by Tools for the demonstration and assessment of additionality are simple cost analysis (Option I), investment comparison analysis (Option II) and benchmark analysis (Option III)	OK	OK
5.1.11.2 Sub-step 2b: Option I. Apply simple cost analysis;	EB 39	Ann 10	It is considered not applicable to the Project	OK	OK
5.1.11.3 Sub-step 2b: Option II. Apply investment comparison analysis;	EB 39	Ann 10	It is considered not applicable to the Project	OK	OK
5.1.11.4 Sub-step 2b: Option III. Apply benchmark analysis;	EB 39	Ann 10	Yes. The benchmark analysis method based on Project IRR is chosen.	OK	OK
5.1.11.5 Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III);	EB 39	Ann 10	Yes.	OK	OK
5.1.11.6 Sub-step 2d: Sensitivity analysis (only applicable to Options II and III).	EB 39	Ann 10	Yes.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
5.1.12 In sub-step 2a has the determination of appropriate method of analysis done as per the guidance as below?	EB 39	Ann 10	Yes.	OK	OK
5.1.12.1 Simple cost analysis if the CDM project activity and the alternatives identified in Step 1 generate no financial or economic benefits other than CDM related income (Option I).	EB 39	Ann 10	Yes. Excluded as the proposed project activity generates financial benefits by the sales of electricity other than CER revenue.	OK	OK
5.1.12.2 Otherwise, use the investment comparison analysis (Option II) or the benchmark analysis (Option III). Specify option used with justification.	EB 39	Ann 10	Yes. The baseline scenario of the Project is the supply of electricity from a grid rather than a new investment project. Thus the Option III is chosen.	OK	OK
5.1.13 Has the below guideline followed for sub-step 2b Option I. Apply simple cost analysis? Document the costs associated with the CDM project activity and the alternatives identified in Step1 and demonstrate that there is at least one alternative which is less costly than the project activity.	EB 39	Ann 10	Not applicable.	OK	OK
5.1.14 Has the below guideline followed for sub-step 2b Option II. Apply investment comparison analysis? Identify the financial indicator, such as IRR, NPV, cost benefit ratio, or unit cost of service most suitable for the project type and decision-making context. Please specify	EB 39	Ann 10	Not applicable.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
5.1.15 Has the below guideline followed for Sub-step 2b: Option III. Apply benchmark analysis?	EB 39	Ann 10		OK	OK
5.1.15.1 Identify the financial/economic indicator, such as IRR, most suitable for the project type and decision context.	EB 39	Ann 10	Yes. IRR was identified as the financial indicator.	OK	OK
5.1.15.2 When applying Option II or Option III, the financial/economic analysis shall be based on parameters that are standard in the market, considering the specific characteristics of the project type, but not linked to the subjective profitability expectation or risk profile of a particular project developer. Only in the particular case where the project activity can be implemented by the project participant, the specific financial/economic situation of the company undertaking the project activity can be considered.	EB 39	Ann 10	Yes.	OK	OK
5.1.15.3 Discount rates and benchmarks shall be derived from: (a) Government bond rates, increased by a suitable risk premium to reflect private investment and/or the project type, as substantiated by an independent (financial) expert or documented by official publicly available financial data; (b) Estimates of the cost of financing and required return on capital (e.g. commercial	EB 39	Ann 10	Yes. Derived from (d) With reference to Interim Rules on Economic Assessment of Electrical Engineering Retrofit Projects, the financial benchmark IRR of Chinese electric power industry is 8% on project, which has been used widely in feasibility studies of new power plants, including wind power	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
lending rates and guarantees required for the country and the type of project activity concerned), based on bankers views and private equity investors/funds' required return on comparable projects; (c) A company internal benchmark (weighted average capital cost of the company), only in the particular case referred to above in 2. The project developers shall demonstrate that this benchmark has been consistently used in the past, i.e. that project activities under similar conditions developed by the same company used the same benchmark; (d) Government/official approved benchmark where such benchmarks are used for investment decisions; (e) Any other indicators, if the project participants can demonstrate that the above Options are not applicable and their indicator is appropriately justified. Please specify benchmark and justify.			projects in China.		
5.1.16 Has the below guideline followed for Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III)?	EB 39	Ann 10	Yes.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
5.1.16.1 Calculate the suitable financial indicator for the proposed CDM project activity and, in the case of Option II above, for the other alternatives. Include all relevant costs (including, for example, the investment cost, the operations and maintenance costs), and revenues (excluding CER revenues, but possibly including inter alia subsidies/fiscal incentives, ODA, etc, where applicable), and, as appropriate, non-market cost and benefits in the case of public investors if this is standard practice for the selection of public investments in the host country.	EB 39	Ann 10	Yes.	OK	OK
5.1.16.2 Present the investment analysis in a transparent manner and provide all the relevant assumptions, preferably in the CDM-PDD, or in separate annexes to the CDM-PDD.	EB 39	Ann 10	Yes. IRR calculation spread sheet has been provided. CL 4. The fair value rate is 9%, a clarification is required.	GL-4	OK
5.1.16.3 Justify and/or cite assumptions.	EB 39	Ann 10	Yes. All indicators are sourced from the approved FSR.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
5.1.16.4 In calculating the financial/economic indicator, the project's risks can be included through the cash flow pattern, subject to project-specific expectations and assumptions.	EB 39	Ann 10	Yes. Relevant costs are included.	OK	OK
5.1.16.5 Assumptions and input data for the investment analysis shall not differ across the project activity and its alternatives, unless differences can be well substantiated.	EB 39	Ann 10	Not applicable as Option III is used.	OK	OK
5.1.16.6 Present in the CDM-PDD a clear comparison of the financial indicator for the proposed CDM activity. Please specify details for above.	EB 39	Ann 10	Yes. 5.47% VS benchmark of 8% in PDD Version 1.0 dated 08/11/2008	OK	OK
5.1.17 Has the below guideline followed for Sub-step 2d: Sensitivity analysis (only applicable to Options II and III)? Include a sensitivity analysis that shows whether the conclusion regarding the financial/economic attractiveness is robust to reasonable variations in the critical assumptions.	EB 39	Ann 10	Yes. Four main variable factors are identified for sensitivity analysis of the project, including Total investment, annual O&M costs, tariff, and annual supplied power with a variation range from -10% ~ +10%.	OK	OK
5.1.18 Has the outcome of Step 2 clearly mentioned with justification?	EB 39	Ann 10	Yes. The proposed project is not financially feasible without the revenue of CERs.	OK	OK
5.1.19 In step 4: Common practice analysis has all the sub-steps as below followed?	EB 39	Ann 10		OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
5.1.19.1 Sub-step 4a: Analyze other activities similar to the proposed project activity;	EB 39	Ann 10	Yes. Shangyi Damanjing and Chengde Hongsong wind farms are identified for analysis.	OK	OK
5.1.19.2 Sub-step 4b: Discuss any similar Options that are occurring.	EB 39	Ann 10	Yes.	OK	OK
5.1.20 Has the below guideline followed for Sub-step 4a: Analyze other activities similar to the proposed project activity? Provide an analysis of any other activities that are operational and that are similar to the proposed project activity. Other CDM project activities are not to be included in this analysis. Provide documented evidence and, where relevant, quantitative information. On the basis of that analysis, describe whether and to which extent similar activities have already diffused in the relevant region.	EB 39	Ann 10	Yes. The Criteria used is that: Technology or industry type: wind farms; Geographical scope: in Hebei Province; Capacity / scale: the installed capacity larger than 15MW	OK	OK
5.1.21 Has the below guideline followed for Sub-step 4b: Discuss any similar Options that are occurring? If similar activities are identified, then it is necessary to demonstrate why the existence of these activities does not contradict the claim that the proposed project activity is financially/economically unattractive or subject to barriers. This can be done	EB 39	Ann 10	Yes. The two wind farms were enjoyed the benefits from the carbon funding that rendered it financially attractive, CL 5. The latest statistics of wind power project	GL-5	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
by comparing the proposed project activity to the other similar activities, and pointing out and explaining essential distinctions between them that explain why the similar activities enjoyed certain benefits that rendered it financially/economically attractive (e.g., subsidies or other financial flows) and which the proposed project activity cannot use or did not face the barriers to which the proposed project activity is subject. In case similar projects are not accessible, the PDD should include justification about non-accessibility of data/information.			of 2007 should be used.		
5.1.22 Has the outcome from Step 4 clearly mentioned in PDD?	EB 39	Ann 10	Pending on CL 5	Pending	
5.1.23 Has it been proved that the project is additional?	EB 39	Ann 10	Yes.	OK	OK
5.2 Prior consideration of the clean development mechanism					
5.2.1 Is the project activity start date prior to the date of publication of the PDD for stakeholder comments?	VVM	96	No. The start date is 30/11/2008 (Launch construction) which was confirmed by check relevant evidences, after the date of publication of the PDD for stakeholder comments on 27/11/2008.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
5.2.2 If yes, were the CDM benefits considered necessary in the decision to undertake the project as a proposed CDM project activity?	VVM	96	Not applicable.		
5.2.3 Is the start date of the project activity, reported in the PDD, in accordance with the "Glossary of CDM terms", which states that "The starting date of a CDM project activity is the earliest date at which either the implementation or construction or real action of a project activity begins"?	VVM	97	Pending on CL 2.	Pending	OK
5.2.4 Does the project activity require construction, retrofit or other modifications?	VVM	97	Yes, the project activity requires construction.	OK	OK
5.2.5 If yes, is it ensured that the date of commissioning cannot be considered as the project activity start date?	VVM	97	Yes, the date of commissioning will not be considered as the project activity start date as the PP identified the date of the launch of construction as the start date in the PDD.	OK	OK
5.2.6 Is it a new project activity (project activities with starting date on or after 02 August 2008) or an existing project activity (project activities with a start date before 02 August 2008)?	VVM	98	It is new project activity	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
5.2.7 For a new project, for which PDD has not been published for global stakeholder consultation or a new methodology proposed to the Executive Board before the project activity start date, had the PP informed the Host Party DNA and/or the UNFCCC secretariat in writing of the commencement of the project activity and of their intention to seek CDM status? (Provide reference to such confirmation from Host Party DNA and/or UNFCCC secretariat).	VVM	99	Such notification is not necessary as the PDD has been published for global stakeholder before the project activity start date.	OK	OK
5.2.8 For an existing project activity, for which the start date is prior to the date of publication of the PDD for global stakeholder consultation, are the following evidences provided:	VVM	100	Even though the Project is a new project, the PP has provided relative evidences to prove that the CDM revenue has been seriously considered during the investment decision, as follow.	OK	OK
5.2.8.1 evidence that must indicate that awareness of the CDM prior to the project activity start date, and that the benefits of the CDM were a decisive factor in the decision to proceed with the project, including, inter alia:	VVM	100	Yes.	OK	OK
5.2.8.1.1 Minutes and/or notes related to the consideration of the decision by the Board of Directors, or equivalent, of the project participant, to undertake the project as a proposed CDM project activity?			Yes, the board meeting minute has been provided and checked during on-site visit.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
5.2.8.2 Reliable evidence from project participants that must indicate that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation, including, inter alia:	VVM	100	Yes.	OK	OK
5.2.8.2.1 Contract with consultants for CDM/PDD/methodology services?	VVM	100	Yes. The signed CERs Emission Reduction Purchase Agreement with CRM included consultants services has been provided and checked during on-site visit.	OK	OK
5.2.8.2.2 Emission Reduction Purchase Agreements or other documentation related to the sale of the potential CERs (including correspondence with multilateral financial institutions or carbon funds)?	VVM	100	Yes. Emission Reduction Purchase Agreement was signed with CRM on 28/09/2008	OK	OK
5.2.8.2.3 Evidence of agreements or negotiations with a DOE for validation services?	VVM	100	Yes. Kept by Bureau Veritas Certification.	OK	OK
5.2.8.2.4 Submission of a new methodology to the CDM Executive Board?	VVM	100	Not applicable		
5.2.8.2.5 Publication in newspaper?	VVM	100	Not applicable		



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
5.2.8.2.6 Interviews with DNA?	VVM	100	Yes. Bulletin on 58 th Meeting of National CDM Board issued by China's DNA. http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File2105.pdf	OK	OK
5.2.8.2.7 Earlier correspondence on the project with the DNA or the UNFCCC secretariat?	VVM	100	Not applicable		
5.3 Identification of alternatives					
5.3.1 Does the approved methodology that is selected by the proposed CDM project activity prescribe the baseline scenario and hence no further analysis is required?	VVM	103	Yes. Refer to 4.4.1	OK	OK
5.3.2 If no, does the PDD identify credible alternatives to the project activity in order to determine the most realistic baseline scenario?	VVM	103	Not applicable		
5.3.3 Does the list of alternatives given in the PDD ensure that:	VVM	104	Yes.	OK	OK
5.3.3.1 The list of alternatives includes as one of the options that the project activity is undertaken without being registered as a proposed CDM project activity?	VVM	104	Yes. Refer to 5.1.3.1 above	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
5.3.3.2 The list contains all plausible alternatives that the DOE, on the basis of its local and sectoral knowledge, considers to be viable means of supplying the outputs or services that are to be supplied by the proposed CDM project activity?	VVM	104	Yes. Refer to 5.1.3.1 above	OK	OK
5.3.3.3 The alternatives comply with all applicable and enforced legislation?	VVM	104	Yes. Refer to 5.1.3 above	OK	OK
5.4 Investment analysis					
5.4.1 Has investment analysis been used to demonstrate the additionality of the proposed CDM project activity?	VVM	106	Yes.	OK	OK
5.4.2 If yes, does the PDD provide evidence that the proposed CDM project activity would not be:	VVM	106			
5.4.2.1 The most economically or financially attractive alternative?	VVM	106	Not applied.		
5.4.2.2 Economically or financially feasible, without the revenue from the sale of certified emission reductions (CERs)?	VVM	106	Yes. Concluded based on the IRR calculation (5.47% less than the benchmark of 8%) and Emission Reduction Purchase Agreement. The input values are sourced from the approved FSR.	OK	OK
5.4.3 Was this shown by one of the following approaches?	VVM	107	Yes.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
5.4.3.1 Demonstrate that the proposed CDM project activity would produce no financial or economic benefits other than CDM-related income. Document the costs associated with the proposed CDM project activity and the alternatives identified and demonstrate that there is at least one alternative which is less costly than the proposed CDM project activity.	VVM	107	Not applicable.		
5.4.3.2 The proposed CDM project activity is less economically or financially attractive than at least one other credible and realistic alternative.	VVM	107	Not applicable.		
5.4.3.3 The financial returns of the proposed CDM project activity would be insufficient to justify the required investment.	VVM	107	Yes.	OK	OK
5.4.4 Is the period of assessment limited to the proposed crediting period of the CDM project activity?	EB 41	Ann 45	No. The period of assessment is lifetime of the equipments which is 20 years, shorter than the crediting period of the Project.	OK	OK
5.4.5 Does the project IRR and equity IRR calculations reflect the period of expected operation of the underlying project activity (technical lifetime), or - if a shorter period is chosen - include the fair value of the project activity assets at the end of the assessment period?	EB 41	Ann 45	1 year for construction period and 20 years for operation period per the approved FSR. The operation period 20 years is widely applied in Chinese wind Power Sector.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
5.4.6 Does the IRR calculation include the cost of major maintenance and/or rehabilitation if these are expected to be incurred during the period of assessment?	EB 41	Ann 45	Yes.	OK	OK
5.4.7 Do the project participants justify the appropriateness of the period of assessment in the context of the underlying project activity, without reference to the proposed CDM crediting period?	EB 41	Ann 45	Yes. The 20 years used in the PDD is reasonable according to "Tool for the demonstration and assessment of additionality" version 05.2.	OK	OK
5.4.8 Does the cash flow in the final year include a fair value of the project activity assets at the end of the assessment period?	EB 41	Ann 45	Yes.	OK	OK
5.4.9 Has the fair value been calculated in accordance with local accounting regulations where available, or international best practice?	EB 41	Ann 45	Refer to CL 4	Pending	OK
5.4.10 Was a thorough assessment of all parameters and assumptions used in calculating the relevant financial indicator, and determine the accuracy and suitability of these parameters using the available evidence and expertise in relevant accounting practices conducted?	VVM	109	Yes. 1. The total investment of the proposed project is impossible to be decreased by over 10% which is cross-checked by reviewing the contract value of WTG. 2. The historical wind resources are measured by the Zhangbei Observatory which is one of the basic observatories of China established in 1955 and the data is	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
			reliable. 3. The further supporting evidences, i.e. document issued by NDRC on 03/12/2007 (Code: Fa Gai Jia Ge [2007] No.3303), indicate that the government guiding tariff for projects in Hebei Province is 0.54CNY/kWh, which is also used in the FSR of the project and the PDD, in the first 30,000 hours of its operation, and after the 30,000 hours, the tariff will be average tariff in the same region, currently it is 0.3453CNY/kWh, which is 40% lower than the government guiding tariff of the proposed project. Therefore, the PP adopt the tariff of 0.54CNY/kWh in the FSR is reasonable and conservative.		
5.4.11 Were the parameters cross-checked against third-party or publicly available sources, such as invoices or price indices?	VVM	109	Yes. Refer to 5.4.10 above.	OK	OK
5.4.12 Were feasibility reports, public announcements and annual financial reports related to the proposed CDM project activity and the project participants reviewed?	VVM	109	The FSR provided has been reviewed	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
5.4.13 Was the correctness of computations carried out and documented by the project participants assessed?	VVM	109	Yes	OK	OK
5.4.14 Was the sensitivity analysis by the project participants to determine under what conditions variations in the result would occur and the likelihood of these conditions assessed?	VVM	109	No. CL 6. A further elaboration in the PDD to show whether the variables will exceed -10% or +10% so as to the IRR of the project could reach the benchmark is required.	CL-6	OK
5.4.15 To determine this, was it assessed whether it is reasonable to assume that no investment would be made at a rate of return lower than the benchmark by:	VVM	110			
5.4.15.1 Assessing previous investment decisions by the project participants involved?	VVM	110	Yes.	OK	OK
5.4.15.2 Determining whether the same benchmark has been applied?	VVM	110	The benchmark of 8% is widely used for wind power projects similar to the Project in China.	OK	OK
5.4.15.3 Determining if there are verifiable circumstances that have led to a change in the benchmark?	VVM	110	No other benchmark rate can be applied in China power sector.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
5.4.16 Did the project participants rely on values from Feasibility Study Reports (FSR) that are approved by national authorities for proposed project activities?	VVM	111	Yes. The input values are sourced from the FSR which was approved by the local government.	OK	OK
5.4.17 If yes: (EB38 para.54)	VVM	111			
5.4.17.1 has the FSR been the basis of the decision to proceed with the investment in the project, i.e. that the period of time between the finalization of the FSR and the investment decision is sufficiently short for the DOE to confirm that it is unlikely in the context of the underlying project activity that the input values would have materially changed?	VVM	111	Yes, as interviewed, the PP's final decision to proceed with the investment in the Project has been made based on the FSR conducted by China Power Engineering Consulting Company in Jun.2008. After the FSR was approved by local DRC on 29/10/2008, the PP signed the WTG purchase contract with the supplier in Jan.2009. Validation team was therefore confident that it is unlikely in the context of the underlying project activity that the input values would have materially changed.	OK	OK
5.4.17.2 Are the values used in the PDD and associated annexes fully consistent with the FSR? If not, was the appropriateness of the values validated?	VVM	111	All parameters used in the PDD are fully consistent with the FSR.	OK	OK
5.4.17.3 On the basis of its specific local and sectoral expertise, is confirmation provided, by cross-checking or other appropriate manner, that	VVM	111	The WTG purchase contract has been checked and found the actual cost of the WTG is little higher than those estimated in		OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
the input values from the FSR are valid and applicable at the time of the investment decision?			<p>the FSR. The construction contract has not been signed yet.</p> <p>Document issued by NDRC on 03/12/2007 (Code: Fa Gai Jia Ge [2007] No.3303) have been checked and confirmed that the government guiding tariff for projects in Hebei Province is 0.54CNY/kWh, which is also used in the FSR of the project and the PDD,,for the first 30,000 hours of its generation, after that, the tariff will be down to the average tariff in the same region, currently it is 0.3453 CNY/kWh (incl. VAT). Therefore, the PDD used 0.54CNY/kWh (incl. VAT) in the FSR is reasonable and conservative.</p> <p>CL-7</p> <p>The procedure for determining the annual supplied electricity of 94,050MWh is not described clearly.</p> <p>The value of Average Annual O&M Cost was studied based on the “Codes on Compiling Feasibility Study Report of Wind Farms” issued by NDRC on 25/05/2005.</p>	CL-7	



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
			Similarly to the investment the Project, the actual costs spent on the operation of the Project is unlikely to be less than the values used in the FSR. Those values of various taxes are defined per the taxation rules conducted by local government		
5.5 Barrier analysis					
5.5.1 Has barrier analysis been used to demonstrate the additionality of the proposed CDM project activity?	VVM	113	Not applied in the PDD.	OK	OK
5.6 Common practice analysis					
5.6.1 Is this a large-scale or first-of-its kind small-scale project activity?	VVM	117	It is a large-scale project activity.	OK	OK
5.6.2 If yes, was common practice analysis carried out as a credibility check of the other available evidence used by the project participants to demonstrate additionality?	VVM	117	Yes.	OK	OK
5.6.3 Was it assessed whether the geographical scope (e.g. defined region) of the common practice analysis is appropriate for the assessment of common practice related to the project activity's technology or industry type? (For certain	VVM	118	Yes. The Project is located in Hebei Province. As projects of same type developed within the same region face a similar regulatory framework that makes them comparable.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
technologies the relevant region for assessment will be local and for others it may be trans-national /global.)			Therefore, activities similar to the Project should be wind farm located in Hebei Province.		
5.6.4 Was a region other than the entire host country chosen?	VVM	118	Yes. Hebei Province	OK	OK
5.6.5 If yes, was the explanation why this region is more appropriate assessed?	VVM	118	Yes. In China, the regulatory framework and investment climate for wind farm projects are only similar and comparable in the same Province/Autonomous Region. Wind farm project proposals are approved by the provincial DRC.	OK	OK
5.6.6 Using official sources and local and industry expertise, was it determined to what extent similar and operational projects (e.g., using similar technology or practice), other than CDM project activities, and have been undertaken in the defined region?	VVM	118	Two similar projects as PDD listed were identified in Hebei Province and based on the statistics of installed capacity of wind power in China in 2006, collated by Professor Shi Pengfei. Pending on CL 5.	Pending	OK
5.6.7 Are similar and operational projects, other than CDM project activities, already" widely observed and commonly carried out" in the defined region?	VVM	118	Not found through this analysis. As the public information presents, the two similar projects, "Shangyi Damanjing with 50.1MW" and "Chengde Hongsong with 34.5MW", They are not common practice as enjoyed the benefits from the carbon	Pending	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
			funding that rendered it financially attractive. Pending on CL 5		
5.6.8 If yes, was it assessed whether there are essential distinctions between the proposed CDM project activity and the other similar activities?	VVM	118	Pending on CL 5	Pending	OK
6 Monitoring plan					
6.1 Does the PDD include a monitoring plan?	VVM	120	Yes.	OK	OK
6.2 Is this monitoring plan based on the approved monitoring methodology applied to the proposed CDM project activity?	VVM	120	Yes.	OK	OK
6.3 Was the list of parameters required by the selected methodology identified?	VVM	121	Yes.	OK	OK
6.4 Does the monitoring plan contain all necessary parameters?	VVM	121	Yes. Only the quantity of annual net electricity delivered to the grid by the proposed project (EG _y) is required by the ACM0002 and it has been included in the MP.	OK	OK
6.5 Are the parameters clearly described?	VVM	121	Yes EG _y is the quantity of annual net electricity delivered to the grid by the Project.	OK	OK
6.6 Do the means of monitoring described in the plan comply with the requirements of the methodology?	VVM	121	Yes.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
6.7 Specific questions per methodology regarding parameters.			Yes. The electricity will be continuously measured and monthly recorded, commercial receipts will be kept for cross-check CL-8 The relevant procedures for cross checking the readings is not described	CL-8	OK
6.8 Are the monitoring arrangements described in the monitoring plan feasible within the project design?	VVM	121	Yes. In line with local practices in power sector	OK	OK
6.9 Are the following means of implementation of the monitoring plan sufficient to ensure that the emission reductions achieved by/resulting from the proposed CDM project activity can be reported ex post and verified:	VVM	121	Yes.	OK	OK
6.9.1 Data management procedures?	VVM	121	Yes. The procedures are appropriate and practicable.	OK	OK
6.9.2 Quality assurance procedures?	VVM	121	Yes. The procedures are appropriate and practicable.	OK	OK
6.9.3 Quality control procedures?	VVM	121	Yes. The procedures are appropriate and practicable.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
7 Sustainable development					
7.1 Does the CDM project activity assists Parties not included in Annex I to the Convention in achieving sustainable development?	VVM	123	Pending close out above CAR-1,CAR-2	Pending	OK
7.2 Does the letter of approval by the DNA of the host Party confirm the contribution of the proposed CDM project activity to the sustainable development of the host Party?	VVM	124	Pending close out above CAR-1,CAR-2	Pending	OK
8 Local stakeholder consultation					
8.1 Were local stakeholders (public, including individuals, groups or communities affected, of likely to be affected, by the proposed CDM project activity or actions leading to the implementation of such an activity) invited by the PPs to comment on the proposed CDM project activity prior to the publication of the PDD on the UNFCCC website?	VVM	126	Yes. The local stakeholders including local villagers and residents in the area, 50 pieces of questionnaires were distributed in Jan. 2008 and all of them were returned. The stakeholder consulting is prior to the publication of the PDD on the UNFCCC website.	OK	OK
8.2 Have comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity been invited?	VVM	127	Yes. The stakeholders are all supportive of the proposed project and to date there has been no need to modify the project design according to the comments received.	OK	OK



CHECKLIST QUESTION	Ref.	§	comments	Draft Concl	Final Concl
8.3 Is the summary of the comments received as provided in the PDD complete?	VVM	127	Yes. Sampled questionnaires have been cross-checked with the description in the PDD section E. 2.	OK	OK
8.4 Have the project participants taken due account of any comments received and described this process in the PDD?	VVM	127	Yes. PDD section E.3. The stakeholders are all supportive of the proposed project and to date there has been no need to modify the project design according to the comments received.	OK	OK
9 Environmental impacts					
9.1 Have the project participants submitted documentation on the analysis of the environmental impacts of the project activity?	VVM	129	Yes. EIA and its approval made by local EPA are presented.	OK	OK
9.2 Have the project participants undertaken an analysis of environmental impacts?	VVM	130	Yes. EIA worked out by Hebei Province Engineering Consulting Institute in January 2008.	OK	OK
9.3 Does the host Party require an environmental impact assessment?	VVM	130	Yes.	OK	OK
9.4 If yes, have the environmental impact assessment approved by local government?	VVM	130	Yes. Approved by Environmental Protection Bureau of Hebei Province in April 2008.	OK	OK

Table 2 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests	Ref. in table 1	Summary of project owner response	Validation team conclusion
CAR-1 Letter of Approval from China's DNA has not been presented yet.	1.1	LoA of China has been provided to DOE.	Letter of Approval from DNA of China (Host country) dated 18/02/2009 has been provided and found reliable; hence CAR-1 closed.
CAR-2 Letter of Approval from UK's DNA has not been presented yet.	1.1	LoA of UK has been provided to DOE.	Letter of Approval from DNA of UK (Annex I party) dated 26/03/2009 has been provided and found reliable; hence CAR-2 closed.
CAR-3 Please correct the web link stated in PDD Section B.6.	4.5.7.1	The web link of grid emission factor issued by China's DNA has been updated to 18/07/2008 prior to the validation.	The official data is the latest one available prior to the validation, hence CAR-3 closed.
CL-1 Average lifetime of the equipments is required to be addressed.	3.8.3	Revised in the updated PDD. Average lifetime of the equipments is 20 years.	The average life time of the WTG is 20 years and has been presented in the PDD Version 1.1, hence the CL 1 closed.



Draft report clarifications and corrective action requests	Ref. in table 1	Summary of project owner response	Validation team conclusion
CL-2 The detailed timeline is required to identify the starting date of the project activity and the evidences of PP's formal decision to proceed with the investment in the Project are required to be presented.	3.15.4	The developer held a meeting on 03/07/2008 after receiving the FSR, in which decision of applying for CDM registration and seeking for CERs buyer was made. On this basis, a CERs Sales contract was signed on 28/09/2008. After the FSR was approved 29/10/2008, the developer launched the construction on 30/11/2008 and soon signed Purchase contract for turbines in Jan.2009. The 30/11/2008 is identified as the project start date. The evidence of PP's formal decision to proceed with the investment in the Project has been presented.	The detail timeline to show the start date of the project and to show the consideration of CDM during investment decision has been presented in the PDD Version 1.1 dated 05/04/2009, and relevant evidences have been provided and checked. Hence the CL 2 closed.
CL-3 The determination of w_{OM} and w_{BM} should be specified.	4.5.5	The default weights are used, for the wind farm projects in the first crediting period and the subsequent crediting period, $w_{OM} = 0.75$ and $w_{BM} = 0.25$.	The two parameters have been properly used in the PDD Version 1.1, hence the CL 3 closed.
CL-4 A clarification on fair value rate is required.	5.1.16.2	According to the financial analysis in the approved FSR, depreciation rate is 13% for 7 years, then the fair value rate is thus of 9%, which is in compliance with the new tax regulation. http://www.gov.cn/zwgk/2007-12/11/content_830645.htm	The method is eligible and conservative, hence the CL 4 closed.
CL-5 The latest statistics of wind power project of 2007 should be used.	5.1.21	The latest statistics of wind power project have been used in the updated PDD. There are two wind farm projects, identified as similar project.	The latest statistics of wind power project have been used in the PDD Version 1.1, and the evidences have been checked and found reasonable; hence the CL 5 closed.



Draft report clarifications and corrective action requests	Ref. in table 1	Summary of project owner response	Validation team conclusion
CL-6 A further elaboration in the PDD to show whether the variables will exceed -10% or +10% so as to the IRR of the project could reach the benchmark is required.	5.4.14	Assuming these four variables to change within the range between -10% and 10%, then the outcomes of IRR sensitivities has been presented in the updated PDD. As it shows IRR calculation spreadsheet shows: when the tariff or generation would need to increase over 20%, the benchmark would be reached. In addition, the both the investment costs and O&M costs are unlikely to be declined based on the current economy situation in China.	A further elaboration to show whether the variables will exceed -10% or +10% so as to the IRR of the project could reach the benchmark has been presented in the PDD Version 1.1, hence the CL 6 closed.
CL-7 The procedure for determining the annual supplied electricity of 94,050MWh is required to be elaborated	5.4.17.3	The expected power generation of the proposed project is calculated by an independent qualified design institute with the highest grade (Grade A) in the electricity report in the FSR on the basis of historical wind resource assessment records, experience of the developer in this area with the same turbines, and the manufacturer's reference data of the turbines, using a scientific approach applied internationally. The volume of annual generation therefore represents the long-term average power supply during the lifetime of the wind farm, taking into account yearly variations in power generation.	A further description has been presented in the PDD Version 1.1 dated 05/04/2009 that the data is taken from the approved FSR and designed appropriately by the authorized third party in power sector, hence the CL 7 closed.
CL-8 The relevant procedures for cross checking the readings is required to be specified .	6.7	The way to cross check the readings is stated in the updated PDD. The invoice of each wind farm will be issued separately to cross check the power exportation.	A further description has been presented in the PDD Version 1.1 dated 05/04/2009, hence the CL 8 closed.

**APPENDIX B: VERIFIERS CV'S**

Ms. (Jasmine) Tang Xuemei	Bureau Veritas Certification, China	<p>Team Leader, CDM Lead Verifier.</p> <p>She has 2 years experiences in the field of CDM and mainly focusing on energy and agriculture sector. She was involved in approximate 25 CDM projects in P.R China. She has undergone intensive trainings on the Clean Development Mechanism and EMS ISO14000 in Bureau Veritas.</p>
Mr.Liao Ling	Bureau Veritas Certification, China	<p>Team Member, CDM Verifier.</p> <p>He holds a Bachelor Degree in Atmosphere Science. He has total experience of 2 years of CDM consulting experience in P.R China and involved in several CDM projects in P.R China. He obtained the certificate of CDM Lead Verifier.</p>
Mr. Zeng Ziyuan	Bureau Veritas Certification, China	<p>Team Member, CDM Verifier.</p> <p>He holds a bachelor degree in Building Environment and Facility Engineering. He has 2 years of environmental Software and Building Automation engineering experience. He has received the training and obtained the certificates of EMS ISO14000 lead auditor and CDM lead verifier.</p>
Mr. (Robin) Wang Jing	Bureau Veritas Certification, China	<p>Technical Reviewer, CDM Lead Verifier</p> <p>He holds a Bachelor Degree in Gas & Heating Engineering and a certificate of investment analysis issued by Word Business Strategist Association (WBSA). He was a Gas Engineer with 10 years' experiences in petrochemical sector. He obtained the certificate of CDM Lead Verifier and Lead Auditor for ISO 14000.</p>