



VALIDATION REPORT

Camco International Limited

**Roncheng Wind Power Project,
48.75MW**

SGS Climate Change Programme

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Summary:			
<p>Camco International Limited has commissioned SGS UK to perform the validation of the project: "Roncheng Wind Power Project, 48.75MW". The scope of the validation 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. SGS has employed a risk-based approach in the validation, focusing on the identification of significant risk for project implementation and the generation of CERs. By operating this wind power project with the total installed capacity of 48.75MW, the total emission reductions from the project are estimated to be 611,598 t of CO₂e over a first 7 years crediting period, averaging 87,371 t of CO₂e annually.</p> <p>The validation is based on the findings of document reviews, the stakeholder consultation process and responses from the project participants to the findings raised in this report.</p> <p>The report and the annexed validation describes a total 9 findings which include:</p> <ul style="list-style-type: none"> • 1 Corrective Action Requests; • 8 New Information Requests; <p>All of the above CARs and NIRs were successfully closed out and the project will hence be recommended by SGS for registration with the UNFCCC.</p>			
Subject:		Indexing Terms	
CDM Validation			
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Abbreviations

BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CM	Combined Margin
COP/MOP	Conference of Parties / Meeting of Parties
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board of the clean development mechanism
EIA	Environmental Impact Assessment
EPA	Environmental Protection Authority
FSR	Feasibility Study Report
GHG	Greenhouse gas
IETA	International Emission Trading Association
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
LoA	Letter of Approval
MP	Monitoring Plan
MW	Mega Watt
NCPG	North China Power Grid
NGO	Non Governmental Organization
NIR	New Information Request
OM	Operating Margin
PDD	Project Design Document
SGS	Société Générale de Surveillance
UNFCCC	United Nations Framework Convention on Climate Change

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1. Introduction

1.1 Objective

Camco International Limited has commissioned SGS to perform the validation of the project: "Roncheng Wind Power Project, 48.75MW" with regard to the relevant requirements for CDM project activities. The purpose of a validation is to have an independent third party assess 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 meets the stated requirements and identified criteria. Validation is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of Certified Emission Reduction (CER). UNFCCC criteria refer to the Kyoto Protocol criteria and the CDM rules and modalities and related decisions by the COP/MOP and the CDM Executive Board.

1.2 Scope

The scope of the validation 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. SGS has employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.

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 GHG Project Description

The project activity proposes to install and operate a 48.75 MW grid connected wind farm in Roncheng City, Shandong Province, People's Republic of China. The starting date of the project activity is 25 Sep 2006.

Baseline Scenario:

The installed capacity of North China Power Grid (NCPG) has been increasing for many years, and NCPG is dominated by fossil-fuel all the time. It is not expected that renewable resource additions will have significant effect on installed capacity additions of NCPG during the first crediting period of the project.

The project complies with the applicability criteria of the approved consolidated baseline methodology ACM0002 Version 06, "Consolidated methodology for grid-connected electricity generation from renewable sources".

According to ACM0002 Version 6, the site of the project activity and the electricity system boundary is defined as the project boundary and all power plants connected to NCPG, including Beijing, Tianjin, Hebei, Shanxi, Inner Mongolia and Shandong grids. There are no significant transmission constraints between the power plants serving NCPG. Thus project boundary is clearly defined.

The baseline scenario of this project is the equivalent amount of electricity delivered to NCPG by the operation of existing grid-connected power plants without the proposed project activity.

In accordance with ACM0002 Version 06, the baseline emission factor is determined *ex ante* as a combined margin (CM) emission factor, i.e. the 75% to 25% weighted average of the operating margin (OM) emission factor and the build margin (BM) emission factor.

Project Scenario:

The project involves installation and operating of 39 units of 1250 kW wind turbines, with a total capacity of 48.75 MW. The electricity generated by the project will be delivered to NCPG via a 35kV transmission line. The total estimated average electricity supplied to NCPG is 88.335 GWh annually. The total emission reductions from the project are estimated to be 611,598 t of CO₂e over a first 7 years crediting period, averaging 87,371 t of CO₂e annually.

Leakage:

According to ACM0002 Version 06, there is no need to consider Leakage (L_y) for the project.

Environmental & Social Impacts:

An Environmental Impact Analysis (EIA) for the project was carried out by the Rongcheng Academic Institute of Environmental Protection and was approved by Shandong Environment Protection Bureau in February, 2006.

According to the EIA, the potential environmental impacts have been sufficiently considered. No significant environmental impacts will be resulted from the project activity.

1.4 The Names and Roles of the Validation Team Members

Name	Office	Role
Sarah Ruan Sha	SGS China	Lead Assessor
Robin Wang Jing	SGS China	Assessor
Niclo Deng Wei	SGS China	Assessor
Simon Zhao Xinguang	SGS China	Assessor

Statement of Competence of team members are attached at Annex IV.

2. Methodology

2.1 Review of CDM-PDD and Additional Documentation

The validation is performed primarily as a document review of the publicly available project documents. The assessment is performed by trained assessors using a validation protocol.

A site visit is usually required to verify assumptions in the baseline. Additional information can be required to complete the validation, which may be obtained from public sources or through telephone and face-to-face interviews with key stakeholders (including the project developers and Government and NGO representatives in the host country). The results of this local assessment are summarized in Annex 1 to this report.

2.2 Use of the validation protocol

The validation protocol used for the assessment is partly based on the templates of the IETA / World Bank Validation and Verification Manual and partly on the experience of SGS with the validation of CDM projects. It serves the following purposes:

- it organises, details and clarifies the requirements the project is expected to meet; and
- it documents both how a particular requirement has been validated and the result of the validation.

The validation protocol consists of several tables. The different columns in these tables are described below.

Checklist Question	Means of Verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements are linked to checklist questions the project should meet.	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 (Y), or a Corrective Action Request (CAR) due to non-compliance with the checklist question (See below). New Information Request (NIR) is used when the validation team has identified a need for further clarification.

The completed validation protocol for this project is attached as Annex 2 to this report

2.3 Findings

As an outcome of the validation process, the team can raise different types of findings

In general, where insufficient or inaccurate information is available and clarification or new information is required the Assessor shall raise a **New Information Request (NIR)** specifying what additional information is required.

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

- I. mistakes have been made with a direct influence on project results;
- II. validation protocol requirements have not been met; or
- III. there is a risk that the project would not be accepted as a CDM project or that emission reductions will not be verified.

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

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

Corrective Action Requests and New Information Requests are raised in the draft validation protocol and detailed in a separate form (Annex 3). In this form, the Project Developer is given the opportunity to “close” outstanding CARs and respond to NIRs and Observations.

2.4 Internal Quality Control

Following the completion of the assessment process and a recommendation by the Assessment team, all documentation will be forwarded to a Technical Reviewer. The task of the Technical Reviewer is to check that all procedures have been followed and all conclusions are justified. The Technical Reviewer will either accept or reject the recommendation made by the assessment team.

3. Determination Findings

3.1 Participation Requirements

The host Party in this project is P.R.China. China ratified the Kyoto protocol on 30 August 2002 and has appointed a DNA. CAR1 was raised for the LoA from Chinese DNA being absent at the beginning of the validation assessment. When the LoA was received afterwards on 4 Sep 2007, CAR1 was closed out. No other Party is mentioned in the PDD.

Besides, NIR1 was raised due to minor deviations of format from the normative CDM-PDD template (Version 03). After correlative modification being made by the PP and reviewed by SGS assessors, all these minor deviations of format are eliminated. Thus NIR1 was closed out.

3.2 Baseline Selection and Additionality

As a grid connected wind power generation project, the project complies with following applicability criteria in the methodology ACM0002 Version 06:

The project is a grid connected renewable power activity from wind sources.

The project does not involve switching from fossil fuel to renewable energy at the site of the project activity.

The geographic and system boundaries for the relevant electricity grid, namely NCPG, can be clearly identified and information on the characteristics of the grid is available.

According to ACM0002 Version 06, there are totally four realistic and credible alternatives to the project activity, which are:

1. No project activity undertaken (continuation of current practice). The equivalent amount of electricity will be generated by the NCPG.
2. Construction of a fossil fuel power plant of annual output equivalent to the proposed project.
3. The proposed project activity not undertaken as a CDM project activity.
4. Renewable power plant of equivalent capacity to the proposed project not undertaken as a CDM activity.

The scenario that does not comply with current Chinese laws and regulations, that is limited by renewable energy resources availability in the region, and that is with poor financial attraction can be excluded. As a consequence, the scenario of continuation of current practice is determined as the baseline scenario, i.e. in the absence of the project activity the electricity generated by this project will be supplied by NCPG.

The additionality of the project as required by ACM0002 Version 06 is demonstrated by applying *Tool for the demonstration and assessment of additionality* (version 03).

Given that the Project earns not only CER revenue but also electricity revenue, the Option I (simple cost analysis) is not appropriate. Besides, there are no other similar investment projects for the investor, thus Option II (investment comparison analysis) is not chosen. Therefore benchmark analysis is selected as the appropriate investment analysis option for this project.

8% IRR benchmark is used in the Benchmark investment analysis in the FSR as well as in the PDD, this benchmark is set up according to the “*Interim Rules on Economic Assessment of Electrical Engineering Retrofit Projects*” issued by the “Department of Power Generation & Transmission Operations of State Power Corporation”, who was the former state authority to manage relevant power issues including new constructions of power plants. The *Interim Rules* states that the benchmark is based on *The Methodology and Parameters for Financial Evaluation of Construction projects* (Chapter 1 General, Section 1.1) which is the national criteria in evaluating new construction projects including fossil fuel fired plants. This benchmark was widely accepted in all newly constructed power plants in China, and has also been accepted as benchmark for registered CDM projects in power sector. Further, 8% is also applied as the benchmark in the Feasibility Study Report (FSR) issued by Shanghai Electric Power Design Institute Co., Ltd., whose design qualification could be found at <http://www.sepd.com.cn/zizhi.asp>. The project FSR was approved by Shandong Development and Reform Committee on 29 June 2005. Therefore, IRR of 8% for total investment of a project is regarded as benchmark for investment in the proposed project.

Regarding this benchmark IRR, the project participants have calculated the project IRR with or without CDM benefit using an IRR calculation spreadsheet.

NIR3 was raised to request for the detailed IRR calculation spreadsheet to reproduce IRR calculation based on the data in the FSR. After the IRR calculation spreadsheet having been provided by the project participant, following issues were raised:

Some data between the Feasibility Study Report (FSR) and the IRR calculation spreadsheet, such as Project total investment, Capital Expenditure, Equity, Loan value, etc., were not consistent;

Interest during construction period was counted incorrectly.

The IRR has been calculated again by the PP in a revised spreadsheet according to the approved FSR. The PP indicated that there is one amendment in the revised IRR calculation spreadsheet, namely the adjustment of the revenues according to the actual electricity tariff, which is approved by Shandong Price Control Bureau¹; all the other parameters in the IRR calculation spreadsheet are selected from the FSR, which was prepared by an accredited professional entity, namely Shanghai Electric Power Design Institute Co., Ltd., and was approved by Shandong Development and Reform Committee on 29 June 2005. Thus the financial parameters in the revised IRR calculation spreadsheet are sustainable. At the same time, NIR8 was raised for requesting part of relevant supporting materials, such as purchase agreements, invoices, contracts, and so on. Spot check has been made on prices of signed purchase contracts of wind turbines and wind towers provided by the PP against estimated prices in the approved FSR. It is found that actual expenditures of the items being spot checked are even larger than those estimated in the approved FSR. It can be concluded that the estimated parameters in the FSR are sustainable and conservative to calculate the IRR. NIR8 was closed out.

All the parameters in the revised IRR calculation spreadsheet was checked and verified one by one against the materials, namely related pages in the FSR and the approval of electricity tariff from Shandong Price Control Bureau presented by the PP. NIR3 was closed out.

According to the revised IRR calculation spreadsheet, the project IRR is calculated as 6.71% without CDM benefit, and increase to 9.61% with CDM revenue. It shows that the project is not financially attractive without CDM support.

According to "Tool for the demonstration and assessment of additionality" version 03, sensitivity analysis has been described in page 13 of PDD version 04. Besides the electricity tariff is fixed by the Letter of Approval for the Power purchase price of Guohua Resourceful (Rongcheng) Wind Power Generation Co., Ltd. by Shandong Price Bureau (/20/), and the CER price is assumed according to price at the time of submission for host country approval in Feb. 2006, all the other assumptions were derived from the Feasibility Study Report (FSR) (/7/) of the proposed project. In China, the FSR must be prepared by an accredited third party and get approved by local government (/8/). Assumptions and data sources for the economic evaluation of a project in the FSR are required to be based on relevant national standards and investigation report for industry. Therefore, assumptions and data from the FSR are regarded as most trustworthy.

According to FSR, Capital Expenditure, Revenue and O&M cost is the only three variables in economic evaluation. Revenue equals to Power output times electricity tariff. It is validated by SGS assessor that the electricity tariff is fixed by government approval which indicated that the electricity tariff is not likely to change in future unless relevant national policy changes. Therefore, power output instead of revenue, together with capital expenditure and O&M cost were included in sensitivity analysis.

An excel spreadsheet including parameter definition, IRR calculation and sensitivity analysis has been provided by PP. Sensitivities have been tested from -10% to +10%. The analysis is transparent. It is concluded that in all cases the IRR will not exceed 8% benchmark except power output increases 10% or the capital expenditure decreases 10%. A further clarification has been made by PP that the possibility of such scenarios is very low. The relative chapters of FSR and evidences provided by PP has been double checked by SGS assessor. 1) For the capital expenditure issue, as the high inflation of China in fuel, human resources and raw material (/25/), moreover, some types of cost such as lubricant was not included in FSR, thus the total capital expenditure is deemed unlikely to be 10% lower than estimation. 2) For the power output issue, the power output depends on the wind resources; the estimation of wind resource in FSR is based on a

¹ The Approval of Electricity Tariff for Uploading Electricity to Power Grid by Guohua Resourceful (Rongcheng) Wind Power Generation Co., Ltd., dated 27 July 2007.

long-term historical data monitored by Cheng Shan Tou meteorological station (/26/) and on-site test data (/7/). Although the wind may fluctuate during a short period, the energy loss is ranged from -6.67% to 5.59% according to FSR. Therefore, -10% of capital expenditure and +10% of power output was excluded from sensitivity analysis.

Hence, according to the sensitivity analysis, the project IRR without CER is unlikely to be higher than benchmark with reasonable variations in the critical assumptions, which is consistently supporting the conclusion that the project is not financial attractive.

Besides the clarification of sensitivity analysis, PP updated the IRR calculation according to the updated tax policy. Compared to the previous IRR spreadsheet, it is checked by SGS assessor that the project IRR without CER increases from 6.71% to 7.06% with the decreasing of estimated tax in the first five years, all the other key parameters remain the same as FSR. However, the increased project IRR without CER is still below the benchmark 8%, which does not impact the conclusion of additionality.

According to “Tool for the demonstration and assessment of additionality” version 03, common practice analysis is required to discuss the projects similar to the proposed project activity. The projects are considered similar if they are in the same country/region and/or rely on a broadly similar technology, are of similar scale, and take place in a comparable environment with respect to regulatory framework, investment climate, access to technology, access to financing, etc.

The proposed project is located in Shandong province and connected to North China Power Grid. All the wind farms belonging to North China Power Grid were involved in common practice analysis. The wind farms built before year of 2000 were excluded because there was a reform of electric industry in 2000, the investment climate turn significantly different since then. Information of wind farms come from the “Statistic of Installed capacity of wind farm in China, 2006” (/27/) by Shi Pengfei who is a famous expert in wind energy industry. The data source is widely used among industry and it is deemed to be external and complete.

Among all the wind farms listed in “Statistic of Installed capacity of wind farm in China, 2006”, several kinds of wind farm were excluded:

- 1) Wind farms with very small total install capacity, e.g. lower than 15MW.
- 2) Different in unit capacity and wind turbine technology

As per FSR, the proposed project is a coastal wind farm where the wind turbines are installed along the coastline, on one hand, the utilizable area is limited, the unit capacity of wind turbine could not be very small; On the other hand, up to the limitation of area for transportation and installation, the unit capacity could not be too large. 1.0MW~1.5MW wind turbines were preferred as per FSR. Moreover, the design wind power density is 290.1W/m² which indicated the wind resource is not very good according to the national standard GB/T 18710-2002 (/28/). Thus, the proposed project have to selected state of arts technology.

According to the “Statistic of Installed capacity of wind farm in China, 2006”, most wind farms which were built before 2004 and used domestic wind turbines adopted the turbine of which the technology is more basic and the unit capacity is lower than 1MW. It was suitable for those projects where there are sufficient area and better wind resource. Such kind of wind farms were excluded since it has essential distinction to the proposed project. Of course there are still some wind farms using domestic turbines or built before 2004 adopted advanced turbines of which the unit capacity is larger than 1MW. All the wind farms using the similar unit capacity and technology were listed in below table 1, including some wind farms using domestic wind turbine and some wind farms built before 2004. They are abstracted from Table 4 and Table 5 of PDD.

Table 1 Wind farms using similar unit capacity and technology to proposed project activity

Name of project	Year of construction	Unit capacity	Carbon financing?	Reference
Inner Mongolia Sonid Youqi Zhurihe	2006	1500kw Sinovel	Applying for carbon finance through the CDM	http://cdm.unfccc.int/Projects/Validation/DB/CJNKHWTUCB H3BS7HK46A8SC7UHXMMH /view.html
Inner Mongolia Qahar Youyi Zhongqi Dadonggou	2006	1500kw Sinovel	Applying for carbon finance through the CDM	http://cdm.unfccc.int/Projects/DB/TUEV-SUED1166704457.57

Inner Mongolia Xin Barag Youqi Alatanemole	2006	1500kw Sinovel	Applying for carbon finance through the CDM	http://cdm.unfccc.int/Projects/DB/JC1173174854.8/view
Shandong Roncheng Dongchudao	2006	1500kw Sinovel	Applying for carbon finance through the CDM	http://cdm.unfccc.int/Projects/DB/DNV-CUK1174370580.2/view
Shandong Roncheng Gangxizhen	2006	1500kw Sinovel	Applying for carbon finance through the CDM	http://cdm.unfccc.int/Projects/DB/DNV-CUK1179309260.87/view
Hebei Shangyi Manjing	2005	1500kw GE Wind	Applying for carbon finance through the CDM	http://cdm.unfccc.int/Projects/DB/DNV-CUK1167911701.87/view
Hebei Zhangbei Baibuluo	2005	1500kw GE Wind	Applying for carbon finance through the CDM	http://cdm.unfccc.int/UserManagement/FileStorage/5X09Y9XLJO28P4KEA4GNSWG275CF5T
Hebei Zhangbei Baibuluo	2006	1500kw GE Shenyang	Applying for carbon finance through the CDM	http://www.dnv.com/focus/climate_change/Upload/Zhangbei%20Mijiagou%20Winfarm%20PDDv1%207%20for%20DNV%20_2_.pdf
Hebei Zhangbei Baibuluo	2006	1500kw CASC-Acciona	Applying for carbon finance through the CDM	http://www.dnv.com/focus/climate_change/Upload/Zhangbei%20Mijiagou%20Winfarm%20PDDv1%207%20for%20DNV%20_2_.pdf
Inner Mongolia Huitengxile	2004	1500kw GE Wind	Applying for carbon finance through the CDM	http://cdm.unfccc.int/Projects/DB/TUEV-SUED1166704457.57/view
Inner Mongolia Saihanba	2005	1000kw Vestas	Applying for carbon finance through the CDM	http://cdm.unfccc.int/Projects/DB/DNV-CUK1173680185.45/view
Inner Mongolia Zhouzi Bayinxile	2006	1250kw Suzlon	Applying for carbon finance through the CDM	http://cdm.unfccc.int/Projects/DB/TUEV-SUED1188906688.93/view
Shandong Jimo Fengshan	2003	1300kw Nordex	Non-CDM project	http://www.stport.net/News/File_News/0520060227092108.htm

3) Wind farms have applied or are applying carbon financial, as listed in above table 1.

By compared to the “Statistic of Installed capacity of wind farm in China, 2006”, SGS assessor confirmed that after exclusion of aforementioned cases, Jimo Fengshan Wind farm is the only similar project to proposed project activity. Jimo Fengshan wind farm is clearly different with the proposed project because it is more financial attractive with 10% project IRR which exceed the benchmark of 8% (/29).

By common practice analysis, it was concluded that although similar activities are observed, essential distinctions are reasonably explained. The proposed project activity without CDM is not common practice.

According to the aforementioned description, it is concluded that the proposed project activity is additional.

3.3 Application of Baseline Methodology and Calculation of Emission Factors

According to ACM0002 Version 06, the baseline emission factor in the PDD has been properly calculated in a transparent and conservative manner using the combined margin (CM) approach.

In final Version 3 of the PDD, the data used in OM emission factor calculation is derived from *China Energy Statistical Yearbook* 2004 to 2006; the data used in BM emission factor calculation is derived from *China Electric Power Yearbook* 2004 to 2006.

For OM emission factor, the option of simple OM is selected because low-cost / must run projects constitute less than 50% of the total grid generation and data for applying the dispatch data analysis is not available. Following ACM0002 Version 6, the average emission factor for each fuel type serving the NCPG is calculated *ex ante* based on a 3 years full generation-weighted average of the most recent available statistics. In this way OM emission factor is calculated as 1.026 tCO₂ / MWh.

The BM emission factor is calculated as the weighted average emission factor of the 20% most recent power plants built. Thus the BM emission factor is calculated as 0.880 tCO₂ / MWh.

NIR2 was raised for requesting:

Clarification of the elimination of the average OM option by explaining how low-cost / must run resources were compared with zero emission sources;

Clarification of how the deviation submitted and approved for AM0005 can be applied in proposed project to determine the BM emission factor.

The PP cited national statistics of power generation by sources in NCPG over the past most recent 5 years as the proof that low-cost / must run resources account for less than 50% of total amount of NCPG power generation. Therefore the average OM option is eliminated.

Besides, the PP referred to the CDM EB guidance on determine of the BM emission factor in AM0005 in China². This guidance has been accepted by EB in most of those registered projects using ACM0002 Version06. Therefore, the above mentioned deviation for determining the BM emission factor is acceptable for the proposed project. All related material and information source has been reviewed by SGS assessors. NIR2 was closed out.

The weight for operating margin (OM) and build margin (BM) is selected as 0.75 and 0.25 respectively in line with ACM0002 Version 06 for wind power project. Thus the calculated *ex ante* CM emission factor is 0.989 tCO₂ / MWh, which is determined *ex ante* and fixed for the first crediting period.

3.4 Application of Monitoring Methodology and Monitoring Plan

As the emission factor of NCPG has been calculated *ex ante* according to methodology ACM0002 Version 06, the only parameter that needs to be monitored during the operation for the wind farm (*ex post*) is EGy, the electricity supplied to NCPG by the project.

NIR4 was raised for information of equipments measuring the electricity exchanged with NCPG. The information of the measuring meter and the backup meter that would follow national standards having been supplemented in the PDD Annex 4, NIR4 was closed out.

NIR5 was raised for further information of the organization of the project, especially the authority and responsibility of management, registration, monitoring, measurement and report of this project. After the organization chart having been added in the PDD section B 7.2 and the specific responsibilities of the project staff having been described in the PDD Annex 4, NIR5 was closed out.

NIR6 and NIR7 were raised to enquire whether there are any procedures developed for calibration and maintenance of monitoring equipments, for dealing with missing data in case of errors or equipment malfunctioning, for record handling and data management, and for internal quality control and continuous improvement. After the monitoring procedure, calibration procedure, record keep and internal reporting procedure, error handling procedure, external reporting procedure and procedure for corrective actions arising having been supplemented to the PDD Annex 4, NIR6 and NIR7 were closed out.

² DNV letter to the CDM Executive Board; *Request for Guidance: Application of AM0005 and AMS-I-D in China* dated 7 October 2005 available online at:

<http://cdm.unfccc.int/UserManagement/FileStorage/6POIAMGYOEDOTKW25TA20EHEKPR4DM>

3.5 Project Design

The project involves construction and operation of 39 units of 1250kW wind turbines. With a total capacity of 48.75MW, this project will be operating for 21 years³. During the design period of the project, CDM benefit has been seriously considered: a board meeting was held on 17 March 2005 to start initial preparation work especially for developing the proposed project as a CDM mode in order to raise fund for the project⁴; the project participant commissioned SGS UK to perform the validation of the project on 13 July 2006⁵; and site visit was implemented on 6 September 2006 by SGS lead assessor, who found that the project was only at the earliest stage of its construction phase.

3.6 Environmental Impacts

An Environmental Impact Assessment (EIA) has been completed pursuant to Chinese laws and regulations. This EIA has been approved by Shandong Provincial Environmental Protection Bureau in February 2006. The potential environmental impacts have been thoroughly considered. No significant impacts will be resulted from the project activity. Related evidences including EIA and its approval from related EPA were verified by SGS assessors during the site visit.

3.7 Local Stakeholder Comments

Two stakeholder symposiums were held at Chen Shan Township People's Government in Rongcheng City on 8 March 2006 and on 5 July 2006. In total 30 persons attended this meeting. They are representatives from the government, local residents and villagers. Besides, questionnaires were distributed in order to collect opinions and concerns of the attendees on the construction of the project.

In these two stakeholder symposiums, the developer introduced the basic situation of the project, and the participants discussed on issues of the project construction and expressed their concern. The questions and concerns from the public were mainly about the impact to local economy and employment. Responding to the comments in regard to impact on environment, the project owner presented detailed EIA report and stated that all prevention and control measures would be taken strictly following the EIA report, and the project would be implemented in a serious and responsive manner. According to the project owner, the project would employ local citizens and help solving local employment problem; the salary of employees would be maintained the same with current employees in order not to impact local human resource market. Finally, 100% participants thought that the project would bring benefits to their lives and supported the construction of the project.

³ According to the purchase agreement with the manufacturer, the expected lifetime of the wind turbines is 20 years. This purchase agreement has been reviewed by SGS assessors. Besides, CDM benefit was considered when the project is in the period of designing. Considering the renewable crediting period chosen is 3*7 year crediting periods, 21 years has been used by the project owner as the project lifetime and this is shown in the Feasibility Study Report.

⁴ Board Meeting Decision of Guohua (Rongcheng) Wind Power Generation Co., Ltd. 2005 No. (77), dated on 17 March 2005.

⁵ Validation service agreement signed between the project participant and SGS, dated on 13 July 2006.

4. Comments by Parties, Stakeholders and NGOs

In accordance with sub-paragraphs 40 (b) and (c) of the CDM modalities and procedures, the project design document of a proposed CDM project activity shall be made publicly available and the DOE shall invite comments on the validation requirements from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available. This chapter describes this process for this project.

4.1 Description of how and when the PDD was made publicly available

The PDD and the monitoring plan for this project were made available on the UNFCCC website <http://cdm.unfccc.int/Projects/Validation/DB/4EB411MDULG742MJ2QJSOURVWFRN9L/view.html> and were open for comments from 15 Jul 2006 until 13 Aug 2006. Comments were invited through the UNFCCC CDM homepage.

4.2 Compilation of all Comments Received

No comment is received.

4.3 Explanation of how Comments Have Been Taken into Account

No comment is received.

5. Validation Opinion

SGS has performed a validation of the project: “Roncheng Wind Power Project, 48.75MW”. The validation was performed on the basis of the UNFCCC criteria and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

Using a risk based approach, the review of the project design documentation and the subsequent follow-up interviews have provided SGS with sufficient evidence to determine the fulfilment of the stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria. The project will hence be recommended by SGS for registration with the UNFCCC.

SGS has received confirmation by the host Party that the project activity assists it in achieving sustainable development.

By operating this wind power project with the total installed capacity of 48.75MW, the project results in reductions of greenhouse gas emissions that are real, measurable and give long-term benefits to the mitigation of climate change. A review of the investment analysis and barriers demonstrates that the proposed project activity is not a likely baseline scenario. The total emission reductions from the project are estimated to be 611,598 t of CO₂e over a first 7 years crediting period, averaging 87,371 t of CO₂e annually. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achieved given the underlying assumptions do not change. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. If the project is implemented as designed, the project is likely to achieve the estimated amount of emission reductions.

The validation is based on the information made available to SGS and the engagement conditions detailed in the report. The validation has been performed using a risk based approach as described above. The only purpose of this report is its use during the registration process as part of the CDM project cycle. Hence SGS can not be held liable by any party for decisions made or not made based on the validation opinion, which will go beyond that purpose.

The DOE declares herewith that in undertaking the validation of this proposed CDM project activity it has no financial interest related to the proposed CDM project activity and that undertaking such a validation does not constitute a conflict of interest which is incompatible with the role of a DOE under the CDM.

6. List of Persons Interviewed

<i>Date</i>	<i>Name</i>	<i>Position</i>	<i>Short description of subject discussed</i>
5 Sep 2006	Mr. Zhang Zhe	Vice General Manager of Guohua Resourceful (Rongcheng) Wind Power Generation CO., Ltd.	FSR / Project design
5 Sep 2006	Ms. Gong Yufei	Vice General Manager of Guohua Resourceful (Rongcheng) Wind Power Generation CO., Ltd.	FSR / Environmental Impact
5 Sep 2006	Mr. Zhao Weiming	Employee of Roaring 40 ^s	Investment
5 Sep 2006	Mr. Tian Chunjing	Vice Director of Roncheng Development & Reform Bureau.	FSR / Environmental Impact / comments of local stakeholders
5 Sep 2006	Mr. Rong Zeng	Vice Director of Roncheng Environmental Protection Bureau.	Environmental Impact / comments of local stakeholders
5 Sep 2006	Ms. Madeleine Rawlins	Consultant, Camco International Limited	PDD
5 Sep 2006	Ms. Gina Zhang Jie	Consultant, Camco International Limited	PDD

7. Document References

Category 1 Documents (documents provided by the Client that relate directly to the GHG components of the project, (i.e. the CDM Project Design Document, confirmation by the host Party on contribution to sustainable development and written approval of voluntary participation from the designated national authority):

- /1/ PDD, the following versions have been reviewed,
 - Version 1 received on 12 June 2006 for public comments
 - Version 1 received on 12 July 2006
 - Version 2 received on 31 October 2006
 - Version 3 completed on 31 October 2007
 - Version 4 completed on 2 January 2008
- /2/ ACM0002 Version 06
- /3/ Tool for the demonstration and assessment of additionality Version 03
- /4/ Letter of Approval from Chinese DNA issued on 22 May 2007
- /5/ Emission Reduction Spreadsheet
- /6/ IRR spreadsheets

Category 2 Documents (background documents used to check project assumptions and confirm the validity of information given in the Category 1 documents and in validation interviews):

- /7/ Feasibility Study Report, dated Oct 2005
- /8/ Approval of FSR from Shandong Development and Reform Committee, dated on 29 June 2005.
- /9/ Approval of EIA from Shandong Provincial Bureau of Environmental Protection, dated 16 Jun 2005
- /10/ Notification of Emission Factor of Region Power Grid issued by China DNA on 15 Dec 2006
<http://cdm.ccchina.gov.cn/web/NewsInfo.asp?NewsId=1235>
- /11/ Notification of Emission Factor of Region Power Grid issued by China DNA on 9 Aug 2007
<http://cdm.ccchina.gov.cn/web/NewsInfo.asp?NewsId=1889>
- /12/ China's target efficiency for 2020
<http://www.ccchina.gov.cn/source/fa/fa2002082803>
- /13/ 2006 IPCC Guidance for National Greenhouse Gas Inventories
- /14/ Notification of Grid Tariff issued by Shandong Development & Reform Commission
- /15/ Statements of local stakeholders consultations
- /16/ Questionnaires for local stakeholders consultations
- /17/ Notice of Strictly Prohibited the Installation of Fuel-fired Generators with the Capacity of 135 MW or below, issued by State Council Office, decree No.2002-6.
- /18/ Request for guidance: Application of AM0005 and AMS-I.D in China
<http://cdm.unfccc.int/UserManagement/FileStorage/6POIAMGYOEDOTKW25TA20EHEKPR4DM>
- /19/ DNV letter to the CDM Executive Board; *Request for Guidance: Application of AM0005 and AMS-I-D in China*, dated 7 October 2005
- /20/ The Approval of Electricity Tariff for Uploading Electricity to Power Grid by Guohua Resourceful (Roncheng) Wind Power Generation Co., Ltd., dated 27 July 2007.
- /21/ Board Meeting Decision of Guohua (Roncheng) Wind Power Generation Co., Ltd. 2005 No. (77), dated on 17 March 2005.
- /22/ CDM development agreement between Project owner and Camco dated 3 Mar 2006
- /23/ Tower supply contract dated 19 Sep 2006
- /24/ Wind turbine purchase contract dated 8 Nov 2006
- /25/ China Statistic Year Book, 2004, 2005, 2006, 2007
- /26/ <http://cdc.cma.gov.cn/shishi/climate.jsp?stprovid=shandong>
- /27/ Statistic of installed capacity of wind farm in China, 2006 by Shi pengfei,
http://www.cwea.org.cn/download/display_info.asp?id=19
- /28/ GB/T 18710-2002 Methodology of Wind energy resource assessment for wind farm
- /29/ http://www.stport.net/News/File_News/0520060227092108.htm



A.1 Annex 1: Local Assessment

It is not applicable because the Lead Assessor visited the project site.

A.2 Annex 2: Validation Protocol

Table 1 Participation Requirements for Clean Development Mechanism (CDM) Project Activities (Ref PDD, Letters of Approval and UNFCCC website)

REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
1.1 The project shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3 and be entered into voluntarily.	DR	PDD	No Annex 1 buyer has been identified yet	OK	OK
1.2 The project shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof, and be entered into voluntarily	DR	PDD	China is listed as host country. No Letter of Approval has been provided yet	CAR 1	OK
1.3 All Parties (listed in Section A3 of the PDD) have ratified the Kyoto protocol and are allowed to participate in CDM projects	DR	Internet	China has ratified the Kyoto Protocol on 30 August 2002 and has appointed a DNA, refer to http://maindb.unfccc.int/public/country.pl?country=CN	OK	OK
1.4 The project results in reductions of GHG emissions or increases in sequestration when compared to the baseline; and the project can be reasonably shown to be different from the baseline scenario	DR	PDD	The electricity will be generated by a 48.75MW wind farm and will subsequently displace power generation by coal-fired thermal plants and reduce CO2 emission in North China Power Grid (NCPG), which is dominated by coal-fired generation technology. The estimated annual greenhouse gas (GHG) emission reductions will be 87,363 tCO ₂ e.	OK	OK
1.5 Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for minimum 30 days (45 days for AR projects), and the project design document and comments have been made publicly available	I	PDD	PDD has been made publicly available from 15-07-06 until 13-08-06 and comments were invited through the UNFCC website. No comments received, refer to	OK	OK



REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
			http://cdm.unfccc.int/Projects/Validation/DB/4EB411MDULG742MJ2QJSOURVFRN9L/view.html		
1.6 The project has correctly completed a Project Design Document, using the current version and exactly following the guidance			Project has used version 2 of the PDD template which is acceptable since the PDD was published before the EB accepted version 3 - it was noted that the UNFCCC logo in the page header in Annex 3 and 4 was moved -	NIR1	OK
1.7 The project shall not make use of Official Development Assistance (ODA), nor result in the diversion of such ODA	DR SV	PDD	No indication that ODA is used, to be confirmed by local assessment	Pending	OK
1.8 For AR projects, the host country shall have issued a communication providing a single definition of minimum tree cover, minimum land area value and minimum tree height. Has such a letter been issued and are the definitions consistently applied throughout the PDD?			NA	NA	
1.9 Does the project meet the additional requirements detailed in: Table 9 for SSC projects Table 10 for AR projects Table 11 for AR SSC projects			NA	NA	
1.10 Is the current version of the PDD complete and does it clearly reflect all the information presented during the validation assessment.			Pending close out all CARs and NIRs	Pending	OK
1.11 Does the PDD use accurate and reliable information that can be verified in an objective manner?			Pending close out all CARs and NIRs	Pending	OK

Table 2 Baseline methodology(ies) (Ref: PDD Section B and E and Annex 3 and AM)

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
2.1 Does the project meet all the applicability criteria listed in the methodology	PDD	DR	Methodology is applicable to grid-connected renewable power generation projects including wind sources and the boundaries of the grid can be clearly identified and information on the characteristics of the grid is available Pending on grid characteristics	Pending	OK
2.2 Is the project boundary consistent with the approved methodology	PDD	DR	Spatial extent of the project boundary includes project site and all power plants connected to the system. Project has selected the Shandong Province grid. To be confirmed by local assessor	Pending	OK
2.3 Are the baseline emissions determined in accordance with the methodology described	PDD	DR	Pending on confirmation that grid selection is appropriate Data used to be confirmed by local assessor Project uses simple OM which is in accordance with ACM0002 Alternative approach suggested for BM but not clear if this is acceptable (DNV previous communication with EB on application AM0005 deviation)	Pending	OK
2.4 Are the project emissions determined in accordance with the methodology described	PDD	DR	In accordance with the methodology, project emission for wind project are considered as 0	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
2.5 Is the leakage op the project activity determined in accordance with the methodology described	PDD	DR	In accordance with methodology, leakage does not need to be taken into account	OK	OK
2.6 Are the emission reductions determined in accordance with the methodology described	PDD	DR	Emission reductions are calculated as the difference between baseline and project emissions + leakage	OK	OK

Table 3 Additionality (Ref: PDD Section B3 and AM)

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
3.1 Does the PDD follow all the steps required in the methodology to determine the additionality	PDD	DR	Project is applying the additionality tool version 03 as required by the methodology	OK	OK
3.2 Is the discussion on the additionality clear and have all assumptions been supported by transparent and documented evidence	PDD	DR	IRR mentioned in financial barrier but no details provided The starting date of the project activity is 25 Sep 2006. Thus relevant supporting materials, such as purchase agreements, loan contract, invoices, contracts, and so on, need to be provided to prove the main costs of this project.	NIR 3 NIR 8	OK OK
3.3 Does the selected baseline represent the most likely scenario among other possible and/or discussed scenarios?	PDD	DR	Pending close out NIRs/Cars and local assessment	Pending	OK
3.4 Is it demonstrated/justified that the project activity itself is not a likely baseline scenario	PDD	DR	Pending close out NIRs/Cars and local assessment	Pending	OK

Table 4 Monitoring methodology (PDD Section D and AM)

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
4.1 Does the project meet all the applicability criteria listed in the monitoring methodology	PDD	DR	Methodology is applicable to grid-connected renewable power generation projects including wind sources and the boundaries of the grid can be clearly identified and information on the characteristics of the grid is available Pending on grid characteristics	Pending	OK
4.2 Does the PDD provide for the monitoring of the baseline emissions as required in the monitoring methodology	PDD	DR	Methodology specifies that the baseline EF must either be determined ex-ante for the crediting period or monitored ex-post. Project has selected ex-ante option.	OK	OK
4.3 Does the PDD provide for the monitoring of the project emissions as required in the monitoring methodology	PDD	DR	In accordance with the methodology, project emission for wind project are considered as 0	OK	OK
4.4 Does the PDD provide for the monitoring of the leakage as required in the monitoring methodology	PDD	DR	In accordance with methodology, leakage does not need to be taken into account	OK	OK
4.5 Does the PDD provide for Quality Control (QC) and Quality Assurance (QA) Procedures as required in the monitoring methodology	PDD	DR	QA/QC for the energy output measurements is provided	OK	OK

Table 5 Monitoring plan (PDD Annex 4)

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
5.1 Monitoring of Sustainable Development Indicators/ Environmental Impacts					
5.1.1 Does the monitoring plan provide the collection and archiving of relevant data concerning environmental, social and economic impacts?	PDD	DR	Contribution to sustainable development is not being monitored. Not required under the methodology but makes it difficult to confirm claims made	OK	OK
5.1.2 Is the choice of indicators for sustainability development (social, environmental, economic) reasonable?	PDD	DR	NA	Ok	OK
5.1.3 Will it be possible to monitor the specified sustainable development indicators?	PDD	DR	NA	OK	OK
5.1.4 Are the sustainable development indicators in line with stated national priorities in the Host Country?	PDD	DR	NA	OK	OK
5.2 Project Management Planning					
5.2.1 Is the authority and responsibility of project management clearly described?	PDD	DR	Section D4 discusses staff available and managers without clearly defining responsibilities	NIR 5	OK
5.2.2 Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?	PDD	DR	Section D4 discusses staff available and managers without clearly defining responsibilities	NIR 5	OK
5.2.3 Are procedures identified for training of monitoring personnel?	PDD	DR	PDD states staff will be trained on safe production and operation against the specific operation manual Confirmation local assessor	Pending	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
5.2.4 Are procedures identified for emergency preparedness for cases where emergencies can cause unintended emissions?	PDD	DR	Unlikely to be applicable for wind farm. Failure of equipment would not need to unintended emissions	OK	OK
5.2.5 Are procedures identified for calibration of monitoring equipment?	PDD	DR	No procedures detailed or described, very little information in Annex 4	NIR 6	OK
5.2.6 Are procedures identified for maintenance of monitoring equipment and installations?	PDD	DR	No procedures detailed or described, very little information in Annex 4	NIR 6	OK
5.2.7 Are procedures identified for monitoring, measurements and reporting?	PDD	DR	No procedures detailed or described, very little information in Annex 4	NIR 6	OK
5.2.8 Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	PDD	DR	No procedures detailed or described, very little information in Annex 4	NIR 6	OK
5.2.9 Are procedures identified for dealing with possible monitoring data adjustments and uncertainties?	PDD	DR	No procedures detailed or described, very little information in Annex 4	NIR 6	OK
5.2.10 Are procedures identified for review of reported results/data?	PDD	DR	No system described for internal quality control and continuous improvement	NIR 7	OK
5.2.11 Are procedures identified for internal audits of GHG project compliance with operational requirements where applicable?	PDD	DR	No system described for internal quality control and continuous improvement	NIR 7	OK
5.2.12 Are procedures identified for project performance reviews before data is submitted for verification, internally or externally?	PDD	DR	No system described for internal quality control and continuous improvement	NIR 7	OK
Are procedures identified for corrective actions in order to provide for more accurate future monitoring and reporting?	PDD	DR	No system described for internal quality control and continuous improvement	NIR 7	OK

Table 6 Environmental Impacts (Ref PDD Section F and relevant local legislation)

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
6.1 Has an analysis of the environmental impacts of the project activity been sufficiently described?	PDD	DR	To be confirmed by local assessor	Pending	OK
6.2 Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	PDD	DR	To be confirmed by local assessor	Pending	OK
6.3 Will the project create any adverse environmental effects?	PDD	DR	To be confirmed by local assessor	Pending	OK
6.4 Are transboundary environmental impacts considered in the analysis?	PDD	DR	Impacts are not considered significant	OK	OK
6.5 Have identified environmental impacts been addressed in the project design?	PDD	DR	Impacts are not considered significant	OK	OK
6.6 Does the project comply with environmental legislation in the host country?	PDD	DR	To be confirmed by local assessor	Pending	OK

Table 7 Comments by local stakeholders (Ref PDD Section G)

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
7.1 Have relevant stakeholders been consulted?	PDD	DR	To be confirmed by local assessor	Pending	OK
7.2 Have appropriate media been used to invite comments by local stakeholders?	PDD	DR	To be confirmed by local assessor	Pending	OK
7.3 If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	PDD	DR	To be confirmed by local assessor	Pending	OK
7.4 Is a summary of the stakeholder comments received provided?	PDD	DR	To be confirmed by local assessor	Pending	OK
7.5 Has due account been taken of any stakeholder comments received?	PDD	DR	To be confirmed by local assessor	Pending	OK

Table 8 Other requirements

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
8.1 Project Design Document					
8.1.1 Editorial issues: does the project correctly apply the PDD template and has the document been completed without modifying/adding headings or logo, format or font.	PDD	DR	Minor issues refer to NIR 2	Pending	OK
8.1.2 Substantive issues: does the PDD address all the specific requirements under each header. If requirements are not applicable / not relevant, this must be stated and justified	PDD	DR	Pending close out NIRs	Pending	OK
8.2 Technology to be employed					
8.2.1 Does the project design engineering reflect current good practices?	PDD	DR	Description seems to reflect standard design	OK	OK
8.2.2 Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	PDD	DR	Project appears to be standard wind power technology although technical barrier was mentioned Pending feedback local assessment	Pending	OK
8.3 Is the project technology likely to be substituted by other or more efficient technologies within the project period?	PDD	DR	Operational life time of 25 years which is not unreasonable assuming proper operation and maintenance	OK	OK
8.2.4 Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project	PDD	DR	Training is planned for safe operation. Not expected that extensive training is required which could create problems	OK	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
period?					
8.3 Duration of the Project/ Crediting Period					
8.3.1 Are the project's starting date and operational lifetime clearly defined and reasonable?	PDD	DR	Lifetime is 25 years, starting data is same as crediting period so would be the start of operation	OK	OK
8.3.2 Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max. two x 7 years or fixed crediting period of max. 10 years)?	PDD	DR	Renewable crediting period	OK	OK
8.3.3 Does the project's operational lifetime exceed the crediting period	PDD	DR	Yes, 25 years vs 21 years	OK	OK

A.3 Annex 3: Overview of Findings

Date: 18 Aug 2006 Raised by: M. van der Linden/ Elton Chen / Robin Wang

No.	Type	Issue	Ref
1	CAR1	Letter of Approval from host country has not been made available to the validator	1.2
Date: 28 Apr 2007			
[Comments] The project was officially approved by DNA and the LoA is estimated to be issued in May, 2007.			
Date: 4 Sep 2007 Robin Wang			
[Acceptance and close out] The copy of LoA approved by Chinese DNA has been presented. Hence CAR1 is closed out.			

Date: 18 Aug 2006 Raised by: M. van der Linden/ Elton Chen / Robin Wang

No.	Type	Issue	Ref
2	NIR1	Minor deviation from the PDD template in the header of Annex 3 and 5 were the UNFCCC logo and page number have been moved. Please correct	1.6
Date: 28 Apr 2007			
[Comments] Corrected and updated to Version 3 template please refer to the revised PDD			
Date: 2 July 2007			
[Acceptance and close out]			
1. In the header of Annex 3, the UNFCCC logo is not in the right place.			
2. The page 39 is blank.			
3. The Additionality Tool Version 03 has been used in PDD, but there are some headers are not consistent with the Version 03. Please correct accordingly.			
Date: 4 Sep 2007			
[Comments] Corrected and updated in the PDD.			
Date: 4 Sep 2007 Robin Wang			
[Acceptance and close out] The corrected headers are consistent with the PDD Version 3 template. Hence NIR 1 is closed out.			

Date: 21 Aug 2006 Raised by: M. van der Linden/ Elton Chen / Robin Wang

No.	Type	Issue	Ref
3	NIR2	In PDD version 1 page 12, the reason of not choosing average OM is given as "The average OM is used when low-cost /must run resources constitute more than 50% of total amount of power generation in the grid. Table 4 shows that zero emissions sources have accounted for less than 50% of the generation on the Shandong Power Grid on average over the last 5 years, therefore this method is not applicable to the project." Please clarify how you compare low-cost /must run resources with zero emissions sources. In the PDD you have selected to use an approach for determining the Build Margin which is different from the requirements of the approved methodology. You base this on a request for deviation submitted and approved for AM0005. Please note that since deviation are project specific and don't automatically apply to all project unless methodologies are changed, further guidance from the EB might be required before this can be accepted.	2.3
Date: 28 Apr 2007			
[Comments] Please refer to Table 6 in Section B.6.3 Step 1 and Step 2 of the revision PDD			
Date: 2 July 2007			
[Acceptance and close out] As indicated above, the justification of selecting simple OM method is not logical, NIR remains.			
The alternative approach used in determining BM is from a request for guidance when using the former methodology AM0005, and which has been accepted by EB in most of those registered projects using ACM0002. Therefore, the above mentioned approach for determining the BM is acceptable for the project.			

Date: 4 Sep 2007 [Comments] Please refer to page 24 Section B.6.3 Step 1 for further explanation.
Date: 12 Sep 2007 Robin Wang [Acceptance and close out] The determination of OM and BM is logical and complied with the ACM0002 Version 06. Hence NIR 2 is closed out.

Date: 21 Aug 2006 Raised by: M. van der Linden/ Elton Chen / Robin Wang

No.	Type	Issue	Ref
4	NIR3	Can you provide a copy of the IRR calculation mentioned in the additionality analysis	3.2

Date: 28 Apr 2007
[Comments] IRR calculation was clarified in separate document

Date: 15 July 2007
[Acceptance and close out]
 1. Several data between FSR and IRR spreadsheet such as Project total investment, Capex, Equity, Loan value etc are not consistent with each other.
 2. In IRR Sheet "Workings", the Interest during construction is counted incorrect.
 3. Please input updated IRR calculation into spreadsheet for reproduction based on the data in Sheet 14-6 of FSR.

Date: 4 Sep 2007
[Comments] The IRR has been calculated in a new spreadsheet according to the FSR cash flow tables. This has been provided to the DOE. There is one amendment in the spreadsheet that adjusts the revenues according to the tariff that was negotiated rather than the tariff in the FSR. The tariff in the FSR was never considered to be realistic. Further evidence of the negotiated tariff has been provided to the DOE.

Date: 11 Sep 2007 Robin Wang
[Acceptance and close out] The revised IRR has been checked with the FSR according to the approval of grid tariff from local authority; found the parameters shown in the PDD are sustainable. Hence NIR3 is closed out.

Date: 21 Aug 2006 Raised by: M. van der Linden/ Elton Chen / Robin Wang

No.	Type	Issue	Ref
5	NIR4	It is stated that EGy is net of any on site losses. Is there separate meter metering the output to the grid? If there is separate meter who is responsible for installation and maintenance of that meter? is there any backup meter? it is stated that invoices will be available for checking. Will these invoices be derived from direct measurement and if so, again who is responsible for that meter.	4.5

Date: 28 Apr 2007
[Comments] revised, please refer to the revised PDD

Date: 2 July 2007 Robin Wang
[Acceptance and close out] The relevant revision has been made in section B7. NIR is closed.

Date: 21 Aug 2006 Raised by: M. van der Linden / Elton Chen / Robin Wang

No.	Type	Issue	Ref
6	NIR5	Section D4 describes presence of managers for the project. Can you elaborate on the organization of the project and especially: - authority and responsibility of project management - authority and responsibility for registration, monitoring, measurement and reporting	5.2.1 5.2.2

Date: 28 Apr 2007
[Comments] revised, please refer to Section B7.2 in the revised PDD

Date: July 13, 2007 Robin Wang
[Acceptance and close out] The organization chart has been added in section B7 while the specific responsibilities of the project staff are described in ANNEX4. NIR closed out.

Date: 21 Aug 2006

Raised by: M. van der Linden/ Elton Chen / Robin Wang

No.	Type	Issue	Ref
7	NIR6	Have any procedures been developed for: - calibration and maintenance of monitoring equipment - dealing with missing data in case of errors or equipment malfunctioning - record handling and data management	5.2.5 5.2.6 5.2.9 5.2.7 5.2.8
Date: 28 Apr 2007 [Comments] completed, please refer to Annex 4 in the revised PDD			
Date: 13 July 2007 Robin Wang [Acceptance and close out] The required contents have been supplemented in PDD ANNEX 4. NIR is closed.			

Date: 21 Aug 2006

Raised by: M. van der Linden/ Elton Chen / Robin Wang

No.	Type	Issue	Ref
8	NIR7	Have you made arrangement for internal quality control and continuous improvement of procedures, data etc.	5.2.10 5.2.11 5.2.12 5.2.13
Date: 28 Apr 2007 [Comments] completed, please refer to the revised PDD			
Date: 13 July 2007 Robin Wang [Acceptance and close out] The required contents have been supplemented in ANNEX 4. NIR is closed.			

Date: 14 Nov 2007

Raised by: Sarah Ruan / Elton Chen / Robin Wang

No.	Type	Issue	Ref
9	NIR8	The starting date of the project activity is 25 Sep 2006. Thus relevant supporting materials, such as purchase agreements, loan contract, invoices, contracts, and so on, need to be provided to prove the main costs of this project.	3.2
Date: 22 Nov 2007 [Comments] Scan copy of purchase contracts of wind turbines and wind towers plus scan copy of related page in FSR has been provided to DOE.			
Date: 6 Dec 2007 Robin Wang [Acceptance and close out] Spot check of actual contract price has been made against related copy in the FSR. It is OK. Hence NIR is closed.			



A.4 Annex 4: Statement of Competency of Validation Team

Statement of Competence

Name: Sarah Ruan Sha

SGS Affiliate: SGS China

Status

- Product Co-ordinator
- Operations Co-ordinator
- Technical Reviewer
- Expert

Validation

Verification

- Local Assessor
- Lead Assessor
- Assessor
- / Trainee Lead Assessor

Scopes of Expertise

- 1. Energy Industries (renewable / non-renewable)
- 2. Energy Distribution
- 3. Energy Demand
- 4. Manufacturing
- 5. Chemical Industry
- 6. Construction
- 7. Transport
- 8. Mining/Mineral Production
- 9. Metal Production
- 10. Fugitive Emissions from Fuels (solid,oil and gas)
- 11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride
- 12. Solvent Use
- 13. Waste Handling and Disposal
- 14. Afforestation and Reforestation
- 15. Agriculture

Approved Member of Staff by: Elton Chen Wu

Date: 05/11/2007



Statement of Competence

Name: Robin Wang Jing

SGS Affiliate: SGS China

Status

- Product Co-ordinator
- Operations Co-ordinator
- Technical Reviewer
- Expert

Validation

Verification

- Local Assessor
- Lead Assessor
- Assessor
- / Trainee Lead Assessor

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)
2. Energy Distribution
3. Energy Demand
4. Manufacturing
5. Chemical Industry
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8. Mining/Mineral Production
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10. Fugitive Emissions from Fuels (solid,oil and gas)
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12. Solvent Use
13. Waste Handling and Disposal
14. Afforestation and Reforestation
15. Agriculture

Approved Member of Staff by: Elton Chen Wu

Date: 23/06/2007



Statement of Competence

Name: Niclo Deng Wei

SGS Affiliate: SGS China

Status

- Product Co-ordinator
- Operations Co-ordinator
- Technical Reviewer
- Expert

Validation

Verification

- Local Assessor
- Lead Assessor
- Assessor
- / Trainee Lead Assessor

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)
2. Energy Distribution
3. Energy Demand
4. Manufacturing
5. Chemical Industry
6. Construction
7. Transport
8. Mining/Mineral Production
9. Metal Production
10. Fugitive Emissions from Fuels (solid,oil and gas)
11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride
12. Solvent Use
13. Waste Handling and Disposal
14. Afforestation and Reforestation
15. Agriculture

Approved Member of Staff by: Elton Chen Wu

Date: 23/07/2008



Statement of Competence

Name: Simon Zhao Xinguang

SGS Affiliate: SGS China

Status

- Product Co-ordinator
- Operations Co-ordinator
- Technical Reviewer
- Expert

Validation

Verification

- Local Assessor
- Lead Assessor
- Assessor
- / Trainee Lead Assessor

Scopes of Expertise

- 16. Energy Industries (renewable / non-renewable)
- 17. Energy Distribution
- 18. Energy Demand
- 19. Manufacturing
- 20. Chemical Industry
- 21. Construction
- 22. Transport
- 23. Mining/Mineral Production
- 24. Metal Production
- 25. Fugitive Emissions from Fuels (solid,oil and gas)
- 26. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride
- 27. Solvent Use
- 28. Waste Handling and Disposal
- 29. Afforestation and Reforestation
- 30. Agriculture

Approved Member of Staff by: Elton Chen Wu

Date: 23/07/2008

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