



Industrie Service

Choose certainty.
Add value.

Validation Report

EcoSecurities Group Plc

VALIDATION OF THE CDM-PROJECT:
JILIN DA'AN DAGANGZI WIND POWER PROJECT
PHASE II

REPORT NO. 1113897

25 February 2010

TÜV SÜD Industrie Service GmbH
Carbon Management Service
Westendstr. 199 - 80686 Munich – GERMANY



Report No.	Date of first issue	Revision No.	Date of this revision	Certificate No.
1113897	17-10-2008	03	25-02-2010	-

Subject: Validation of a CDM Project	
Accredited TÜV SÜD Unit: TÜV SÜD Industrie Service GmbH Certification Body "climate and energy" Westendstr. 199 80686 Munich Germany	TÜV SÜD Contract Partner: Jiangsu TUV Product Service Ltd., Beijing Branch Unit 0918, Landmark Tower 2 100004 Beijing China
Project Participant: Jilin CGN Wind Power Co., Ltd No.1 Changbai Nan Ave, Da'an City Jilin Province, 131300 China Eco Securities Group plc 40 Dawson Street Dublin, Ireland	Project Site(s): Shuanggang Village, Dagangzi County, Jilin Province, P.R.China E 123°35'26"~123°38'58" Longitude N 44°18'23"~45°18'46" Latitude
Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II	
Applied Methodology / Version: ACM0002/ Version 07	Scope(s): 1 Technical Area: 1.1.
First PDD Version: Date of issuance: 24-04-2008 Version No.: 01 Starting Date of GSP 10-05-2008	Final PDD version: Date of issuance: 18-02-2010 Version No.: 5.0
Estimated Annual Emission Reduction:	118,197 tCO ₂ e
Assessment Team Leader: Xiaoyan Liu Further Assessment Team Members: Xiaoying Chen Karin Wagner	Responsible Certification Body Members: Cuiyun Zhang

Summary of the Validation Opinion:

- The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM. Hence TÜV SÜD will recommend the project for registration by the CDM Executive Board in case letters of approval of all Parties involved will be available before the expiring date of the applied methodology(ies) or the applied methodology version respectively.
- The review of the project design documentation and the subsequent follow-up interviews have not provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. Hence TÜV SÜD will not recommend the project for registration by the CDM Executive Board and will inform the project participants and the CDM Executive Board on this decision.

Abbreviations

ACM	Approved Consolidated Methodology
AM	Approved Methodology
AMS	Approved Methodology Small scale
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CER	Certified Emission Reduction
CM	Combined Margin
CMP	Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol
CR / CL	Clarification Request
DNA	Designated National Authority
DOE	Designated Operational Entity
EF	Emission Factor
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission Reduction
FAR	Forward Action Request
FSR	Feasibility Study Report
GHG	GreenHouse Gas(es)
IPCC	Intergovernmental Panel on Climate Change
IRL	Information Reference List
IRR	Internal Rate of Return
KP	Kyoto Protocol

MP	Monitoring Plan
NGO	Non Governmental Organisation
OM	Operational Margin
PDD	Project Design Document
PP	Project Participant
TÜV SÜD	TÜV SÜD Industrie Service GmbH
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

Table of Contents		Page
1	INTRODUCTION	6
1.1	Objective	6
1.2	Scope	6
2	METHODOLOGY	7
2.1	Appointment of the Assessment Team	8
2.2	Review of Documents	8
2.3	Follow-up Interviews.....	9
2.4	Further cross-check.....	9
2.5	Resolution of Clarification and Corrective Action Requests	9
2.6	Internal Quality Control.....	10
3	SUMMARY	11
3.1	Approval	11
3.2	Participation.....	11
3.3	Project design document.....	11
3.4	Project description.....	12
3.5	Baseline and monitoring methodology	12
3.6	Additionality	15
3.7	Monitoring plan.....	20
3.8	Sustainable development	20
3.9	Local stakeholder consultation	21
3.10	Environmental impacts	21
4	COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS.....	22
5	VALIDATION OPINION	23

Annex 1: Validation Protocol

Annex 2: Information Reference List

1 INTRODUCTION

1.1 Objective

The validation objective is an independent assessment by a Third Party (Designated Operational Entity = DOE) of a proposed project activity against all defined criteria set for the registration under the Clean Development Mechanism (CDM). Validation is part of the CDM project cycle and will finally result in a conclusion by the executing DOE whether a project activity is valid and should be submitted for registration to the CDM Executive Board (CDM-EB). The ultimate decision on the registration of a proposed project activity rests at the CDM-EB and the Parties involved.

The project activity discussed by this validation report has been submitted under the project title:
Jilin Da'an Dagangzi Wind Power Project Phase II

1.2 Scope

The scope of any assessment is defined by the underlying legislation, regulation and guidance given by relevant entities or authorities. In the case of CDM project activities the scope is set by:

- The Kyoto Protocol, in particular § 12 and modalities and procedures for the CDM
- Decision 2/CMP1 and Decision 3/CMP.1 (Marrakech Accords)
- Further COP/MOP decisions with reference to the CDM (e.g. decisions 4 – 8/CMP.1)
- Decisions and specific guidance by the EB published under <http://cdm.unfccc.int>
- Guidelines for Completing the Project Design Document (CDM-PDD), and the Proposed New Baseline and Monitoring Methodology (CDM-NM)
- Baselines and monitoring methodologies (including GHG inventories)
- Management systems and auditing methods
- Environmental issues relevant to the sectoral scope applied for
- Applicable environmental and social impacts and aspects of CDM project activity
- Sector specific technologies and their applications
- Current technical and operational knowledge of the specific sectoral scope and information on best practice

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

Once TÜV SÜD receives a first PDD version, it is made publicly available at the UNFCCC webpage and at TÜV SÜD's webpage for starting a 30 day global stakeholder consultation process (GSP). In case of any request a PDD might be revised (under certain conditions the GSP could be repeated) and the final PDD will form the basis for the final evaluation as presented in this report. Information on the first and the final PDD version is presented in page 1.

The only purpose of a validation is its use during the registration process as part of the CDM project cycle. Hence, TÜV SÜD cannot be held liable by any party for decisions made or not made based on the validation opinion, which will go beyond that purpose.

2 METHODOLOGY

The project assessment applies standard auditing techniques to assess the correctness of the information provided by the project participants. The assessment is based on the “Clean Development Mechanism Validation and Verification Manual” version 01. The work starts with appointment of team covering the technical scope(s), sectoral scope(s) and relevant host country experience for evaluating the CDM project activity. Once the project is made available for the stakeholder consultation process, members of the team carry out the desk review, follow-up actions, resolution of issues identified and finally preparation of the validation report. The prepared validation report and other supporting documents then undergo an internal quality control by the CB “climate and energy” before submission to the CDM-EB.

In order to ensure transparency, assumptions are clear and explicitly stated; the background material is clearly referenced. TÜV SÜD developed methodology-specific checklists and protocol customised for the project. The protocol shows, in a transparent manner, criteria (requirements), the discussion of each criterion by the assessment team and the results from validating the identified criteria. The validation protocol serves the following purposes:

It organises, 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 and any adjustment made to the project design.

The validation protocol consists of three tables. The different columns in these tables are described in the figure below.

The completed validation protocol is enclosed in Annex 1 to this report.

Validation Protocol Table 1: Conformity of Project activity and PDD				
Checklist Topic / Question	Reference	Comments	PDD in GSP	Final PDD
<i>The checklist is organised in sections following the arrangement of the applied PDD version. Each section is then further sub-divided. The lowest level constitutes a checklist question / criterion.</i>	<i>Gives reference to documents where the answer to the checklist question or item is found in case the comment refers to documents other than the PDD.</i>	<i>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. In some cases sub-checklist are applied indicating yes/no decisions on the compliance with the stated criterion. Any Request has to be substantiated within this column</i>	<i>Conclusions are presented based on the assessment of the first PDD version. This is either acceptable based on evidence provided (☑), or a Corrective Action Request (CAR) due to non-compliance with the checklist question (See below). Clarification Request (CR) is used when the validation team has identified a need for further clarification. Forward action request to highlight issues related to project implementation that require review during the first verification.</i>	<i>Conclusions are presented in the same manner based on the assessment of the final PDD version and further documents including assumptions presented in the documentation.</i>

Clarifications and corrective action requests	Ref. to table 1	Summary of project owner response	Validation team conclusion
<i>If the conclusions from table 1 are either a Corrective Action, a Clarification or a Forward action Request, these should be listed in this section.</i>	<i>Reference to the checklist question number in Table 1 where the issue is explained.</i>	<i>The responses given by the client or other project participants during the communications with the validation team should be summarised in this section.</i>	<i>This section should summarise the discussion on and revision to project documentation together with the validation team's responses and final conclusions. The conclusions should be reflected in Table 1, under "Final PDD".</i>

In case of a denial of the project activity more detailed information on this decision will be presented in table 3.

Clarifications and corrective action requests	Id. of CAR/CR 1	Explanation of the Conclusion for Denial
<i>If the final conclusions from table 2 results in a denial the referenced request should be listed in this section.</i>	<i>Identifier of the Request.</i>	<i>This section should present a detail explanation, why the project is finally considered not to be in compliance with a criterion with a clear reference to the requirement which is not complied with.</i>

2.1 Appointment of the Assessment Team

According to the technical scopes and experiences in the sectoral or national business environment TÜV SÜD has composed a project team in accordance with the appointment rules of the TÜV SÜD certification body "climate and energy". The composition of an assessment team has to be approved by the Certification Body (CB) ensuring that the required skills are covered by the team. The CB TÜV SÜD operates four qualification levels for team members that are assigned by formal appointment rules:

- Assessment Team Leader (ATL)
- Greenhouse Gas Auditor (GHG-A)
- Greenhouse Gas Auditor Trainee (T)
- Experts (E)

It is required that the sectoral scope linked to the methodology has to be covered by the assessment team.

Name	Qualification	Coverage of scope	Coverage of technical area	Host country experience
Xiaoyan Liu	ATL	☑	☑	☑
Xiaoying Chen	GHG-A	☑	☑	☑
Karin Wagner	GHG-A	☑	☑	

Xiaoyan Liu is a senior engineer for Environmental Engineering and head at section of "Carbon Resource Management" in Beijing branch office, Jiangsu TUV Product Service Ltd. She is also a lead auditor for environmental management systems and holds a Master Degree in environmental science. In her position she is responsible for the implementation of validation, verification and certifica-

tions audits for GHG projects. She received training in the CDM validation process early in 2006 and has participated already in many CDM project assessments as auditor / ATL.

Xiaoying Chen is an Auditor for GHG inventory validation and verification for Scope 1 at TÜV Industrie Service GmbH TÜV SÜD Group, she holds a Master Degree in knowledge management from Conservatoire Nationale des Arts et Metiers and has a strong technical background in renewable energies. She has been involved in GHG activities since 2005, starting as consultant for the development of CDM projects. She has received extensive training in CDM validation and verification processes and participated in several CDM project assessments.

Karin Wagner is an Auditor for GHG inventory validation and verification for Scope 1 at the “Carbon Management Service” department of TÜV SÜD Industrie Service GmbH in Munich, Germany. She holds a M.Sc. in geological sciences and has gathered experience in environmental consulting before joining TÜV SÜD. She has received training in the CDM validation process and participated in several CDM project assessments.

2.2 Review of Documents

A first version of the PDD was submitted to the DOE in May 2008. The first PDD version submitted by the PP and additional background documents related to the project design and baseline were reviewed to verify the correctness, credibility and interpretation of the presented information, furthermore a cross check between information provided and information from other sources (if available) have been done as initial step of the validation process. A complete list of all documents and proofs reviewed is attached as annex 2 to this report.

2.3 Follow-up Interviews

On 20/05/2008 TÜV SÜD performed interviews and physical site inspection with project stakeholders to confirm relevant information and to resolve issues identified in the first document review. The table below provides a list of all persons interviewed in this context.

Name	Organisation
Zhao Jingjing (Project Owner)	CGNPC
Yan Shuang (Project Owner)	CGNPC
Guo Hao (CDM consultant)	Eco Securities
Yang Yi (CDM consultant)	Eco Securities
Lu Hao (Project Owner)	CGNPC

2.4 Further cross-check

During the validation process, the team makes reference to available information related to similar projects or technologies as the CDM project activity. The documentation has also been reviewed against the approved methodology/ies applied to confirm the appropriateness of formulae and correctness of calculations.

2.5 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation is to resolve the requests for corrective actions and clarifications and any other outstanding issues which needed to be clarified for TÜV SÜD's conclusion on the project design. The CARs and CRs raised by TÜV SÜD were resolved during communi-

cation between the client and TÜV SÜD. To guarantee the transparency of the validation process, the concerns raised and responses that have been given are documented in more detail in the validation protocol in annex 1.

The final PDD version that was submitted in March 2009 serves as the basis for the final assessment presented herewith. Changes are not considered to be significant with respect to the qualification of the project as a CDM project based on the two main objectives of the CDM, i.e. to achieve a reduction of anthropogenic GHG emissions and to contribute to a sustainable development.

2.6 Internal Quality Control

As final step of a validation the final documentation including the validation report and the protocol have to undergo an internal quality control by the CB "climate and energy", i.e. each report has to be finally approved either by the head of the CB or the deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one.

After confirmation of the PP the validation opinion and relevant documents are submitted to the EB through the UNFCCC web-platform.

3 SUMMARY

The assessment work and the main results are described below in accordance with the VVM reporting requirements. The reference documents indicated in this section and Annex 1 are stated in Annex 2.

3.1 Approval

The project participants are Jilin CGN Wind Power Co., Ltd of People's Republic of China an Eco-Securities Group Plc and Credit Suisse International of United Kingdom of Great Britain and Northern Ireland. The host Party China and further participant Parties United Kingdom of Great Britain and Northern Ireland meet the requirements to participate in the CDM.

The DNA of the United Kingdom has issued a LoA (IRL 29) on 30 July 2008 authorizing EcoSecurities Group Plc as a project participant, The DNA of the United Kingdom has issued a LoA (IRL 29) on 13/08/2008 authorizing Credit Suisse International as a project participant, the DNA of China has also issued a LoA (IRL 37) on 22 April 2008 authorizing Jilin CGN Wind Power Co., Ltd as a project participant. TÜV SÜD received these letters from the project participants directly and considers the provided letters as authentic.

The China LoA has further been double-checked with the CDM project webpage sponsored by the Department of Climate Change, NDRC (<http://cdm.ccchina.gov.cn>), which further confirms the approval of this CDM project.

Furthermore, after checking the provided LoAs, TÜV SÜD confirms that the three letters refer to the precise proposed CDM project activity title in line with the title in the PDD "Jilin Da'an Dagangzi Wind Power Project Phase II".

All three letters also indicate that each participating Party is a Party to the Kyoto Protocol, and that the participation in the Jilin Da'an Dagangzi Wind Power Project Phase II project is voluntary. The Chinese LoA also confirms that the proposed CDM project activity contributes to the sustainable development of China (host country). Based on the information given in these letters, TÜV SÜD considers the approval as unconditional with respect to these items.

All three LoAs have been issued by the respective Party's DNA, National Development and Reform Commission of the People's Republic of China and Global Carbon Markets – Department of Energy and Climate Change, respectively.

TÜV SÜD considers the requirements of the VVM (§§ 45-48) to be complied with.

The LoA does not specify a version number of the PDD or validation report. The corresponding references included to LoA, PDD and validation report are consistent.

3.2 Participation

The participants of the project activity have been approved by the corresponding Parties, which is confirmed by the issued LoAs.

The means of validation were equivalent to those described in section 3.1 in regard to the approval process of the project activity.

3.3 Project design document

The PDD is compliant with relevant form and guidance as provided by UNFCCC.

The most recent version of the PDD form was used.

TÜV SÜD considers that the guidelines for the completion of the PDD in their most recent version have been followed. Relevant information has provided by the participants in the applying PDD sections. Completeness was assessed through the checklist included to Annex 1 of this report.

3.4 Project description

The following description of the project as per PDD could be verified during the on-site audit:

The project activity is a 49.5MW wind farm project located in Jilin province, P. R. China. Totally 33 sets of 1500 kW wind turbines (FD77B Dongfang Turbine Manufacture) will be installed, providing a total capacity of 49.5 MW. The annual average power supply to the grid is 103,130MWh, the proposed project will achieve CO₂ emission reduction by replacing electricity generated by fossil fuel fired power plant connected into Northeast China Power Grid. The proposed project is estimated to generate 118,197 tonnes CO₂ emission reduction annually.

The information presented in the PDD on the technical design is consistent with the actual planing and implementation of the project activity as confirmed by:

- Review of data and information (see annex 2), cross check the same with other sources if available.
- An on-site visit has been performed and relevant stakeholder and personnel with knowledge of the project were interviewed, in case of doubt further cross checks through additional interviews have been done.
- Finally information related to similar projects or technologies as the CDM project activity have been used if available to confirm the accuracy and completeness of the project description.

In light of the above, TÜV SÜD confirms that the project description as included to the PDD is sufficiently accurate and complete in order to comply with the requirements of the CDM.

3.5 Baseline and monitoring methodology

3.5.1 Applicability of the selected methodology

Compliance with each applicability condition as listed in the chosen baseline and monitoring methodology ACM0002 Version 07 has been demonstrated.

The assessment was carried out for each applicability criteria and included among others the compliance check of the local project setting with the applicability conditions in regard to baseline setting and eligible project measures. This assessment also included the review of secondary sources which sustain that applicability conditions are complied with.

The Methodology specific protocol included to the Annex 1 documents the assessment process, including the steps taken. The results on the compliance check as well as the relevant evidence are explicitly presented in annex 1.

TÜV SÜD confirms that the chosen baseline and monitoring methodology is applicable to the project activity.

Emission sources which are not addressed by the applied methodology and which are expected to contribute more than 1% of the overall expected average annual emissions reduction have not been identified.

3.5.2 Project boundary

The project boundary was assessed in the context of physical site inspection, interviews and based on the secondary evidence received on the design of the project.

Project boundary:

The project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to, which was correctly identified as the Northeast China Power Grid.

The most relevant documentation assessed in order to confirm the project boundary are following:

- The electronic wiring system design report of Jilin Da'an Dagangzi Wind Power Project Phase II (IRL11)

The same have been validated during the validation process using standard audit techniques, further details of any observation are transparently presented in the annex 1.

Hence TÜV SÜD confirms that the identified boundary and the selected sources and gases as documented in the PDD are justified for the project activity.

3.5.3 Baseline identification

In the PDD the following baseline scenario has been defined:

As per the ACM0002 (Version 07) methodology, the baseline is clearly defined for this type of project activity (i.e. installation of a new grid-connected renewable wind power plant) which is as 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 electricity system".

The information presented in the PDD has been validated by a first document review of all the data, further confirmation based on the on-site visit and a final step by cross checking the information with similar relevant projects and/or technologies. The sources referenced in the PDD have been quoted correctly. The information was cross-checked based on verifiable and credible sources, such as:

- Prohibition to construct fossil-fuel fired power plants with less than 135 MW(IRL 27),
- Approval of feasibility study of Jilin Dagangzi Wind Power Project Phase II (IRL 10),
- ACM0002 (Version 07).

TÜV SÜD has determined that no reasonable alternative scenario has been excluded.

Based on the validated assumptions on calculations TÜV SÜD considers that the identified baseline scenario is reasonable.

TÜV SÜD confirms that all relevant CDM requirements, including relevant and / or sectoral policies and circumstances, have been identified correctly taken into account in the definition of the baseline scenario.

A verifiable description of the baseline scenario has been included to the PDD.

In regard to item 86 of VVM, TÜV SÜD confirms that:

1. All the assumptions and data used by the project participants are listed in the PDD, including their references and sources;
2. All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD;
3. Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable;
4. Relevant national and/or sectoral policies and circumstances are considered and listed in the PDD;

5. 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.

3.5.4 Algorithm and/or formulae used to determine emission reductions

3.5.4.1 Baseline Emissions

TÜV SÜD has assessed the calculations of project emissions, baseline emissions and leakage and emission reductions. Corresponding calculations were carried out based on calculation spreadsheets. The parameters and equations presented in the PDD and further documentation have been compared with the information and requirements presented in the methodology and respective tools. The equation comparison has been made explicitly following all the formulae presented in the calculation files.

The calculation of the baseline emissions followed the procedures described in the methodology ACM0002 Version 07. The North-East China Power Grid is considered to be the project boundary. The operating margin emission factor (EF_{OM}) was determined based on the simple OM method. The ex-ante option was chosen for this calculation. The calculation of the build margin emission factor (EF_{BM}) was based on modified methods agreed by the EB, because plant specific data are not available in China. The emission factor of the thermal power plants was calculated by the proportion of the emissions of coal, gas and oil times the emission factor of the best available coal, gas and oil power plant as defined and published by the Chinese DNA. The new thermal capacity installation that exceeded 20% in the last years, for which data was available, was finally assessed with this factor.

The value (1.1461tCO₂/MWh) for the combined margin emission factor (EF_{CM}) was determined using the weighted average of the EF_{BM} and EF_{OM} using the default values for the factors as described in the methodology (i.e. 0.75 and 0.25 for wind farms). As per the methodology, the project does not need to consider leakage or project emissions. As a result, the annual emission reductions equal the annual baseline emissions.

The assumptions and data used to determine the emission reductions are listed in the PDD and all the sources have been checked and confirmed.

Based on the information reviewed it can be confirmed that the sources used are correctly quoted and interpreted in the PDD.

The values presented in the PDD are considered reasonable based on the documentation reviewed, further references and the result of the interviews.

The baseline methodology has been correctly applied following the requirements.

The estimate of the baseline emissions can be confirmed as the same have been replicated by the audit team using the information provided.

Detailed information on the verification of the parameters used in the equations can be found in the annex 1.

3.5.5 Project emissions

According to the applied methodology, for wind energy project activities, $PEy = 0$.

3.5.6 Leakage

Not applicable as indicated by the applied methodology.

3.5.7 Emission Reductions

In summary, the calculation of the baseline emissions and the emission reductions, respectively, can be considered as correct.

3.6 Additionality

The additionality of the project has been presented in the PDD using following approach:

- Tool for the demonstration and assessment of additionality (version 05.2);

The approach use in the PDD has been assessed first based on a document review, where following relevant documents have been reviewed:

- FSR(IRL 8)
- The bidding grid tariff approval by Jilin mechanical equipment bidding company(IRL 18)
- The investment analysis (IRL 38)

On site the additionality has been discussed principally with: Mr Zhao Jingjing, the project owner of CGNPC. Furthermore some documents have been reviewed on-site (for details see annex 2).

Finally the data, rationales, assumptions, justifications and documentation provided have been check using local knowledge and sectoral and financial expertise, the same has been cross checked by:

- FSR approval (IRL 10)
- The main equipment purchase contract (IRL 14)
- The fed-in grid tariff approval by NDRC (IRL34)

Based on this validation steps we can confirm that the documentation assessed is appropriate for this project.

3.6.1 Prior consideration of the clean development mechanism

The starting date(12/09/2007) of the project activity is determined by the main equipment purchasing contract (IRL14), which is the earliest date at which either the implementation or construction or real action of a project activity begins. In order to confirm the same the assessment team has reviewed the following documents:

- Main equipment purchasing contract (IRL14)
- Start construction contract (IRL19)

Additionally the assessment team cross checked this information with Mr. Zhao Jingjing and Ms. Yan Shuang, the project owner.

The starting date of the project activity is determined to be 12/09/2007 which is before 02 August and also before the GSP.

The chronological listing of the major events associated with the proposed project activity clearly indicates that CDM was seriously considered before the starting date. The project started with the equipment purchasing on September 12, 2007 (IRL14). Prior to that date, CDM was seriously taken into consideration which was demonstrated by several events and actions:

- 22/06/2007 – The project owner got the notice on lower tariff than the expected one and realized that the project will not be financially attractive, as the IRR calculated with the lower tariff is 7.06% (IRL 36, 38).
- 06/08/2007 – Bidding Notice for CDM development issued (IRL 16).
- 12/09/2007 – Equipment purchasing contract signed with Dongfang turbine Co., Ltd (IRL 14)
- 29/01/2008 – ERPA signed with EcoSecurities Group plc and Credit Suisse International (IRL 22)
- 10/03/2008 – The start construction of the proposed project (IRL19)

- 10/05/2008 – GSP start (see section 4 of the validation report)

In summary, TÜV SÜD can confirm that CDM was seriously taken into consideration in order to proceed and implement the proposed wind farm project.

The PPs have presented to the assessment team following documentation:

- Publication of the Bidding Notice for the CDM development of the project (IRL16)
- Main equipment purchasing contract (IRL14)

Additionally in order to confirm that the PPs have taken real actions to continue the activity as CDM, following timeline has been reviewed against the respective documents presented in the table below:

Activity	Document	Auditor conclusion
29/01/2008, the ERPA was signed	ERPA (IRL22)	Real CDM application action
22/04/2008, LoA of China was issued	LoA (IRL37)	Real CDM application action
10/05/2008, GSP started	GSP version PDD (IRL1)	Real CDM application action

Hence, the project complies with the requirements to demonstrate the prior consideration of the CDM.

3.6.2 Identifications of alternatives

The output of the project is electricity that is exported to the Northeast China Power Grid.

The list of alternatives to supply the outputs mentioned above, which is presented in the PDD includes the project activity undertaken without being registered as CDM project. The rest of the alternatives presented do include all plausible scenarios taking into account the local and sectoral situations for the outputs mentioned. Hence the list of alternatives is considered to be complete.

3.6.3 Investment analysis

The PP uses the investment analysis to demonstrate the additionality.

The financial returns of the proposed project are insufficient to justify the investment.

The parameters used in the financial calculations have been validated based on a review of the sources presented in the PDD, inter alia:

The FSR (IRL8) respectively (investment costs, the O&M costs, annual power generation and supply, etc). The only deviating key input parameter is the tariff that was derived from the NDRC approved grid tariff to the wind farms in the same province (IRL 34). According to the *Method for the Tariff of Grid connected Electricity Generation from Renewable Sources and Management of Apportionment of Expenses* (IRL 42) issued by NDRC, a unified guiding tariff would be determined to each wind farm on a provincial level, and the tariff of the bidding/tendering project usually acquires a lower tariff than the governmental guiding tariff, hence we confirm that the guiding tariff to the wind farms within the same province is the essential information to the project owner, we herewith confirm that the guiding tariff (IRL 34, 610RMB/MWh, VAT including) to the wind farms in Jilin province is appropriate to be considered as the input value for the investment analysis, which is more realistic than the estimated tariff in the FSR (638RMB/MWh, VAT including) to the project participant.

Furthermore the period of time between the finalization of the FSR and the investment decision is only 1 month, and the tariff adopted in the IRR calculation was acquired 2 months before the in-

vestment decision, therefore it can be confirmed that it is unlikely that the input values have materially changed. Furthermore based on a cross check with:

- The tariff bidding announcement (IRL 18), to compare with the grid tariff adopted in the investment analysis, the fed-in grid tariff approved by NDRC is identical to the tariff adopted in the investment analysis.
- Total investment is presumed to be 461.24 Mio RMB in the FSR. The investment per MW was calculated at about 9.3 Mio RMB/MW, which is lower than the average cost of 10 Mio RMB/MW based on TÜV-SÜD's internal statistics and is considered to be conservative.
- The annual operation hours (2083 hours) was calculated by third party-Jilin Provincial Investigation, Design and Research Institute contracted by the project owner. The calculation is based on 20 years of historical wind data and several months on-site wind measurement and confirmed by local experts evidenced with Evaluation Comments for FSR and finally approved by Jilin Development and Reform Committee. The 3rd party projection organization and confirmation from local experts and approval from the local government department have been considered to be reliable sources for the operation hours' projection.
- As the project has not been operational, there are no actual operation costs available for cross check. The total operation cost is 132,140 Mio for the whole lifetime. The unit operation cost is higher than the average cost of TÜV-SÜD' internal statistics, as the O&M cost is not the most sensitive parameter which will impact the IRR result significantly, hence we can confirm that the O&M cost estimated in the FSR is reasonable.
- Wind power feed in grid price VAT document (IRL 24), to compare with the taxation rate adopted in the investment analysis, we can conclude the relevant taxation calculation was in line with the national taxation regulation.

It can be seen that the parameters are plausible and can be considered acceptable under the project situation. The benchmark used for the financial comparison has been obtained from *Interim Rules on Economic Assessment of Electrical Engineering Retrofit Projects* (IRL 32). This value (8%) has been checked against the source and the suitability for this project can be confirmed as conservative based on TÜV SÜD's local and sectoral expertise. Hence it can be confirm that the benchmark used is adequate for this project.

Further assumptions presented in the financial analysis inter alia: the taxes etc, have been also reviewed and were find appropriate based on Wind power feed in grid price VAT document (IRL 24), Hence it can be confirmed that the underlying assumptions are appropriate for this project. The financial calculation has been completely checked, all the calculation files were checked and no mistakes have been found. Hence it can be confirmed that the calculations are correct.

In accordance with the "Corrections" request from EB52, and the corrective request from EB51, the tariff determination of the proposed project is further assessed, the PLF has been further checked as the other major input value for the investment analysis:

In China, the wind power projects are categorized as follows:

- a. Wind power projects with Government approved tariffs: projects where the tariff is determined by Government regulation.
- b. Wind power projects with a concession: projects where the developer has successfully bid to win the concession to produce electricity on the project site, and the tariff is determined in the bid process.

c. Demonstration Wind power projects: early stage (i.e. pre Power sector Reform in 2001) “pilot” projects, where the tariff is determined by particular characteristics of the project.

The proposed project is connected to, and obtained permission to sell the generated electricity to the Jilin Power Grid*. Since electricity tariffs exporting to grids differ province by province, only wind power projects connected in Jilin Province are considered in the case of this proposed project activity. There are 17 wind power projects (16 CDM and 1 non CDM demonstration project), including the proposed Project, which are currently exporting electricity to the Jilin Power Grid.

As shown in Table B.5.4 of the PDD, the actual electricity tariff of each wind power projects has been validated by the audit team, and it is observed the tariff of Jilin Tongyu Wind Farm Project, and Changling Wind Power Project are higher than the tariff obtained by the proposed project.

Jilin Tongyu Wind Farm was developed before 2002, which is the period prior to the power sector reform, this demonstration project applies imported technologies, using turbines from Spain and Germany, which resulted in increased investment costs for that project. The tariff was set at a reasonably high level of just above 0.9 RMB/kWh in order to guarantee a marginal return to the project. Therefore, the electricity tariff is not applicable for comparison with the proposed Project.

Changling Wind Power Project

The installed capacity of the Changling Wind Power Project is 9.35 MW, which is significantly lower than all other government approved projects, whose installed capacity is between 30 and 50 MW, is 0.61 RMB/kWh (see Table B.5.4). In addition, the tariff of the Changling Wind Power Project is only 3% higher than the tariff given to the other wind projects with an installed capacity of around 50 MW.

In the case of this project activity, even if the higher tariff of 0.63 RMB/kWh (inclusive of VAT) was used, the Project IRR without CDM would be 7.48% , Only if the proposed Project received a tariff of 0.655RMB/kWh throughout its lifetime, would the IRR reach the benchmark. This scenario is highly unlikely since, as mentioned above, the tariff of the proposed Project has been officially approved by the Jilin Provincial Pricing Bureau on 24 November 2009 (Ji Sheng Jia Shen Pi[2009]28) at 0.61 RMB/kWh including VAT, based on the NDRC’s “Circular on Improving Wind Power On-grid Tariff Policy” ([2009]1906).

Therefore, as mentioned above, the IRR is not likely to reach the benchmark due to an increase in electricity tariff.

According to the latest tariff policy released by the NDRC on 20/07/2009(IRL 47) a benchmark tariff will be imposed on the new wind power projects in Jilin Province at a 0.61RMB/kWh (inclusive of VAT). This tariff is the same as the one granted to all projects but the first one for which the government approved the tariff in the Province. This further shows that the tariff for wind power projects is stable in Jilin Province. The net return of the wind farm projects would not be decreased by the impact from the tariff or the investment because the tariff keeps stable and the investment would not increase dramatically.

* The Jilin Provincial Power Grid is the part of regional Northeast China Power Grid (NECPG). The NECPG includes the Jilin, Liaoning and Heilongjiang Power Grids

In accordance with the "Corrections" request from EB52, the PLF of the proposed project is further assessed as following:

Load factor (23.7%) The annual operating hours (and hence the load factor) used in the PDD is fully consistent with the value in the FSR.

The annual operating hours (2083hrs) was calculated by an independent third party - Jilin Provincial Investigation, Design and Research Institute contracted by the project owner. The annual operating hours was calculated using professional WAsP^{*} software, TÜV SÜD validated that this is a scientific method that is applied internationally and has been widely used by wind developers and turbine manufactures. The calculation is based on 30 years(1977-2006) of historical wind data and one year(2006-2007) of on-site wind measurement and finally approved by Jilin Development and Reform Committee. The approval by local government demonstrates that that data is reliable and reasonable. Hence we confirm the determination of the annual operating hours is in line with EB48 Annex 11.

The expected operating hours in the PDD can be cross-checked against similar projects in the same region as the project activity. Table B.5.5 of the final PDD shows the wind projects in Baicheng Region in the Jilin Province (the region where the project activity is located) that have been registered as CDM projects. From this table it can be seen that the operating hours of the projects in the same region as the project activity are slightly lower than the operating hours of the project activity. This cross-check demonstrates that the operating hours (and hence the load factor) is valid and applicable at the time of the investment decision.

According to paragraph 111 of VVM, apart from the tariff, the other input values used in the PDD and associate annexes are fully consistent with the FSR, based on our further evaluation of the applied tariff, and the PLF, we consider they are applicable to the project, and they are confirmed as plausible. Hence the investment analysis is considered to be appropriate.

3.6.4 Barrier analysis

Barrier analysis was not applied for this project.

3.6.5 Common practice analysis

The region for the common practice analysis has been defined as Jilin Province. The project activity's technology can be found in different country regions, where different situations can appear. Hence the region has been defined taken into account the kind of technology and the industry type. The assessment team has revised the approach presented in the PDD and can confirm that the relevant parameters as location, infrastructure, economical situation and development has been taken into account in order to define the region to be use for the common practice.

- Wind farm installed capacity statistic of year 2006.(IRL25)
- China wind Power Report 2007 (IRL33)

Hence the presented region can be considered appropriate for the common practice analysis.

The assessment team has reviewed official sources as

* www.wasp.dk

- <http://cdm.unfccc.int/Projects/Validation/DB/Q4HQ1J7WTI6BNFB7NLIXHEPB4APVMP/view.html>, for checking Jilin Changling Wind Farm Phase II Project.
- <http://cdm.unfccc.int/Projects/Validation/DB/JTN3CD2I2LXN07FOKTLPWXFDJN2SPK/view.html>, for checking Huaneng Tongyu Phase II project
- <http://cdm.unfccc.int/Projects/Validation/DB/7RNF2LVMSRV354HBUHY8REN2KBXH4N/view.html>, for checking Jilin Datong project.

This information confirms that the list of similar projects presented in the PDD is complete. Additionally the team made a further cross check of the information based on the interviews.

All the similar projects that are not a CDM project have been checked firstly by a review of all documentation available (See annex 2), furthermore the essential distinctions between these projects and the CDM project under validation have been confirmed using publication on the internet.

Hence it can be confirmed that the proposed CDM activity is not a common practice in the defined region.

3.7 Monitoring plan

The monitoring plan presented in the PDD complies with the requirement of the methodology. The assessment team has checked all the parameters presented in the monitoring plan against the requirements of the methodology; no deviations relevant for the project activity have been found in the plan.

The procedures have been revised by the assessment team through document review and interviews with the relevant personnel; this information together with a physical inspection allows the assessment team to confirm that the proposed monitoring plan is feasible within the project design. The major parameters to be monitored have been discussed with the PPs especially regarding the location of the meters, the data management and in general the quality assurance and quality control procedures to be implemented in the context of the project. E_{Gy} will be monitored at the connection point between Da'an wind power plant and the grid, the backup meter will be also installed at the connection point, this meter will also monitor the power import from the grid when emergency occurs.

Hence it is expected that the PPs will be able to implement the monitoring plan and the emission reductions achieved can be reported ex-post and verified.

In accordance with the "Corrections" request from EB52, as well as the request from EB5, TÜV SÜD further assessed the monitoring plan of the proposed project, TÜV SÜD confirms the revised monitoring plan sufficiently demonstrated the measurement of the parameter E_{Gy}, and we confirm the measurement of the imported electricity from the grid is in line with the applied methodology, which is also found to be consistent with the actual planning.

3.8 Sustainable development

The LoA of the Host country clearly present a statement that the project contributes to the sustainable development of the host Party.

3.9 Local stakeholder consultation

The relevant local stakeholders have been invited via the questionnaire. The evidence of these invitations is IRL 21. The assessment team has reviewed the documentation in order to validate the inclusion of relevant stakeholders and using the local expertise can confirm that the communication method used to invite the stakeholders can be considered appropriate. The summary of comments presented in the PDD has been cross checked with the documentation of the stakeholder consultation and it is found to be complete.

The relevant comments presented by the local stakeholders have been taken due account by the PP, the same has been cross checked with the information obtained during the interviews.

Hence the local stakeholder consultation has been adequately performed according to the CDM requirements.

3.10 Environmental impacts

The project participants undertake an environmental impact assessment. The assessment team made a document review of the information presented. The IRL 13 approval of EIA of Jilin Daan Dagangzi Wind Power Project Phase II confirms the correctness of the approach used by the PPs. Hence the PPs followed the requirements of the host country regarding the environmental impacts.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

TÜV SÜD published the project documents on UNFCCC website by installing a link to TÜV SÜD's own website and invited comments by Parties, stakeholders and non-governmental organisations during a period of 30 days.

The following table presents all key information on this process:

webpage: http://www.netinform.net/KE/Wegweiser/Guide2_3.aspx?ID=4884&Ebene1_ID=26&Ebene2_ID=1501&mode=0	
Starting date of the global stakeholder consultation process: 2008-05-10	
Comment submitted by: None	Issues raised: -
Response by TÜV SÜD: -	

5 VALIDATION OPINION

TÜV SÜD has performed a validation of the following proposed CDM project activity:

Jilin Da'an Danggangzi Wind Power Project Phase II

Standard auditing techniques have been used for the validation of the project. Methodology-specific checklists and protocol customised for the project have been prepared to carry out the audit and present the outcome in a transparent and comprehensive manner.

The review of the project design documentation, the subsequent follow-up interviews and the further cross check of references have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria in the protocol. In our opinion, the project meets all relevant UNFCCC requirements for the CDM. Hence TÜV SÜD will recommend the project for registration by the CDM Executive Board.

An analysis as provided by the applied methodology 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 as designed, the project is likely to achieve the estimated amount of emission reductions as specified within the final PDD version.

The validation is based on the information made available to us and the engagement conditions detailed in this report. The validation has been performed following the VVM requirements. The only purpose of this report is its use during the registration process as part of the CDM project cycle. Hence, TÜV SÜD 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.

Munich, 25-02-2010

Beijing, 25-02-2010



Cuiyun Zhang
Certification Body "climate and energy"
TÜV SÜD Industrie Service GmbH

Xiaoyan Liu
Assessment Team Leader

Validation of the CDM Project:
Jilin Da'an Danggangzi Wind Power Project Phase II



Industrie Service

Annex 1: Validation Protocol

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

Table 1 Conformity of Project Activity and PDD

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
A. General description of project activity				
A.1. Title of the project activity				
A.1.1. Does the used project title clearly enable to identify the unique CDM activity?	1,2	The project is titled with the project location, project type and the energy source. It can be clearly identified.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.1.2. Are there any indication concerning the revision number and the date of the revision?	1,2	Yes, the available PDD is indicated as version 1.0, dated 24/04/2008.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.1.3. Is this consistent with the time line of the project's history?	1,2	This version is consistent with the one opened GSP.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2. Description of the project activity				
A.2.1. Is the description delivering a transparent overview of the project activities?	1,2	The project is described transparently and the project activities described have been proved on-site. There is no inconsistency about the project information between the PDD and the actual situation.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2.2. What proofs are available demonstrating that the project description is in compliance with the actual situation or planning?	8-13	<p>The project activity is the displacement of electricity generated by coal fired power plants with electricity generated by the wind power plant. The following documents deliver evidences for the project activity:</p> <ul style="list-style-type: none"> - EIA and EIA Approval - Feasibility Study - The evaluation report of the FSR - Project Approval from Jilin DRC <p>These documents have been evidenced during the audit.</p>	CR1	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
			<u>Clarification Request No. 1.</u> Please provide the approval of grid connection to the DOE.		
A.2.3.	Is the information provided by these proofs consistent with the information provided by the PDD?	1,2	Yes, it is.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2.4.	Is all information presented consistent with details provided by further chapters of the PDD?	1,2	Yes, there are no contradictions in the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.3. Project participants					
A.3.1.	Is the form required for the indication of project participants correctly applied?	1,2, 29, 37	The form is correctly applied. Jilin CGN Wind Power Co., Ltd. and Credit Suisse International, EcoSecurities Group plc are considered as project participant. <u>Clarification Request No. 2.</u> The table in A.3 indicates that the Switzerland is the buyer, however, in Annex 1, the company-Credit Suisse International's address is UK. Please clarify.	CR2	<input checked="" type="checkbox"/>
A.3.2.	Is the participation of the listed entities or Parties confirmed by each one of them?	1,2, 22, 29, 37	Yes, ERPA between project participants were signed on Jan 29th, 2008. <u>Open Issue</u> Pls. deliver the LoAs issued by China and buyer country together with the MoC countersigned by both parties to the DOE before raising the request of registration.	Open Issue	<input checked="" type="checkbox"/>
A.3.3.	Is all information on participants / Parties provided in consistency with details provided by further chapters of the PDD (in	1,2	Yes. The contact information of the project participants is listed in Annex 1 of the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
particular annex 1)?				
A.4. Technical description of the project activity				
<i>A.4.1. Location of the project activity</i>				
A.4.1.1. Does the information provided on the location of the project activity allow for a clear identification of the site(s)?	1,2,8,	The project is located near the village of Shuanggang, Dagangzi County, Da'an City, Jilin Province, People's Republic of «Host_Country» (P. R. China) <u>Corrective Action Request No.1.</u> A provincial map is preferred for a better understanding of the project site.	CAR1	<input checked="" type="checkbox"/>
A.4.1.2. How is it ensured and/or demonstrated, that the project proponents can implement the project at this site (ownership, licenses, contracts etc.)?	1,2	The wind farm is now under construction process, 33 turbines will be put into test operation in October 2008, it has been proved by the auditor.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>A.4.2. Category(ies) of project activity</i>				
A.4.2.1. To which category(ies) does the project activity belonging to? Is the category correctly identified and indicated?	1,2	Yes, the project falls into scope 1. The category is correctly identified and indicated in A.4.2 of the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<i>A.4.3. Technology to be employed by the project activity</i>				
A.4.3.1. Does the technical design of the project activity reflect current good practices?	1,2,8,14	Yes, the project design reflects the current good practices. The project will employ large turbines with a capacity of 1500KW. <u>Corrective Action Request No.2.</u> The description of the turbine type should be consistent with the purchasing contract. The small inconsistencies regarding the operating time yearly between the Feasibility and the PDD. Please keep consistency of	CAR2	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		annual electricity supplied to the grid within the PDD.		
A.4.3.2. Does the description of the technology to be applied provide sufficient and transparent input/ information to evaluate its impact on the greenhouse gas balance?	1,2	Yes, the project activity comprises the use of wind power for the substitution of grid supplied electricity mainly from coal fired plants. There is no doubt that this technology will reduce the GHG emissions significantly.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.3. Does the implementation of the project activity require any technology transfer from annex-I-countries to the host country(ies)?	1,2, 14	No, the wind turbines are domestically made.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.4. Is the technology implemented by the project activity environmentally safe?	1,2	Yes. The main possible environmental problem produced by the technology implemented is noise. The construction noise is temporary, and the closest residents are beyond the operational noise impact area. Therefore, the noise of the project will not have impact on nearby residents.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.5. Is the information provided in compliance with actual situation or planning?	1,2, 14	Yes. The main turbine-generator purchasing contract has been reviewed by the auditor.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.6. Does the project use state of the art technology and / or does the technology result in a significantly better performance than any commonly used technologies in the host country?	1,2	The common practice for electricity generation is still coal-fired power plant. Hence, the project definitely would result in a better performance than the common practice.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.7. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1,2, 8	We do not expect that there will be a substitution, the Feasibility Study Report clearly shows that this technology is the most suitable to be employed at the site. The life cycle of a wind turbine is under normal circumstances longer than the project period.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.8. Does the project require extensive initial training and maintenance efforts in order to be carried out as scheduled during the	1,2, 15	Yes, initial training regarding wind farm operation has been provided to the staff of the wind farm, the training certification has been provided to the DOE.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
project period?				
A.4.3.9. Is information available on the demand and requirements for training and maintenance?	1,2	See A.4.3.8.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.10. Is a schedule available for the implementation of the project and are there any risks for delays?	1,2 28	The wind farm will be put into test operation in October 2008. Equipment purchasing contract has been signed and there are no risks for delays. The time schedule is not available in the PDD. <u>Corrective Action Request No.3.</u> The time schedule of the implementation of the project should be included into the PDD.	CAR3	<input checked="" type="checkbox"/>
A.4.4. Estimated amount of emission reductions over the chosen crediting period				
A.4.4.1. Is the form required for the indication of projected emission reductions correctly applied?	1,2	Yes. The form is correctly applied according to the version 3 of PDD template.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.4.2. Are the figures provided consistent with other data presented in the PDD?	1,2	Yes. The figures are consistent.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.5. Public funding of the project activity				
A.4.5.1. Is the information provided on public funding provided in compliance with the actual situation or planning as available by the project participants?	1,2, 17	Yes. There is no public funding necessary; all costs are covered by bank loans and private equity. The bank loan commitment has been verified by the DOE.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.5.2. Is all information provided consistent with the details given in remaining chapters of the PDD (in particular annex 2)?	1,2	The statements are consistent within the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II
 Date of Completion: 25/02/2010
 Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD				
B. Application of a baseline and monitoring methodology								
B.1. Title and reference of the approved baseline and monitoring methodology								
B.1.1. Are reference number, version number, and title of the baseline and monitoring methodology clearly indicated?	1,2	Yes, ACM0002 (version 7) has been applied and the reference is clearly indicated.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
B.1.2. Is the applied version the most recent one and / or is this version still applicable?	1,2	Yes, it is.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
B.1.3. Does the methodology refer to the following tools with its latest approved versions: - Tool to calculate the emission factor for an electricity system - Tool for the demonstration and assessment of additionality - Tool to calculate project or leakage CO ₂ emissions from fossil fuel combustion	1,2	The methodology refers to the following tools: 1) Tool to calculate the emission factor for an electricity system (Version 01); 2) Tool for the demonstration and assessment of additionality (Version 04);	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
B.2. Justification of the choice of the methodology and why it is applicable to the project activity								
B.2.1. Is the applied methodology considered the most appropriate one?	1,2	Yes. The approved methodology ACM0002 is exactly applicable to the wind farm project.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Fill in the required amount of sub checklists for applicability criteria as given by the methodology applied and comment at least every line answered with "No"								
B.2.2. Criterion 1: Type of electricity capacity addition by grid-connected renewable power genera-	1,2	<table border="1"> <tr> <td>Applicability checklist</td> <td>Yes / No</td> </tr> <tr> <td>Criterion discussed in the PDD?</td> <td>N/A</td> </tr> </table>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No							
Criterion discussed in the PDD?	N/A							

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD										
<p>tion</p> <p>The following types are possible: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit.</p>		<table border="1"> <tr> <td>Compliance provable?</td> <td>N/A</td> </tr> <tr> <td>Evidences provided in the PDD?</td> <td>N/A</td> </tr> <tr> <td>Compliance verified?</td> <td>N/A</td> </tr> </table>	Compliance provable?	N/A	Evidences provided in the PDD?	N/A	Compliance verified?	N/A						
Compliance provable?	N/A													
Evidences provided in the PDD?	N/A													
Compliance verified?	N/A													
<p>B.2.3. Criterion 2 (in the case of hydro plants):</p> <p>-The project activity is implemented in an existing reservoir, with no change in the volume of reservoir or</p> <p>-The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity is greater than 4 W/m² or</p> <p>-The project activity results in new reservoirs and the power density of the power plant is greater than 4 W/m².</p>	1,2	<table border="1"> <tr> <td>Applicability checklist</td> <td>Yes / No</td> </tr> <tr> <td>Criterion discussed in the PDD?</td> <td>N/A</td> </tr> <tr> <td>Compliance provable?</td> <td>N/A</td> </tr> <tr> <td>Evidences provided in the PDD?</td> <td>N/A</td> </tr> <tr> <td>Compliance verified?</td> <td>N/A</td> </tr> </table>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	N/A	Compliance provable?	N/A	Evidences provided in the PDD?	N/A	Compliance verified?	N/A	☑	☑
Applicability checklist	Yes / No													
Criterion discussed in the PDD?	N/A													
Compliance provable?	N/A													
Evidences provided in the PDD?	N/A													
Compliance verified?	N/A													
<p>B.2.4. Criterion 3 (in the case of modification/retrofit in existing power plants):</p> <p>5 years of historical data (or 3 years in the case of non hydro project activities) are available</p>	1,2	<table border="1"> <tr> <td>Applicability checklist</td> <td>Yes / No</td> </tr> <tr> <td>Criterion discussed in the PDD?</td> <td>N/A</td> </tr> <tr> <td>Compliance provable?</td> <td>N/A</td> </tr> <tr> <td>Evidences provided in the PDD?</td> <td>N/A</td> </tr> <tr> <td>Compliance verified?</td> <td>N/A</td> </tr> </table>	Applicability checklist	Yes / No	Criterion discussed in the PDD?	N/A	Compliance provable?	N/A	Evidences provided in the PDD?	N/A	Compliance verified?	N/A	☑	☑
Applicability checklist	Yes / No													
Criterion discussed in the PDD?	N/A													
Compliance provable?	N/A													
Evidences provided in the PDD?	N/A													
Compliance verified?	N/A													
<p>B.2.5. Criterion 4:</p>	1,2		☑	☑										

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD	
Defined electricity grid boundaries		Applicability checklist	Yes / No		
		Criterion discussed in the PDD?	Yes		
		Compliance provable?	Yes		
		Evidences provided in the PDD?	Yes		
		Compliance verified?	Yes		
B.2.6. Criterion 5: Approved inclusion in other methodologies (if applied only)	1,2	Applicability checklist	Yes / No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Criterion discussed in the PDD?	N/A		
		Compliance provable?	N/A		
		Evidences provided in the PDD?	N/A		
		Compliance verified?	N/A		
B.2.7. Criterion 6: Exclusion of fuel switching activities	1,2	Applicability checklist	Yes / No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Criterion discussed in the PDD?	Yes		
		Compliance provable?	Yes		
		Evidences provided in the PDD?	Yes		
		Compliance verified?	Yes		
B.2.8. Criterion 7: Exclusion of biomass fired power plants	1,2	Applicability checklist	Yes / No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Criterion discussed in the PDD?	Yes		
		Compliance provable?	Yes		
		Evidences provided in the PDD?	Yes		
		Compliance verified?	Yes		
B.2.9. Criterion 8: Exclusion of hydro power plants that result in new reservoirs or in the increase in ex-	1,2	Applicability checklist	Yes / No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Criterion discussed in the PDD?	N/A		
		Compliance provable?	N/A		

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD										
isting reservoirs where the power density of the power plant is less than 4 W/m2.		Evidences provided in the PDD?	N/A											
		Compliance verified?	N/A											
B.3. Description of the sources and gases included in the project boundary														
Integrate the required amount of sub-checklists for sources and gases as given by the methodology applied and comment on at least every line answered with "No"														
B.3.1. Source: Fugitive Emissions from non-condensable gases contained in geothermal steam (geothermal power plants only) Gas(es): CO ₂ , CH ₄ Type: Project Emissions	1,2	<table border="1"> <thead> <tr> <th>Boundary checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Source and gas(es) discussed by the PDD?</td> <td>N/A</td> </tr> <tr> <td>Inclusion / exclusion justified?</td> <td>N/A</td> </tr> <tr> <td>Explanation / Justification sufficient?</td> <td>N/A</td> </tr> <tr> <td>Consistency with monitoring plan?</td> <td>N/A</td> </tr> </tbody> </table>	Boundary checklist	Yes / No	Source and gas(es) discussed by the PDD?	N/A	Inclusion / exclusion justified?	N/A	Explanation / Justification sufficient?	N/A	Consistency with monitoring plan?	N/A	☑	☑
Boundary checklist	Yes / No													
Source and gas(es) discussed by the PDD?	N/A													
Inclusion / exclusion justified?	N/A													
Explanation / Justification sufficient?	N/A													
Consistency with monitoring plan?	N/A													
B.3.2. Source: Emissions from combustion of fossil fuels required to operate the geothermal power plant (geothermal power plants only) Gas(es): CO ₂ Type: Project Emissions	1,2	<table border="1"> <thead> <tr> <th>Boundary checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Source and gas(es) discussed by the PDD?</td> <td>N/A</td> </tr> <tr> <td>Inclusion / exclusion justified?</td> <td>N/A</td> </tr> <tr> <td>Explanation / Justification sufficient?</td> <td>N/A</td> </tr> <tr> <td>Consistency with monitoring plan?</td> <td>N/A</td> </tr> </tbody> </table>	Boundary checklist	Yes / No	Source and gas(es) discussed by the PDD?	N/A	Inclusion / exclusion justified?	N/A	Explanation / Justification sufficient?	N/A	Consistency with monitoring plan?	N/A	☑	☑
Boundary checklist	Yes / No													
Source and gas(es) discussed by the PDD?	N/A													
Inclusion / exclusion justified?	N/A													
Explanation / Justification sufficient?	N/A													
Consistency with monitoring plan?	N/A													
B.3.3. Source: Emissions from the reservoir (hydro power plants only) Gas(es): , CH ₄ Type: Project Emissions	1,2	<table border="1"> <thead> <tr> <th>Boundary checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Source and gas(es) discussed by the PDD?</td> <td>N/A</td> </tr> <tr> <td>Inclusion / exclusion justified?</td> <td>N/A</td> </tr> <tr> <td>Explanation / Justification sufficient?</td> <td>N/A</td> </tr> <tr> <td>Consistency with monitoring plan?</td> <td>N/A</td> </tr> </tbody> </table>	Boundary checklist	Yes / No	Source and gas(es) discussed by the PDD?	N/A	Inclusion / exclusion justified?	N/A	Explanation / Justification sufficient?	N/A	Consistency with monitoring plan?	N/A	☑	☑
Boundary checklist	Yes / No													
Source and gas(es) discussed by the PDD?	N/A													
Inclusion / exclusion justified?	N/A													
Explanation / Justification sufficient?	N/A													
Consistency with monitoring plan?	N/A													

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD										
B.3.4.	Source: Emissions from electricity generation in fossil fuel fired power plants that is displaced due to the project activity Gas(es): CO ₂ Type: Baseline Emissions	1,2	<table border="1"> <tr> <td>Boundary checklist</td> <td>Yes / No</td> </tr> <tr> <td>Source and gas(es) discussed by the PDD?</td> <td>Yes</td> </tr> <tr> <td>Inclusion / exclusion justified?</td> <td>Yes</td> </tr> <tr> <td>Explanation / Justification sufficient?</td> <td>Yes</td> </tr> <tr> <td>Consistency with monitoring plan?</td> <td>Yes</td> </tr> </table>	Boundary checklist	Yes / No	Source and gas(es) discussed by the PDD?	Yes	Inclusion / exclusion justified?	Yes	Explanation / Justification sufficient?	Yes	Consistency with monitoring plan?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Boundary checklist	Yes / No														
Source and gas(es) discussed by the PDD?	Yes														
Inclusion / exclusion justified?	Yes														
Explanation / Justification sufficient?	Yes														
Consistency with monitoring plan?	Yes														
B.3.5.	Source: Emissions from electricity generation in fossil fuel fired power plants of any connected electricity system Gas(es): CO ₂ Type: Baseline Emissions	1,2	<table border="1"> <tr> <td>Boundary checklist</td> <td>Yes / No</td> </tr> <tr> <td>Source and gas(es) discussed by the PDD?</td> <td>Yes</td> </tr> <tr> <td>Inclusion / exclusion justified?</td> <td>Yes</td> </tr> <tr> <td>Explanation / Justification sufficient?</td> <td>Yes</td> </tr> <tr> <td>Consistency with monitoring plan?</td> <td>Yes</td> </tr> </table> <p>There are no electricity imports to Northeast China Power Grid.</p>	Boundary checklist	Yes / No	Source and gas(es) discussed by the PDD?	Yes	Inclusion / exclusion justified?	Yes	Explanation / Justification sufficient?	Yes	Consistency with monitoring plan?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Boundary checklist	Yes / No														
Source and gas(es) discussed by the PDD?	Yes														
Inclusion / exclusion justified?	Yes														
Explanation / Justification sufficient?	Yes														
Consistency with monitoring plan?	Yes														
B.3.6.	Source: Emissions from electricity generation in fossil fuel fired power plants of imported electricity (project electricity consumption) Gas(es): CO ₂	1,2	<table border="1"> <tr> <td>Boundary checklist</td> <td>Yes / No</td> </tr> <tr> <td>Source and gas(es) discussed by the PDD?</td> <td>Yes</td> </tr> <tr> <td>Inclusion / exclusion justified?</td> <td>Yes</td> </tr> <tr> <td>Explanation / Justification sufficient?</td> <td>Yes</td> </tr> <tr> <td>Consistency with monitoring plan?</td> <td>Yes</td> </tr> </table>	Boundary checklist	Yes / No	Source and gas(es) discussed by the PDD?	Yes	Inclusion / exclusion justified?	Yes	Explanation / Justification sufficient?	Yes	Consistency with monitoring plan?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Boundary checklist	Yes / No														
Source and gas(es) discussed by the PDD?	Yes														
Inclusion / exclusion justified?	Yes														
Explanation / Justification sufficient?	Yes														
Consistency with monitoring plan?	Yes														
B.3.7.	Do the spatial and technological boundaries as verified on-site comply with the discussion provided by the PDD?	1,2 11	<p>The boundary of the proposed project is Northeast China Power Grid.</p> <p><u>Corrective Action Request No.4.</u></p> <p>The provinces included in the Northeast China grid should be specified.</p>	CAR4	<input checked="" type="checkbox"/>										

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
B.4. Description of how the baseline scenario is identified and description of the identified baseline scenario					
B.4.1.	Is it clearly described that the baseline is represented by the combined margin of the grid the activity will be connected to?	1-5	Yes, it is clearly described in chapter B.6.1 that the baseline emission factor is calculated reflected in the combined margin (CM) calculations: described in the "Tool to calculate the emission factor for an electricity system".	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.4.2.	In case of any modification or retrofit of existing facilities: Is data available to determine the historic production level?	1,2	Not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.4.3.	In case of any modification or retrofit of existing facilities: Have conservative assumptions been applied in order to estimate the point in time when the existing equipment needs to be replaced?	1,2	Not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Changes required for methodology implementation in 2 nd and 3 rd crediting periods					
B.4.4.	Has the continued validity of the baseline been correctly assessed?	1,2	Not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.4.5.	Has the baseline been updated with new data?	1,2	Not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered CDM project activity (assessment and demonstration of additionality):					
B.5.1.	Is evidence provided, that CDM has been considered seriously in the decision to proceed with the project activity (CDM de-	1,2, 16,	Yes, the CDM consideration has been seriously considered by the project owner, the internal CDM resolution was dated 06/08/2007,	CR3	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
cision before project start)?	14, 34, 35, 36	2007. <u>Clarification Request No. 3.</u> Please provide CDM consideration evidence with English translation to the DOE. Please also clarify how the CDM has been seriously considered prior to the project start, since the main equipment purchasing contract has been signed in Sep, 2007.		
B.5.2. Have realistic and credible alternatives been identified providing comparable outputs or services? (step 1a)	1,2, 26	The following baseline scenarios are discussed: <ul style="list-style-type: none"> - Construction of a fossil fuel-fired power plant with equivalent installed capacity - Other renewable energy power plant with the same annual electricity output as the proposed project activity - The project itself without consideration of the CDM - The Northeast China Power Grid as the provider for the same capacity and electricity output as the proposed project 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.3. Is the project activity without CDM included in these alternatives? (step 1a)	1,2	Yes, see B.5.2.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.4. Is a discussion provided for all identified alternatives concerning the compliance with applicable laws and regulations? (step 1b)	1,2, 26	Yes, the national policy about strictly prohibiting the installation of coal-fired power plants with the capacity of 135MW or below is identified in the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.5. In case the PDD argues that specific laws are not enforced in the country or region: Is evidence available concerning that statement? (step 1b)	1,2	Not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
B.5.6. In case of applying step 2 / investment analysis of the additionality tool: Is the analysis method identified appropriately (step 2a)?	1,2	Yes, the benchmark analysis is applied.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.7. In case of Option I (simple cost analysis): Is it demonstrated that the activity produces no economic benefits other than CDM income?	1,2	Not applicable. The simple cost analysis does not apply as the proposed project not only obtains CDM revenue but also revenue through electricity sales.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.8. In case of Option II (investment comparison analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?	1,2	Investment comparison analysis method is only applicable to projects whose alternatives are similar investment projects. The alternative baseline scenario of the proposed project is Northeast China Power Grid rather than new investment projects. Therefore option II is not an appropriate method either.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.9. In case of Option III (benchmark analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?	1,2	Yes, the IRR indicator is selected.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.10. In case of Option II or Option III: Is the calculation of financial figures for this indicator correctly done for all alternatives and the project activity?	1,2	The calculation of financial figures for IRR is done for the project activity with and without the revenues from the sale of CERs.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.11. In case of Option II or Option III: Is the analysis presented in a transparent manner including publicly available proofs for the utilized data?	1,2, 32 38	<p><u>Corrective Action Request No.5.</u></p> <p>Please present the IRR calculation in a transparent manner, the source of the input value should be clearly indicated in the IRR excel sheet and the PDD.</p> <p>Furthermore, please delete the non-related parameters in the IRR calculation spreadsheet, e.g. the power density is not applicable in the wind farm project, please note the IRR calculation should be</p>	CAR5	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		<p>project specific.</p> <p>Please explain why the IRR value, feed-in tariff and operation cost in the PDD is not consistent with Feasibility Study Report(FSR). Please present the justification of the differences in the PDD.</p> <p>Please provide the original pages of the FSR including partial translation of the following main parameters to the DOE:</p> <ol style="list-style-type: none"> 1. Tariff 2. IRR result 3. Benchmark value 4. Conclusion financially viable or not 5. Cash flow sheet 6. Cover page, date of completion <p>The selected benchmark evidence should be delivered to the DOE. Please present the justification of selected benchmark in the PDD.</p> <p>We do not accept the resource No.9, No.11, please use official publication to support the statements of the PDD.</p>		
B.5.12. In case of applying step 3 (barrier analysis) of the additionality tool: Is a complete list of barriers developed that prevent the different alternatives to occur?	1,2	Not applicable.	☑	☑
B.5.13. In case of applying step 3 (barrier analysis): Is transparent and documented evidence provided on the existence and sig-	1,2	See B.5.12.	☑	☑

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
nificance of these barriers?				
B.5.14. In case of applying step 3 (barrier analysis): Is it transparently shown that the execution of at least one of the alternatives is not prevented by the identified barriers?	1,2	Not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.15. Have other activities in the host country / region similar to the project activity been identified and are these activities appropriately analyzed by the PDD (step 4a)?	1,2, 23, 24, 25	<u>Corrective Action Request No.6.</u> Please define the similar projects with reliable resources.	CAR6	<input checked="" type="checkbox"/>
B.5.16. If similar activities are occurring: Is it demonstrated that in spite of these similarities the project activity would not be implemented without the CDM component (step 4b)?	1,2	See CAR6.	See CAR6.	<input checked="" type="checkbox"/>
B.5.17. Is it appropriately explained how the approval of the project activity will help to overcome the economic and financial hurdles or other identified barriers?	1,2	Yes. The CDM registration will make the project more financial attractive.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6. Emissions reductions				
<i>B.6.1. Explanation of methodological choices</i>				
B.6.1.1. Is it explained how the procedures provided in the methodology are applied by the proposed project activity?	1,2	The calculation of the emission reduction is applied according to "Tool to calculate the emission factor for an electricity system (version01)". STEP 1: Identify the relevant electric power system.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		<p>STEP 2: Select an operating margin (OM) method.</p> <p>STEP 3: Calculate the operating margin emission factor according to the selected method.</p> <p>STEP 4: Identify the cohort of power units to be included in the build margin (BM).</p> <p>STEP 5: Calculate the build margin emission factor.</p> <p>STEP 6: Calculate the combined margin (CM) emissions factor.</p> <p>These steps are described in a transparent manner.</p>		
B.6.1.2. Is every selection of options offered by the methodology correctly justified and is this justification in line with the situation verified on-site?	1,2	Yes, the selection of options offered by Tool to calculate the emission factor for an electricity system (version 1) is correctly justified which has been verified during on-site audit.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.3. Are the formulae required for the determination of project emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1,2	Not applicable. There are no project emissions.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.4. Are the formulae required for the determination of baseline emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1,2	Yes, formulae to calculate the baseline emissions are correctly presented.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.5. Is the choice of options to determine the emissions factor (OM, BM) justified in a suitable and transparent manner?	1,2	Yes, the choice of options to determine OM and BM factor is justified, which is clearly described in section B.6.1 of the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.6. Are the six steps as defined per the "Tool for calculation of emission factor for electrical systems" correctly applied by the	1,2	Yes, it is.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
project participants?				
B.6.1.7. In case of alternative weighing factors for the Combined Margin: Is the quantification of the alternative weighing factor justified in a suitable and transparent manner?	1,2	Not applicable. The default weights for wind power projects (OM 0.75 and BM 0.25 respectively) are used.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.8. In case of alternative weighing factors for the Combined Margin: Is the guidance for the PDD concerning the acceptability of alternative weights considered in the discussion?	1,2	Not applicable. See B.6.1.7.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.9. Are the formulae required for the determination of leakage emissions correctly presented, enabling a complete identification of parameter to be used and / or monitored?	1,2	No leakages have to be considered according to the methodology. Therefore the question is not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Tool to calculate project or leakage CO2 emissions from fossil fuel combustion				
B.6.1.10. Is the formula required for the determination of CO2 project emissions from fossil fuel combustion correctly presented, enabling a complete identification of parameter to be used and / or monitored	1,2	This tool is not applicable.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.11. Is option A (preferred approach) or option B chosen for the determination of the CO2 emission coefficient COEF _{i,y} and is COEF _{i,y} correctly determined?	1,2	See B.6.1.10.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.1.12. Are formulae required for the determination of emission reductions correctly pre-	1,2	Yes, the formulae required for the determination of emission re-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD		
sented?		duction is clearly presented in Section B.6.				
B.6.2. Data and parameters that are available at validation						
B.6.2.1. Is the list of parameters presented in chapter B.6.2 considered to be complete with regard to the requirements of the applied methodology?	1,2	Yes. A list of parameters is clearly presented.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
B.6.2.2. Is the choice of ex-ante or ex-post vintage of OM and BM factors clearly specified in the PDD?	1,2	Yes, ex-ante vintage of OM and BM factors is clearly specified in the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Fill in the required amount of sub checklists for monitoring parameter and comment any line answered with "No"						
B.6.2.3. Parameter Title: GWP _{CH4} Global warming potential of methane valid for the relevant commitment period (tCO2/tCH4)	1,2	Data Checklist		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
		Title in line with methodology?				N/A
		Data unit correctly expressed?				N/A
		Appropriate description of parameter?				N/A
		Source clearly referenced?				N/A
		Correct value provided?				N/A
		Has this value been verified?				N/A
		Choice of data correctly justified?				N/A
B.6.2.4. Parameter Title: EG _{historical} (only applicable to modification/retrofit of an existing grid-connected renewable power plant/unit) Average of historical electricity delivered by the existing facility to the grid (MWh)	1,2	Data Checklist		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
		Title in line with methodology?				N/A
		Data unit correctly expressed?				N/A
		Appropriate description?				N/A
		Source clearly referenced?				N/A
		Correct value provided?				N/A

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD																		
		Has this value been verified?	N/A																				
		Choice of data correctly justified?	N/A																				
		Measurement method correctly described?	N/A																				
B.6.2.5. Parameter Title: DATE _{BaselineRetrofit} (only applicable to modification/retrofit of an existing grid-connected renewable power plant/unit) Point in time when the existing equipment would need to be replaced in the absence of the project activity	1,2	<table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>N/A</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>N/A</td> </tr> <tr> <td>Appropriate description?</td> <td>N/A</td> </tr> <tr> <td>Source clearly referenced?</td> <td>N/A</td> </tr> <tr> <td>Correct value provided?</td> <td>N/A</td> </tr> <tr> <td>Has this value been verified?</td> <td>N/A</td> </tr> <tr> <td>Choice of data correctly justified?</td> <td>N/A</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>N/A</td> </tr> </tbody> </table>		Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																						
Title in line with methodology?	N/A																						
Data unit correctly expressed?	N/A																						
Appropriate description?	N/A																						
Source clearly referenced?	N/A																						
Correct value provided?	N/A																						
Has this value been verified?	N/A																						
Choice of data correctly justified?	N/A																						
Measurement method correctly described?	N/A																						
B.6.2.6. Parameter Title: EF _{Res} (only applicable to hydro-power plants with reservoir) Default emission factor for emissions from reservoirs (kgCO ₂ e/MWh)	1,2	<table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>N/A</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>N/A</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>N/A</td> </tr> <tr> <td>Source clearly referenced?</td> <td>N/A</td> </tr> <tr> <td>Correct value provided?</td> <td>N/A</td> </tr> <tr> <td>Has this value been verified?</td> <td>N/A</td> </tr> <tr> <td>Choice of data correctly justified?</td> <td>N/A</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>N/A</td> </tr> </tbody> </table>		Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																						
Title in line with methodology?	N/A																						
Data unit correctly expressed?	N/A																						
Appropriate description of parameter?	N/A																						
Source clearly referenced?	N/A																						
Correct value provided?	N/A																						
Has this value been verified?	N/A																						
Choice of data correctly justified?	N/A																						
Measurement method correctly described?	N/A																						
B.6.2.7. Parameter Title: CAP _{BL} (W) (only applicable to modification/retrofit of an existing grid-connected renewable power plant/unit)		<table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>N/A</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>N/A</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>N/A</td> </tr> </tbody> </table>		Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
Data Checklist	Yes / No																						
Title in line with methodology?	N/A																						
Data unit correctly expressed?	N/A																						
Appropriate description of parameter?	N/A																						

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD																		
Installed capacity of the hydro power plant before the implementation of the project activity. For new hydro power plants, this value is zero.		Source clearly referenced?	N/A																			
		Correct value provided?	N/A																			
		Has this value been verified?	N/A																			
		Choice of data correctly justified?	N/A																			
		Measurement method correctly described?	N/A																			
B.6.2.8. Parameter Title: A_{BL} (only applicable to hydropower plant projects with reservoir) Area of the reservoir measured in the surface of the water, before the implementation of the project activity, when the reservoir is full (m ²). For new reservoirs, this value is zero (m ²).	1,2	<table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>N/A</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>N/A</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>N/A</td> </tr> <tr> <td>Source clearly referenced?</td> <td>N/A</td> </tr> <tr> <td>Correct value provided?</td> <td>N/A</td> </tr> <tr> <td>Has this value been verified?</td> <td>N/A</td> </tr> <tr> <td>Choice of data correctly justified?</td> <td>N/A</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>N/A</td> </tr> </tbody> </table>	Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																					
Title in line with methodology?	N/A																					
Data unit correctly expressed?	N/A																					
Appropriate description of parameter?	N/A																					
Source clearly referenced?	N/A																					
Correct value provided?	N/A																					
Has this value been verified?	N/A																					
Choice of data correctly justified?	N/A																					
Measurement method correctly described?	N/A																					
B.6.2.9. Parameter Title: Emission factor of the grid (EF_{CM} in tCO ₂ /MWh)	1,2	<table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>Yes</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Choice of data correctly justified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> </tbody> </table> <p>CM is calculated.</p>	Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																					
Title in line with methodology?	Yes																					
Data unit correctly expressed?	Yes																					
Appropriate description of parameter?	Yes																					
Source clearly referenced?	Yes																					
Correct value provided?	Yes																					
Has this value been verified?	Yes																					
Choice of data correctly justified?	Yes																					
Measurement method correctly described?	Yes																					
B.6.2.10. Parameter Title: Operating margin (EF_{OM} in tCO ₂ /MWh)	1,2	<table border="1"> <thead> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> </tr> </tbody> </table>	Data Checklist	Yes / No			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>														
Data Checklist	Yes / No																					

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD																		
emission factor of the grid		<table border="1"> <tr><td>Title in line with methodology?</td><td>Yes</td></tr> <tr><td>Data unit correctly expressed?</td><td>Yes</td></tr> <tr><td>Appropriate description?</td><td>Yes</td></tr> <tr><td>Source clearly referenced?</td><td>Yes</td></tr> <tr><td>Correct value provided?</td><td>Yes</td></tr> <tr><td>Has this value been verified?</td><td>Yes</td></tr> <tr><td>Choice of data correctly justified?</td><td>Yes</td></tr> <tr><td>Measurement method correctly described?</td><td>Yes</td></tr> </table> <p>This parameter is calculated.</p>	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes				
Title in line with methodology?	Yes																					
Data unit correctly expressed?	Yes																					
Appropriate description?	Yes																					
Source clearly referenced?	Yes																					
Correct value provided?	Yes																					
Has this value been verified?	Yes																					
Choice of data correctly justified?	Yes																					
Measurement method correctly described?	Yes																					
B.6.2.11. Parameter Title: Build margin (EF _{BMintCO2} /MWh) emission factor of the grid	1,2	<table border="1"> <tr><th>Data Checklist</th><th>Yes / No</th></tr> <tr><td>Title in line with methodology?</td><td>Yes</td></tr> <tr><td>Data unit correctly expressed?</td><td>Yes</td></tr> <tr><td>Appropriate description of parameter?</td><td>Yes</td></tr> <tr><td>Source clearly referenced?</td><td>Yes</td></tr> <tr><td>Correct value provided?</td><td>Yes</td></tr> <tr><td>Has this value been verified?</td><td>Yes</td></tr> <tr><td>Choice of data correctly justified?</td><td>Yes</td></tr> <tr><td>Measurement method correctly described?</td><td>Yes</td></tr> </table> <p>This parameter is calculated.</p>	Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																					
Title in line with methodology?	Yes																					
Data unit correctly expressed?	Yes																					
Appropriate description of parameter?	Yes																					
Source clearly referenced?	Yes																					
Correct value provided?	Yes																					
Has this value been verified?	Yes																					
Choice of data correctly justified?	Yes																					
Measurement method correctly described?	Yes																					
B.6.2.12. Parameter Title: FC _{i,m,y} , FC _{i,y} , FC _{i,j,y} , FC _{i,k,y} , FC _{i,n,y} and FC _{i,n,h} Amount of fossil fuel type i consumed by power plant / unit m,j,k or n (or in the project electricity system in case of FC _{i,y}) in year y or hour h (mass or volume unit)	1,2	<table border="1"> <tr><th>Data Checklist</th><th>Yes / No</th></tr> <tr><td>Title in line with methodology?</td><td>Yes</td></tr> <tr><td>Data unit correctly expressed?</td><td>Yes</td></tr> <tr><td>Appropriate description of parameter?</td><td>Yes</td></tr> <tr><td>Source clearly referenced?</td><td>Yes</td></tr> <tr><td>Correct value provided?</td><td>Yes</td></tr> <tr><td>Has this value been verified?</td><td>Yes</td></tr> </table>	Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Data Checklist	Yes / No																					
Title in line with methodology?	Yes																					
Data unit correctly expressed?	Yes																					
Appropriate description of parameter?	Yes																					
Source clearly referenced?	Yes																					
Correct value provided?	Yes																					
Has this value been verified?	Yes																					

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD																		
		<table border="1"> <tr> <td>Choice of data correctly justified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> </table>	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes																
Choice of data correctly justified?	Yes																					
Measurement method correctly described?	Yes																					
B.6.2.13. Parameter Title: $NCV_{i,y}$ Net calorific value (energy content) of fossil fuel type i in year y (GJ / mass or volume unit)	1,2	<table border="1"> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> <tr> <td>Title in line with methodology?</td> <td>Yes</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Choice of data correctly justified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> </table>	Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																					
Title in line with methodology?	Yes																					
Data unit correctly expressed?	Yes																					
Appropriate description of parameter?	Yes																					
Source clearly referenced?	Yes																					
Correct value provided?	Yes																					
Has this value been verified?	Yes																					
Choice of data correctly justified?	Yes																					
Measurement method correctly described?	Yes																					
B.6.2.14. Parameter Title: $EF_{CO_2,i,y}$ and $EF_{CO_2,m,i,y}$ CO2 emission factor of fossil fuel type i in year y (tCO2/GJ)	1,2	<table border="1"> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> <tr> <td>Title in line with methodology?</td> <td>Yes</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Choice of data correctly justified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> </table>	Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																					
Title in line with methodology?	Yes																					
Data unit correctly expressed?	Yes																					
Appropriate description of parameter?	Yes																					
Source clearly referenced?	Yes																					
Correct value provided?	Yes																					
Has this value been verified?	Yes																					
Choice of data correctly justified?	Yes																					
Measurement method correctly described?	Yes																					
B.6.2.15. Parameter Title: $EG_{m,y}$, EG_y , $EG_{j,y}$, $EG_{k,y}$ and $EG_{n,h}$ Net electricity generated and delivered to the grid by power plant / unit m,j,k or n (or	1,2	<table border="1"> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> <tr> <td>Title in line with methodology?</td> <td>Yes</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> </table>	Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	CAR7	<input checked="" type="checkbox"/>												
Data Checklist	Yes / No																					
Title in line with methodology?	Yes																					
Data unit correctly expressed?	Yes																					

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD																		
in the project electricity system in case of EG _y in year y or hour h (MWh)		<table border="1"> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>No</td> </tr> <tr> <td>Correct value provided?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Choice of data correctly justified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>Yes</td> </tr> </table> <p><u>Corrective Action Request No.7.</u> The data source should be correctly referred.</p>	Appropriate description of parameter?	Yes	Source clearly referenced?	No	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes								
Appropriate description of parameter?	Yes																					
Source clearly referenced?	No																					
Correct value provided?	Yes																					
Has this value been verified?	Yes																					
Choice of data correctly justified?	Yes																					
Measurement method correctly described?	Yes																					
B.6.2.16. Parameter Title: EG _{PJ,h} Electricity displaced by the project activity in hour h of year y (in MWh) (only applicable for the dispatch data OM)	1,2	<table border="1"> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> <tr> <td>Title in line with methodology?</td> <td>N/A</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>N/A</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>N/A</td> </tr> <tr> <td>Source clearly referenced?</td> <td>N/A</td> </tr> <tr> <td>Correct value provided?</td> <td>N/A</td> </tr> <tr> <td>Has this value been verified?</td> <td>N/A</td> </tr> <tr> <td>Choice of data correctly justified?</td> <td>N/A</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>N/A</td> </tr> </table>	Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																					
Title in line with methodology?	N/A																					
Data unit correctly expressed?	N/A																					
Appropriate description of parameter?	N/A																					
Source clearly referenced?	N/A																					
Correct value provided?	N/A																					
Has this value been verified?	N/A																					
Choice of data correctly justified?	N/A																					
Measurement method correctly described?	N/A																					
B.6.2.17. Parameter Title: $\eta_{m,y}$ Average net energy conversion efficiency of power unit m in year y	1,2	<table border="1"> <tr> <th>Data Checklist</th> <th>Yes / No</th> </tr> <tr> <td>Title in line with methodology?</td> <td>N/A</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>N/A</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>N/A</td> </tr> <tr> <td>Source clearly referenced?</td> <td>N/A</td> </tr> <tr> <td>Correct value provided?</td> <td>N/A</td> </tr> <tr> <td>Has this value been verified?</td> <td>N/A</td> </tr> <tr> <td>Choice of data correctly justified?</td> <td>N/A</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>N/A</td> </tr> </table>	Data Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided?	N/A	Has this value been verified?	N/A	Choice of data correctly justified?	N/A	Measurement method correctly described?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																					
Title in line with methodology?	N/A																					
Data unit correctly expressed?	N/A																					
Appropriate description of parameter?	N/A																					
Source clearly referenced?	N/A																					
Correct value provided?	N/A																					
Has this value been verified?	N/A																					
Choice of data correctly justified?	N/A																					
Measurement method correctly described?	N/A																					
B.6.2.18. Parameter Title: A _{PJ} (only applicable to	1,2		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																		

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD
hydropower plant projects with reservoir)Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full.		Data Checklist	Yes / No		
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		
		Appropriate description of parameter?	N/A		
		Source clearly referenced?	N/A		
		Correct value provided?	N/A		
		Has this value been verified?	N/A		
		Choice of data correctly justified?	N/A		
		Measurement method correctly described?	N/A		
B.6.2.19. Parameter Title: fraction of time with low costs /must run plant at the margin (for simple adjusted OM only)	1,2	Data Checklist	Yes / No	☑	☑
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		
		Appropriate description of parameter?	N/A		
		Source clearly referenced?	N/A		
		Correct value provided?	N/A		
		Has this value been verified?	N/A		
		Choice of data correctly justified?	N/A		
		Measurement method correctly described?	N/A		
B.6.2.20. Parameter Title: Electricity Imports from connected grids		Data Checklist	Yes/No	☑	☑
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		
		Appropriate description of parameter?	N/A		
		Source clearly referenced?	N/A		
		Correct value provided?	N/A		

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
		Has this value been verified?	N/A	
		Choice of data correctly justified?	N/A	
		Measurement method correctly described?	N/A	
B.6.3. Ex-ante calculation of emission reductions				
B.6.3.1. Is the projection based on the same procedures as used for future monitoring?	1,2	Yes, the procedures are the same.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.3.2. Are the GHG calculations documented in a complete and transparent manner?	1,2	The latest issued emission factors by NDRC in August of 2007 are used.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.3.3. Is the calculation of the operating margin and build margin emission factors documented electronically in a spreadsheet with the relevant information as defined per the "Tool for calculation of emission factor for electrical systems"? Has this spreadsheet been submitted to the validation team?	1,2	Yes, see annex 3 of the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.3.4. Is the data provided in this section consistent with data as presented in other chapters of the PDD?	1,2	Yes, it is.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.4. Summary of the ex-ante estimation of emission reductions				
B.6.4.1. Will the project result in fewer GHG emissions than the baseline scenario?	1,2	Yes, there are no project emissions.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.4.2. Is the form/table required for the indication of projected emission reductions correctly applied?	1,2	Yes, the form is correctly applied according to the PDD template.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD																						
B.6.4.3. Is the projection in line with the envisioned time schedule for the project's implementation and the indicated crediting period?	1,2, 28	Yes, it is. The Emission Reduction from year 2009 to 2015 is clearly presented, and it is in line with the envisioned time schedule.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																						
B.6.4.4. Is the data provided in this section in consistency with data as presented in other chapters of the PDD?	1,2	Yes, no contradiction.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																						
B.7. Application of the monitoring methodology and description of the monitoring plan																										
<i>B.7.1. Data and parameters monitored</i>																										
B.7.1.1. Is the list of parameters presented by chapter B.7.1 considered to be complete with regard to the requirements of the applied methodology?	1,2	The parameter EGy-- electricity delivered to the grid by the proposed project is listed in chapter B.7.1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																						
Integrate the required amount of sub-checklists for monitoring parameter and comment on any line answered with "No"																										
B.7.1.2. Parameter Title: EGy Electricity supplied by the project activity to the grid (in MWh)	1,2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>Yes</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>Yes</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>Yes</td> </tr> <tr> <td>Source clearly referenced?</td> <td>Yes</td> </tr> <tr> <td>Correct value provided for estimation?</td> <td>Yes</td> </tr> <tr> <td>Has this value been verified?</td> <td>Yes</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>No</td> </tr> <tr> <td>Correct reference to standards?</td> <td>Yes</td> </tr> <tr> <td>Indication of accuracy provided?</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures described?</td> <td>Yes</td> </tr> </tbody> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided for estimation?	Yes	Has this value been verified?	Yes	Measurement method correctly described?	No	Correct reference to standards?	Yes	Indication of accuracy provided?	Yes	QA/QC procedures described?	Yes	CAR8	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																									
Title in line with methodology?	Yes																									
Data unit correctly expressed?	Yes																									
Appropriate description of parameter?	Yes																									
Source clearly referenced?	Yes																									
Correct value provided for estimation?	Yes																									
Has this value been verified?	Yes																									
Measurement method correctly described?	No																									
Correct reference to standards?	Yes																									
Indication of accuracy provided?	Yes																									
QA/QC procedures described?	Yes																									

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD																								
		<table border="1"> <tr> <td>QA/QC procedures appropriate?</td> <td>Yes</td> </tr> </table> <p><u>Corrective Action Request No.8.</u></p> <p>Please specify the auxiliary power usage in case of emergency. Does the wind farm consist of a backup line?</p> <p>The measurement method of EGy should be described transparently to ensure that for the calculation of the emission reduction only the net electricity supply will be used.</p> <p>Please specify the calibration standard in the PDD.</p>	QA/QC procedures appropriate?	Yes																								
QA/QC procedures appropriate?	Yes																											
B.7.1.3. Parameter Title: TEGy Total electricity produced by the project activity, including the electricity supplied to the grid and the electricity supplied to internal loads, in year y (in MWh).	1,2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr><td>Title in line with methodology?</td><td>N/A</td></tr> <tr><td>Data unit correctly expressed?</td><td>N/A</td></tr> <tr><td>Appropriate description of parameter?</td><td>N/A</td></tr> <tr><td>Source clearly referenced?</td><td>N/A</td></tr> <tr><td>Correct value provided for estimation?</td><td>N/A</td></tr> <tr><td>Has this value been verified?</td><td>N/A</td></tr> <tr><td>Measurement method correctly described?</td><td>N/A</td></tr> <tr><td>Correct reference to standards?</td><td>N/A</td></tr> <tr><td>Indication of accuracy provided?</td><td>N/A</td></tr> <tr><td>QA/QC procedures described?</td><td>N/A</td></tr> <tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr> </tbody> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N/A																											
Data unit correctly expressed?	N/A																											
Appropriate description of parameter?	N/A																											
Source clearly referenced?	N/A																											
Correct value provided for estimation?	N/A																											
Has this value been verified?	N/A																											
Measurement method correctly described?	N/A																											
Correct reference to standards?	N/A																											
Indication of accuracy provided?	N/A																											
QA/QC procedures described?	N/A																											
QA/QC procedures appropriate?	N/A																											
B.7.1.4. Parameter Title: EF _{grid,CM,y} Combined margin CO2 emission factor for grid connected power	1,2	<p>Not applicable, as this protocol refers to the ex-ante determination of CM.</p> <table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr><td>Title in line with methodology?</td><td>N/A</td></tr> </tbody> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																				
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N/A																											

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PDD in GSP	Final PDD	
generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (tCO2/MWh)		Data unit correctly expressed?	N/A			
		Appropriate description of parameter?	N/A			
		Source clearly referenced?	N/A			
		Correct value provided for estimation?	N/A			
		Has this value been verified?	N/A			
		Measurement method correctly described?	N/A			
		Correct reference to standards?	N/A			
		Indication of accuracy provided?	N/A			
		QA/QC procedures described?	N/A			
		QA/QC procedures appropriate?	N/A			
B.7.1.5. Parameter Title: PEFC _{j,y} CO2 emissions from fossil fuel combustion in process j during the year y (tCO2/yr). Calculated as per the latest version of the "Tool to calculate project or leakage CO2 emissions from fossil fuel combustion"	1,2	Monitoring Checklist		Yes / No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		Title in line with methodology?	N/A			
		Data unit correctly expressed?	N/A			
		Appropriate description of parameter?	N/A			
		Source clearly referenced?	N/A			
		Correct value provided for estimation?	N/A			
		Has this value been verified?	N/A			
		Measurement method correctly described?	N/A			
		Correct reference to standards?	N/A			
		Indication of accuracy provided?	N/A			
		QA/QC procedures described?	N/A			
		QA/QC procedures appropriate?	N/A			
		B.7.1.6. Parameter Title: Cap _{PJ} (only applicable to hydropower plant projects) Installed capacity of the hydro power plant after the implementation of the project activity (W).	1,2	Monitoring Checklist		
Title in line with methodology?	N/A					
Data unit correctly expressed?	N/A					
Appropriate description of parameter?	N/A					
Source clearly referenced?	N/A					
Correct value provided for estimation?	N/A					

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD																								
		<table border="1"> <tr> <td>Has this value been verified?</td> <td>N/A</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>N/A</td> </tr> <tr> <td>Correct reference to standards?</td> <td>N/A</td> </tr> <tr> <td>Indication of accuracy provided?</td> <td>N/A</td> </tr> <tr> <td>QA/QC procedures described?</td> <td>N/A</td> </tr> <tr> <td>QA/QC procedures appropriate?</td> <td>N/A</td> </tr> </table>	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A														
Has this value been verified?	N/A																											
Measurement method correctly described?	N/A																											
Correct reference to standards?	N/A																											
Indication of accuracy provided?	N/A																											
QA/QC procedures described?	N/A																											
QA/QC procedures appropriate?	N/A																											
<p>B.7.1.7. Parameter Title: A_{PJ} (only applicable to hydropower plant projects with reservoir)</p> <p>Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full (m^2).</p>	1,2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>N/A</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>N/A</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>N/A</td> </tr> <tr> <td>Source clearly referenced?</td> <td>N/A</td> </tr> <tr> <td>Correct value provided for estimation?</td> <td>N/A</td> </tr> <tr> <td>Has this value been verified?</td> <td>N/A</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>N/A</td> </tr> <tr> <td>Correct reference to standards?</td> <td>N/A</td> </tr> <tr> <td>Indication of accuracy provided?</td> <td>N/A</td> </tr> <tr> <td>QA/QC procedures described?</td> <td>N/A</td> </tr> <tr> <td>QA/QC procedures appropriate?</td> <td>N/A</td> </tr> </tbody> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N/A																											
Data unit correctly expressed?	N/A																											
Appropriate description of parameter?	N/A																											
Source clearly referenced?	N/A																											
Correct value provided for estimation?	N/A																											
Has this value been verified?	N/A																											
Measurement method correctly described?	N/A																											
Correct reference to standards?	N/A																											
Indication of accuracy provided?	N/A																											
QA/QC procedures described?	N/A																											
QA/QC procedures appropriate?	N/A																											
<p>B.7.1.8. Parameter Title: w_{Main,CO_2}</p> <p>Average mass fraction of CO_2 in the produced steam tCO_2/t steam (for geothermal projects only)</p>	1,2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr> <td>Title in line with methodology?</td> <td>N/A</td> </tr> <tr> <td>Data unit correctly expressed?</td> <td>N/A</td> </tr> <tr> <td>Appropriate description of parameter?</td> <td>N/A</td> </tr> <tr> <td>Source clearly referenced?</td> <td>N/A</td> </tr> <tr> <td>Correct value provided for estimation?</td> <td>N/A</td> </tr> <tr> <td>Has this value been verified?</td> <td>N/A</td> </tr> <tr> <td>Measurement method correctly described?</td> <td>N/A</td> </tr> <tr> <td>Correct reference to standards?</td> <td>N/A</td> </tr> <tr> <td>Indication of accuracy provided?</td> <td>N/A</td> </tr> </tbody> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N/A																											
Data unit correctly expressed?	N/A																											
Appropriate description of parameter?	N/A																											
Source clearly referenced?	N/A																											
Correct value provided for estimation?	N/A																											
Has this value been verified?	N/A																											
Measurement method correctly described?	N/A																											
Correct reference to standards?	N/A																											
Indication of accuracy provided?	N/A																											

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD																								
		<table border="1"> <tr> <td>QA/QC procedures described?</td> <td>N/A</td> </tr> <tr> <td>QA/QC procedures appropriate?</td> <td>N/A</td> </tr> </table>	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A																						
QA/QC procedures described?	N/A																											
QA/QC procedures appropriate?	N/A																											
B.7.1.9. Parameter Title: w_{Main,CH_4} Average mass fraction of CH ₄ in the produced steam (tCH ₄ /t steam). for geothermal projects only)	1,2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr><td>Title in line with methodology?</td><td>N/A</td></tr> <tr><td>Data unit correctly expressed?</td><td>N/A</td></tr> <tr><td>Appropriate description of parameter?</td><td>N/A</td></tr> <tr><td>Source clearly referenced?</td><td>N/A</td></tr> <tr><td>Correct value provided for estimation?</td><td>N/A</td></tr> <tr><td>Has this value been verified?</td><td>N/A</td></tr> <tr><td>Measurement method correctly described?</td><td>N/A</td></tr> <tr><td>Correct reference to standards?</td><td>N/A</td></tr> <tr><td>Indication of accuracy provided?</td><td>N/A</td></tr> <tr><td>QA/QC procedures described?</td><td>N/A</td></tr> <tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr> </tbody> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N/A																											
Data unit correctly expressed?	N/A																											
Appropriate description of parameter?	N/A																											
Source clearly referenced?	N/A																											
Correct value provided for estimation?	N/A																											
Has this value been verified?	N/A																											
Measurement method correctly described?	N/A																											
Correct reference to standards?	N/A																											
Indication of accuracy provided?	N/A																											
QA/QC procedures described?	N/A																											
QA/QC procedures appropriate?	N/A																											
B.7.1.10. Parameter Title: $M_{S,y}$ Quantity of steam produced during the year y. (for geothermal projects only)	1,2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr><td>Title in line with methodology?</td><td>N/A</td></tr> <tr><td>Data unit correctly expressed?</td><td>N/A</td></tr> <tr><td>Appropriate description of parameter?</td><td>N/A</td></tr> <tr><td>Source clearly referenced?</td><td>N/A</td></tr> <tr><td>Correct value provided for estimation?</td><td>N/A</td></tr> <tr><td>Has this value been verified?</td><td>N/A</td></tr> <tr><td>Measurement method correctly described?</td><td>N/A</td></tr> <tr><td>Correct reference to standards?</td><td>N/A</td></tr> <tr><td>Indication of accuracy provided?</td><td>N/A</td></tr> </tbody> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N/A																											
Data unit correctly expressed?	N/A																											
Appropriate description of parameter?	N/A																											
Source clearly referenced?	N/A																											
Correct value provided for estimation?	N/A																											
Has this value been verified?	N/A																											
Measurement method correctly described?	N/A																											
Correct reference to standards?	N/A																											
Indication of accuracy provided?	N/A																											

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD																								
		<table border="1"> <tr> <td>QA/QC procedures described?</td> <td>N/A</td> </tr> <tr> <td>QA/QC procedures appropriate?</td> <td>N/A</td> </tr> </table>	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A																						
QA/QC procedures described?	N/A																											
QA/QC procedures appropriate?	N/A																											
Parameters related to the "Tool to calculate project or leakage CO2 emissions from fossil fuel combustion"																												
B.7.1.11. Parameter Title: Quantity of fuel type i combusted in process j during the year y $FC_{i,j,y}$	1,2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr><td>Title in line with methodology?</td><td>N/A</td></tr> <tr><td>Data unit correctly expressed?</td><td>N/A</td></tr> <tr><td>Appropriate description of parameter?</td><td>N/A</td></tr> <tr><td>Source clearly referenced?</td><td>N/A</td></tr> <tr><td>Correct value provided for estimation?</td><td>N/A</td></tr> <tr><td>Has this value been verified?</td><td>N/A</td></tr> <tr><td>Measurement method correctly described?</td><td>N/A</td></tr> <tr><td>Correct reference to standards?</td><td>N/A</td></tr> <tr><td>Indication of accuracy provided?</td><td>N/A</td></tr> <tr><td>QA/QC procedures described?</td><td>N/A</td></tr> <tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr> </tbody> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N/A																											
Data unit correctly expressed?	N/A																											
Appropriate description of parameter?	N/A																											
Source clearly referenced?	N/A																											
Correct value provided for estimation?	N/A																											
Has this value been verified?	N/A																											
Measurement method correctly described?	N/A																											
Correct reference to standards?	N/A																											
Indication of accuracy provided?	N/A																											
QA/QC procedures described?	N/A																											
QA/QC procedures appropriate?	N/A																											
B.7.1.12. Parameter title: Weighted average mass fraction of carbon in fuel type i in year y $W_{C,i,y}$	1,2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr><td>Title in line with methodology?</td><td>N/A</td></tr> <tr><td>Data unit correctly expressed?</td><td>N/A</td></tr> <tr><td>Appropriate description of parameter?</td><td>N/A</td></tr> <tr><td>Source clearly referenced?</td><td>N/A</td></tr> <tr><td>Correct value provided for estimation?</td><td>N/A</td></tr> <tr><td>Has this value been verified?</td><td>N/A</td></tr> <tr><td>Measurement method correctly described?</td><td>N/A</td></tr> <tr><td>Correct reference to standards?</td><td>N/A</td></tr> <tr><td>Indication of accuracy provided?</td><td>N/A</td></tr> </tbody> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N/A																											
Data unit correctly expressed?	N/A																											
Appropriate description of parameter?	N/A																											
Source clearly referenced?	N/A																											
Correct value provided for estimation?	N/A																											
Has this value been verified?	N/A																											
Measurement method correctly described?	N/A																											
Correct reference to standards?	N/A																											
Indication of accuracy provided?	N/A																											

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD																								
		QA/QC procedures described?	N/A																									
		QA/QC procedures appropriate?	N/A																									
B.7.1.13. Parameter title: Weighted average density of fuel type i in year y $\rho_{i,y}$	1,2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr><td>Title in line with methodology?</td><td>N/A</td></tr> <tr><td>Data unit correctly expressed?</td><td>N/A</td></tr> <tr><td>Appropriate description of parameter?</td><td>N/A</td></tr> <tr><td>Source clearly referenced?</td><td>N/A</td></tr> <tr><td>Correct value provided for estimation?</td><td>N/A</td></tr> <tr><td>Has this value been verified?</td><td>N/A</td></tr> <tr><td>Measurement method correctly described?</td><td>N/A</td></tr> <tr><td>Correct reference to standards?</td><td>N/A</td></tr> <tr><td>Indication of accuracy provided?</td><td>N/A</td></tr> <tr><td>QA/QC procedures described?</td><td>N/A</td></tr> <tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr> </tbody> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N/A																											
Data unit correctly expressed?	N/A																											
Appropriate description of parameter?	N/A																											
Source clearly referenced?	N/A																											
Correct value provided for estimation?	N/A																											
Has this value been verified?	N/A																											
Measurement method correctly described?	N/A																											
Correct reference to standards?	N/A																											
Indication of accuracy provided?	N/A																											
QA/QC procedures described?	N/A																											
QA/QC procedures appropriate?	N/A																											
B.7.1.14. Parameter title: Weighted average net calorific value of fuel type i in year y $NCV_{i,y}$	1,2	<table border="1"> <thead> <tr> <th>Monitoring Checklist</th> <th>Yes / No</th> </tr> </thead> <tbody> <tr><td>Title in line with methodology?</td><td>N/A</td></tr> <tr><td>Data unit correctly expressed?</td><td>N/A</td></tr> <tr><td>Appropriate description of parameter?</td><td>N/A</td></tr> <tr><td>Source clearly referenced?</td><td>N/A</td></tr> <tr><td>Correct value provided for estimation?</td><td>N/A</td></tr> <tr><td>Has this value been verified?</td><td>N/A</td></tr> <tr><td>Measurement method correctly described?</td><td>N/A</td></tr> <tr><td>Correct reference to standards?</td><td>N/A</td></tr> <tr><td>Indication of accuracy provided?</td><td>N/A</td></tr> <tr><td>QA/QC procedures described?</td><td>N/A</td></tr> <tr><td>QA/QC procedures appropriate?</td><td>N/A</td></tr> </tbody> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	N/A	Data unit correctly expressed?	N/A	Appropriate description of parameter?	N/A	Source clearly referenced?	N/A	Correct value provided for estimation?	N/A	Has this value been verified?	N/A	Measurement method correctly described?	N/A	Correct reference to standards?	N/A	Indication of accuracy provided?	N/A	QA/QC procedures described?	N/A	QA/QC procedures appropriate?	N/A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																											
Title in line with methodology?	N/A																											
Data unit correctly expressed?	N/A																											
Appropriate description of parameter?	N/A																											
Source clearly referenced?	N/A																											
Correct value provided for estimation?	N/A																											
Has this value been verified?	N/A																											
Measurement method correctly described?	N/A																											
Correct reference to standards?	N/A																											
Indication of accuracy provided?	N/A																											
QA/QC procedures described?	N/A																											
QA/QC procedures appropriate?	N/A																											
B.7.1.15. Parameter title:	1,2		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																								

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD	
Weighted average CO2 emission factor of fuel type i in year y $EF_{CO_2,i,y}$		Monitoring Checklist	Yes / No		
		Title in line with methodology?	N/A		
		Data unit correctly expressed?	N/A		
		Appropriate description of parameter?	N/A		
		Source clearly referenced?	N/A		
		Correct value provided for estimation?	N/A		
		Has this value been verified?	N/A		
		Measurement method correctly described?	N/A		
		Correct reference to standards?	N/A		
		Indication of accuracy provided?	N/A		
		QA/QC procedures described?	N/A		
QA/QC procedures appropriate?	N/A				
B.7.2. Description of the monitoring plan					
B.7.2.1. Is the operational and management structure clearly described and in compliance with the envisioned situation?	1,2	Yes, it is.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
B.7.2.2. Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	1,2	Yes, it is.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
B.7.2.3. Does the monitoring plan provide current good monitoring practice?	1,2	<u>Corrective Action Request No.9.</u> A diagram should be presented to allow a better understanding of how the parameters are monitored.	CAR9	<input checked="" type="checkbox"/>	
B.7.2.4. If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring provisions?	1,2	Yes, CDM monitoring system procedures and the operational procedures relating the Q/A of the emission reduction is defined in the Annex4.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
B.8. Date of completion of the application of the baseline study and monitoring methodology an the name of the responsible person(s)/entity(ies)					
B.8.1.	Is there any indication of a date when the baseline was determined?	1,2	Yes, The application of the baseline study and monitoring methodology of the proposed project was completed on 14/12/2007.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.8.2.	Is this consistent with the time line of the PDD history?	1,2	Yes, it is.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.8.3.	Is the information on the person(s) / entity(ies) responsible for the application of the baseline and monitoring methodology provided consistent with the actual situation?	1,2	Ms. Guo Hao from EcoSecurities determined the baseline study and monitoring methodology.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.8.4.	Is information provided whether this person / entity is also considered a project participant?	1,2	Yes. The mentioned person is not project participants.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
C. Duration of the project activity / crediting period					
C.1. Duration of the project activity					
C.1.1.	Are the project's starting date and operational lifetime clearly defined and reasonable?	14, 19 28	Yes, the construction work of the project starts from 10/03/2008. The operational lifetime is expected to be 20years. However the turbine purchasing contract is signed in September 2007. <u>Corrective Action Request No.10.</u> Please revise the project starting date accordingly.	CAR10	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
C.2. Choice of the crediting period and related information				
C.2.1. Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max 7 years with potential for 2 renewals or fixed crediting period of max. 10 years)?	1,2	7 years with potential for 2 renewals is chosen as the crediting period.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D. Environmental impacts				
D.1. Documentation on the analysis of the environmental impacts, including transboundary impacts				
D.1.1. Has the analysis of the environmental impacts of the project activity been sufficiently described?	1,2	Yes. The analysis of the environmental impacts involved six aspects: atmospheric environment, noise, solid waste, electromagnetism impact, vegetation and biological impact.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?	1,2, 13	Yes, EIA is a must in P. R. China for new wind farm projects. The EIA of the proposed project was approved by Jilin EPB on September 17 th , 2007.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.3. Will the project create any adverse environmental effects?	1,2	Referring to the EIA and the approval of EIA, the project will create no negative environmental impacts.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.4. Were transboundary environmental impacts identified in the analysis?	1,2	There is no trans-boundary impact described in EIA report or approval of EIA.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
D.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party				
D.2.1. Have the identified environmental impacts been addressed in the project design sufficiently?	1,2	Yes. According to the EIA and the approval of EIA, there is no adverse environmental impact from the project activity.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.2.2. Does the project comply with environmental legislation in the host country?	1,2	Yes, the project is in conformity with the environmental legislation of P. R. China and the EIA has been approved by the authorized organization.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E. Stakeholders' comments				
E.1. Brief description how comments by local stakeholders have been invited and compiled				
E.1.1. Have relevant stakeholders been consulted?	1,2, 20	Yes, special stakeholder meeting and questionnaires were used to consult the relevant stakeholders.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.2. Have appropriate media been used to invite comments by local stakeholders?	1,2 20	The project owner used the billboard to invite comments by local stakeholders.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.3. 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?	1,2	There are no regulations/laws in China for carrying out the stakeholder consultation process for this project activity.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.4. Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?	1,2	Yes. Confirmed with the detailed documents, the process is described in a complete and transparent manner.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PDD in GSP	Final PDD
E.2. Summary of the comments received				
E.2.1. Is a summary of the stakeholder comments received provided?	1,2	Yes, sections E.2 and E.3 of the PDD give a summary of stakeholder comments received by questionnaires.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.3. Report on how due account was taken of any comments received				
E.3.1. Has due account been taken of any stakeholder comments received?	1,2	Not applicable, since there is no negative comments received from the stakeholder.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F. Annexes 1 - 4				
Annex 1: Contact Information				
F.1.1. Is the information provided consistent with the one given under section A.3?	1,2	Yes, the information provided is consistent with on given under section A.3.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.1.2. Is the information on all private participants and directly involved Parties presented?	1,2	Yes.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Annex 2: Information regarding public funding				
F.1.3. Is the information provided on the inclusion of public funding (if any) in consistency with the actual situation presented by the project participants?	1,2	Yes. There is no public funding taking place; all costs are covered by bank loans and private equity.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.1.4. If necessary: Is an affirmation available that any such funding from Annex-I countries does not result in a diversion of ODA?	1,2	See F.1.3.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

CHECKLIST TOPIC / QUESTION		Ref.	COMMENTS	PDD in GSP	Final PDD
Annex 3: Baseline information					
F.1.5.	If additional background information on baseline data is provided: Is this information consistent with data presented by other sections of the PDD?	1,2	Yes. The input data to calculate OM and BM are provided in Annex 3, which is consistent with data present in other sections of the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.1.6.	Is the data provided verifiable? Has sufficient evidence been provided to the validation team?	1,2	Yes. The data are consistent with the NDRC issued data and have been verified by the audit team.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.1.7.	Does the additional information substantiate / support statements given in other sections of the PDD?	1,2	See F.1.5.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Annex 4: Monitoring information					
F.1.8.	If additional background information on monitoring is provided: Is this information consistent with data presented in other sections of the PDD?	1,2	Some monitoring procedures are listed in Annex 4. The detailed will be available during the verification.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.1.9.	Is the information provided verifiable? Has sufficient evidence been provided to the validation team?	1,2	See F1.8.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.1.10.	Do the additional information and / or documented procedures substantiate / support statements given in other sections of the PDD?	1,2	See F1.8.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

Table 2 Resolution of Corrective Action and Clarification Requests

Clarifications and corrective action requests by validation team	Ref. to table 1	Summary of project owner response	Validation team conclusion
<p><u>Open Issue</u></p> <p>Pls. deliver the LoAs issued by China and buyer country together with the MoC counter-signed by both parties to the DOE before raising the request of registration.</p>		The Chinese LoA and MoC have been provided to the DoE. The Annex 1 LoAs have been requested and will be provided to the DoE when obtained.	☑
<p><u>Corrective Action Request No.1.</u></p> <p>A provincial map is preferred for a better understanding of the project site.</p>	A.4.1.1	Please see A.4.1.4 of PDD for updated information	☑ This issue is considered to be resolved.
<p><u>Corrective Action Request No.2.</u></p> <p>The description of the turbine type should be consistent with the purchasing contract.</p> <p>The small inconsistencies regarding the operating time yearly between the Feasibility and the PDD. Please keep consistency of annual electricity supplied to the grid within the PDD.</p>	A.4.3.1	<p>Concerning the turbine type, please see PDD for updated information.</p> <p>Concerning the operating time, please see PDD for updated information.</p>	☑ This issue is considered to be resolved.

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

<p><u>Corrective Action Request No.3.</u> The time schedule of the implementation of the project should be included into the PDD.</p>	<p>A.4.3.10</p>	<p>Please see PDD for updated information on the time schedule and the stat of the project activity (Section B.5 and C.1)</p>	<p>DOE's first response: The project starting date in table A.4.3.2. should be Sep. 2007 when the main equipment purchasing contract was signed. Please revise the project starting date in section C as well. Reply to the first response: <input checked="" type="checkbox"/> This issue is considered to be resolved.</p>
<p><u>Corrective Action Request No.4.</u> The provinces included in the Northeast China grid should be specified.</p>	<p>B.3.7</p>	<p>Please see PDD for updated information (end of section B.3 in Page 8).</p>	<p>Please specify the pages where you had made the corrections. <input checked="" type="checkbox"/> This issue is considered to be resolved.</p>

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

<p><u>Corrective Action Request No.5.</u></p> <p>Please present the IRR calculation in a transparent manner, the source of the input value should be clearly indicated in the IRR excel sheet and the PDD.</p> <p>Furthermore, please delete the non-related parameters in the IRR calculation spreadsheet, e.g. the power density is not applicable in the wind farm project, please note the IRR calculation should be project specific.</p> <p>Please explain why the IRR value, feed-in tariff and operation cost in the PDD is not consistent with Feasibility Study Report(FSR). Please present the justification of the differences in the PDD.</p> <p>Please provide the original pages of the FSR including partial translation of the following main parameters to the DOE:</p> <ol style="list-style-type: none"> 7. Tariff 8. IRR result 9. Benchmark value 10. Conclusion financially viable or not 11. Cash flow sheet 12. Cover page, date of completion <p>The selected benchmark evidence should be delivered to the DOE. Please present the justification of selected benchmark in the PDD.</p> <p>We do not accept the resource No.9, No.11, please use official publication to support the statements of the PDD.</p>	<p>B.5.11</p>	<p>1)Please see spreadsheet and PDD for source of input value.</p> <p>2)Please see spreadsheet for revision of non-related parameters in the IRR calculation.</p> <p>3) The feed-in tariff for wind projects is set by bidding according to the local policy. The tariff the project developer obtained after the bidding process (0.610 RMB/KWh including VAT) is used in the PDD and spreadsheet, instead of the tariff expected in the FSR (0.638RMB/KWh including VAT). This explains why the IRR is different from the FSR. If 0.638RMB/KWh shown in the FSR is used instead of 0.610RMB/KWh, the IRR is 7.97%, which is similar to the IRR in the FSR (8.74%). The reason for the difference of 0.77% is caused by financial cost. According to EB39 new requirements, the cost of financing expenditures should not be included in the calculation of project IRR. If we include the financial cost as the PD did in the FSR, the IRR will be 8.77%, which is almost same with IRR in FSR.</p>	<p>DOE's first response:</p> <p>The fed-in tariff was determined on 30th Nov, 2007, which is later than the FSR was developed, please kindly note the FSR is the basis for the pp taking the financial decision, and in the same time CDM application was mentioned, any later grid price should not be taking into account after the financial decision was made.</p> <p>DOE's second response:</p> <p>Please clarify why PP still used a higher tariff in FSR which was finished in July 2007, after PP knew the lower tariff on June 22, 2007.</p> <p><input checked="" type="checkbox"/></p> <p>This issue is considered to be resolved. The difference between the calculated IRR and the IRR in the FSR is clarified by the pp, which is accepted by the DOE.</p>
--	---------------	---	---

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



CAR 5:

Reply to the first response:

The NDRC issued in 2005 a policy setting the [wind power pricing](#) mechanism (see NDRC Document[2005]1204) aimed to reduce the on-grid tariff of wind projects. According to this policy, the tariff is determined by bidding process, instead of custom tariff regulated by local government, and is approved by the NDRC. This is applicable for projects below and above 50 MW in Jilin province. In 2007, the approval price for wind projects in Jilin province was 0.610 RMB/KWh including VAT (see Li Junfeng and Ma Lingjuan – August 2007), which is among the highest in China. The tariff that the project developer was granted was the same, as shown in the Bidding result from November 2007 and the approval by the NDRC in July 2008. This shows that the tariff expected in the Feasibility Study was not realistic at the time of decision making. In addition, the approved electricity tariffs for wind projects (including the proposed project) with an installed capacity below 50 MW in Jilin Province in 2008 is 0.610 RMB/KWh (see NDRC – July 2008 http://www.ndrc.gov.cn/zcfb/zcfbtz/2008tongzhi/t20080813_230718.htm and <http://www.ndrc.gov.cn/zcfb/zcfbtz/2008tongzhi/W020080813574224669079.pdf>). This shows that the tariff estimated in the FS was not realistic, given the tariff applicable at the time of the decision making which is still applicable today. In order to accurately assess the project at the time of the decision making, the tariff used in the investment analysis is the official tariff applicable at the time of the decision making.

An average value of the operation costs was used in the investment analysis. The annual values are now used. Please see the updated PDD and spreadsheet.

Reply to the second response:

The Project Developer signed an agreement with the research institute in late March 2007 and the timeline was below:

March 2007 The PD signed an agreement on FSR of the proposed project with the research institute and the PD provided all information, including predicted tariff to the research institute.

30/06/2007 The date in the agreement that the research institute was requested to finish the FSR, which would be submitted to local government in July for approval. So the date showed in the FSR is July 2007.

The length for finishing the FSR is more than 3 month. So the tariff of 638Yuan/MWh used in the FSR was based on an optimistic es-

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

timation in consideration of some other wind projects and the PD's expectation on the proposed project. CGN Wind Power Co. Ltd send a notice to Jilin CGN Wind Power Co.Ltd on 22th June 2007 when they got the notice on Feed-in Tariff of Renewable Energy Project– issued by NDRC on 9 June 2007, however, the FSR was finished already before they got the Tariff notice and the FSR could not be revised at that time.

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

<p><u>Corrective Action Request No.6.</u></p> <p>Please define the similar projects with reliable resources.</p>	<p>B.5.15</p>	<p>No other wind farm projects of a similar size in the province have been identified, except for one that benefited from a policy support and those projects applying for CDM financing, listed on the CDM website. Currently 9 wind farm projects in Jilin are registered as CDM projects, and a further 12 projects have been published on the UNFCCC website for global stakeholder consultation as part of the validation process. Official sources of information (i.e. the China Electric Power Yearbook 2007) do not give a list of individual wind farm projects in the region. However, the registration of 9 such projects in the region indicates that wind projects are not common practice in the absence of CDM financing, and thus such projects can be considered additional.</p> <p>Besides, the total installed capacity of wind farms in Jilin Province only represents 1.8% of the total installed capacity¹. This shows that wind farms are not common practice in the Province.</p> <p>http://www.cwea.org.cn/download/display_list.asp?cid=2 & http://www.cwea.org.cn/upload/20080324.pdf (2007)</p>	<p>DOE's first response:</p> <p>Please submit official publication of the wind farm statistics in Jilin province for the common practice analysis, the capacity range, as well as the geographical range should be specified.</p> <p>Reply for the first response:</p> <p>No official publication of wind farm statistics in Jilin province is available. In addition, no other available official source of information giving a list of individual wind farms in the region is accessible. In accordance with the latest version of the Additionality Tool, only projects for which data/information is accessible are included in the common practice analysis.</p> <p>DOE's second response:</p> <p>What about Shi Pengfei (Deputy Director, Chinese Wind Energy Association), Statistics on China Wind Farm Installed Capacity in 2007?</p> <p>Reply for the second response by the pp: the relevant evidence has been provided to the DOE.</p> <p><input checked="" type="checkbox"/></p> <p>This issue is considered to be resolved.</p>
---	---------------	---	---

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

<p><u>Corrective Action Request No.7.</u> The data source should be correctly referred.</p>	<p>B.6.2.15</p>	<p>Please see PDD for updated information.</p>	<p><input checked="" type="checkbox"/> This issue is considered to be resolved.</p>
<p><u>Corrective Action Request No.8.</u> Please specify the auxiliary power usage in case of emergency. Does the wind farm consist of a backup line? The measurement method of EGy should be described transparently to ensure that for the calculation of the emission reduction only the net electricity supply will be used. Please specify the calibration standard in the PDD.</p>	<p>B.7.1.2</p>	<p>The construction is still at an early stage, hence the project developer cannot provide details about the auxiliary power usage in case of emergency yet. The final set up of the monitoring system should ensure that emission reductions calculations are based on the net electricity supply. Reply for the first response: Due to this project being in the early stage, the monitoring system has not been finalized and the site cannot provide the information required, It will be provided to the DOE as soon as it is available. The current monitoring plan is based on the information available. At the time of verification, a correct and finalized line diagram will be provided to the DOE.</p>	<p>DOE's first response: The monitoring plan should be determined before the project registration, hence please provide the relevant information. DOE's second response: <input checked="" type="checkbox"/> This issue is considered to be resolved.</p>

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

<p><u>Corrective Action Request No.9.</u></p> <p>A diagram should be presented to allow a better understanding of how the parameters are monitored.</p>	<p>B.7.2.3</p>	<p>Due to the project being at an early stage, the project developer can not provide a detailed diagram. The diagram will be provided by the project developer as soon as the monitoring system is finalised.</p>	<p>See above.</p> <p>Reply for the first response:</p> <p>The current monitoring plan is based on the information available. At the time of verification, a correct and finalized line diagram will be provided to the DOE.</p> <p><input checked="" type="checkbox"/></p> <p>This issue is considered to be resolved.</p>
<p><u>Corrective Action Request No.10.</u></p> <p>Please revise the project starting date accordingly.</p>	<p>C.1.1</p>	<p>Please see the revised PDD for updated information. (Page 30)</p>	<p>See the comments to CAR3.</p> <p><input checked="" type="checkbox"/></p> <p>This issue is considered to be resolved.</p>
<p><u>Clarification Request No. 1.</u></p> <p>Please provide the approval of grid connection to the DOE.</p>	<p>A.2.2</p>	<p>The approval of grid connection has not been granted yet. According to the project developer, the approval could be obtained around two months before the start of operation.</p>	<p><input checked="" type="checkbox"/></p> <p>This issue is considered to be resolved, since the grid bidding price has been acquired in 2007.</p>
<p><u>Clarification Request No. 2.</u></p> <p>The table in A.3 indicates that the Switzerland is the buyer, however, in Annex 1, the company-Credit Suisse International's address is UK. Please clarify.</p>	<p>A.3.1</p>	<p>Credit Suisse International will be authorised by the UK. Please see the revised PDD for updated information</p>	<p><input checked="" type="checkbox"/></p> <p>This issue is considered to be resolved.</p>

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Industrie Service

<p><u>Clarification Request No. 3.</u></p> <p>Please provide CDM consideration evidence with English translation to the DOE. Please also clarify how the CDM has been seriously considered prior to the project start, since the main equipment purchasing contract has been signed in Sep, 2007.</p>	<p>B.5.1</p>	<p>Please see attached documents for information and section B.5. of the PDD.</p> <p>In August 2007 the project developer made the decision to proceed with the project as a CDM project and published a Bidding Notice for the CDM development of the project. This was decided because the project was not financially attractive with the applicable electricity tariff. The project developer got the notice issued by NDRC on 9 June 2007 that the tariff for Jilin wind project is 0.61Yuan/MWh. Besides, the project developer also emphasised that the CDM can help alleviating the financing problems faced by the Project and the benefits of CDM development for this project in the Feasibility Study. The bid was won by EcoSecurities and Credit Suisse International and an Emission Reduction Purchase Agreement (ERPA) was negotiated and signed in January 2008. The project developer then signed a purchase agreement for the generating equipment in September 2007 (start of the project activity). This shows that the benefits of the CDM were a decisive factor in the decision to proceed with the project.</p>	<p>DOE's first response:</p> <p>Any evidence regarding the early CDM consideration could be provided?</p> <p>See our updated answer on the left.</p> <p><input checked="" type="checkbox"/></p> <p>This issue is considered to be resolved.</p>
--	--------------	---	--

Validation Protocol

Project Title: Jilin Da'an Dagangzi Wind Power Project Phase II

Date of Completion: 25/02/2010

Number of Pages: 48



Table 3 Unresolved Corrective Action and Clarification Requests (in case of denials)


Clarifications and / or corrective action requests by validation team	Id. of CAR/CR	Explanation of Conclusion for Denial
-	-	-

Validation of the CDM Project:
Jilin Da'an Danggangzi Wind Power Project Phase II




Industrie Service

Annex 2: Information Reference List

Final Report	2010-2-25	Validation of the “Jilin Da’an Dagangzi Wind Power Project Phase II” Information Reference List	Page 1 of 4	 Industrie Service
--------------	-----------	--	-------------	--

Reference No.	Document or Type of Information
1	Project Design Document for CDM project “Jilin Da’an Dagangzi Wind Power Project Phase II”, version 1.0, dated 24/04/2008.
2	Consolidated baseline methodology for grid-connected electricity generation from renewable sources ACM0002, version 07.
3	Tool for the demonstration and assessment of additionality, version 05.2.
4	Tool to calculate the emission factor for an electricity system.
5	Tool to calculate project or leakage CO2 emissions from fossil fuel combustion (version01, EB32).
6	Participant list of on-site interview, signed on May 20th 2008.
7	<p>Project-site interviews at the project site in the village Shuanggang, Dagangzi County, Da’an City, Jilin Province, P.R China., ducted on 20th May, 2008 by auditing team of TÜV SÜD:</p> <p>Validation team: Ms. Chen Xiaoying CDM Auditor TÜV SUD China</p> <p>Interviewed persons: Mr. Zhao Jingjing Project owner CGNPC Ms. Yan Shuang Project owner CGNPC Ms. Guo Hao CDM consultant Eco Securities Mr. Yang Yi CDM consultant Eco Securities</p>
8	Feasibility study of Jilin Da’an Dagangzi Wind Power Project Phase II, issued by Jilin electric investigation and design institute, dated July, 2007.
9	The evaluation report of the FSR, issued by Jilin energy saving consulting Co., Ltd, dated 28th Sep, 2007.
10	Approval of Jilin Da’an Dagangzi Wind Power Project Phase II, issued by Jilin DRC, dated 23rd, Oct 2007.
11	The electronic wiring system design report of Jilin Da’an Dagangzi Wind Power Project Phase II, designed by Jilin electric

Final Report	2010-2-25	Validation of the "Jilin Da'an Dagangzi Wind Power Project Phase II" Information Reference List	Page 2 of 4	 Industrie Service
--------------	-----------	--	-------------	--

Reference No.	Document or Type of Information
	investigation and design institute, dated Sep, 2007.
12	EIA of Jilin electric investigation and design institute, issued by Northeast China coal industry environmental protection institute, dated Aug, 2007.
13	Approval of EIA of Jilin Da'an Dagangzi Wind Power Project Phase II, issued by Jilin EPB, dated 17th Sep, 2007.
14	Purchasing contract of the wind turbine (type FD77B-1500/12.5), signed with Dongfang turbine Co., Ltd, dated 12 Sep, 2007.
15	Samples of training certification to the wind farm staff, regarding the wind farm operating knowledge, issued by Dongfang Turbine plant, dated Sep, 2007.
16	Publication of the Bidding Notice for the CDM development of the project, issued by the board of Jilin CGN wind power Co., Ltd, dated 6 th Aug, 2007.
17	Bank loan contract, signed between Jilin CGN wind power Co., Ltd and Dayawan nuclear power financial Co., Ltd, and China construction bank Baicheng branch, dated 27 th Dec, 2007, total amount of 3173.5 million Yuan.
18	The bidding price approval (0.61yuan/Kwh), issued by Jilin mechanical equipment bidding company, dated 30th Nov, 2007.
19	The starting construction report of Jilin Da'an Dagangzi Wind Power Project Phase II, issued by Jilin Jineng electric construction supervision Co., Ltd, dated 6th Mar, 2008.
20	Stakeholder consultation recalling billboard, issued by Jilin CGN wind power Co., Ltd, dated 14 th Jan, 2008.
21	Questionnaire samples total 30 pieces, dated Feb, 2008.
22	EAPA signed with Eco Securities and Credit Suisse, dated 29 th Jan, 2008.
23	2007 installed wind farm statistics, issued by China wind energy association, 2007.
24	Wind power feed in grid price VAT Deduction to 50% document, issued by China taxation bureau, dated 2001.
25	Wind farm installed capacity statistic of year 2006.
26	Point Carbon. Chinese official defends additionality of renewable in CDM 21/03/2007.
27	The national policy about strictly prohibiting the installation of coal-fired generators under the capacity of 135MW. Issued by the State council office, 2002.

Final Report	2010-2-25	Validation of the “Jilin Da’an Dagangzi Wind Power Project Phase II” Information Reference List	Page 3 of 4	 Industrie Service
--------------	-----------	--	-------------	--

Reference No.	Document or Type of Information
28	The proposed project activity on-going process plan.
29	LoA of UK, to Eco-Securities, and LoA of UK to Credit Suiss.
30	CDM project Emission reduction bidding result, issued by CGNPC to Eco Securities, dated 10th Jan 2008.
31	Construction regulation about wind farm projects, issued by NDRC, dated 4 th July, 2005.
32	Interim Rules on Economic Assessment of Electrical Engineering Retrofit Projects, bench mark evidence
33	China Wind Power Report 2007, released by China environmental science press
34	Notice of "Grid price for Wind farms in several provinces", issued by NDRC, dated 9 th June, 2007
35	Li Junfeng and Ma Lingjuan's report on Wind Project and Notice on tariff of renewable energy generation issued by NDRC on 09/06/2007, in which the tariff of wind project in Jilin is 610Yuan/MWh.
36	Notice of CDM bid results – Jilin CGN Wind Power Co., Ltd, dated 10 th Jan, 2008.
37	LoA of China
38	Investment analysis of Jilin Da’an Dagangzi Wind Power Project Phase II.
39	http://cdm.unfccc.int/Projects/Validation/DB/Q4HQ1J7WTI6BNFB7NLIXHEPB4APVMP/view.html
40	http://cdm.unfccc.int/Projects/Validation/DB/JTN3CD2I2LXN07FOKTLPWXFDJN2SPK/view.html
41	http://cdm.unfccc.int/Projects/Validation/DB/7RNF2LVMSRV354HBUHY8REN2KBXH4N/view.html
42	Method for the Tariff of Grid connected Electricity Generation from Renewable Sources and Management of Apportionment of Expenses, FAGAIJIAGE(2006) No. 7

Final Report	2010-2-25	Validation of the “Jilin Da’an Dagangzi Wind Power Project Phase II” Information Reference List	Page 4 of 4	 Industrie Service
--------------	-----------	--	-------------	--

Reference No.	Document or Type of Information
	Below documents were referenced during the RFR stage, some of them might be repeated from the previous information list.
43	http://www.cwea.org.cn/upload/20090305 ; China Wind Farm Report 2007, Greenpeace and CWEA
44	Notice on Feed in Tariff of Renewable Energy Project– issued by NDRC on 9 June 2007 http://www.hebj.gov.cn/upfiles/xy_col32gjc_20070718164220007126.htm (Fa Gai Jia Ge[2007]1260)
45	Notice on Feed in Tariff of Renewable Energy Project– issued by NDRC on 23 July 2008 http://www.ndrc.gov.cn/zcfb/zcfbtz/2008tongzhi/t20080813_230718.htm (Fa Gai Jia Ge[2008]1876)
46	Publication of the bidding Notice for the CDM development of the project activity, 06/08/2007, CGN
47	NDRC Notice on Perfection the Feed-in-tariff of Wind Farms Policy issued on July 20, 2009 http://www.sdpc.gov.cn/zfdj/jqgg/dian/t20090727_292837.htm (Fa Gai Jia Ge[2009]1906)
48	Notic on Wind Project Establishment and Management issued on July 4, 2005 http://www.sdpc.gov.cn/zcfb/zcfbtz/zcfbtz2005/t20050810_39031.htm (Fa Gai Neng Yuan[2005]1204)
49	2007 China Wind Power Report by the Chinese Renewable Energy Industry Association, Global Wind Energy Council and Greenpeace http://www.greenpeace.org/raw/content/china/en/press/reports/wind-power-report.pdf