



VALIDATION REPORT

for the CDM Project Activity

Inner Mongolia China Water Group Huade
Cheliwusu Wind Farm 49.5MW Project

in

China

Report No. 01 997 9105064988

Version No. 04, 2012-03-15

TÜV Rheinland (China) Ltd.

I. Project description:

Project title: Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project

Host Country: China

Methodology: ACM0002, Version 12.1.0 ☒ Large Scale ☐ Small Scale

Annual average emission reductions (estimate): 95,181 tCO₂e/yr

GHG reducing measure/technology: Newly built grid-connected wind power plant

Party	Project Participants	Party considered a project participant
China(Host)	China Water Group Huade Wind Power Co., Ltd.	No
United Kingdom of Great Britain and Northern Ireland	Eco-Tec Asia (UK) Ltd	No

II. Validation:

Contract party: Eco-Tec Asia (UK) Ltd

Validation Team:

Role	Full name	Appointed for Sectoral Scopes	Affiliation
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Technical Reviewer	Ms. Cuiping Deng	1.2, 4.1, 4.5, 5.1, 8.2, 10.2, 11.1, 12.1	TÜV Rheinland (China) Ltd.

Validation Phases:

- ☒ Desk Review
- ☒ Follow up interviews
- ☒ Resolution of outstanding issues

Validation Status:

- ☐ Corrective Actions / Clarifications Requested
- ☒ Full Approval and Submission for Registration
- ☐ Rejected

III. Validation Report:

Report No.: 01 997 9105064988	Current revision No.: 04	Date of current revision: 2012-03-15	Date of first issue: 2011-08-12
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Final approval: <input checked="" type="checkbox"/>	Released Date: 2012-03-16 By: Mr Praveen N Urs	Designated Operational Entity (DOE): TÜV Rheinland (China) Ltd. Unit 707, AVIC Building, No.10B, Central Road, East 3rd Ring Road, Chaoyang District, Beijing, CHINA 100 022 Telefax.: +86 10 6566 6660-288 E-mail: GHG-DOE@bj.chn.tuv.com
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¹ Mr. Chong YAN was qualified as auditor on 16 Dec. 2011.

Abbreviations

BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification request
CM	Combined Margin
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DNA	Designated National Authority
EB	Executive Board
EF	Emission Factor
EIA	Environmental Impact Assessment
ERPA	Emission Reduction Purchase Agreement
EPB	Environmental Protection Bureau
FAR	Forward Action Request
FSR	Feasibility Study Report
GHG	Greenhouse gas(es)
HCA	Host Country Apporval
IPCC	Intergovernmental Panel on Climate Change
LoA	Letter of Approval
IRR	Internal Rate of Return
NCPG	North China Power Grid
NCV	Net Calorific Value
NDRC	National Development and Reform Commission
NGO	Non-governmental Organisation
ODA	Official Development Assistance
OM	Operating Margin
PDD	Project Design Document
PPs	Project Participants
UNFCCC	United Nations Framework Convention on Climate Change
VAT	Value-added Tax
VVM	Validation and Verification Manual

Executive Summary – Validation Opinion

The validation team assigned by the DOE (TÜV Rheinland (China) Ltd.) has performed a validation of the 'Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project' in P.R. China on the basis of UNFCCC criteria for Clean Development Mechanism (CDM) projects according to Article 12 of the Kyoto Protocol and subsequent decisions of the CDM Executive Board with regard to CDM modalities and procedures and the application of approved methodologies. The validation report and the validation protocol are summarizing the findings of the validation.

The review of the project design documentation and the subsequent follow-up interviews have provided DOE with sufficient evidence to determine the fulfillment of stated criteria.

The Validation has been executed in the following steps:

- Desk review of preliminary PDD (Version 1.0, dated 27/05/2011)
- Public stakeholder comment process (14 Jun. 2011 to 13 Jul. 2011)
- On-site visit with stakeholder interviews (6 Jul. 2011 to 7 Jul. 2011)
- Issue of checklist with corrective action requests (CARs) and clarification requests (CLs) and the draft validation report & protocol
- Desk review of revised PDD (Version 1.6, dated 14/03/2012)
- Review of proposed correction and clarifications
- Issue of the final validation report & protocol

The host country of the proposed project is P.R. China. The Letter of Approval (LoA) of voluntary participation, including confirmation by China's DNA - National Development & Reform Commission (NDRC), that the project assists them in achieving sustainable development, has been issued in Nov. 2011.

The project activity is bilateral CDM-project, with United Kingdom of Great Britain and Northern Ireland (UK) identified as the Annex I party. The LoA from the DNA of UK, i.e. Environment Agency, issued on 11 Jan. 2012, stated that Eco-Tec Asia (UK) Ltd is authorized to participate in the project.

The validation did not reveal any information that indicates that the project can be seen as a diversion of ODA funding towards China.

The project applies approved consolidated baseline and monitoring methodology ACM0002, Version 12.1.0- *"Consolidated baseline methodology for grid-connected electricity generation from renewable sources"*

And also the project applies the tools as follows:

- *"Tool to calculate the emission factor for an electricity system" Version 02.2.1*
- *"Tool for the demonstration and assessment of additionality" Version 05.2.1.*

By generating zero-emission electricity with renewable wind energy and displacing grid electricity, the project results in reductions of CO₂ emissions that are real, measurable and

give long-term benefits to the mitigation of climate change. It is demonstrated that the project 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.

The total emission reductions from the project are estimated to be on the average 95,181 tCO₂e/yr over the fixed 10 years of crediting period. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achieved given that the underlying assumptions do not change.

Adequate monitoring procedures have been identified in the PDD according to the selected Methodology ACM0002, Version 12.1.0. Project operational staff's training record has been checked up to be valid.

The project proponent has resolved all Corrective Action Requests and Clarification Requests as stated in the Validation Report and the Validation Protocol, which has resulted in a revision of the PDD. In summary, it is Validation Team's opinion that the Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project in P.R. China as described in the PDD of Version 1.6, dated 14/03/2012 meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria as well as the consolidated baseline and monitoring methodology ACM0002, Version 12.1.0. TÜV Rheinland thus requests the registration of the project as a CDM project activity.

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1 INTRODUCTION

The Eco-Tec Asia (UK) Ltd has commissioned the DOE TÜV Rheinland (China) Ltd. to perform a validation of the CDM Project Activity **‘Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project’** in China (hereafter called “the project”). This report summarises the findings of the validation of the project, performed on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. The term “UNFCCC criteria” refers to Article 12 of the Kyoto Protocol, the CDM modalities and procedures and the subsequent decisions by the CDM Executive Board.

1.1 Objective

The purpose of a validation is to have an independent third party assess the project design. In particular, the project's baseline, monitoring plan, and the project's compliance with relevant UNFCCC and host Party criteria are validated in order to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria. Validation is a requirement for all CDM projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

1.2 Scope

The validation scope is defined as an independent and objective review of the project design document (PDD). The PDD is reviewed against the relevant criteria (see above) and decisions by the CDM Executive Board, including the approved baseline and monitoring methodology. The validation team has, based on the recommendations in the Validation and Verification Manual employed a rules-based approach, focusing on the identification of significant risks for project implementation and the generation of CERs.

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

2 METHODOLOGY

The validation consists of the following three phases:

- I a desk review of the project design documents
- II on-site visit and follow-up interviews with project stakeholders
- III the resolution of outstanding issues and the issuance of the final validation report and opinion.

The following sections outline each step in more detail.

2.1 Desk Review of the Project Design Documentation

The following table outlines the documentation reviewed during the validation:

- /1/ PDD [initially published version], Version 1.0, dated 27/05/2011
- /2/ PDD [Final version], Version 1.6, dated 14/03/2012
- /3/ Host Country Approval: People's Republic of China, National Development and Reform Commission, English Version No. 3252, dated in Nov. 2011
- /4/ Letter or Approval: the UK, Environment Agency, Reference No. EA/Eco-Tec/01/2012, dated 11/01/2012
- /5/ Modalities of Communication, dated 29/11/2011
- /6/ CDM Validation and Verification Manual (Version 01.2), dated 30/07/2010
- /7/ CDM-PDD - Project Design Document form, Version 3, EB25, Annex15
http://cdm.unfccc.int/Reference/PDDs_Forms/PDDs/index.html
- /8/ Guidelines Project Design Document (CDM-PDD) and the Proposed new baseline and monitoring methodologies (CDM-NM), Version 07.0, EB41, Annex12, dated 02/08/2008
- /9/ Approved consolidated baseline and monitoring methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", version 12.1.0, EB 58, Annex 7, dated 26/11/2010
- /10/ Tool to calculate the emission factor for an electricity system, Version 02.2.1, EB 63, Annex 19, dated 29/09/2011
- /11/ Tool for the demonstration and assessment of additionality, Version 05.2.1, EB 39, Annex 10, dated 11/08/2011
- /12/ Guidelines on the assessment of investment analysis, Version 05, EB62, Annex 5, dated 15/07/2011
- /13/ Guidelines on the demonstration and assessment of prior consideration of the CDM, Version 04, EB 62, Annex 13, dated 15/07/2011
- /14/ Glossary of CDM terms, Version 05, dated 19/08/2009
- /15/ MOC Form, Version 01.4, dated 25/07/2011
- /16/ EB Guidance for request for deviation titled "Application of AM0005 and AMS.I.D in China", Reference No. M-DEV0004,
<http://cdm.unfccc.int/Projects/deviations/87512>

- /17/ Guidelines for the Reporting and Validation of Plant Load Factors, EB 48, Annex 11, dated 17/07/2009
- /18/ Information Note on the Highest Tariffs applied by the executive board in its decisions on registration of projects in the People's Republic of China, Version 02, EB 61, Para 78, dated 03/06/2011
- /19/ Feasibility Study Report of Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project by Inner Mongolia Power Exploration & Design Institute, dated in Feb. 2010
- /20/ Approval of FSR of Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project issued by Development and Reform Commission of Inner Mongolia Autonomous Region, Document No. Nei Fa Gai Neng Yuan Zi[2010]2732, dated 09/12/2010
- /21/ Environmental Impact Assessment Report Form of Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project by Ulanqab Environmental Protection Science Research Institute, dated 13/08/2010
- /22/ Approval of EIA of Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project by Environmental Protection Bureau of Inner Mongolia Autonomous Region, No. Nei Huan Biao [2010]253, dated 20/10/2010
- /23/ Geographical coordinates of 33 wind turbine generators for Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project
- /24/ Approval of grid-connection system design of Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project, issued by Inner Mongolia Electric Power Group Co., Ltd., Document No. Nei Dian Fa Zhan[2010] 508, dated 06/09/2010
- /25/ Business license of China Water Group Huade Wind Power Co., Ltd., Registration No. 152625000000941, dated 09/03/2007
- /26/ CDM decision of the project by Executive Board of China Water Group Huade Wind Power Co., Ltd., Document No. (2010) Dong Jue Zi 3, dated 08/03/2010
- /27/ CDM Notification Form of the project drafted by China Water Group Huade Wind Power Co., Ltd. on 30/09/2010 and approved by NDRC on 09/10/2010
- /28/ Prior Consideration of the CDM Form received by UNFCCC on 12/10/2010 from website http://cdm.unfccc.int/Projects/PriorCDM/notifications/index_html
- /29/ Emission Reduction Purchase Agreement signed between China Water Group Huade Wind Power Co., Ltd. and Eco-Tec Asia (UK) Ltd, dated 07/04/2011
- /30/ Stakeholders Consulting Meeting Invitation Bulletin of Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project, dated 08/03/2010
- /31/ Stakeholders questionnaires regarding to the implementation of Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project, dated 15/03/2010
- /32/ Purchase & service contract of wind turbines of Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project, signed between China Water Group Huade Wind Power Co., Ltd. and Sinovel Wind Group Co., Ltd.,

dated 30/05/2010

- /33/ Foundation construction contract of wind tower, box transformer and hoist platform of Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project, signed between China Water Group Huade Wind Power Co., Ltd. and Shenyang Tianbei Construction Engineering Co., Ltd., dated 07/03/2011
- /34/ Wind power generator hoist contract of Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project, signed between China Water Group Huade Wind Power Co., Ltd. and China Nuclear Industry Zhongyuan Construction Co., Ltd., dated 07/03/2011
- /35/ Purchase & service contract of towers of Wind Turbine-Generators of Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project, signed between China Water Group Huade Wind Power Co., Ltd. and Gezhouba Group Mechanical & Electrical Construction Co., Ltd., dated 30/05/2010
- /36/ 35KV collecting cable and box transformer installation construction contract of Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project, signed between China Water Group Huade Wind Power Co., Ltd. and Beijing Tianyuan New Energy Technology Co., Ltd, dated 28/04/2011
- /37/ Box Transformer Purchase Agreement of Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project, signed between China Water Group Huade Wind Power Co., Ltd. and Ningbo Tianan Group, dated 09/04/2011
- /38/ Cable accessories purchase agreement of Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project, signed between China Water Group Huade Wind Power Co., Ltd. and Changsha Cable Accessory Co., Ltd., dated 13/06/2011
- /39/ Other minor shared purchase contracts, incl. access road construction dated 05/03/2011, ground connection dated 09/04/2011, electrical cable dated 25/05/2011, etc.
- /40/ Loan commitment letter of Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project, issued by Three Gorges Financing Co., Ltd., Document No. San Cai Dai Han[2010]0804, dated 20/08/2010
- /41/ IRR calculation spreadsheet of Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project
- /42/ ER calculation spreadsheets of Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project
- /43/ Notification regarding the regulation on the ratio of self-equity in fixed assets investment of project issued by State council of China, Document No. Guo Fa[2009]27, dated 25/05/2009
- /44/ Adjustment history of bank loan benchmark interest rate issued by Monetary Policy Department, the People's bank of China, dated 10/02/2011
- /45/ Notification regarding the requirements on the regulation of wind power projects

- construction issued by NDRC of China, Document No. Fa Gai Neng Yuan[2005]1024, dated 04/07/2005
- /46/ Notification regarding the effective date of residual value rate of fixed assets issued by State Taxation Ministry of China, Document No. Guo Shui Han[2005]883, dated 14/09/2005
- /47/ Decision on the reform of investment system issued by State Council of China, Document No. Guo Fa[2004]20, dated 16/07/2004
- /48/ Notification regarding wind power electricity tariff issued by NDRC of China, Document No. Fa Gai Jia Ge[2009]1906, dated 20/07/2009
- /49/ VAT interim statute of P.R. China issued by State Council of China, Document No. State Council Decree 538, dated 10/11/2008
- /50/ Notification regarding VAT policies of resources integrated utilization and other products issued by both State Financial Ministry and State Tax Bureau of China, Document No. Cai Shui[2008]156, dated 09/12/2008
- /51/ Notification regarding several questions in the reform of VAT issued by both state Financial Ministry and State Taxation Ministry of China, Document No. Cai Shui[2008]170, dated 19/12/2008
- /52/ Enterprise Income Tax of P.R. China approved by State Chairman of P.R. China, Document No. State Chairman Decree 63, dated 16/03/2007
- /53/ Regulations on the implementation of enterprise income tax law of P.R. China approved by State Premier of P.R. China, Document No. State Council Decree 512, dated 06/12/2007
- /54/ List of public infrastructure projects in the enterprise income tax preferential policy (Version 2008), issued by Ministry of Finance, State Administration of Taxation and NDRC of P.R. China, Document No. Cai Shui [2008]116, dated 08/09/2008
- /55/ Urban Maintenance & Construction Tax Interim Rules of P. R. China issued by State Council of China, Document No. Guo Fa[1985]19, dated 08/02/1985
- /56/ Decision to revise interim rules of educational surtax issued by State Council of China, Document No. State Council Decree 448, dated 20/08/2005
- /57/ Notification regarding the electric power system reform program issued by State Council of China, Document No. Guo Fa[2002]5, dated 10/02/2002
- /58/ China Energy Statistics Yearbook 2007 to 2009 published by China Statistics Publishing Company
- /59/ China Electric Power Yearbook 2005 to 2009 pulished by China Electric Power Publishing Company
- /60/ 2006 IPCC Guidlines for National Greenhouse Gas Inventories
- /61/ Guidance for the determination of grid boundaries and emission factors issued by NDRC of China, dated 20/12/2010
<http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File2552.pdf>
- /62/ China's Regional Grid Baseline Emission Factor Calculation (OM) issued by

- NDRC of China, dated 20/12/2010
<http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File2550.xls>
- /63/ China's Regional Grid Baseline Emission Factor Calculation (BM) issued by NDRC of China, dated 20/12/2010
<http://cdm.ccchina.gov.cn/WebSite/CDM/UpFile/File2551.doc>
- /64/ Interim Rules on Economic Assessment of Electrical Engineering Retrofit Projects, published by China Electric Power Publishing Company, dated 01/03/2003.
- /65/ CDM Pipeline Overview published by UNEP Risoe Centre, dated 01/10/2011
- /66/ Statistics analysis table of similar registered wind power projects with installation more than 15MW located in Inner Mongolia Autonomous Region
- /67/ Statistics of installed capacity of wind power projects in China 2010 issued by Wind Energy Technical Committee of China Renewable Energy Association, dated 18/03/2011
- /68/ News with title "National Debt Fund 30MW Project in Keshiketeng Banner" via <http://www.chifeng.gov.cn/html/2008-11/3130.shtml>
- /69/ Bailingmiao Phase I wind power project via <https://gs1.apx.com/mymodule/ProjectDoc/EditProjectDoc.asp?id1=449>
- /70/ Bailingmiao Phase II wind power project via <https://gs1.apx.com/mymodule/ProjectDoc/EditProjectDoc.asp?id1=505>
- /71/ Honiton Xiwu Phase I wind power project via <https://gs1.apx.com/mymodule/ProjectDoc/EditProjectDoc.asp?id1=620>
- /72/ Technical administration code of electric energy metering (DL/T448-2000), published by China Electric Power Publishing Company, version 1 dated in Sep. 2000;
Electrical Energy Meters with Electronics (JJG596-1999) issued by General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China, dated 21/10/1999;
Technical Norm of the Calibration of AC Watt-hour Meters at place of installation (JJG1055-1997) approved by General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China, dated 20/11/1997;
- /73/ CDM and Operation Training Plan issued by China Water Group Huade Wind Power Co., Ltd., dated 04/07/2011
- /74/ Technical training records from 18/07/2011 to 17/08/2011, inc. operation and maintenance of wind power plant.
- /75/ Methodology of Wind Energy Resource Assessment for Wind Farm issued by General Administration of Quality Supervision, Inspection and Quarantine of P.R. China, Document No. GB/T 18710-2002, dated 28/04/2002
- /76/ Compilation Method for Feasibility Study Report of Wind Power Projects issued by NDRC of China, Document No. Fa Gai Ban Neng Yuan[2005]889, dated 09/05/2005

- /77/ Clarification on the energy loss factors of wind power projects in China issued by NDRC of China, dated 02/06/2009
- /78/ Financial Assessment Methods and Parameters for Construction Project (3rd version), issued by Construction Administration of NDRC, dated 03/07/2006
- /79/ Public comments received from email address of zhongzhouli8@gmail.com, dated 14/06/2011
- /80/ A Further Consulting Email for specific data source or evidences of received general comments to the commenter zhongzhouli8@gmail.com, dated 28/07/2011
- /81/ The statement on the geographical coordinates of 33 wind turbine-generators by China Water Group Huade Wind Power Co., Ltd.
- /82/ Statistical Bulletins of National Economy and Social Development of Inner Mongolia from 2003 to 2010;
Statistical Bulletins of National Economy and Social Development of P.R. China from 2003 to 2010;
- /83/ 1. Technical agreement of main transformer for the Changshun Phase I wind farm signed between China Water Group Huade Wind Power Co., Ltd. and Shandong Taikai Transformer Co., Ltd., dated in Jan. 2009;
2. Technical agreement of main transformer for the Sandaogou wind farm signed between China Water Group Huade Wind Power Co., Ltd. and Shandong Taikai Transformer Co., Ltd., dated in Jun. 2010;
3. Technical agreement of main transformer for the Heping and Niujiacun wind farms signed between China Water Group Huade Wind Power Co., Ltd. and Shandong Dachi Electric Co., Ltd., dated in Jun. 2010;
4. Technical agreement of main transformer for the Niujiatangzi and Sitaifangzi wind farms signed between China Water Group Huade Wind Power Co., Ltd. and Shandong Dachi Electric Co., Ltd., dated in Apr. 2011;
5. Technical agreement of main transformer for the Erligetu and Cheliwusu wind farms signed between China Water Group Huade Wind Power Co., Ltd. and Shandong Dachi Electric Co., Ltd., dated in Apr. 2011;
- /84/ The issuance email of LoA from the DNA (i.e. Environment Agency) of the UK, dated 11/01/2012
- /85/ The MoC statement email from the validation contractual PP of Eco-Tec Asia (UK) Ltd, dated 06/12/2011
- /86/ Feasibility Study Report of Inner Mongolia China Water Group Huade Erligetu Wind Farm 49.5MW Project by Inner Mongolia Power Exploration & Design Institute, dated in Feb. 2010;
Feasibility Study Report of Inner Mongolia China Water Group Huade Sandaogou Wind Farm 49.5MW Project by Inner Mongolia Power Exploration & Design Institute, dated in Feb. 2010;
Feasibility Study Report of Inner Mongolia China Water Group Huade Heping Wind Farm 49.5MW Project by Inner Mongolia Power Exploration & Design Institute, dated in Feb. 2010;

Feasibility Study Report of Inner Mongolia China Water Group Huade Niujiatangzi Wind Farm 49.5MW Project by Inner Mongolia Power Exploration & Design Institute, dated in Feb. 2010;

Feasibility Study Report of Inner Mongolia China Water Group Huade Sitaifangzi Wind Farm 49.5MW Project by Inner Mongolia Power Exploration & Design Institute, dated in Feb. 2010;

Feasibility Study Report of Inner Mongolia China Water Group Huade Niujiacun Wind Farm 49.5MW Project by Inner Mongolia Power Exploration & Design Institute, dated in Feb. 2010

2.2 Follow-up Interviews with Project Stakeholders

	Date	Name	Organization	Topic
/i/	2011-07-07	Mr. Lixin WANG Mr. Junsong GAO	China Water Group Huade Wind Power Co., Ltd.	<ul style="list-style-type: none"> – Project Management – Technical issues – Approval status by the host country – Sustainable development issues – Investment risks and barriers – Additionality – Monitoring plan – Training plan – Environmental impacts – Stakeholder process – Financial source – CDM incentive consideration
/ii/	2011-07-07	Mr. Xin WU Ms. Qian ZHAO	Eco-tec Asia (Beijing) Co., Ltd.	<ul style="list-style-type: none"> – Project design document – Baseline determination – Emission reductions calculation – Project additionality – Status of LoAs
/iii/	2011-07-07	Mr. Aibin XIN	Development & Reform Committee of Huade County	<ul style="list-style-type: none"> – Approval procedures of project – Renewable Energy policies
/iv/	2011-07-07	Mr. Yibin HE	Environmental Protection Bureau of Huade County	<ul style="list-style-type: none"> – Approval procedures of project – Renewable Energy policies – Environmental Impacts of the project
/v/	2011-07-07	Mr. Jie DING	Electrical Power Bureau of Ulanqab	<ul style="list-style-type: none"> – Approval status of project grid-connection; – Electricity tariff – Gate meter of grid

				connection
/vi/	2011-07-07	Mr. Yizhou RUAN	Three Gorges Finance Co., Ltd.	<ul style="list-style-type: none"> – Approval procedures of loan – Assessment result of loan risk
/vii/	2011-07-07	Mr. Tao ZHU	Local residents	<ul style="list-style-type: none"> – Benefits from the project – Impacts of the project on local environment

The validation team carried the on site visit on 6-7 Jul. 2011, which is prior to the date of GSP closure (i.e. 13 Jul. 2011). Considering the validation work is carried out during the public stakeholder comment process, it is possible to receive comments from global stakeholders and the response from project participant for received comments should be validated during follow-up interviews. Thus the team signed a confirmation Letter with the project participant to confirm that in case of any negative comments arise and some or all of them were not addressed during site visit, the validation team would go for a second site visit. Public comments were received on 14 Jun. 2011 /79/ which is before site visit, and all the relevant comments were addressed during site visit. Thus, no second site visit is necessary. Details please refer to section 3.10 of the VR.

2.3 Resolution of Outstanding Issues

The objective of this phase of the validation is to resolve any outstanding issues which need be clarified prior to TÜV Rheinland's positive conclusion on the project design. In order to ensure transparency a validation protocol is customised for the project. The protocol shows in transparent manner criteria (requirements), means of verification 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.

The validation protocol consists of two tables. The different columns in these tables are described in the figure below. The completed validation protocol for this project is enclosed in Appendix A to this report.

Findings established during the validation can either be seen as a non-fulfilment of CDM criteria or where a risk to the fulfilment of project objectives is identified. Corrective action requests (CAR) are issued, where:

- mistakes have been made with a direct influence on project results;
- CDM and/or methodology specific requirements have not been met; or
- there is a risk that the project would not be accepted as a CDM project or that emission reductions will not be certified.

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

Validation Protocol Table 1: Validation requirements				
Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
<i>The various UNFCCC requirements as specified in the VVM are linked to checklist questions the project should meet. The checklist is organised in different sections, following the logic of the VVM.</i>	<i>Gives reference to documents where the answer to the checklist question or item is found.</i>	<i>Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.</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.</i>	<i>This is either acceptable based on evidence provided (OK), or a corrective action request (CAR) due to non-compliance with the checklist question (See below). A request for clarification (CL) is used when the validation team has identified a need for further clarification.</i>

Validation Protocol Table 2: List of Requests for Corrective Action (CAR) and Clarification (CL)			
Draft report clarifications and corrective action requests	Ref. to checklist question in table 1	Summary of project owner response	Validation conclusion
<i>If the conclusions from the draft Validation are either a CAR or a CL, these should be listed in this section.</i>	<i>Reference to the checklist question number in Table 1 where the CAR or CL is explained.</i>	<i>The responses given by the project participants during the communications with the validation team should be summarised in this section.</i>	<i>This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 1, under "Final Conclusion".</i>

Figure 1. Validation protocol tables

Herewith, the Validation Team summarizes *major* changes between webhosted PDD and final version of PDD for submission as follows:

	Webhosted PDD Version 1.0, dated 27/05/2011/1/	Correction to webhosted PDD in the final PDD submission for registration with DOE acceptance. Version 1.6, dated 14/03/2012/2/
Project geographical coordinates	Centre point: 114°00'00"E, 41°44'00"E	Centre point: 114.0023°E, 41.7366°N Area covered by the project activity 113.9668°E~114.0269°E, 41.7165°N~41.7529°N Pls. refer to CAR 3 in the Table 2 of Annex A.
Update of tools	Tool for the demonstration and assessment of additonality (Version 05.2, EB 39) Tool to calculate the emission	Tool for the demonstration and assessment of additonality (Version 05.2.1, EB 39) Tool to calculate the emission factor for

	factor for an electricity system (Version 02.1.0, EB 60)	an electricity system (Version 02.2.1, EB 63) Pls. refer to CAR 6 in the Table 2 of Annex A.
Financial basic input parameters	Interest rate of long-term loans: 5.94% Interest rate of loans for circulating capital: 5.94% Interest rate of short-term loans: 5.31% Salary: 40,000RMB/year for one staff Repair fee rate: 1.0~2.5%	Interest rate of long-term loans: 6.04% Interest rate of loans for circulating capital: 6.04% Interest rate of short-term loans: 5.56% Salary: 60,000RMB/year for one staff Repair fee rate: 1.5% Pls. refer to CL 2 in the Table 2 of Annex A.
Monitoring Plan	Two bidirectional electricity meters (incl. main and backup meter) will be installed to measure the net electricity to the NCPG by the project activity.	34 bidirectional electricity meters will be applied to measure the net electricity to the NCPG by the project activity. Pls. refer to CAR 8 in the Table 2 of Annex A.
<p>Please refer to Appendix A of this report for details of each change between webhosted PDD and the final PDD for submission. The Validation Team has carried out the validation process based on the Webhosted PDD and raised CARs/CLs against the project by issuing the validation protocol.</p> <p>With the updated information and corrections done on final PDD, the PP has addressed all the CARs /CLs that were raised by the Validation Team.</p> <p>It is concluded that the Validation Team has reviewed the project in line with the VVM (version 01.2) and all the evidence, corrections, justifications and updating done on the final PDD with respect to CARs /CLs raised are accepted and closed by the Validation Team, issuing the positive validation opinion for project registration.</p>		

2.4 Internal Quality Control

The final validation report will undergo a technical review before requesting registration of the project activity. The technical review was performed by a technical reviewer qualified in accordance with TÜV Rheinland's qualification scheme for CDM validation and verification.

2.5 Validation Team

Role	Full Name	Appointed for Sectoral Scopes	Affiliation
Team Leader	Mr. TAN Yi	1.2, 13.1	TUV Rheinland (China) Ltd.
Team member	Mr. Chong YAN ²	1.2, 2.1, 3.1, 4.3, 4.5, 9.1	TUV Rheinland (Shanghai) Ltd.
Technical Reviewer	Ms. Cuiping Deng	1.2, 4.1, 4.5, 5.1, 8.2, 10.2, 11.1, 12.1	TUV Rheinland (China) Ltd.

3 VALIDATION FINDINGS

The findings of the validation are stated in the following sections. The validation criteria (requirements), the means of verification and the results from validating the identified criteria are documented in more detail in the validation protocol in Appendix A.

The final validation findings relate to the project design shall be documented and described in the revised and resubmitted project design documentation.

3.1 Approval and Participation

One project participant of the project is China Water Group Huade Wind Power Co., Ltd.(the project owner) from China, where the host party meets all relevant participation requirements in the CDM. The other project participant in Eco-Tec Asia (UK) Ltd from the UK identified as the Annex I Party involved in the project.

The Letter of Approval (LoA)/3/, received from the project participant, has been issued from the China's DNA, i.e. NDRC, in Nov. 2011, for authorizing the project owner as project participant and confirming that the project contributes to China's sustainable development. The validation team has checked up the current status of the project on the China DNA's website³ and considered the LoA submitted is valid.

The LoA of UK, received also from the project participant, has been issued by the DNA of the UK, i.e. Environment Agency, on 11 Jan. 2012/4/. It states that the Eco-Tec Asia (UK) Ltd is

² Mr. Chong YAN was qualified as auditor on 16 Dec. 2011.

³ Project information of the proposed project on the China DNA's website
http://cdm.ccchina.gov.cn/website/CDM/pdf/Item_new/Item_new6922.pdf

authorized to participate in the project. The validation team is able to confirm that the LoA submitted is valid based on its issuance email from the UK's DNA dated 11/01/2012/84/.

The validation team also confirms that the title of the project in the PDD/2/ is identical to the one stated in the respective LoA from China/3/ and the UK/4/.

Based on the description above, the validation team is able to confirm approval and participation requirements relating to the project as per the VVM/version 01.2/6/ in a tabular manner as below,

Project participants	China Water Group Huade Wind Power Co., Ltd.	Eco-Tec Asia (UK) Ltd
Parties involved	P.R. China (host)	United Kingdom of Great Britain and Northern Ireland
Ratification status of the parties	China ratified the Kyoto Protocol on 30 August 2002.	The UK, as the Annex I party, ratified the Kyoto Protocol on 31 May 2002
APPROVAL		
LoA received	Yes	Yes
Date of LoA	Nov. 2011	11/01/2012
Reference to document	No. 3252 /3/	No. EA/Eco-Tec/01/2012 /4/
LoA received from	PP	PP
Validation of authenticity	NDRC Website: http://cdm.ccchina.gov.cn/website/CDM/pdf/Item_new/Item_new6922.pdf	The issuance email of LoA from the DNA of the UK dated 11/01/2012 /84/
Validity of LoA	Valid	Valid
PARTICIPATION		
Party is party to Kyoto Protocol	Yes	Yes
Voluntary participation	Yes	Yes
Diversion of official development aid towards host country	N/A	No
Project contribution to SD	Yes	N/A

The MoC/5/ between the project participants to EB has been compiled as per the standardized MoC Form (version 01.4)/15/ and submitted to the validation team. The names and authorized signatories of the project participants indicated in the MoC are consistent with the ones in the PDD. The validation team is able to confirm that the authorized signatories in the MoC are valid based on the MoC statement email from the validation contractual PP of Eco-Tec Asia (UK) Ltd dated 06/12/2011 /85/.

The project does not receive any public funding, according to the Section A.4.5 and the Annex 2 of the PDD. The documentation review and the onsite interview did not reveal any information indicating that the project can be seen as a diversion of official development assistance (ODA) funding towards China. It is reflected in the loan commitment letter from Three Gorges Financing Co., Ltd. /40/ that the bank loan is promised to be not more than 342.3356million RMB for the implementation of the project, which also is not more than 80% of total investment. According to the official document of Notification regarding the regulation on the ratio of self-equity in fixed assets investment of project/43/, the ratio of self-equity for wind power project is required to be more than 20%. Therefore, the project funding can be deemed to be only raised from bank loan and capital, which is in compliance with the project approval/20/. During the onsite interview with the management representative of the project owner, i.e. Mr. Lixin WANG, it is further confirmed that no other source of capital rather than the above-mentioned two sources is involved in the project/i/.

3.2 Project Design Document

The Project Design Document (Version 1.6, dated 14/03/2012) is prepared based on the currently valid PDD form/7/ and is completed in accordance with the Guidelines for Completing the Project Design Document (CDM-PDD) and the Proposed New Baseline and Monitoring Methodologies (CDM-NM)/8/.

3.3 Project Description

The validation means of documentation review, onsite observation, stakeholders' interview and background investigation on the internet have been conducted by the validation team to ensure that the description of the project activity is accurate and complete.

The project is located in Changshun Town, Huade County, Ulanqab City, Inner Mongolia Autonomous Region, P.R. China. The project activity involves the installation and operation of 33 wind turbine-generator sets of 1,500kW capacity each, aggregating to a total of 49.5MW installed capacity/19/. Based on the technical specification annexed to the wind turbine-generator purchase contract/32/, the main technical parameter are confirmed as listed in the below table. The standard wind technology of 1,500kW wind turbine-generator utilized by the project can be widely observed in China and thus represents current good practice. The range of the geographical coordinates of the project activity is 113.9668°E—114.0269°E and 41.7165°N—41.7529°N, and the centre geographic coordinates of the project wind farm is 114.0023°E and 41.7366°N, which are all evidenced by the location statement issued by China Water Group Huade Wind Power Co., Ltd./81/. The validation team has also used the professional map software, i.e. Google Earth to cross check the project's location. On the basis of the above information, the validation team can confirm that the location description of the project in the PDD is accurate.

Technical Components	Item	Unit	Value
Wind-turbine Generator Set	Manufacturer	-	Sinovel Wind Group Co., Ltd.
	Type	-	SL1500/77

	Rated Capacity	kW	1,500
	Designed lifetime	years	20
	Wind wheel diameter	m	77.4
	Cut-in speed	m/s	3
	Rated speed	m/s	11
	Cut-out speed	m/s	20
Generator	Rated capacity	kW	1,520
	Rated voltage	V	690
	Power factor	-	0.9(inductive)~0.95(capacitive)

It is observed by the validation team that the starting date of the project is 30 May 2010 (i.e. the signing date of both the purchase & service contract of wind turbines, and the purchase & service contract of towers) /32//35/, which is confirmed by the validation team to be the earliest date at which either the implementation or construction or real action of the project activity begins/32//33//34//35//36//37//38/, in accordance with the latest version of “Glossary of CDM terms”/14/. The validation team also confirm that the implementation timeframe of the project described in the Section B.5 of the PDD is valid by means of documentation review and the on-site observation & interview.

The project will achieve emission reductions by supplying zero-emission electricity to the North China Power Grid (NCPG)/24/, which is dominated by fossil-fuel based power plants according to the recent China Electricity Power Yearbook/59/. It is reported in the FSR/19/ that the net electricity supplied to NCPG is 102,246MWh. The designed lifetime of the main equipments (incl. wind turbines and generators) of the project is 20 years, which is stipulated in the main equipments purchase contract/32/. Thus, the operational lifetime of the project activity is expected to be 20 years. A fixed crediting period of 10 years has been chosen for the project, starting from 1 Apr. 2012 or registration date, whichever is later. The expected emission reductions of the project activity are 95,181 tCO₂e/yr and 951,810 tCO₂e in total over the fixed crediting period of 10 years.

Starting date of project	Expected project operational lifetime	Crediting period
30 May 2010	20 years	10 years of fixed crediting period

The project owner has organized the project-specific training on the period from 18/07/2011 to 17/08/2011 to ensure daily operation of the project activity smoothly /73//74/.

In summary, the validation team conclude that the project description in the PDD is complete and accurate.

3.4 Baseline and Monitoring Methodology

3.4.1 Applicability of the selected methodology to the project activity

The project correctly applies the approved consolidated baseline and monitoring methodology, ACM0002, Version 12.1.0-*"Consolidated baseline methodology for grid-connected electricity generation from renewable sources"*/19/, in conjunction with the "Tool to calculate the emission factor for an electricity system" (Version 02.2.1) and the "Tool for the demonstration and assessment of additionality" (Version 05.2.1). Based on the information of UNFCCC website

<http://cdm.unfccc.int/methodologies/DB/RSC TZ8SKT4F7N1CFDXCSA7BDQ7FU1X>, the validation team can confirm that the approved methodology ACM0002, Version 12.1.0 and tools applied for the project are valid.

The justification of applicability criteria for the baseline and monitoring methodology are assessed by the validation team by means of documentation review and the onsite assessment. It is the validation team's opinion that the project fully meets the criteria as described as follows:

Applicability conditions	DOE's opinion
This methodology is applicable to grid-connected renewable power generation project activities that (a) install a new power plant at site where no renewable power plants was operated prior to the implementation of the project activity (greenfield plant); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s);	The project is a newly built 49.5MW wind energy power generation plant/19/ at a site where no renewable power plant was operated prior to the implementation of the project, which is confirmed by means of documentation review/19//20//21//22/ and physical observation & interviews during the onsite assessment. The electricity generated by the project would be supplied to the NCPG in terms of official approval of grid-connection system design/24/. Therefore, this condition is considered applicable to the project activity.
The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: 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;	As reported in the FSR of the project/19/ and its official approval/20/, the project activity is the installation of 49.5MW wind power plant. Therefore, this condition is considered applicable to the project activity.
In the case of capacity additions, retrofits or replacements (except for wind, solar, wave or tidal power capacity addition projects which use Option 2: on page 11 to calculate the	This condition is not applicable since the project activity is newly built wind power plant, which is confirmed by means of documentation review/19//20//21//22/ and physical observation &

<p>parameter $EG_{PJ,y}$): the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity;</p>	<p>interviews during the onsite assessment.</p>
<p>In case of hydro power plants, one of the following conditions must apply:</p> <ul style="list-style-type: none"> ○ The project activity is implemented in an existing reservoir, with no change in the volume of reservoir; or ○ The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m^2; or ○ The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m^2. 	<p>This condition is not applicable since the project activity is newly built wind power plant, which is confirmed by means of documentation review/19//20//21//22/ and physical observation & interviews during the onsite assessment.</p>
<p>The methodology is not applicable to the following:</p> <ul style="list-style-type: none"> • Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site; • Biomass fired power plants; • Hydro power plants¹ that result in new reservoirs or in the increase in existing reservoirs where the power density of the power plant is less than 4 W/m^2. 	<p>The project is a newly built 49.5MW wind energy power generation plant/19/, which is confirmed by means of documentation review/19//20//21//22/ and physical observation & interviews during the onsite assessment. Therefore, it is deemed that the project does not involve switching from fossil fuel to renewable energy at the site of the project, and the project activity is applicable to the methodology accordingly.</p>
<p>In the case of retrofits, replacements, or capacity additions, this</p>	<p>This condition is not applicable since the project</p>

methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is the continuation of the current situation, i.e. to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance.	activity is newly built wind power plant, which is confirmed by means of documentation review/19//20//21//22/ and physical observation & interviews during the onsite assessment.
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During the onsite assessment, no fossil fuel-fired power generation facility was observed at the project site. In addition, according to the FSR/19/ of the project and confirmation of the project owner's representatives during the on-site interview /i/, the project would not involve installation of the fossil fuel based power generating units for operation of the project. The validation team thus confirm that no GHG emission accounting for more than 1% of the project's annual emission reductions due to the implementation of the project is involved in the project.

Based on the above, the validation team can confirm that the selected approved methodology ACM0002, Version 12.1.0 is applicable to the project.

3.4.2 Project Boundary

The project boundary of the project has been assessed by means of on-site physical observation and documentation review. The project boundary is clearly defined as the project power plant and all power plants connected physically to the electricity system of NCPG, which is defined in accordance with the "Tool to calculate the emission factor for an electricity system"/10/ since there are no significant transmission constraints between the power plants of the NCPG/59/. The NCPG includes Beijing, Tianjin, Hebei Province, Shanxi Province, Shandong Province, Inner Mongolia Autonomous Region, on the basis of information announced by NDRC of China on 20 Dec. 2010/61/, which is most recent available before the validation of the project.

The system boundary is correctly justified according to ACM0002, Version 12.1.0/9/ and the "Tool to calculate the emission factor for an electricity system"/10/ and the overview of emission sources are presented as below,

	GHGs involved	Description
Baseline emissions	CO ₂	Main emission source
Project emissions	N/A	No supplementary fossil fuel is required for power generation of the project, project emissions are thus considered as zero.
Leakage	N/A	No leakage is applicable under ACM0002, Version 12.1.0.

To sum up, the validation team can confirm that the project boundary of the project is appropriately identified and all emission sources have also been identified in the PDD/2/.

3.4.3 Baseline Identification

The baseline of the project is identified based on the approved consolidated baseline and monitoring methodology, ACM0002, Version 12.1.0-*"Consolidated baseline methodology for grid-connected electricity generation from renewable sources"*/9/. As a new grid-connected renewable power plant/19//20//21//22//24/, the baseline scenario of the project is thus determined as Electricity delivered to the grid by the project would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources in the NCPG, as defined in the "Tool to calculate the emission factor for an electricity system"/10/.

With regard to the item 87 of VVM/6/, the validation team can conclude following opinions in a tabular form,

<i>The approved baseline methodology applicable to the project</i> - explicit criteria - implicit criteria (e.g. available scenarios, applicability of formulas for BE/PE/LE calculations)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The applicability of the methodology ACM0002, Version 12.1.0 has been justified in Section 3.4.1 above.
<i>PDD includes all assumptions and data used by project participants</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The PDD listed all assumptions and data in accordance with ACM0002, Version 12.1.0/9/ and the "Tool to calculate the emission factor for an electricity system"/10/, details as below, <i>"Electricity delivered to the grid by the project would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources in the NCPG."</i>
<i>All the references and documents used are relevant for establishing the baseline scenario</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The baseline scenario to the project is prescribed as per the applied methodology ACM0002, Version 12.1.0.
<i>All the references and documents used are correctly quoted and conservatively interpreted in the PDD</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The baseline scenario is prescribed as per the applied methodology ACM0002, Version 12.1.0.
<i>All relevant policies / regulations considered are listed in the PDD</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The baseline scenario is prescribed as per the applied methodology ACM0002, Version 12.1.0.
<i>Identified potential baseline scenarios reasonably represent what would/could</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The baseline scenario is prescribed as per the applied methodology

<i>occur in the absence of the proposed project activity</i>		ACM0002, Version 12.1.0.
<i>The baseline scenario selection is appropriate and determined according to the methodology</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The baseline scenario to the project is appropriately selected as per the applied methodology ACM0002, Version 12.1.0.
<i>The approved methodology used is applicable to the identified baseline scenario</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The applied methodology ACM0002, Version 12.1.0 is applicable to the identified baseline scenario in the PDD/2/.

3.4.4 GHG Emission Reductions

The validation team has assessed all the calculations of project emissions, baseline emissions, leakage and emission reductions in the PDD/2/ against the requirements presented in the applied methodology ACM0002, Version 12.1.0 /9/ and “Tool to calculate the emission factor for an electricity system”/10/.

Project emissions

The project activity is to utilize renewable wind source for power generation. In addition, by means of documentation review/19//20//21//22/, onsite physical observation and the project owner’s confirmation /i/ during the onsite interview, the validation team confirm that no auxiliary power equipment is or would be installed at the project site. According to the applied methodology ACM0002, Version 12.1.0 /9/, it is thus reasonable to consider the project emissions as zero for the project.

Baseline emission

As discussed in the section 3.4.1 above, the project activity is confirmed by the validation team to be the installation of a new NCPG grid-connected renewable wind power plant at a site where no renewable power plant was operated prior to the implementation of the project activity. According to the applied methodology ACM0002, Version 12.1.0 /9/, the baseline emissions of the project include only CO₂ emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity. In addition, assuming that all project electricity generation above baseline level would have been generated by existing grid-connected power plants and the addition of new grid-connected power plants, the baseline emission of the project is thus appropriately calculated as below,

$$BE_y = EG_{\text{facility},y} \bullet EF_{\text{grid,CM},y}$$

Where,

BE_y = Baseline emissions in year y (tCO₂/yr)

$EG_{PJ,y}$ = Quantity of net electricity generation supplied by the project plant to the grid in year y (MWh/yr)

$EF_{grid,CM,y}$ = Combined margin CO₂ emission factor for grid-connected power generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (tCO₂/MWh)

According to the “Tool to calculate the emission factor for an electricity system” (Version 02.2.1)/6/, the combined grid emission factor of the project as of 0.9309tCO₂e/MWh was assessed by the validation team as follows: 1) The electricity generated by the project would be supplied to the NCPG. In accordance with the delineation of power grids, i.e. Guidance for the determination of grid boundaries and emission factors issued by NDRC of China on 20 Dec. 2010/61/, the power plants physically connected to the NCPG can be dispatched without significant transmission constraints. Thus, the NCPG is identified as the project electricity system of the project;

2) The energy consumption data of power generation in 2009 was available from China Energy Statistic Yearbook 2010, which was published in Jan. 2011; and the power generation data in 2009 was available from China Electric Power Yearbook 2010, which was published in Dec. 2010. Even if the two Yearbooks (i.e. China Energy Statistic Yearbook 2010 and China Electric Power Yearbook 2010) were available before the date of PDD for GSP (i.e. 14 Jun. 2011), but the electricity exchange between power grids and power supply efficiency of coal-fired, oil-fired and gas-fired in 2009 were not available at that time. Thus, the validation team confirmed that the completed data source in 2009 is not available for EF calculation, and the EF based on China Energy Statistics Yearbook 2007 to 2009 /58/ and China Electric Power Yearbook 2005 to 2009/59/ is reasonable and conservative;

3) The calculation of the Operating Margin (OM) in the PDD is assessed as follows:

- the simple OM emission factor calculation method is appropriately selected because low cost/must run projects constitute less than 50% of the total grid generation of the NCPG from 2004 to 2008/59/;

- a 3-year generation-weighted average, based on the most recent available date at the time of commencement of validation (i.e. 14 Jun. 2011), is properly used. Those applied data are derived from the China Energy Statistics Yearbook 2007 to 2009/58/, China Electric Power Yearbook 2005 to 2009 /59/ and 2006 IPCC Guidelines for National Greenhouse Gas Inventories/60/;

- the Option B is properly selected for calculation of the simple OM since the data on fuel consumption and net electricity generation of each power plant/unit is not publicly available in China;

- the calculation of the OM is correctly conducted using the Equation (3) in the PDD, which is exactly the same as the Equation (1) stipulated in the “Tool to calculate the emission factor for an electricity system” (Version 02.2.1). The data and parameters used are appropriately derived from the data sources/58//59//60//62/.

As a result, the validation team confirmed that the OM emission factor calculated as 0.9914tCO₂e/MWh in the PDD fully complies with the Tool to calculate the emission factor

for an electricity system.

4) The calculation of the Build Margin (BM) in the PDD is assessed as follows:

- because plant specific fuel consumption and electricity generation data is not publicly available in China, the approved deviation of the baseline methodology of AM0005/16/ is appropriately applied in the PDD;
- the cohort of power units necessary of the BM calculation has been properly selected in the PDD according to the above deviation. The installed capacity addition from year 2006 to 2008 was selected as it stands for 26.15% of the total installed capacity of year 2008, which satisfies the specification of over 20% in the Tool to calculate the emission factor for an electricity system;
- the BM emission factor is ex-ante calculated and the Equations (4) – (9) used to calculate the BM emission factor in the PDD has been applied correctly as per the above approved deviation and the “Tool to calculate the emission factor for an electricity system”. The data and parameters used are appropriately derived from the data sources/58//59//60//63/.

As a result, the validation team confirmed that the BM emission factor calculated as 0.7495tCO₂e/MWh in the PDD fully complies with the Tool to calculate the emission factor for an electricity system.

5) The validation team confirmed that the Combined Margin (CM) is calculated correctly as follows:

- the default weights of 75% OM and 25% BM for the project have been correctly selected and the Equation (10) in the PDD is properly applied in the PDD in accordance with the “Tool to calculate the emission factor for an electricity system”.

In conclusion, the validation can confirm that the CM of the project is appropriately calculated as 0.9309tCO₂e/MWh in the PDD/2/ based on the most recent data available at the time of submission of the CDM-PDD to the DOE for validation (i.e. 14 Jun. 2011).

Leakage

According to the applied methodology ACM0002, Version 12.1.0 /9/, no leakage emissions are considered for the project.

Emission reductions

According to the applied methodology ACM0002, Version 12.1.0 /9/, the emission reductions of the project during the crediting period is the difference between the baseline emissions and the project emissions.

However, based on the above assessment, the project emission is considered as zero for the project, thus the emission reductions are determined as the equivalent amount of baseline emissions. It is demonstrated in the FSR/19/ that the estimated annual net electricity supplied to the NCPG by the project is 102,246MWh, the expected emission reductions of the project are therefore calculated as 95,181 tCO₂e/yr over the fixed crediting period of 10 years.

With regard to the item 92 of VVM/6/, the validation team can conclude following opinions in a tabular form,

<i>All assumptions made for estimating GHG are listed in the PDD</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	All the assumptions made for estimating GHG have been confirmed listed in the PDD Section B.6. The main assumptions are in line with project situation in FSR, the methodology and the Notification on Determining Baseline Emission Factors of China Power Grid, which was published on China DNA's official website on 20 Dec. 2010.
<i>All data used by project participants are listed in the PDD</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	All data used by the project participants have been confirmed listed according to the FSR of the project, Tool to calculate the emission factor for an electricity system (Version 02.2.1) and relevant China DNA's Guidance.
<i>Their references and sources are also listed in the PDD</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The references and sources have been confirmed listed in the PDD Section B.6 and Annex 3 Baseline Information.
<i>Formulas, parameters, values are complete, accurate, transparent and conservative</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Formulas, parameters, values have been confirmed completely, accurately, transparently and conservatively documented in the PDD Section B.6 and Annex 3 Baseline Information according to the FSR of the project, the Tool to calculate the emission factor for an electricity system (Version 02.2.1) and China DNA's Guidance/61/.
<i>All the references and documents used are correctly quoted and conservatively interpreted in the PDD</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	All the references and documents used have been correctly quoted and conservatively interpreted in the PDD Section B.6 and Annex 3 Baseline Information according to the FSR of the project, the Tool to calculate the emission factor for an electricity system (Version 02.2.1) and China DNA's Guidance/61/.
<i>Methodology has been applied correctly to calculate project emissions, baseline emissions, leakage emissions and emission</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The methodology (i.e. ACM0002, Version 12.1.0) has been correctly applied to calculate project emissions, baseline emissions, leakage emissions and emission

<i>reductions</i>		reductions. Please also see above descriptions in this section.
<i>All the emissions of baseline emissions can be replicated using information provided in the PDD</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	All the emissions of baseline emissions can be replicated by multiplying the annual net electricity output to NCPG (i.e. 102,246MWh) by the CO ₂ emission factor of NCPG (i.e. 0.9309tCO ₂ e/MWh). The baseline emissions calculation is thus calculated as 95,181 tCO ₂ e/yr.

3.5 Additionality

A step-wise discussion has been conducted by the validation team to assess the additionality of the project.

3.5.1 CDM consideration

The starting date of the project activity is 30 May 2010 (i.e. the signing date of both the purchase & service contract of wind turbines, and the purchase & service contract of towers)/32//35/, which is confirmed by the validation team to be the earliest date at which either the implementation or construction or real action of the project activity begins/32//33//34//35//36//37//38/, in according with the latest version of “Glossary of CDM terms”/14/, details as following table,

Date	Implementation of the project	Reference
30/05/2010	Purchase & service contract of wind turbines	/32/
30/05/2010	Purchase & service contract of towers	/35/
07/03/2011	Foundation construction contract of wind tower, box transformer and hoist platform	/33/
07/03/2011	Wind power generator hoist contract	/34/
09/04/2011	Box transformer purchase agreement	/37/
28/04/2011	35KV collecting cable and box transformer installation construction contract	/36/
13/06/2011	Cable accessories purchase agreement	/38/

Based on the UNFCCC website information, the PDD of the project was published for global stakeholder consultation on 14 Jun. 2011. It is thus concluded that the starting date of the project activity is after 2 Aug. 2008 but before the publication date of the PDD for global stakeholder consultation.

Accordingly, the PP submitted one standardized prior consideration of the CDM form to UNFCCC secretariat on 12 Oct. 2010 /28/ and one standardized CDM notification form of the project to Chinese DNA (i.e. NDRC) on 9 Oct. 2010 /27/ respectively, both of which contain the precise geographical location and a brief description of the proposed project activity and are all made within six months of the project activity start date (i.e. 30 May 2010).

According to the latest version of “Guidelines on the demonstration and assessment of prior consideration of the CDM” /13/, the validation team can confirm that the CDM was seriously considered in the decision to implement the project activity.

3.5.2 Alternatives

According to the item 105 of the VVM /6/, the applied methodology ACM0002, Version 12.1.0 by the project prescribes the baseline scenario, thus no further analysis is required in the PDD.

3.5.3 Investment analysis

The benchmark analysis (Option III of Step 2 of the “Tool for the demonstration and assessment of additionality” /11/) is selected for conducting the investment analysis for the project, where the selection is considered by the validation team to be appropriate considering that, a) the project can generate sales revenue of electricity other than the CDM revenue, and b) the baseline scenario to the project as identified above is the supply of electricity from a grid in terms of para.19 of the latest version of “Guidelines on the assessment of investment analysis” /12/. The project IRR (after tax) is identified as the financial indicator for the benchmark analysis of the project, which is considered appropriate since the project IRR is adopted for financial analysis in the project’s FSR /19/ and is most widely observed for the financial analysis of wind power projects in China.

The authoritative reference of the 8% of project IRR benchmark (after tax) selected for the project, i.e. “Interim Rules on Economic Assessment of Electric Engineering Retrofit Projects” /64/, has been reviewed by the validation. It can be identified that the economic benchmark is regulated for the entire electric power industry in China. Therefore, the validation can consider that the project IRR benchmark of 8% for the project is reliable.

All the input parameters used in the financial analysis of the project are sourced from the FSR developed by Inner Mongolia Power Exploration & Design, a class-I entity accredited for developing FSR by the Chinese government organization of Ministry of Housing and Urban-Rural Development of P.R. China, on 30 Oct. 2010 /19/. The FSR was approved by the Development and Reform Commission of Inner Mongolia Autonomous Region on 9 Dec. 2010 /20/. Therefore, all the input parameters used in the financial analysis of the project can be assessed as information provided by an independent and recognized source.

The period of time between the finalization of the FSR (i.e. Feb. 2010) /19/ and the investment decision (i.e. 30 May 2010, the starting date of the project, which is more conservative in the financial assessment) /32//35/ can be considered sufficiently short by the validation team, and it is unlikely in the context of the underlying project activity that the input values would have materially changed during this gap. Therefore, all input parameters sourced from FSR were available at the time of the investment decision and were more reasonable to be considered in the investment decision.

The project IRR of the project /41/ is developed in compliance with the latest version of "Guidelines on the assessment of investment analysis"/12/. Detailed assessment on all input parameters used in the investment analysis by the validation team are presented as following,

a. Installed Capacity

The validation team has checked up the FSR of the project /19/, the project approval/20/, the EIA of the project/21/, the approval of EIA/22/, the wind turbine-generator purchase contract/32/ and also interviewed the management representative of the project owner // during the onsite validation, thus can confirm that the total installed capacity of 49.5MW is valid.

b. Total static investment

The validation team reviewed all incurred major contracts/32//33//34//35//36//37//38/ for the implementation of the project activity, and confirmed that the secured capital included in those contracts was up to 418.4917million RMB, which is 100.51% of total static investment of the project estimated in the FSR. Plus with the other inevitable minor equally shared expenses with other projects/39/, the total incurred cost for the project has been verified 426.2786million RMB (excl. the cost of main transformer). It is thus considered conservative by the validation team to apply the estimated construction investment of 416.3751million RMB (excl. the cost of main transformer) in the investment analysis.

In addition, the validation team further assess the appropriateness of the total static investment by cross checking both other registered CDM wind power projects located in the Inner Mongolia Autonomous Region incorporated in the UNEP CDM Pipeline Overview dated 01/10/2011/65/ and other 6 adjacent similar 49.5MW wind farm projects under CDM validation owned by the same project owner of China Water Group Huade Wind Power Co., Ltd./86/. 148 wind power projects listed in the statistics analysis table provided by PP /66/ are verified to be derived from the updated CDM Pipeline dated 01/10/2011/65/, they have similar total installed capacity to the project (i.e. larger than 15MW) and also are all located in the Inner Mongolia Autonomous Region where the project locates, it can thus be considered by the validation team that the comparison of financial input values between them and the project is appropriate. Based on the total installed capacity and the total static investment of those projects, the specific unit investment of similar registered CDM projects is fluctuated from 7,656.36RMB/KW (Registration No. 3777) to 11,806.67RMB/KW (Registration No. 2135) /65//66/, and the specific unit investment of other 6 similar adjacent 49.5MW wind farm projects under CDM validation is fluctuated from 8,610.59RMB/KW to 9,329.56RMB/KW/86/. According to the FSR of the project/19/, the total installed capacity of the project is 49.5MW and the total statistic investment of the project is 416.3751million RMB, the specific unit investment is thus calculated as 8,411.62RMB/KW, which is amid the range of the specific unit investment of registered CDM projects located in Inner Mongolia Autonomous Region, and even lower than the range of other 6 adjacent similar 49.5MW wind farm projects.

Table 1. Statistical information from the similar projects to the proposed project/65//66//86/

Project		Specific unit investment (RMB/KW)	O&M cost of unit electricity output (RMB/kWh)	PLF
148 similar registered CDM projects	Highest	11,806.67 (Registration No. 2135)	0.1776 (Registration No. 1628)	31.78% (Registration No. 3519)
	Lowest	7,656.36 (Registration No. 3777)	0.0480 (Registration No. 2078)	22.76% (Registration No. 3086)
Other 6 adjacent similar 49.5MW wind power projects	Erligetu	8,753.87	0.1094	24.0%
	Niujiafangzi	9,329.56	0.1241	23.8%
	Sitaifangzi	8,360.69	0.1090	23.4%
	Sandaogou	8,792.64	0.1139	22.9%
	Heping	8,712.44	0.1128	23.0%
	Niujiacun	8,610.59	0.1102	23.3%
The proposed project		8,411.62	0.1085	23.6%

Based on the above analysis of two aspects, it is the validation team's opinion that the total static investment adopted for the investment analysis of the project is appropriate and conservative.

c. Annual Electricity Output (Electricity delivered to the grid)

As reflected in the FSR/19/, the annual nominal electricity output of the project is computed by the widely used professional software WASP on the combined basis of the evaluated wind resource in compliance with the national standard GB/T 18710-2002/75/ and various energy loss factors. These loss factors include air density adjustment, wake adjustment, controlling & turbulence influence, rotor blades contamination influence, turbine availability, power curve adjustment, weather influence and self power consumption & transmission line loss. The validation team reviewed the "Compilation Method for Feasibility Study Report of Wind Power Projects"/76/ and thus confirmed that the method to calculate the annual electricity output to the grid is valid. The overall energy loss factor of the project is 29.98%, which results in the annual electricity output supplied to the grid as 102,246MWh. The annual operation hours are thus calculated as 2,066h at full capacity with plant load factor (PLF) of 23.6%. In addition, the validation team reviewed the Clarification on Energy Loss Factor of Wind Power Project in China issued by NDRC of China on 2 Jun. 2009/77/ and confirmed that the overall energy loss factor of the wind power projects in China is generally ranged from 20% to 45%. Thus the validation team considered the 29.98% of overall energy loss factor for the project is reasonable. Further, the annual electricity output by the project could also be demonstrated by justification of the project's PLF below.

The PLF of the project is reported as 23.6% in the FSR, which was completed by the accredited Class-I entity of Inner Mongolia Power Exploration & Design Institute (contracted by the project owner)/19/. The FSR was used to apply for the implementation approval of the project and the Development and Reform Commission of Inner Mongolia Autonomous Region approved it on 9 Dec. 2010/20/. As per “Guidelines for the Reporting and Validation of Plant Load Factors”/17/, the validation team thus concluded that the PLF of 23.6% is appropriate. Further, by cross checking the PLF with the other similar registered CDM projects/65//66/ and other 6 adjacent similar 49.5MW wind farm projects under CDM validation/86/, the proposed PLF of 23.6% also falls within both the appropriate range from 22.76% (Registration No. 3086) to 31.78% (Registration No. 3519) of similar registered CDM projects, and the range from 22.9% to 23.8% of other adjacent similar 49.5MW wind farm project under CDM validation, as reflected in the above table 1.

Based on the above assessment, the validation team confirmed that the annual electricity output of 102,246MWh used to calculate the project IRR is appropriate.

d. Electricity Tariff

The electricity tariff of 0.51RMB/kWh (incl. VAT) is adopted to calculate the project IRR in the PDD/2/. The validation team has assessed its validity in accordance with the item 111 of VVM/6/ as below,

The applied tariff of 0.51RMB/kWh (incl. VAT) in the PDD is derived from the FSR of the project which was completed by the qualified third-party of Inner Mongolia Power Exploration & Design Institute in Feb. 2010 /19/. As reflected in the FSR, the electricity tariff is determined on the basis of official guideline document “Notification regarding wind power electricity tariff” (Document No. Fa Gai Jia Ge[2009]1906) issued by the NDRC of China on 20 Jul. 2009/48/. The validation team reviewed the notification document /48/ and confirmed that the tariff for Ulanqab City of Inner Mongolia Autonomous Region defined as Class I wind source region, is regulated as 0.51RMB/kWh (incl. VAT). Ahead of the investment decision date of 30 May 2010 /32//35/, no other tariff approval notification was further published by the NDRC of China, which is confirmed by the validation team through background investigation on the NDRC official website <http://www.sdpc.gov.cn/>.

Furthermore, according to the latest version 02 of “Information note on the highest tariffs applied by the executive board in its decisions on registration of projects in the People’s Republic of China”/18/, the applied tariff of 0.51RMB/kWh (incl. VAT) in the project is confirmed to be less than the highest tariff of 0.54RMB/kWh (incl. VAT) stipulated in Inner Mongolia Autonomous Region. However, when recalculating the project IRR with the highest tariff of 0.54RMB/kWh (incl. VAT) in the IRR calculation spreadsheet/41/, the validation team concluded that the resulted IRR is 7.19%, which is still lower than the benchmark of 8%.

To sum up, the validation team considered that the electricity tariff of 0.51RMB/kWh (incl. VAT) applied in the project is reasonable at the time of the investment decision.

e. Annual O&M Cost

As stated in the FSR, the annual O&M cost mainly comprises of maintenance cost, salary and welfare of staff, material fee, insurance expense and other cost, which is in compliance with the Compilation Method for Feasibility Report of Wind Power Projects/76/. A detailed calculation is clearly broken down in the IRR spreadsheet/41/.

Based on the annual electricity output and the annual O&M cost of similar registered projects /65//66/ and other 6 adjacent similar 49.5MW wind farm projects under validation/86/, the

O&M cost of unit electricity output is fluctuated from 0.048RMB/kWh (Registration No. 2078) to 0.1776RMB/kWh (Registration No. 1628) for the similar registered CDM projects, and is fluctuated from 0.1090RMB/kWh to 0.1241RMB/kWh for other 6 adjacent similar 49.5MW wind farm projects. According to the FSR of the project/19/, the annual electricity output is 102,246MWh and the annual O&M cost is 11.09million RMB, the O&M cost of unit electricity output of the project is calculated as 0.1085RMB/kWh accordingly, which is amid the unit electricity output O&M cost range of similar registered projects located in Inner Mongolia Autonomous Region, and even lower than the range of other 6 adjacent similar 49.5MW wind farm projects..

Further, the validation team assessed the appropriateness of each item included in the annual O&M cost against the similar registered CDM projects listed in the statistic analysis table/66/, details as following,

Item	Percentage in the annual O&M cost / %	DOE's opinion
Maintenance cost	56.32%	As estimated in the FSR by the qualified entity/19/, the maintenance cost is 1.5% of total fixed assets, which falls within the appropriate arrange between 0.8% (Registration No.3521) and 2.53% (Registration No. 4222). Thus, it is considered reasonable to calculate the maintenance cost as $1.5\% \times 416.3751 \text{ million RMB} = 6.2456 \text{ million RMB}$, which is verified to be 56.32% of annual O&M cost.
Salary and welfare	3.05%	In the FSR/19/, the project will be assigned four staff for its operation, the annual salary is 60,000RMB (exc. 41% of welfare), thus the validation can confirm that the annual salary and welfare expense in the operation of project will be $60,000 \text{ RMB} \times 4 \times (1 + 41\%) = 338,400 \text{ RMB}$, which is verified to be 3.05% of annual O&M cost. By means of checking the O&M cost against its salary and welfare expense of similar registered CDM projects/66/, the ratio of salary and welfare expense vs annual O&M cost is fluctuated from 1.39% (Registration No. 4689) to 22.74% (Registration No. 3596), which covers the project. Thus, the salary and welfare expense estimated in the O&M cost is considered credible.
Material fee	13.39%	As estimated in the FSR/19/, the material fee of the project is 30RMB/kW, which falls within the appropriate arrange between 4.0RMB/kW (Registration No. 3086) and 30.1RMB/kW (Registration No. 2912). Thus, it is considered reasonable to calculate the total material fee as $30 \text{ RMB/kW} \times 49,500 \text{ kW} = 1,485,000 \text{ RMB}$, which is

		verified to be 13.39% of annual O&M cost.
Insurance expense	9.39%	As estimated in the FSR/19/, the insurance expense of the project is 0.25% of fixed assets, which falls within the appropriate arrange between 0.07% (Registration No. 4795) and 0.41% (Registration No. 3936). Thus, it is considered reasonable to calculate the annual insurance expense as $0.25\% \times 416.3751 \text{ million RMB} = 1.0409 \text{ million RMB}$, which is verified to be 9.39% of annual O&M cost.
Other cost	17.85%	As estimated in the FSR/19/, the other cost of the project is 40RMB/kW, which falls within the appropriate arrange between 5.0RMB/kW (Registration No. 4422) and 80.3RMB/kW (Registration No. 2912). Thus, it is considered reasonable to calculate the total material fee as $40 \text{ RMB/kW} \times 49,500 \text{ kW} = 1,980,000 \text{ RMB}$, which is verified to be 17.85% of annual O&M cost.
In total	100%	

To sum up, the validation can consider that the annual O&M cost adopted for the investment analysis of the project is appropriate.

f. Operational Lifetime (Period of Assessment)

The operational lifetime adopted for the investment analysis is selected as 20years, i.e. the technical lifetime of wind turbine-generator sets, which can be evidenced by the wind turbine-generator purchase contract/32/. In addition, the 20 years of period of assessment is in compliance with the latest available version of Guidelines on the assessment of investment analysis/12/, i.e. "In general a minimum period of 10 years and a maximum of 20 years will be appropriate", thus the validation team considered that the selected 20 years for the investment analysis can be deemed as appropriate.

g. Rate of Residual Value/Depreciation Period

As per the latest version of Guidance on the assessment of investment analysis/12/, the residual value of the project fixed assets at the end of the assessment period should be included as a cash inflow in the final year. The residual value rate applied for investment analysis of the project is 5%, which is in compliance with Notification regarding the effective date of residual value rate of fixed assets issued by State Taxation Ministry of China on 14 Sep. 2005/46/.

As stipulated in the item 60 of Regulations on the implementation of enterprise income tax law of P.R. China/53/, the depreciation period of fixed assets shall be more than 10 years for plane, train, ship, machine and other production equipments, thus it deems appropriate to choose 15 years as the depreciation period of the wind power project, and the annual average depreciation rate of the project is accordingly calculated as $(1 - \text{residual value rate}) / \text{depreciation period} = (1 - 5\%) / 15 = 6.33\%$

Based on the information searching of website <http://www.chinatax.gov.cn>, the above quoted national tax regulations are confirmed by the validation team as the latest available at the

time of investment decision and thus both the rate of residual value and the selected depreciation period are all considered as appropriate.

h. Taxes

By cross checking taxes applied in the investment analysis against latest relevant official tax documents, the validation team can confirm below,

1) The VAT of 17% is in line with the official tax document of VAT interim statute of P.R. China (Document No. State Council Decree 538)/49/. According to Notification regarding several questions in the reform of VAT (Document No. Cai Shui[2008]170)/51/, the total VAT of equipments purchased after 1 Jan. 2009 can be recovered by the VAT of electricity sales during operation. In addition, as per Notification regarding VAT policies of resources integrated utilization and other products (Document No. Cai Shui[2008]156)/50/, 50% of VAT for wind power electricity sales is stipulated to be refunded once being levied after 1 Jul. 2008. As reflected in the FSR/19/, the total VAT of fixed assets of the project is verified as 51.7821million RMB. In addition, the starting date of the project is 30 May 2010 validated in the above, which is after both 1 Jul. 2008 and 1 Jan. 2009. Thus, it is appropriate and conservative to apply these relevant VAT subsidy policies into the investment analysis.

2) The income tax of 25% is in line with the official tax document of Enterprise Income Tax of P.R. China (Document No. State Chairman Decree 63)/52/. As newly built and governmentally approved wind power project/19//20/, the project is confirmed to meet the requirements of list of public infrastructure projects in the enterprise income tax preferential policy (Version 2008)/54/. According to the item 87 of Regulations on the implementation of enterprise income tax law of P.R. China/53/, the income tax of the project shall be exempted for the first three years, and then will be half levied for the second three years, which has been correctly applied in the investment analysis.

3) The urban maintenance & construction tax of 5% is in line with the official tax document of Urban Maintenance & Construction Tax Interim Rules of P.R. China (Document No. Guo Fa [1985]19)/55/;

4) The educational surtax of 3% is in line with the official tax document of Decision to revise interim rules of educational surtax (Document No. State Council Decree 448)/56/.

i. Loan Interest Rate

The adjustment history of bank benchmark interest rate was issued by Monetary Policy Department, the People's bank of China on 10 Feb. 2011/44/. The validation team checked this document and confirmed that the bank benchmark interest rate for above 5 years of loan period was regulated as 5.94%, and the bank benchmark interest rate for above 6 months but less than 1 years of loan period was regulated as 5.31% respectively during the time from 23/12/2008 to 19/10/2010, in which the investment decision was made (i.e. 30 May 2010). Considering that the bank loan rate has been increasing from 23/12/2008 to 09/02/2011 as shown in the quoted loan rate adjustment history/44/, the validation team can consider that the slightly overestimated loan rates in the FSR, i.e. 6.04% for the long term bank loan rate and 5.56% for the short bank loan rate, are acceptable. Even though the real time available bank loan rates (i.e. 5.94% for the long term bank loan rate and 5.31% for the short term bank loan rate) were applied in the investment analysis, the project IRR (after tax) would be 6.39%, which is even slightly lower than 6.4% under the estimated conditions in the FSR.

Therefore, the validation team can conclude that the interest rate of 6.04% for long term bank loan and 5.56% for short term bank loan sourced from the FSR of the project is appropriate

and conservative at the time of investment decision, which is in compliance with para.6 of Guideline on the assessment of investment analysis/12/.

It is reflected from the benchmark analysis in the PDD/2/ and the investment analysis spreadsheet /41/ that, without the revenue from the CDM, the project IRR (after tax) would be 6.4%, which is below the benchmark of 8%. Provided that the project was registered as CDM project, the project IRR (after tax) would be improved to 9.73%.

The sensitivity analysis is carried out in the PDD to further demonstrate that the project is unlikely to be financially viable under reasonable variations, i.e. fluctuation range of +10% and -10% as stipulated in the Compilation Method of Feasibility Study Report of Wind Power Project/76/, of four financial parameters including total static investment, annual electricity output, tariff and annual O&M cost. By means of testing the financial analysis, the validation team can conclude that annual electricity output and tariff are two variables that constitute 20% of total project revenues, and the annual O&M cost constitutes more than 20% of total project costs. Therefore, as per the latest version of Guidelines on the assessment of investment analysis/12/, the selected four financial parameters of total static investment, annual electricity output, tariff and annual O&M cost are reasonable in the sensitivity analysis.

As assessed in the PDD/2/, the project IRR of the project is still less than the benchmark of 8% within the stipulated variation range of +10% and -10% of four parameters, only the project IRR of the project would cross the benchmark of 8% when 1) the total static investment decreased by 10.7%; or 2) annual electricity output increased by 11.7%; or 3) electricity tariff increased by 11.7%; or 4) annual O&M cost decreased by 51.5%. The occurrence likelihood of four scenarios are assessed by the validation team as below,

For the scenario 1), the validation team checked all major occurred contracts/32//33//34//35//36//37//38/, the incurred expenses have been summed up to 427.5434million RMB which is 102.68% of total static investment estimated in the FSR, the scenario 1) that the total static investment decreased by 10.7% is thus considered impossible.

For the scenario 2), as assessed by the validation team in the above, the annual electricity output is scientifically computed by the widely used professional software WASP on the basis of long-term weather statistical data measured by the local meteorological station and one year of onsite wind resource measurements, thus the annual electricity output is unlikely to increase by 11.7%.

For the scenario 3), according to the official guidance document of Notification regarding wind power electricity tariff (Document No. Fa Gai Jia Ge[2009]1906)/48/, the tariff of the wind power projects which got project approval after 1 Aug. 2009 and located in Ulanqab of Inner Mongolia Autonomous Region is unified as 0.51RMB/kWh (incl. VAT). As discussed in the above, even though the electricity tariff raised up to the highest tariff of 0.54RMB/kWh (inc. VAT) stipulated in the latest version 02 of "Information note on the highest tariffs applied by the executive board in its decisions on registration of projects in the People's Republic of China"/18/, the project IRR (after tax) would be 7.19%, which is still lower than the benchmark of 8%. Therefore, the electricity tariff of the project is unlikely to increase by 11.7% to reach the benchmark.

For the scenario 4), according to the Statistical Bulletins of National Economy and Social Development of both Inner Mongolia and China from 2003 to 2010/82/, the purchasing price of raw material, fuel & power and personal salary have been increasing in recent years except the economy downturn of Year 2009 resulted from the world economy crisis occurred

in 2008, thus it is impossible for the annual O&M cost of the project to be decreased by 51.5%.

3.5.4 Barrier analysis

The barrier analysis has been skipped in the PDD, thus it is not applicable.

3.5.5 Common practice analysis

According the official document of “Notification regarding the requirements on the regulation of wind power projects construction”/45/, each provincial government in China has been authorized to regulate wind power projects in its provincial region, and also approve the wind power projects with installed capacity of less than 50MW. In addition, wind resources and electricity tariff are usually similar for wind projects in the same province/48/. Thus, the validation team can consider that the Inner Mongolia Autonomous Region, which is the location of the project and also is a provincial level of region of China, is appropriately selected as the geographical scope for the common practice analysis of the project. The Electric Power System Reform Program with document reference No. Guo Fa[2002]5 was issued by State Council of China in 2002/57/, in which the tariff privilege was no longer guaranteed by the government to the project investor after this reform. Therefore, as per “Tool for the demonstration and assessment of additionality”/11/, all wind projects with installed capacity larger than 15MW that have been put into operation after 2002 in Inner Mongolia Autonomous Region as listed in the PDD/2/ for the analysis of common practice, can be considered by the validation team as reasonable.

The validation team verified both the latest published “China Wind Farm Installed Capacity Statistics 2010”/67/ and China Electric Power Yearbook 2009/59/ which is the most recent available statistics for all electric power projects including wind power projects. In addition, one wind power projects investigation was also carried out by the validation team through internet, no other more similar projects to the project could be searched. Therefore, the validation team can be able to confirm that the similar project activities identified in the PDD are valid and comprehensive in the Inner Mongolia Autonomous Region.

The common practice analysis identified four operational wind farm projects to the project, i.e. Dali Phase III wind power project (Dali Phase III), Bailingmiao Phase I wind power project (Bailingmiao Phase I), Bailingmiao Phase II wind power project (Bailingmiao Phase II), and Honiton Xiwu Phase I wind farm project (Xiwu Phase I). The Dali Phase III was financially supported by national debt fund as a demonstration project to promote the localization of wind turbine-generator set in China/68/. The other three projects, inc. Bailingmiao Phase I/69/, Bailingmiao Phase II/70/ and Xiwu Phase I/71/, are all foreign owned and not eligible to apply for the CDM benefits under the rules of Chinese DNA. In addition, in order to relieve the investment barriers, the remaining three projects are confirmed to apply for other carbon financing support, i.e. Voluntary Emission Reduction under the frame of Gold Standard Voluntary Carbon Standard/69//70//71/.

Based on the above assessment, the validation team is able to confirm that the proposed CDM project activity has essential distinctions from the above identified similar project activities, and is thus not common practice.

In accordance with the assessment in the above sections 3.5.1-3.5.5, the validation team can conclude that the project is additional.

3.6 Monitoring

The project applies the approved monitoring methodology ACM0002, Version 12.1.0. The data monitored and the monitoring interval and frequency is in compliance with the methodology. The monitoring plan has been clearly described in section B.7.2 of the PDD and examined by the validation team to be appropriate.

3.6.1 Parameters determined ex-ante

The baseline grid emission factor of the project is reported to be determined ex-ante and would remain fixed during the fixed 10 years of crediting period in the PDD. The value is calculated as a combined margin consisting of the weighted average of the OM and BM emission coefficients. The parameters applied in the calculation were validated by the validation team and discussed in the section 3.4.4.

3.6.2 Parameters determined ex-post

Based on the onsite inspection and the confirmation of management representative (i.e. Junsong GAO)/i/ during the onsite validation, the project is confirmed to share one gateway electric meter with other 7 wind farms owned by the same project owner of China Water Group Huade Wind Power Co., Ltd. as demonstrated in the line diagram of PDD/2/, thus the parameters required to be monitored for the project would be,

- Electricity exported to the grid by the Phase j project (j=I, II, III, IV, V, VI, VII, VIII) part i (i=1, 2, 3, 4 for Phase I project, i=1, 2, 3 for the other 7 projects) in year y / $ES_{j,i,export,y}$;
- Electricity imported from the grid to the Phase j project (j=I, II, III, IV, V, VI, VII, VIII) part i (i=1, 2, 3, 4 for Phase I project, i=1, 2, 3 for the other 7 projects) in year y / $ES_{j,i,import,y}$;
- Total electricity exported to the grid by all the 8 projects (including the Project) in year y / $ES_{total,export,y}$;
- Total electricity imported from the grid by all the 8 projects (including the Project) in year y / $ES_{total,import,y}$;
- The amount of electricity exported to the grid from the wind farm connected to the transformer p (p=A, B, C, D, E) in year y / $ES_{p,export,y}$;
- The amount of electricity imported from the grid to the wind farm connected to the transformer p (p=B, C, D, E; bi-directional) in year y / $ES_{p,import,y}$;
- Quantity of net electricity generation supplied by the project to the grid in year y / $EG_{facility,y}$.

For the monitoring of the net electricity supplied by the project to the grid, 34 electric meters will be adopted in the project, detailed determination as following,

$$EG_{facility,y} = ES_{total,export,y} \times \frac{\sum_{i=1}^3 ES_{VIII,i,export,y}}{\sum_{i=1}^4 ES_{I,i,export,y} + \sum_{j=II}^{VIII} \sum_{i=1}^3 ES_{j,i,export,y}} - ES_{total,import,y} \times \frac{\sum_{i=1}^3 ES_{VIII,i,import,y}}{\sum_{i=1}^4 ES_{I,i,import,y} + \sum_{j=II}^{VIII} \sum_{i=1}^3 ES_{j,i,import,y}}$$

As selected in the technical agreement of main transformer involved in the project/83/, the transformer loss of 5 main transformers are all less than 0.5%. In addition, based on the expertise of the validation team, the line transmission loss can be ignored due to the equivalently short distance between each of 8 projects and the substation inspected during

the on-site assessment, thus the above determination of weighting can be considered reasonable.

Further, according to the technical management rules on the electric metering equipments (DL/T448-2000)/72/, the accuracy of electric meter shall be applied the type I of metering equipment (i.e. 0.2s or 0.5s) for the installed capacity more than 200MW, and the type II of metering equipment (i.e. 0.5s or 0.5) for the installed capacity more than 100MW, and the type III of metering equipment (i.e. 1.0) for the installed capacity below 100MW, thus the validation team can consider that the accuracy of electric meters assumed can ensure the monitoring of electricity to the grid by the project.

As described in the monitoring plan of the PDD/2/, all parameters will be continuously measured by meters, the readings of the meters will be recorded monthly and the monitoring meters will be calibrated on the yearly basis in accordance with national relevant regulations/72/. Therefore, the validation team concluded that the monitoring plan in the PDD contained all necessary parameters and their monitoring methods are in compliance with the requirements in the applied methodology ACM0002, Version 12.1.0.

3.6.3 Management system and quality assurance

Monitoring of sustainable development indicators is not required by the DNA of China. The environmental impacts are considered minor and will be monitored by the local environmental authority during the project lifetime. According to the PDD, the project's monitoring plan outlines the following:

- Monitoring data;
- Monitoring team structure;
- Installation of Monitoring Equipment;
- Data collection and handling;
- Procedures for emergency;
- Meter calibration;
- Data management system;
- Monitoring report, and;
- Training program.

According to the documentation review, the validation team considers that the monitoring plan described in the PDD would be feasible within the project design. Sufficient procedures have been identified in the PDD and the implementation of those procedures will enable that the emission reductions of the project can be reported ex-post. The management and operation team for the monitoring activity of the project is described in the PDD. The specific training of CDM was carried out between 18/07/2011 and 17/08/2011 and the corresponding training record was checked by the validation team to be valid/73//74/. Thus, the validation team's opinion is that the project owner is able to implement the monitoring plan as described in the PDD.

3.7 Sustainable Development

The DNA of China as host country, i.e. NDRC, issued the LoA of the project in Nov. 2011 /3/. It is stated in the LoA that the project assists China in achieving sustainable development. The validity of the LoA from China has been assessed by the validation team in the section 3.1.

3.8 Environmental Impacts

The project is a newly built wind power generation project, and its environmental impacts have been sufficiently analyzed in the form of an Environmental Impact Assessment (EIA) in accordance with the China laws & Regulations. The EIA of the project was prepared by the qualified entity of Ulanqab Environmental Protection Science Research Institute on 13 Aug. 2010 /21/ and also approved by Environmental Protection Bureau of Inner Mongolia Autonomous Region on 20 Oct. 2010 /22/. According to the approved EIA/21/, no significant environmental impacts were expected in the project. In addition, during the onsite stakeholders interview, Mr. Yibin HE/iv/, i.e. one supervision team leader of local Environmental Protection Bureau, confirmed that no environmental complaints on the project had been received.

3.9 Local Stakeholder Consultation

The stakeholders consulting meeting invitation bulletin of the project was released on 8 Mar. 2010/30/. And then the local stakeholders' comments on the project were invited by distributing questionnaires to mainly affected local stakeholders on 15 Mar. 2010 /31/, which was prior to the global publication of PDD on the UNFCCC website (i.e. 14 Jun. 2011 to 13 Jul. 2011). Totally 35 questionnaires were distributed to the stakeholders with 100% of response rate /31/. During the onsite stakeholders interview, local resident representative /vii/ was interviewed by the validation team and confirmed that the surveyed village is the nearest village to the project site, thus the validation team is able to conclude that the surveyed residents are mainly affected by the implementation of the project and their comments are representative. In addition, the local government officials are also considered relevant for the project. Therefore, it is the validation team's opinion that the local stakeholder consultation for the project is adequate. It is reflected in the questionnaires /31/ that all of the respondents fully supported the implementation of the project, and all comments received were summarized in the PDD accordingly.

3.10 Comments by Parties, Stakeholders and NGOs

The PDD *version 1.0* of Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project was made publicly available on (<http://cdm.unfccc.int/Projects/Validation/DB/BX3VMKX7D8C7ISFUFPH68KTTG5PXRX/view.html>) from 14 Jun. 2011 to 13 Jul. 2011 in order to invite comments from public stakeholders.

One comment was received and is given in the below text box with the assessment of the validation team.

No.	Submitted by	Comments	DoE's opinion
1.	zhong zhou li (Email:zhongz houli8	It is evident from the PDD that the values are consistent and it is definitely forged and cooked	As per the item 40-42 of VVM/version 01.2/6/, the validation team has taken into account the

	<p>@gmail.com)/79/</p>	<p>up values to show a non CDM project as a CDM project. What is this? DoE to check the Detailed Project Report and Feasibility Report which is submitted to the other agencies and Banks by Project owner and ensure that the values match with the DPR/FR submitted to DoE also. After careful study of PDD it is found that DPR/FR is in different versions made and submitted with different purposes to different agencies which is totally unacceptable, illegal and unethical. PP/Consultant may show some undertaking letter from bank manager to DoE stating that both DPR's are same. These kinds of letters should not be accepted and entertained by DoE. While collecting the DPR/FR from banks and other agencies, all DPR/FR pages should be counter signed by Banks and other agencies so that the real DPR/FR given to other parties by the PP/Consultant is same as the one submitted to DOE. In this particular project there is clear cut evidence that DPR/FR values are changed/ fabricated mischievously and intentionally. This must be probed fully. DOE must take a written undertaking from the PP/Consultant about the list of parties to whom this DPR/FR is submitted and for what purposes. Then DOE should cross check with all the parties and confirm that the same DPR/FR is submitted to all the parties correctly without any changes. DOE must not accept any reports and undertakings from PP/Consultant. DOE must</p>	<p>comment received during the validation process, with details of actions as follows,</p> <p>a. Document review</p> <p>During the on-site assessment, the validation team has received the original FSR of the proposed project and confirmed that the original FSR of the project was completed by the qualified third party of Inner Mongolia Power Exploration & Design Institute in Feb.2010/19/. And the project was approved by the Development and Reform Commission of Inner Mongolia Autonomous Region on 9 Dec. 2010/20/.</p> <p>b. On-site interview</p> <p>During the on-site assessment, by means of indepently interviewing with Mr. Aibin XIN/iii/ and Mr. Yizhou RUAN/vi/, i.e. the vice director of local DRC and the general manager of Three Gorges Finance Co., Ltd. respectively, the validation team confirmed that the version of FSR to the validation team is legally effective and consistent with both one that local DRC reviewed for the approval of implementation and one that the Three Gorges Finance Company assessed that the risk of financing for the project.</p> <p>c. Email consulting</p> <p>Since the received comments were not substantiated during the on-site assessment, the validation team emailed the commenter for requesting further clarification on 28 Jul. 2011/80/, but no additional information or substantiation is provided in response to the request for clarification.</p>
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		<p>make independent evaluation and use totally different parties without informing the PP or Consultant to cross check the facts. DOE to write to the party who prepared the DPR/FR which is submitted to the banks and other agencies and the same is verified against the one submitted to the DOE by PP/Consultant. This project is a fabricated and fake CDM project and must be rejected by the DOE right away. DOE should not support this kind of projects otherwise CDM EB should suspend this DOE for at least one year.</p>	<p>Therefore, the validation team can confirm that,</p> <ul style="list-style-type: none">• There is no evidence to indicate that the FSR provided by PP for validation and for implementation approval have been changed;• The FSR finally was approved by the Development and Reform Commission of Inner Mongolia Autonomous Region on 9 Dec. 2010/20/, and no revision was required. The time of investment decision was made on 30 May 2010, i.e. the signing date of both the purchase & service contract of wind turbines, and the purchase & service contract of towers/32//35/. The time gap between the FSR and the investment decision is sufficiently short, during which it is unlikely in the context of the underlying project activity that the input values would have materially change. Thus, the FSR shall be the basis of the decision to proceed with the investment of the project activity;• Moreover, by browsing the UNFCCC website, the validation team noticed that many other proposed CDM projects were also received the same comments submitted by zhong zhou li during the GSP of the project, thus the validation team can consider that the comments are not particularly for the project. <p>In sum, the validation team can conclude that the comments submitted by zhong zhou li are not relevant with the proposed project.</p>
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Appendix A

CDM VALIDATION PROTOCOL

Inner Mongolia China Water Group Huade Cheliwusu Wind Farm 49.5MW Project

In

China

Report No. 01 997 9105064988

Table 1: Validation requirements

(based on § 37 of the CDM Modalities and Procedures and on CDM Validation and Verification Manual)

Checklist question	Ref.	MoV ⁴	Findings, comments, references, data sources	Draft conclusion	Final conclusion
1. Approval					
1.1 Have Letters of Approval have been provided from all involved Parties?	/1/ /3/ /4/	DR I	LoAs from both China and UK are to be provided.	CAR 4	OK
1.2 Are all Parties, who issued the LoA, Parties to the Kyoto Protocol <u>and</u> is this stated in the LoA?	/1/ /3/ /4/	DR I	Pls. refer to 1.1.	CAR 4	OK
1.3 Is every LoA from the Parties involved issued by an organisation listed as Designated National Authority (DNA) on the UNFCCC web site?	/1/ /3/ /4/	DR I	Pls. refer to 1.1.	CAR 4	OK
1.4 Is the participation in the CDM project activity voluntary <u>and</u> is this stated in all LoAs?	/1/ /3/ /4/	DR I	Pls. refer to 1.1.	CAR 4	OK
1.5 Is the LoA unconditional with respect to 1.2 to 1.4?	/1/ /3/ /4/	DR	Pls. refer to 1.1.	CAR 4	OK
1.6 Is the title of the CDM project activity as given in the PDD identical with the title given in all LoAs and Modalities of Communication?	/1/ /3/ /4/ /5/	DR	Pls. refer to 1.1.	CAR 4	OK

⁴ MoV = Means of Verification, DR = Document Review, I = Interview, www = internet search.

1.7 If any of provided LoAs contains additional specification of the CDM project activity (PDD version number, validation report version number, amount of ER, etc.) are those specifications valid and consistent with other documents?	/1/ /3/ /4/	DR	Pls. refer to 1.1.	CAR 4	OK
1.8 Does the project activity involve any public funding from Annex I Parties? <u>If yes</u> , has Annex I Party provided a written confirmation that the use of such funding does not lead to the diversion of the official development assistance.	/19/ /20/ /40/	DR I	<p>The loan commitment letter issued by Three Gorges Financing Co., Ltd. is verified by the validation team that the 80% of total investment will be from bank loan, which is in line with the FSR and AFSR.</p> <p>During the time of onsite validation, the validation team had a telephone interview with general manager of the credit department of Three Gorges Financing Co., Ltd. i.e. Mr. Jie DING, and confirmed that Three Gorges Financing Co., Ltd. had conducted a financing risk assessment for the project and promised providing the bank loan of not more than 80% of total investment.</p> <p>In addition, according to the Notification regarding the regulated equity ratio of project fixed assets investment, the equity ratio in the fixed assets investment for wind projects is mandatory to be not less than 20%.</p> <p>Therefore, the validation team consider that the project does not involve any public funding from Annex I Parties.</p>	OK	OK
2. Participation (VVM E.2)					

2.1	Are the Parties and project participants (PP) listed in the section A.3 of the PDD correctly <u>and</u> is this information consistent with the contact details provided in Annex 1 of the PDD?	/1/	DR	Yes. The Parties and project participants (PP) listed in the section A.3. of PDD are consistent with the contact details provided in Annex I of the PDD.	OK	OK
2.2	Has every Party involved approved the participation of each corresponding PP, either by means of a LoA or by a separate written document?	/1/ /3/ /4/	DR	Pls. refer to 1.1.	CAR-1	OK
3. Project Design Document (VVM E.3)						
3.1	Is the PDD presented for validation based on the latest template available at the UNFCCC website?	/1/ /7/	DR	Yes. The PDD presented for validation is in compliance with the latest template version 03 available at the UNFCCC website.	OK	OK
3.2	Has the PDD been established in accordance with the CDM requirements for completing PDDs issued by the CDM EB?	/1/ /8/	DR	As per EB41 Annex12, the starting date of the crediting period for the project shall be presented in the format of DD/MM/YYYY.	CAR-2	OK
4. Project Description (VVM E.4)						

<p>4.1a) Does the PDD contain a description, which provides the reader with a clear understanding of the precise nature of the project activity and the technical aspects of its implementation?</p> <p>4.1b) Is the description (incl. any process flow-charts, Spreadsheets etc.) complete, coherent and consistent with the provisions of the monitoring plan?</p>	<p>/1/ /19/ /20/</p>	<p>DR I</p>	<p>a) By means of documentation review and onsite assessment against the PDD, below issues are identified,</p> <p>1) The physical location of the project activity addressed in the PDD is just the centre geographical coordinates of the wind farm, and doesn't reveal the unique identification of the project activity, thus a revision to the project location is required and geographical coordinates of all wind turbine generators are to be provided for cross-checking.</p> <p>2) The map of the project site is to be revised into the English version.</p> <p>b) Pls. refer to 8.1, 8.4, 8.5, 8.8, 8.13 and 8.14.</p>	<p>CAR-3</p> <p>CAR-4</p>	<p>OK</p>
<p>4.2 In the case of greenfield project activity, is the project design described sufficiently by means of specifications, drawings and manuals?</p>	<p>/1/ /19/ /20/ /21/ /22/</p>	<p>DR I</p>	<p>By means of checking the FSR, AFSR, EIA, AEIA and stakeholders interview, the project activity is confirmed to be a Greenfield project.</p> <p>However, the technical parameters of wind turbine generator shall be revised in the PDD in line with the signed wind turbine-generator purchase agreement.</p>	<p>CAR-5</p>	<p>OK</p>

4.3 Does the project activity reflects current good practices, uses state of the art technology or would the technology result in a significantly better performance, than any commonly used technologies in the host country?	/1/ /19/ /20/ /21/ /22/	DR I	Yes. The project activity is a newly built wind power project, which reflects current good practices. Based on expertise, the proposed project uses state of the art technology of wind power to generate zero-emission of electrical energy, which would result in a significantly better performance than any commonly used fossil fuel fired power generation technologies in China.	OK	OK
4.4 In cases where the project activity involves the alteration of an existing installation or process, does the PDD provide a clear description of the differences between the project and the pre-project scenario?	/1/ /19/ /20/ /21/ /22/	DR	The proposed project is a Greenfield wind power project, thus this item is not applicable.	OK	OK
5. Baseline and Monitoring methodology					
5.1 General requirements					
5.1.1 Is the methodology used in the project activity approved by the CDM EB <u>and</u> is the selected version still valid?	/1/ /9/	DR	By checking UNFCCC website, the methodology ACM0002 Version 12.1.0 used in the proposed project has been approved by CDM EB and the selected version is valid from 17 Sep. 2010 onwards and still valid until now.	OK	OK
5.2 Applicability of the selected methodology					
5.2.1 Does the project activity qualify under the criteria for small-scale CDM project activities set out in § 6 (c) of decision 17/CP.7 and Annex II of the Modalities and Procedures for the CDM?	/1/ /9/	DR	Not applicable.	OK	OK

5.2.1.1 If yes, does the PDD extensively demonstrates and confirms that the small-scale project activity is not a debundled component of a larger project?	/1/ /9/	DR	Not applicable.	OK	OK
5.2.2 Are all applicability conditions of the selected baseline and monitoring methodology and all tools involved satisfied by the project activity?	/1/ /9/ /19/ /20/ /21/ /22/	DR I	Yes. By means of documentation review and stakeholder interview, the project activity is confirmed to be a Greenfield grid connected wind power plant under construction. In addition, based on the onsite assessment, no renewable power plant can be found at the site selected for the project, and the project activity does not involve switching from fossil fuels to renewable energy sources. Therefore, the audit team can confirm that all applicability conditions of selected baseline and monitoring methodology and all tool involved are satisfied by the project activity.	OK	OK
5.2.3 Is the selection of the applied baseline and monitoring methodology justified?	/1/ /9/	DR	Yes. The justification regarding the selection of the applied ACM0002 version 12.1.0 is assessed enough.	OK	OK
5.2.4 Is the selected methodology correctly quoted in all related documents?	/1/ /9/ /42/	DR	Yes. The selected methodology ACM0002 version 12.1.0 is correctly quoted in all related documents, including ER spreadsheet and PDD.	OK	OK

5.2.5 Does the PDD sufficiently describe all the GHG emission sources or sinks occurring as a result of project activity, which have not been accounted for under the selected methodology and are expected to contribute more than 1% of the overall expected average annual emission reductions?	/1/ /9/	DR I	Yes. As assessed in the above, the project activity is Greenfield wind power project. It is confirmed by the validation team during on-site assessment and interviews that no other GHG emission sources or sinks, which have not been accounted for under the selected methodology and are expected to contribute more than 1% of the overall expected average annual emission reductions, occur as a result of the implementation of the proposed project.	OK	OK
5.3 Project boundary					
5.3.1 Does the PDD correctly describe the project boundary?	/1/ /9/ /19/ /20/ /61/	DR I	Yes. The project boundary described in the PDD is fully in line with the applied methodology ACM0002 Version 12.1.0, i.e. including the proposed project power plant and all power plants to the NCPG covering Beijing, Tianjin, Shanxi, Shandong and Inner Mongolia Autonomous Region.	OK	OK
5.3.2 Does the PDD correctly indicate and describe the emission sources and sinks of GHG gases that are included in the project boundary?	/1/ /9/	DR I	Yes. The greenhouse gases and emissions sources included in or excluded from the project boundary have been correctly indicated in the PDD in accordance with ACM0002 Version 12.1.0.	OK	OK

5.3.3 In cases where the methodology allows project participants to choose whether a source or gas is to be included in the project boundary, is the choice explained and justified by PPs?	/1/ /9/	DR	Yes. In the PDD, the PPs give reasonable justification or explanation for the choice of GHG sources, which is in line with the applied methodology ACM0002 Version 12.1.0 and can be cross checked with the documentation presented and onsite assessment.	OK	OK
5.4 Baseline identification					
5.4.1 Has the procedure contained in the selected methodology to identify the most reasonable baseline scenario been applied correctly and documented in the PDD?	/1/ /6/ /9/	DR	Yes. By means of onsite inspection and relevant documents review, the proposed project activity is confirmed as a Greenfield grid-connected wind power plant. As per ACM0002. Version 12.1.0, the PDD directly states that the baseline scenario is the 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 in NCPG, as reflected in the combined margin calculations described in the "Tool to calculate the emission factor for an electricity system". The audit team can conclude that the procedure to identify the most reasonable baseline scenario is appropriate.	OK	OK

5.4.1.1 Is the identified baseline scenario plausible?	/1/ /6/ /9/	DR	Yes. The identified baseline scenario to the project activity is that the 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 in NCPG, as reflected in the combined margin calculations described in the “Tool to calculate the emission factor for an electricity system”, which is in line with the applied methodology ACM0002 Version 12.1.0.	OK	OK
5.4.1.2 Are all assumptions stated in a transparent and conservative manner?	/1/ /6/ /9/ /61/ /62/ /63/	DR	Yes. All assumptions to determine the baseline emission are stated in a transparent and conservative manner in the PDD, which is confirmed by the validation to source from the officially latest public document “2010 Baseline emission factors for regional power grids in China” issued by NDRC of China on 20/12/2010.	OK	OK

5.4.2 Does the selected methodology require the use of tools <u>and</u> does PDD reflects that correctly?	/1/ /9/ /10/ /11/	DR	According the applied methodology ACM0002 Version 12.1.0, all involved tools shall be latest approved version. By means of UNFCCC website searching, the version 02.1.0 of “Tool to calculate the emission factor for an electricity system” and version 05.2 of “Tool for the demonstration and assessment of additionality” are confirmed not to be the latest, thus the updated versions are to be applied in the PDD as per ACM0002 Version 12.1.0.	CAR-6	OK
5.4.2.1 Were all the tools applied correctly?	/1/ /9/ /10/ /11/ /42/	DR	Pls. clarify why the latest two Yearbooks 2010 issued at the time of validation were not selected for EF calculation and then justify the emission factor issue in 2010 is the most recent data available at the time of validation.	GL-1	OK
5.4.3 In case the methodology requires several alternative scenarios to be considered in the identification of the most reasonable baseline scenario, have all scenarios been considered <u>and</u> have no reasonable alternative scenario been excluded?	/1/ /9/	DR	It is not applicable as per ACM0002 Version 12.1.0.	OK	OK
5.4.3.1 Has the choice of the baseline scenario been done using conservative assumptions?	/1/ /9/	DR	Yes. The baseline scenario to the project is in line with the one determined in the applied methodology ACM0002 Version 12.1.0.	OK	OK

5.4.4 Is the identified baseline scenario reasonable according to the assumptions, calculations and rationales used in the PDD and other reference sources?	/1/ /9/	DR	Yes. By conducting documentation review, onsite assessment and stakeholder interview, the project can be confirmed to be a Greenfield grid connected wind power plant to NCPG, thus the baseline scenario to the project presented in the PDD is assessed as reasonable against the applied methodology ACM0002 and the officially latest public document "2010 Baseline emission factors for regional power grids in China" issued by NDRC of China on 20/12/2010.	OK	OK
5.4.6 Does the PDD describe how the national and sectoral policies relevant to the baseline scenario have been identified and considered in the PDD?	/1/ /9/	DR I	It is not applicable since the selected methodology prescribes the baseline scenario.	OK	OK
5.4.7 Does the PDD provide a verifiable description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the project activity?	/1/ /9/	DR I	Yes. In the description of additionality demonstration, the PDD provides a verifiable description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the project activity, which is verified being in compliance with "Tool for the demonstration and assessment of additionality".	OK	OK
5.5 Algorithm and/or formulae used to determine emission reductions					

<p>5.5.1a) Are all calculations applied and documented according to the selected methodology and in a complete and transparent manner?</p> <p>5.5.1b) Are correct units applied and consistency between parameter dimensions and parameter value ensured?</p>	<p>/1/ /9/ /10/ /11/ /42/</p>	DR	<p>Yes. By means of checking the PDD, ER calculation spreadsheet against the applied ACM0002 Version 12.1.0, all calculations to determine emission reductions are confirmed to be presented in a complete and transparent manner according to the applied methodology. In addition, the correct units are correctly applied and consistent between parameter dimensions and parameter value.</p>	OK	OK
5.5.2 In case the methodology allows a selection between different options for equations or parameters, has adequate justification been given and have the correct equations and parameters been used, in accordance with the methodology selected?	<p>/1/ /9/</p>	DR	<p>It is not applicable for wind power plant in accordance with the applied methodology ACM0012 Version 12.1.0.</p>	OK	OK
5.5.3 In case some data and parameters will not be monitored throughout the crediting period, but have already been determined and fixed, are all data sources, assumptions and calculations correct, applicable to the proposed CDM project activity and conservative?	<p>/1/ /9/ /61/ /62/ /63/</p>	DR	<p>Yes. All parameters that are not monitored through the fixed crediting period are sourced from official public data source. They can be assessed as applicable to the proposed project.</p>	OK	OK
5.5.4 In case data and parameters will be monitored on implementation and hence become available only after validation of the project activity, are the estimates provided in the PDD for these data and parameters reasonable?	<p>/1/ /9/ /19/ /20/</p>	DR	<p>Yes. The estimated net electricity output by the project is sourced from the FSR, which is finished by independent and qualified entity based on the requirements of Wind Farm Project FSR Compiling Method, thus the validation team can consider that the data is credible.</p>	OK	OK

5.5.5 Have the major risks and uncertainties, which can influence the emission reduction estimates, been identified and addressed in the PDD?	/1/ /9/ /19/ /20/	DR	Based on the documentation review and onsite assessment, no risk and uncertainties influencing the emission reduction estimates can be identified from the newly built wind power project.	OK	OK
5.6 Leakage					
5.6.1 Has the leakage been identified and calculated according to the approved methodology?	/1/ /9/	DR	As per the applied ACM0012 Version 12.1.0, the audit team confirms that no leakage emissions are necessarily to be considered, which has been correctly addressed in the PDD.	OK	OK
5.6.2 Have the leakage been addressed in complete, conservative and substantiated manner?	/1/ /9/	DR	Not applicable.	OK	OK
5.6.3 Are uncertainties in the leakage emission estimates properly addressed?	/1/ /9/	DR	Not applicable.	OK	OK
6. Methodology-related issues for afforestation or reforestation CDM project activities					
Add specific A/R requirements – if applicable!	/1/	DR	Not applicable.	OK	OK
7. Additionality					
7.1 Prior consideration of the CDM (VVM E.6.III.a)					

7.1.1 Is there documented evidence provided by the project participants on how and when the decision to proceed with the project activity was taken?	/19/ /20/ /21/ /22/ /26/ /27/ /28/	DR	<p>A CDM decision document of the project by the board of directors of China Water Group Huade Wind Power Co., Ltd., is provided by PPs for validation. As stated in the CDM decision document, considering the financial analysis described in the FSR, the board of directors made the decision to proceed with the project activity under the help of CDM CERs revenue on 08/03/2010, and then the first contract of wind turbine-generator purchase and service contract was signed on 30/05/2011.</p> <p>However, the key events timeline of the implementation for the project is not enough addressed in the PDD, pls. make revision in accordance with the actual development of the project.</p>	CAR-7	OK
7.1.2 Is the starting date of the project activity, reported in the PDD, in accordance with the "Glossary of CDM terms" <u>and</u> CDM VVM (§97)?	/1/ /6/ /32/ /33/ /34/ /35/ /36/ /37/ /38/	DR	<p>Yes.</p> <p>The starting date of the project activity, i.e. 30/05/2010, is confirmed to be the signed date of wind turbine-generator purchase and service contract, which is also the earliest date among all signed contracts for the implementation of the project, thus the validation team can conclude that the starting date is in accordance with the "Glossary of CDM terms" and CDM VVM.</p>	OK	OK

7.1.3 Is the date stated in the provided evidence consistent with other available evidence (e.g. dates of construction, purchase orders for equipment)?	/1/ /6/ /32/ /33/ /34/ /35/ /36/ /37/ /38/	DR	Yes. The starting date presented in the PDD is consistent with the earliest contract of wind turbine-generator purchase and service contract.	OK	OK
7.1.4 If the project was not published and the starting date is on or after 2 nd August 2008, was it possible to receive from UNFCCC secretariat and/or DNA a written confirmation that PPs previously informed the above entities on commencement of the project activity and of their intention to seek CDM status?	/1/ /6/ /26/ /27/ /28/ /32/ /33/ /34/ /35/ /36/ /37/ /38/	DR I	Yes. As discussed in the above, the starting date of the project activity is 30/05/2010, after 2 nd Aug.2008. By means of checking CDM notifications to NDRC of China and UNFCCC secretariat provided by PP, combined with UNFCCC website browsing, the validation team can confirm that these two notifications contain the precise geographical location and a brief description of the project activity, and they were submitted to NDRC on 30/09/2010 and UNFCCC secretariat on 12/10/2010, which is within six months of the project starting date. Therefore, as per EB 62, Annex 13, the validation team can conclude that the CDM was seriously considered in the decision to implement the project activity.	OK	OK

7.1.5 For the project activities with a starting date before 2 nd August 2008 and before the actual publication, was there enough evidence presented to prove that PPs were previously aware of CDM?	/1/ /6/ /32/ /33/ /34/ /35/ /36/ /37/ /38/	DR I	It is not applicable to the proposed project since the project starting date is after 2 August 2008.	OK	OK
7.1.6 For the project activities with a starting date before 2 nd August 2008 and before the actual publication, was there enough evidence presented to prove that CDM benefits have been a decisive factor in the decision to proceed with the project activity?	/1/ /6/ /32/ /33/ /34/ /35/ /36/ /37/ /38/	DR I	It is not applicable to the proposed project since the project starting date is after 2 August 2008.	OK	OK
7.1.7 Does the individual or body that took the decision to proceed with the project activity have/had the authority to do so?	/25/ /26/ /27/	DR	Yes. By checking the business license of the project owner, Mr. Bin LI, as the legal person of China Water Group Huade Wind Power Co., Ltd. has the authority to make decision to proceed with the project activity.	OK	OK

7.1.8 For the project activities with a starting date before 2 nd August 2008 and before the actual publication, was there enough evidence presented to prove that PPs were taking continuing and real actions to secure CDM status for the project in parallel with its implementation?	/1/ /6/ /32/ /33/ /34/ /35/ /36/ /37/ /38/	DR I	It is not applicable to the proposed project since the project starting date is after 2 August 2008.	OK	OK
7.1.9 In case there is a significant gap between the start date of the project activity and the commencement of validation, how was it possible for the project participant to commit funds to the project in advance of receiving a positive validation opinion?	/1/ /6/ /32/ /33/ /34/ /35/ /36/ /37/ /38/	DR	As assessed in the above, the starting date of the project is 30/05/2010. By checking UNFCCC website, the commencement of validation for the project is confirmed to be 14/06/2011, thus the validation team can conclude that the time gap those two points is not significant as being less than 2 years.	OK	OK
7.2 Identification of alternatives					
7.2.1 Does the PDD identify and list credible alternatives to the CDM project activity in order to determine the most realistic baseline scenario, unless selected approved methodology prescribes/identifies the baseline scenario and no further analysis is required?	/1/ /9/	DR	It is not applicable since the applied ACM0002 Version 12.1.0 has defined the baseline scenario for the new grid-connected renewable wind power plant.	OK	OK

7.2.2 Does the list of alternatives include as one of the options that the project activity is undertaken without being registered as a CDM project activity?	/1/ /9/	DR	As per the item 105 of VVM (version 01.2), the applied methodology ACM0002 Version 12.1.0 has prescribed the baseline scenario and no further analysis is required.	OK	OK
7.2.3 Does the list contain all realistic/credible alternatives that the DOE, on the basis of its local and sectoral knowledge, considers to be viable means of supplying the outputs or services that are to be supplied by the project activity?	/1/ /9/	DR	Not applicable.	OK	OK
7.2.4 Is the exclusion of the alternatives for legal reasons justified?	/1/ /9/	DR	Not applicable.	OK	OK
7.3 Investment Analysis					
7.3.1 Are all sources of revenues (including savings) have been considered in the PDD and all calculations?	/1/ /6/ /12/ /19/ /41/	DR	Yes. By means of onsite interview and FSR review, the electricity sale, subsidy including deductible fixed assets VAT and 50% of electricity sale VAT are confirmed as all sources of revenue from this project, which have been fully considered in the PDD and IRR calculation spreadsheet.	OK	OK
7.3.2 Is the type of investment analysis selected correctly in the PDD?	/1/ /6/ /9/ /11/	DR	Yes. The benchmark analysis is correctly selected in the PDD, and its corresponding justification is assessed as appropriate.	OK	OK

7.3.3 Is the selected financial indicator chosen and applied correctly?	/1/ /12/ /19/ /41/ /64/	DR	Yes. By means of reviewing the Interim Rules on Economic Assessment of Electrical Engineering Retrofit Projects, the selected 8% of benchmark is indeed applicable to the proposed project, which is also commonly applied in the investment analysis of all other wind power projects within China.	OK	OK
7.3.4 Is the guidance on IRR calculation and assessment correctly applied?	/1/ /12/ /19/ /41/ /64/	DR	Yes. The calculation and assessment of IRR is validated as being in compliance with Interim Rules on Economic Assessment of Electrical Engineering Retrofit Projects and EB62 Annex13.	OK	OK
7.3.5 In case project participants use values from Feasibility Study Reports (FSR) is it possible to verify that the period between the FSR date and investment decision was reasonably short and FSR values did not change materially?	/1/ /6/ /12/ /19/ /26/	DR	Yes. The FSR was finished in Feb. 2010, and the investment decision of the project activity was made on 30/05/2011, i.e. the signing date of wind turbine-generator purchase and service contract. Their time difference is less than four months, within which the FSR values weren't likely to change materially.	OK	OK
7.3.6 Are all the values consistent between FSR and PDD <u>and</u> are inconsistencies properly justified?	/1/ /19/ /41/	DR	Below input financial parameters listed in the PDD are not consistent with the FSR of the project, thus corresponding clarification is required, 1) loan interest rate; 2) salary of staff; 3) repair fee rate.	OK	OK

7.3.7 Were all the values from FSR applicable and valid at the time of the investment decision?	/1/ /6/ /12/ /19/	DR	Below values from FSR for investment analysis are required to justify their applicability and validity at the time of the investment decision with relevant evidences, 1) Total investment 2) Annual O&M 3) Loan interest	CL-3	OK
7.3.8 Is it reasonable to assume that no investment would be made at a rate of return lower than the benchmark by, for example, assessing previous investment decisions by the project participants or some verifiable circumstances that have lead to a change in the benchmark?	/64/	DR I	Yes. It is reasonable and common practice that no investment would be made at a rate of return lower than the benchmark.	OK	OK
7.3.9 Is the Investment Analysis prepared in compliance with the latest version of the "Guidance on the Assessment of Investment Analysis" as provided by the CDM EB?	/1/ /12/ /41/	DR	The likelihood of scenarios passing benchmark is to be further clarified in a transparent manner with substantiated evidences.	CL-4	OK
7.4 Barrier analysis					
7.4.1 Are there any issues addressed in the barrier analysis that have a clear impact on the financial viability of the project activity and that shall be assessed by an investment analysis?	/1/ /11/	DR	Not applicable.	OK	OK

<p>7.4.2 Do the listed barriers exist <u>and</u> is their existence substantiated?</p> <p>Note:</p> <p>(a) by independent sources of data such as relevant national legislation, surveys of local conditions and national or international statistics and/or</p> <p>(b) by interviews with relevant individuals: including members of industry associations, government officials or local experts if necessary?</p>	/1/ /11/	DR	Not applicable.	OK	OK
<p>7.4.3 Would any of the identified barriers prevent the implementation of the project activity but not equally prevent the implementation of the possible alternatives, in particular the implementation of the identified baseline scenario?</p>	/1/ /11/	DR	Not applicable.	OK	OK
7.5 Common practice analysis					
<p>7.5.1 If the PPs claim in the PDD that CDM project activity is the “first of its kind”, is it justified?</p>	/1/ /11/	DR	The PP doesn't claim in the PDD that the proposed project is the “first of its kind”.	OK	OK

7.5.2 Are the geographical boundaries of the project activity identified correctly?	/1/ /11/ /45/	DR	Yes. According to the official document of Notification regarding to the requirements on the regulation of wind power projects construction, provincial government is authorized to regulate wind power projects in its provincial region, thus the validation team can consider that the regulatory framework, investment climate, access to technology and access to financing are comparable in the same province region. Since the project is located in Inner Mongolia Autonomous Region, it is appropriate to choose Inner Mongolia as the geographical boundary for common practice analysis.	OK	OK
7.5.3 Does the PDD provide an explanation why this region was selected and deemed more appropriate <u>and</u> is this explanation traceable and reliable?	/1/ /11/	DR	Yes. The PDD provides a reliable explanation to choose Inner Mongolia Autonomous Region, the detailed assessment from the validation team is as seen the above.	OK	OK
7.5.4 Are there similar operational project activities, other than CDM activities, “widely observed and commonly carried out” in the defined region?	/1/ /11/ /67/	DR I	Yes. Only two similar operational wind power projects other than CDM activities can be identified in Inner Mongolia Autonomous Region, and they can be cross checked with evidences addressed in the PDD.	OK	OK

7.5.5 In case there are similar commercially operated project activities, other than CDM activities, already “widely observed and commonly carried out” in the defined region, are there essential distinctions between the CDM project activity and the other similar activities?	/1/ /11/	DR	Yes. The essential distinctions between CDM project activity and the identified similar projects are described in the PDD and can be confirmed as reliable by cross checking the evidences addressed in the PDD.	OK	OK
8. Monitoring plan					
8.1 Are all parameters required by the selected approved methodology or tool identified <u>and</u> listed in the PDD?	/1/ /9/	DR I	During the onsite validation, the validation team observed that other 7 wind farm projects by the same PO will share one same gate meter with the proposed project together, thus parameters to be monitored for the project shall be further identified in the PDD.	CAR-8	OK
8.2 Is the measurement method clearly stated for each value to be monitored and deemed appropriate?	/1/ /9/	DR I	Ditto.	CAR-8	OK
8.3 Are values of the ex-ante parameters / monitoring parameters selected correctly and conservative in accordance to methodology or tools?	/1/ /9/ /19/	DR	Ditto.	CAR-8	OK
8.4 Is the measurement equipment for each parameter described and deemed appropriate? Are the locations of all measurement equipment clearly identified and consistently described, incl. process flow-charts contained in the PDD?	/1/ /9/ /19/	DR I	The line diagram indicating the locations of monitoring electric meters shall be addressed in the PDD.	CAR-9	OK

8.5	Is the measurement accuracy addressed and deemed appropriate?	/1/ /9/	DR I	The accuracy of the electric meters adopted for the monitoring of the project shall be indicated in the PDD.	CAR-10	OK
8.6	Are procedures in place on how to deal with erroneous measurements <u>and</u> are the corrective actions identified?	/1/ /9/	DR I	Yes. In the PDD, the description regarding procedures how to deal with erroneous measurements are assessed as appropriate and credible.	OK	OK
8.7	Is the frequency of measurement identified and deemed appropriate?	/1/ /9/	DR	Pls. refer to 8.1.	CAR-8	OK
8.8	Is the monitoring plan documented according to the approved methodology and in a complete and transparent manner?	/1/ /9/	DR	Pls. refer to 8.1.	CAR-8	OK
8.9	Are the sampling, measurement methods and procedures defined?	/1/ /9/	DR	Yes. The sampling, measurement methods and procedures are in line with ACM0002 Version 12.1.0.	OK	OK
8.10	Are procedures identified for maintenance of monitoring equipment and installations?	/1/ /9/	DR	Yes. In the PDD, it is confirmed that the technical administration code of electric energy metering (i.e. DL/T448-2000) will be applied to ensure the maintenance of electric meters and installations, which is also confirmed by the validation team to be in line with the requirements of China electric power industry.	OK	OK
8.11	Are the equipment calibration intervals identified and justified?	/1/ /9/ /72/	DR	Yes. The calibration frequency of electric meters is determined as once per year for the project, which is confirmed to be fully in line with DL/T448-2000.	OK	OK

8.12 Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)?	/1/ /9/	DR	Yes. The procedures in archiving data are identified in the PDD.	OK	OK
8.13 Are the monitoring arrangements described in the monitoring plan feasible within the project design?	/1/ /9/ /19/	DR	Pls. refer to 8.1, 8.4 and 8.5.	CAR 8 CAR 9 CAR 10	OK
8.14 Are the means of implementation of the monitoring plan, including the data management and quality assurance and quality control procedures, sufficient to ensure that the emission reductions achieved by / resulting from the project activity can be reported ex post and verified?	/1/ /9/	DR	Yes. The data management, quality control and quality assurance procedures are sufficiently documented in the PDD to ensure the ERs by the project can be reported ex-post and verified.	OK	OK
8.15 Do the PPs make provisions for personnel training needs?	/1/ /73/	DR I	Yes. During the onsite validation, the PPs confirmed that they would provide corresponding training to personals involved in the project. Furthermore, a CDM and operation training plan dated 04/07/2011 was provided by PP to the validation team to substantiate the above.	OK	OK
8.16 Is the authority and responsibility of overall project management clearly described?	/1/ /74/	DR I	Yes. A detailed management structure of project monitoring team is in place addressed in the PDD section B.7.2.	OK	OK

8.17 Are procedures identified for emergency preparedness for cases where emergencies can cause unintended emissions?	/1/	DR	Yes. The procedures for emergency preparedness can be identified in the PDD and assessed as appropriate and conservative to ensure the monitoring of emission reductions.	OK	OK
8.18 Are procedures identified for review of reported results/data?	/1/	DR	Yes. The reported data will be cross checked with sales receipts, which has been integrated in the data collection procedures of the PDD.	OK	OK
8.19 Is the data archiving period for this project activity stated in the PDD and appropriate?	/1/	DR	Yes. All archived monitoring data will be kept at least two years after the end of the crediting period, which has been addressed in the PDD section B.7.2.	OK	OK
8.2 Monitoring of the leakage					
8.2.1 Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining leakage?	/1/ /9/	DR I	Not applicable.	OK	OK
8.2.2 Is the choice of project leakage indicators made according to selected methodology in a reasonable and conservative manner?	/1/ /9/	DR	Not applicable.	OK	OK
8.2.3 Is the measurement method clearly stated and deemed appropriate for each leakage value?	/1/ /9/	DR	Not applicable.	OK	OK
9. Sustainable development					
9.1 Does the LoA from the Host country DNA contain the confirmation that the proposed CDM project activity contributes to the sustainable development of the host Party?	/3/	DR	LoA from the host country of China is pending, pls. refer to 1.1.	CAR-1	OK

9.2 If PDD indicates any additional environmental benefits of the project, other than GHG emission reductions, were those benefits properly substantiated?	/1/ /19/	DR I	<p>As described in the PDD, the project activity will bring below benefits other than GHG emission reductions,</p> <ol style="list-style-type: none"> 1) Full utilization of Inner Mongolia's wind energy resources; 2) Relieving the increase in the demand of electricity in Inner Mongolia; 3) Decreasing emissions of SO₂, NO_x and flue gas dust from fossil fuel power plants; 4) Creating employment opportunities; 5) Providing an attraction for tourism. <p>By means of onsite interview with PPs and FSR review, the above benefits can be assessed as reliable.</p>	OK	OK
10. Stakeholders' consultation and comments					
10.1 Were the stakeholders identified in appropriate and complete manner?	/1/ /30/ /31/	DR I	<p>Yes.</p> <p>The identified stakeholders can be assessed to be appropriate and representative since they are local residents who the project mostly impacted, and have different occupations, ages and education levels.</p>	OK	OK
10.2 Are the identified stakeholders plausible?	/1/ /30/ /31/	DR I	<p>Yes.</p> <p>The identified stakeholders are plausible.</p>	OK	OK

12.3 Does PDD describe the means being used to invite local stakeholder's comments?	/1/ /30/ /31/	DR I	Yes. PDD describes the means being used to invite local stakeholder's comments, pls. see PDD section E.1.	OK	OK
12.4 Were those means appropriate?	/1/ /30/ /31/	DR I	Yes. Questionnaire distribution and collecting were assessed appropriate means to invite comments from stakeholders.	OK	OK
12.5 Was the project presented to the stakeholders in unbiased manner?	/1/ /30/ /31/	DR I	Yes. By means of checking the content of questionnaire, the audit team can conclude that the project was presented to the stakeholders in unbiased manner.	OK	OK
12.6 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/ /30/ /31/	DR I	Yes. The stakeholder consultation process has been carried out in accordance with relevant environmental laws in China.	OK	OK
12.7 Is a summary of the stakeholder comments provided in the PDD?	/1/ /30/ /31/	DR I	Yes. The summary of the stakeholder comments is provided in the PDD based on the collected questionnaire feedbacks.	OK	OK
12.8 Has due account of any stakeholder comments been taken by PPs and reflected in the PDD?	/1/ /30/ /31/	DR I	No any due account of stakeholder comments are identified from the questionnaire feedbacks provided by PP, and the validation team verifies that all stakeholders support the implementation of the proposed project without any necessary adjustments to the project design.	OK	OK
11. Environmental impacts					

11.1 Is the documentation supplied by the PPs regarding environmental impacts relevant and accurately reflected in the PDD?	/1/ /21/ /22/	DR I	Yes. Both EIA and AEIA of the proposed project have been provided to the audit team for validation. Through documents checking, EIA was completed by qualified entity of Ulanqab Environmental Protection Science Research Institute on 13/08/2010 and approved by Environmental Protection Bureau of Inner Mongolia Autonomous Region on 20/10/2010, which has been reflected in the PDD.	OK	OK
11.2 Is an environmental impact assessment (EIA) required for the CDM project activity?	/1/ /21/ /22/	DR I	Yes. As per Environmental Impacts Assessment Law of China, an environmental impact assessment is required before the projects including CDM project activity can be implemented.	OK	OK
11.3 In case an EIA is required, has the EIA has been approved by local authorities and is the outcome accurately reflected in the PDD?	/1/ /21/ /22/	DR I	Yes. By means of document review, EIA of the proposed project have been approved by Environmental Protection Bureau of Inner Mongolia Autonomous Region on 20/10/2010. And the outcome is accurately reflected in the PDD.	OK	OK
11.4 Does the PDD include a brief description of the environmental effects of the project, including transboundary?	/1/ /21/ /22/	DR I	Yes. A brief description of the environmental effects regarding the project activity has been described in section D.1 of the PDD, and assessed as consistent with EIA of the proposed project.	OK	OK

11.5 Are those effects properly addressed in the design of the project activity?	/1/ /19/ /21/ /22/	DR I	Yes. By means of onsite inspection and interview with stakeholders, those effects are properly addressed in the design of the project activity.	OK	OK
11.6 Does the project comply with environmental legislation in the host country?	/1/ /21/ /22/	DR I	Yes. The project complies with environmental legislation of China. Moreover, the project EIA has got approval from local authority.	OK	OK

Table 2: List of Requests for Corrective Action (CAR) and Clarification (CL)**Validation / Verification Manual**

(35) The DOE shall raise a corrective action request (CAR) if one of the following occurs:

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

(36) The DOE shall raise a clarification request (CL) if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

**The wording of CAR/CL shall clearly address nonconformity or seek clarification,
and avoid instructive / consultative language in order to prevent actual or perceived consultancy.**

No.	CAR/CL	Observation (CAR/CL)	Reference	Summary of project owner response	Validation team conclusion
1.	CAR 1	LoAs from both China and UK are to be provided.	1.1-1.7 2.2 9.1	The LoAs from both China and UK have been provided to the DoE.	OK. The LoA from the DNA of China, i.e. NDRC, was issued in Nov. 2011, which can be confirmed valid by cross checking the official DNA website http://cdm.ccchina.gov.cn/website/CDM/pdf/Item_new/Item_new6920.pdf . The LoA from the DNA of the UK, i.e. Environment Agency, was issued in 11 Jan. 2012, which can be confirmed valid based on its issuance email from the DNA of the UK dated 11/01/2012.

					Therefore, CAR 1 is closed.
2.	CAR 2	As per EB41 Annex12, the starting date of the crediting period for the project shall be presented in the format of DD/MM/YYYY.	3.2	All dates in PDD have been revised into the required format.	OK. The starting date of the project activity has been revised into 30/05/2010, which is in line with the format required in EB41, Annex12. Therefore, CAR 2 is closed.
3.	CAR 3	The physical location of the project activity addressed in the PDD is just the centre geographical coordinates of the wind farm, and doesn't reveal the unique identification of the project activity, thus a revision to the project location is required and geographical coordinates of all wind turbine generators are to be provided for cross-checking.	4.1	The project location description in PDD has been revised as required, according to FSR and wind farm layout. The geographical coordinates of all wind turbine generators has been provided for review as the supporting document "CAR 3_Wind farm layout_Cheliwusu".	OK. The revised geographical coordinates can be assessed as unique to identify the location of the project activity. Besides, geographical coordinates of 33 wind-turbine generators provided by PP are confirmed to fall within the area range addressed in the revised PDD. Therefore, CAR 3 is closed.
4.	CAR 4	The map of the project site is to be revised into the English version.	4.1	The map of the project site has been revised into the English version.	OK. The revised English version of map can clearly indicate the general location of the project activity. Therefore, CAR 4 is closed.
5.	CAR 5	The technical parameters of wind turbine generator shall be revised in the PDD in line with the signed wind turbine-generator purchase agreement.	4.2	The technical parameters of wind turbine generators have been revised in the PDD according to the equipment contracts.	OK. The revised technical parameters in the PDD are consistent with the technical agreement.

					Therefore, CAR 5 is closed.
6.	CAR 6	By means of UNFCCC website searching, the version 02.1.0 of “Tool to calculate the emission factor for an electricity system” and version 05.2 of “Tool for the demonstration and assessment of additionality” are confirmed not to be the latest, thus the updated versions are to be applied in the PDD as per ACM0002 Version 12.1.0.	5.4.2 5.4.2.1	The EF calculation tool and the additionality tool applied in the PDD have been updated into version 02.2.1 and version 05.2.1 respectively.	OK. By means of checking UNFCCC website, the version 02.2.1 of EF calculation tool and version 05.2.1 of additionality tool revised in the PDD are confirmed the latest available ones, which is in compliance with the applied ACM0002 Version 12.1.0. Therefore, CAR 6 is closed.
7.	CAR 7	The key events timeline of the implementation for the project is not enough addressed in the PDD, pls. make revision in accordance with the actual development of the project.	7.1.1	The detailed implementation timeline of the Project has been included in the PDD section B.5. Table 4.	OK. The updated timeline in the PDD are verified consistent with evidences provided by PP, and is fully in line with EB41, Annex12, i.e. the dates of investment decision, starting construction, expected commissioning and commercial operation have been added in the PDD accordingly. Therefore, CAR 7 is closed.
8.	CAR 8	During the onsite validation, the validation team observed that other 7 wind farm projects by the same PO will share one same gate meter with the proposed project together, thus parameters to be monitored for the project shall be further identified in the PDD.	8.1-8.3 8.7 8.8 8.13	The monitoring plan has been revised and further identified in section B.7 of PDD.	OK. The line monitoring diagram can be found in the revised PDD, which is considered credible based on the on-site assessment and inspection. As reflected in the technical agreements of main 220kV

					<p>transformers involved in the project, the transformer loss are all verified less than 0.5%, thus the validation team can consider the applied monitoring method of average weighting in the PDD is credible based on the expertise.</p> <p>In addition, the accuracies assumed in the project activity is verified in compliance with the standard of DL/T448-2000.</p> <p>Therefore, CAR 8 is closed.</p>
9.	CAR 9	The line diagram indicating the locations of monitoring electric meters shall be addressed in the PDD.	8.4 8.13	The monitoring equipments and their locations have been included into the chart.	<p>OK.</p> <p>The monitoring line diagram addressed in the PDD can be considered reasonable based on the confirmation with the project owner and the on-site inspection.</p> <p>Therefore, CAR 9 is closed.</p>
10.	CAR 10	The accuracy of the electric meters adopted for the monitoring of the project shall be indicated in the PDD.	8.5 8.13	<p>The accuracy of the electrical meters have been specified in section B.7 of PDD.</p> <p>As described in Figure 4 and section B.7 of the PDD, the accuracy of electrical meters M1.1~M8.3 and M_A (26 meters in total) is 0.5s, which is in compliance with DL/T 448-2000, because these meters are measureing quantity of electricity produced by generators under 100MW or plant self-</p>	<p>OK.</p> <p>According to the technical management rules on the electric metering equipments (DL/T448-2000), the accuracy of electric meter shall be applied the type I of metering equipment (i.e. 0.2s or 0.5s) for the installed capacity more than 200MW, and the type II of metering equipment (i.e. 0.5s or</p>

				<p>consumed, and belongs to Type III measuring instrument requirement. And the accuracy of the other electrical meters is 0.2s, which is also in compliance with DL/T 448-2000.</p>	<p>0.5) for the installed capacity more than 100MW, and the type III of metering equipment (i.e. 1.0) for the installed capacity below 100MW, thus the validation team can consider that the accuracy of electric meters assumed can ensure the monitoring of electricity to the grid by the project.</p> <p>Therefore, CAR 10 is closed.</p>
11.	CL 1	<p>Pls. clarify why the latest two Yearbooks 2010 issued at the time of validation were not selected for EF calculation and then justify the emission factor issue in 2010 is the most recent data available at the time of validation.</p>	5.4.2.1	<p>The data source for EF calculation is NDRC's "2010 Announcement about Confirming Baseline Emission Factors for Factor of Regional Power Grids in China". The reason why the two Yearbooks 2010 are not used to calculate EF is as follows:</p> <p>In China it is very difficult to obtain the data of the five existing power plants built most recently ($SET_{5-units}$; and $AEG_{SET-5-units}$, in MWh) or the power plants capacity additions in the electricity system that comprise 20% of the system generation ($SET_{\geq 20\%}$; and $AEG_{SET-\geq 20\%}$, in MWh) and that were built most recently; thus there is insufficient information to calculate the $EF_{BM,y}$ according to the Tool to calculate the emission factor for an electricity system (Version 02.2.1, EB63). The latest</p>	<p>OK.</p> <p>The justification is to the validation team's opinion.</p> <p>Therefore, CL 1 is closed.</p>

				published conservative alternative method agreed by the CDM Executive Board at validation of this project is the NDRC's "2010 Announcement about Confirming Baseline Emission Factors for Factor of Regional Power Grids in China". Although two Yearbooks 2010 were already issued at the time of validation, the important data to calculate the $EF_{BM,y}$ according to NDRC method, e.g. "the estimated coal consumption of coal-fired power plants (with relevant best practice coal power technology decision)" and "emission factors of coal-fired power using best practice commercialized technology $EF_{Coal,Adv,y}$ ", "the estimated coal consumption of gas and oil plant (with relevant best practice gas and oil power technology decision)" and "emission factors of oil and gas-fired power using best practice commercialized technology $EF_{Oil,Adv,y}$, $EF_{Gas,Adv,y}$ " are not listed in these Yearbooks. They are determined by NDRC according to their statistics results and published yearly. Therefore the emission factor in 2010 published by NDRC is the latest available data by the time of validation of this project.	
12.	CL 2	Below input financial parameters listed in the PDD are not consistent with the FSR of the project, thus corresponding clarification is	7.3.6	The original PDD had mistaken input values, which have been revised according to the FSR.	OK. The revised loan interest rate, salary of staff and

		required, 1) loan interest rate; 2) salary of staff; 3) repair fee rate.			repair fee rate are confirmed to be consistent with the FSR. Therefore, CL 2 is closed.
13.	CL 3	Below values from FSR for investment analysis are required to justify their applicability and validity at the time of the investment decision with relevant evidences, 1) Total static investment 2) Annual O&M 3) Loan interest	7.3.7	<p>All the above values from FSR was estimated by the experienced design institute which has been awarded the highest certificate (grade A) based on relevant national and industrial standards, taking into account the experience of the developer, who have been involved in several earlier projects. Thus they are reasonable, applicable and valid.</p> <p>To further clarify the applicability and validity of the above input values, and to avoid the influence by the installed capacities and electricity generations of different projects, a comparison of some key input values with the similar CDM projects is provided below.</p> <p>The "similar CDM projects" here are defined as the wind farm projects with the capacity larger than 15 MW, registered as CDM projects applying methodology ACM0002, located in Inner Mongolia Autonomous Region where the Project located. This is because: in China, provincial governments are authorized to regulate wind power projects in the province by the NDRC; So the</p>	<p>OK.</p> <p>The statistics analysis table/66/ referred in the justification has been provided the validation team for the validation. 148 wind power projects listed in the statistics analysis table are verified to be derived from the updated CDM Pipeline dated 01/10/2011/65/, they have similar total installed capacity to the project (i.e. larger than 15MW) and also are all located in the Inner Mongolia Autonomous Region where the project locates, it can thus be considered by the validation team that the comparison of financial input values between them and the project is appropriate.</p> <p>The adjustment history of bank benchmark interest rate was issued by Monetary Policy Department, the People's bank of China on 10 Feb. 2011/44/. The validation team checked this document and confirmed</p>

			<p>investment climate, tariff, land policy, regulations etc. are usually similar for wind power projects in the same province.</p> <p>The ratio of total static investment per installed capacity (RMB/kW), the ratio of annual O&M cost per net electricity generation supplied to NCPG (RMB/MWh), are adopted to compare with the similar CDM projects in the Inner Mongolia Autonomus Region.</p> <table><tr><th>Project</th><th>Total Static Investment/ Installed Capacity (RMB/kW)</th><th>O&M Cost/ Net Electricity Generation Supplied to NCPG (RMB/kWh)</th></tr><tr><td>148 similar projects Range: Lowest</td><td>7,656.36 (Ref. 3777)</td><td>0.0480 (Ref. 2078)</td></tr><tr><td>148 similar projects Range: Highest</td><td>11,806.67 (Ref. 2135)</td><td>0.1776 (Ref. 1628)</td></tr><tr><td>The proposed Project: Cheliwusu</td><td>8,411.62</td><td>0.1085</td></tr></table> <p>The loan interest rates of long term and short term loans are took from the loan datum interest rate issued by the People's Bank of China when the investment decision was made. The board decision note was issued</p>	Project	Total Static Investment/ Installed Capacity (RMB/kW)	O&M Cost/ Net Electricity Generation Supplied to NCPG (RMB/kWh)	148 similar projects Range: Lowest	7,656.36 (Ref. 3777)	0.0480 (Ref. 2078)	148 similar projects Range: Highest	11,806.67 (Ref. 2135)	0.1776 (Ref. 1628)	The proposed Project: Cheliwusu	8,411.62	0.1085	<p>that the bank benchmark interest rate for above 5 years of loan period was regulated as 5.94%, and the bank benchmark interest rate for above 6 months but less than 1 years of loan period was regulated as 5.31% respectively during the time from 23/12/2008 to 19/10/2010, in which the investment decision was made (i.e. 30 May 2010). Considering that the bank loan rate has been increasing from 23/12/2008 to 09/02/2011 as shown in the quoted loan rate adjustment history/44/, the validation team can consider that the slightly overestimated loan rates in the FSR, i.e. 6.04% for the long term bank loan rate and 5.56% for the short bank loan rate, are acceptable. Even though the real time available bank loan rates (i.e. 5.94% for the long term bank loan rate and 5.31% for the short term bank loan rate) were applied in the investment analysis, the project IRR (after tax) would be 6.39%, which is even slightly lower than 6.4%</p>
Project	Total Static Investment/ Installed Capacity (RMB/kW)	O&M Cost/ Net Electricity Generation Supplied to NCPG (RMB/kWh)														
148 similar projects Range: Lowest	7,656.36 (Ref. 3777)	0.0480 (Ref. 2078)														
148 similar projects Range: Highest	11,806.67 (Ref. 2135)	0.1776 (Ref. 1628)														
The proposed Project: Cheliwusu	8,411.62	0.1085														

				<p>on 08/03/2010, and the latest long-term and short-term loan interest rates were issued by the People's Bank of China on 23/12/2008. Considering that the proposed project was planned to start equipment purchase and engineering construction almost one and half years after the above loan interest rates being published, and based on the financial analysis experience of the design institute, the loan interest rates of 6.04% and 5.56% for long and short terms loans respectively were adopted by FSR.</p> <p>Therefore, the total investment, annual O&M and loan interest applied in the investment decision are valid.</p>	<p>under the estimated conditions in the FSR.</p> <p>Therefore, the validation team can conclude that the total static investment, annual O&M cost and the loan interest rates are applicable and valid at the time of investment decision, CL 3 is closed accordingly.</p>
14.	CL 4	The likelihood of scenarios passing benchmark is to be further clarified in a transparent manner with substantiated evidences.	7.3.9	<p>The benchmark analysis has been further clarified in section B.5 step 2 Investment Analysis of the PDD.</p>	<p>OK.</p> <p>The further justification in the revised PDD is deemed as reasonable.</p> <p>Therefore, CL 4 is closed.</p>

Appendix B

CERTIFICATES OF COMPETENCE

Qualification

Tan, Yi /

Emission Trading

United Nations Framework Convention on Climate Change

Auditor No.:
(AuditorenRegNr)

Appointed:
(Zugelassen)

☒ ja

Qualification Level: Auditor
(Qualifikationsstufe)

External:
(Externer)

☐ ja

Add. reviewer: ☐ yes
(Zusätzlicher Prüfer)

EAC Scopes:
(EAC Branchen)

CDM 01 – Energy industries (renewable – / non-renewable sources)
CDM 13 – Waste handling and disposal

Add. qualification:
(zus. Qualifikation)

First Appointment: 09/26/2009
(Erstberufung)

Valid to: 09/25/2012
(Gültig bis)

Remarks: CDM 01 limited to TA1.2 – Renewable Energies
CDM 13 limited to TA 13.1– Waste handling & disposal

Languages: Chinese
English
Japanese

Experience Exchange

Date	Location	Remarks	Accredita
2011-06-18	Beijing	Beijing CDM Seminar-EB61/62	United Nations Framework Convention
2010-12-21	Beijing	GC CDM Auditor Experience Exchange, Beijing, 2010-12-21to23	
United Nations Framework Convention on Climate Change			

Monitoring

Latest Monitoring:
(letzte Beurteilung)

Next
Monitoring:
(nächste
Beurteilung)

Remarks:

History of scope allocation

Date: 2009-09-27
Change: EAC CDM, CDM added
By: Manfred Brinkmann
Reason:

History

Created:	03/18/2008 01:50:31 PM	Daxun Li/Bj/Chn/TUV
Modified:	01/13/2011 03:17:56 PM ZE9	Manfred Brinkmann/Jpn/TUV
	01/13/2011 03:17:19 PM ZE9	Manfred Brinkmann/Jpn/TUV
	01/13/2011 03:17:00 PM ZE9	Manfred Brinkmann/Jpn/TUV
	09/13/2010 03:01:43 PM ZE9	Manfred Brinkmann/Jpn/TUV

Qualification

Yan, Chong /

Emission Trading

United Nations Framework Convention on Climate Change

Auditor No.:

(AuditorenRegNr)

Appointed:
(Zugelassen)

☒ ja

Qualification Level: Auditor
(Qualifikationsstufe)

External:
(Externer)

☐ ja

Add. reviewer: ☐ yes
(Zusätzlicher Prüfer)

EAC Scopes:
(EAC Branchen)

CDM 01 – Energy industries (renewable – / non-renewable sources)
CDM 02 – Energy distribution
CDM 03 – Energy demand
CDM 04 – Manufacturing industries
CDM 09 – Metal production

Add. qualification:
(zus. Qualifikation)

First Appointment: 2011/12/15
(Erstberufung)

Valid to: 2014/12/14
(Gültig bis)

Remarks: Valid for TA 1.2, 2.1, 3.1, 4.3, 4.5, 9.1

Languages: Chinese
English

Experience Exchange

Date

Location

Remarks

Accredita

Monitoring

Latest Monitoring:
(letzte Beurteilung)

Next
Monitoring:
(nächste
Beurteilung)

Remarks:

[View / Edit Monitoring](#)

History of scope allocation

Date: 2012-01-10
Change: EAC CDM, CDM, CDM, CDM, CDM added
By: Manfred Brinkmann
Reason: Valid for TA 1.2, 2.1, 3.1, 4.3, 4.5, 9.1

History

Created:	2011/01/28 10:33:30	Chong Yan/Shg/Chn/TUV
Modified:	2012/01/10 08:49:02 ZE9	Manfred Brinkmann/Jpn/TUV
	2011/11/14 18:09:04	Chong Yan/Shg/Chn/TUV
	2011/01/28 10:33:53	Chong Yan/Shg/Chn/TUV

Qualification

Deng, Cuiping /

Emission Trading

United Nations Framework Convention on Climate Change

Auditor No. :
(AuditorenRegNr)

Appointed:
(Zugelassen)

☒ ja

Qualification Level:
(Qualifikationsstufe)

External:
(Externer)

☐ ja

Add. reviewer:
(Zusätzlicher Prüfer)

☒ yes

EAC Scopes:
(EAC Branchen)

CDM 01 – Energy industries (renewable – / non-renewable sources)
CDM 05 – Chemical industry
CDM 11 – Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride
CDM 12 – Solvents use

Add. qualification:
(zus. Qualifikation)

First Appointment: 2010/10/09
(Erstberufung)

Valid to:
(Gültig bis)

2013/10/08

Remarks: Appointed as Technical Reviewer for TA 1.2 TA 5.1, 11.1, 12.1 and TA 4.1, 4.5, 8.2, 10.2 based on Annex D para 5 of Accreditation Standard version 03

Languages:

Experience Exchange

Date

Location

Remarks

Accredita

2010-12-21 Beijing GC CDM Auditor Experience Exchange, Beijing, 2010-12-21to23
United Nations Framework Convention on Climate Change

Monitoring

Latest Monitoring:
(letzte Beurteilung)

Next
Monitoring:
(nächste
Beurteilung)

Remarks:

History of scope allocation

Date: 2010-11-11
Change: EAC CDM, CDM, CDM, CDM added
By: Manfred Brinkmann
Reason: Appointed as Technical Reviewer for
TA 1.2
TA 5.1, 11.1, 12.1

History

Created:	2010/08/13 11:19:43	Cuiping Deng/Bj/Chn/TUV
Modified:	2012/02/12 17:35:34	Praveen Urs/Chn/TUV
	2012/02/12 17:35:21	Praveen Urs/Chn/TUV
	2010/11/11 12:00:44 ZE9	Manfred Brinkmann/Jpn/TUV
	2010/11/11 11:59:20 ZE9	
	2010/11/11 11:58:18 ZE9	
	2010/08/13 11:21:37	