



VERIFICATION REPORT FOR INNER MONGOLIA YIHEWUSU PHASE II 49.5 MW WIND POWER PROJECT

Document Prepared by China Classification Society Certification Co., Ltd. (CCSC)

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Contact	Physical Address: 40, Dong Huang Cheng Gen Nan Jie, Beijing, 100006, P.R. China, Tel: + 86 10 5631 3492 Email: lixingtong@c.ccs.org.cn Website: www.ccs-c.com.cn
Approved By	Mr. TIAN Wei
Work Carried Out By	Team Leader: Mr. LI Xingtong Team Member: Mr. LI Qiuyan (Trainee), Ms. TIAN Peili (Trainee), Ms. WANG Chen (Trainee) Technical Reviewer: Mr. Sun Chunlin, Ms. Liu Ruyun

Summary:

China Classification Society Certification Co., Ltd. (hereafter referred to as “CCSC”) has been commissioned by China Carbon N. V. to perform the verification of greenhouse gas emission reductions of the project activity “Inner Mongolia Yihewusu Phase II 49.5 MW Wind Power Project” (UNFCCC Ref. No. 3490, VCS Ref. No. 1001, hereafter referred to as “the project”) reported in the monitoring report during monitoring period 25/04/2021 to 31/12/2022. The verification scope is defined as a periodic independent and objective review and ex-post determination by the Designated Operational Entity of the monitored reductions in GHG emissions during defined verification period, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up on-site visit and interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion.

CCSC appointed a qualified audit team in accordance with internal procedures to perform the verification. In the course of the joint-validation-verification, Zero Corrective Action Request (CAR), One Clarification Request (CL) and Zero Forward Action Request (FAR) were raised.

The overall verification, from Contract Review to Verification Report & Opinion, was conducted following CCSC internal procedures. In summary, CCSC confirms that the Project is implemented as planned and described in the validated VCS-PD/3/. Deviations from the monitoring plan are sufficiently justified. Installed equipment being essential for generating emission reduction runs reliably and has been calibrated appropriately. The monitoring system is in place and the Project is ready to reduce GHG emission. The GHG emission reduction is calculated without material misstatements, and the emission reductions verified totalize 121,378 tons of CO₂e for this monitoring period. Our opinion relates to the Project’s GHG emission reductions viz. Voluntary Carbon Units (VCUs) reported are based on the valid project baseline, deviation on the monitoring plan and associated documents. Based on the evidence and information that are considered necessary to guarantee that GHG emission reductions are appropriately calculated. In conclusion, CCSC confirms the following statement:

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
2021 (25/04/2021-31/12/2021)	53,022	0	0	53,022
2022 (01/01/2022-31/12/2022)	68,356	0	0	68,356
Total	121,378	0	0	121,378

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1 INTRODUCTION

1.1 Objective

China Carbon N. V. has commissioned China Classification Society Certification Co., Ltd. (herein after refer to as CCSC) to performed the validation of Inner Mongolia Yihewusu Phase II 49.5 MW Wind Power Project (hereafter referred to as “the project”) and the verification of the project covering the monitoring period from 25/04/2021 to 31/12/2022 as the second monitoring period of the second crediting period, on the basis of requirements of Verified Carbon Standard (VCS) Version 4.4 /1/.

CCSC as the validation/verification body (VVB) of the project has been accredited as a DOE by UNFCCC and meets the competence requirements as set out in ISO 14065:2020.

The objective of verification is to verify the reported voluntary emission reductions generated by the Project for the period from 25/04/2021 to 31/12/2022 and to confirm that actual monitoring systems and procedures are in compliance with that described in the monitoring plan and the additional requirements stated by Verra.

1.2 Scope and Criteria

The verification scope encompasses an independent and objective review and ex-post determination of the monitored reductions in GHG emissions by the CCSC. The verification scope covers the relevant documents (e.g., the registered VCS-PD/3/, the monitoring plan, the emission reduction calculation spreadsheet/4/, supporting documents available to the verifier and information collected through performing interviews and during the on-site inspection, VERRA’s requirements publicly available, relevant rules, including the host country legislation, etc.) to be independently reviewed, the project geographical locations to be visited on-site, the related project stakeholders to be interviewed with, and processes that are necessary to acquire objective evidence for the evaluation of the project compliance to the VCS requirements and associated interpretations. The verification activities are conducted according to the VERRA’s requirements. In doing so, the principles of accuracy and completeness, relevance, reliability and credibility were followed. The verification is not meant to provide any consulting service towards the PPs. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project.

1.3 Level of Assurance

CCSC has undertaken a reasonable assurance engagement in accordance with VCS Standard (version 4.4)/1/. The validation and verification conclusions are based on the registered PD/3/ and supporting evidences made available to the VVB and information collected through performing interviews and during the on-site inspection.

1.4 Summary Description of the Project

Project title	Inner Mongolia Yihewusu Phase II 49.5 MW Wind Power Project
UNFCCC reference number	3490
VCS reference number	1001
Crediting period (VCS)	1st 25/06/2009 to 24/06/2019, totally 10 years; 2nd 25/06/2019 to 24/06/2029, totally 10 years.
Monitoring period	25/04/2021 to 31/12/2022
Applied Methodology/Version	ACM0002 version 20.0
Scope/Technical Area	Scope 1 / TA 1.2
UNFCCC link:	https://cdm.unfccc.int/Projects/DB/KFQ1268810735.04/view
VCS link:	https://registry.terra.org/app/projectDetail/VCS/1001
Project Proponent	Inner Mongolia Xinjin Wind Power Co., Ltd.(Project Owner, host country, P. R. China)
Location of the project	Located at Ordos city, Inner Mongolia, in the People's Republic of China The geographic coordinates of the project: E 107°31'42" Longitude, N 40°07'02" Latitude

Note: The project is registered under VCS Version 2007.1, and the VCUs have been claimed since 25/06/2009. It remains eligible to apply the crediting period requirements under VCS Version 2007.1 which shall be a maximum of ten years and may be renewed at most twice. The crediting period of this project has been renewed once and this report describes the verification work against the monitoring period (from 25/04/2021 to 31/12/2022) during the second renewable crediting period (from 25/06/2019 to 24/06/2029).

The Inner Mongolia Yihewusu Phase II 49.5 MW Wind Power Project(hereafter referred to as 'the Project') developed by Inner Mongolia Xinjin Wind Power Co., Ltd.(hereafter referred to as 'the project proponent') is a wind power project located at Ordos city, Inner Mongolia, in the People's Republic of China. The total installed capacity of the Project is 49.5MW consisting of 66 sets of wind turbine with unit capacity of 0.75MW. The project started construction on 15/09/2008, and started operation on 25/06/2009. The electricity generated by the project is sold to the North China Power Grid (NCPG). The expected annual net electricity supply is 101,689 MWh, and the annual amount of emission reductions is expected to be 84,086 tCO₂e over the crediting period, according to VCS-PD/3/.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The overall verification, from contract review to verification report & opinion, was conducted following CCSC internal procedures. CCSC verified the information contained in the documents by reviewing it against the requirements set in VCS Standard Version 4.4/1/, CDM M&P, VCS Validation and Verification Manual Version 3.2, and relevant UNFCCC requirements and applying standard auditing techniques. The verification schedule consists of the following procedures:

Date	Schedule
23/03/2023	Open meeting
23/03/2023-24/03/2023	Follow-up interview, document review and onsite visit
24/03/2023	Close meeting
27/03/2023	Draft verification report with verification findings
10/04/2023	Resolution of Findings
13/04/2023	Draft final verification report
13/04/2023-23/04/2023	Internal technical review
23/04/2023	Verification report finalization

2.2 Document Review

Verification was conducted using CCSC's procedures in line with the requirements specified in the VCS Standard Version 4.4/1/, CDM M&P, VCS Validation and Verification Manual Version 3.2, and relevant UNFCCC requirements and applying standard auditing techniques.

The documents reviewed by the CCSC include but not limited to the Monitoring Report (VCS-MR) submitted by China Carbon N. V., the registered CDM Project Design Document (CDM-PDD)/2/ and approved VCS-PD/3/, and additional background documents related to the project design and baseline, i.e., National Laws, Validation Reports/5/, Applied methodologies/7/, Clarifications on Validation Requirements to be Checked by a certified validation body.

Furthermore, crosschecks were made between information provided in the VCS-PD/3/ and information from sources other than those used.

2.3 Interviews

The follow-up interview was conducted the physical site visit on 23/03/2023 by Mr. LI Xingtong (Team Leader), Mr. LI Qiuyan (Trainee), Ms. TIAN Peili (Trainee) and Ms. Wang Chen (Trainee) from CCSC, which is focused on the issues identified during the desk review. The main topics of the interviews are summarized in Table 1.

Table 1. Interview topics

Interviewed Organization and Persons	Interview Topics
Inner Mongolia Xinjin Wind Power Co., Ltd.	↗ Project background information
Mr. HAO Ning, Vice Director of the plant	↗ Project technology, operation, maintenance and monitoring capability.
Mr. JIA Shuzhen, Vice operation manager	↗ Project monitoring and management plan.
Mr. YIN Tao, Repairer	↗ The evidences of construction status and operation of key equipment, parameters monitoring and data processing activities, monitor equipment and calibration.
	↗ Monitoring data.
	↗ Quality Management; organizational structure, responsibilities and competencies; Internal QA/QC Management procedures and document control.
	↗ Compliance with National Laws and Regulations.

Local herdsman and herdsman:	↪ The process and participation of the stakeholder consultation
Ms. Nabuqima	↪ The environmental and social impacts of the project
Mr. Qimuge	↪ Any complaints by the local stakeholders and the implementation of the mitigation measures
Mr. Batu	

2.4 Site Visits

The assessment team performed the physical on-site verification on 23/03/2023 to 24/03/2023. Site inspection was conducted as below:

Duration of on-site inspection: 23/03/2023 to 24/03/2023				
No.	Activity performed on-site	Site location	Date	Team member
1.	Open meeting - Scope of work - VCS rules and regulations - Verification methodology/tool/guideline - Timeframe - Procedures for verification - CCSC internal approval process - Confidentiality	Project site	23/03/2023	Mr. LI Xingtong, Mr. LI Qiuyan, Ms. TIAN Peili and Ms. Wang Chen
2.	Management interview - Implementation & Operation - Monitoring System - Information flow - Management & Operation Procedure - Local stakeholder consultation - Sustainable development contribution	Project site	23/03/2023	
3.	Site visit - Inspection of installations (Turbines, Centre control room, On-site Meters, etc.) - Interviews about operation procedures, meter reading, training, etc.	Project site	23/03/2023	
4.	Documents review - Implementation - Calibration - QA/QC procedures - Qualification & Training	Project site	23/03/2023 to 24/03/2023	

	- Monitoring records - Cross-check data - ER calculations			
5.	Close meeting - Summary of findings - Follow-up actions	Project site	24/03/2023	

The interviewed personnel and objective are listed in above table.

Through onsite inspection, the verification can confirm that the Project is implemented as planned and described in the validated VCS-PD/3/. Actual monitoring activities complied with the monitoring plan. Installed equipment being essential for generating emission reduction has been running reliably and has been calibrated properly in this monitoring period. The monitoring system is in place and the project reduces GHG emission by replacing fossil fuel power generation.

2.5 Resolution of Findings

The objective of this phase of the verification is to resolve issues that require further elaboration, research or expansion prior to CCSC's positive conclusion on the project design.

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

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

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

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

To guarantee the transparency of the validation process, a summary of each finding, including the issues raised, the response(s) provided by the project proponent, and the final conclusions and any resulting changes to project documents are documented in the Appendix D.

2.5.1 Forward Action Requests

No FAR was raised during this verification process, neither was any remaining one from previous verification or validation.

2.6 Eligibility for Validation Activities

Not applicable as China Classification Society Certification Co. Ltd. holds the accreditation for the validation and verification for projects under scope 1.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

Through reviewing the registered CDM-PDD/2/ and validation report at UNFCCC website, it was validated that the project has also been registered as a CDM project with reference No. 3490. By checking the registered VCS-PD/3/ and <https://registry.terra.org/app/projectDetail/VCS/1001>, it is confirmed that the project has also been registered as a VCS project.

The project does not participate in the other emission trading program, as verified by the CCSC by checking the online public information and interviewing with project owner. The project would claim for either CERs or VCUs, however CERs and VCUs would not been claimed together in the same period confirmed by checking statement/15/ issued by project owner.

The verification team reviewed issuance information in VCS/CDM registry system, and confirmed that GHG Emission Reductions Credits have been issued as Table 2:

Table 2. List of GHG emission reduction credits issued

Monitoring period	GHG emission reductions (tCO ₂ e)	Credit Type	Program
01/07/2009 to 24/11/2010	135,265	VCU	VCS
25/11/2010 to 20/11/2012	Awaiting issuance request	CER	CDM
21/11/2012 to 20/01/2013	Awaiting issuance request	CER	CDM
21/01/2013 to 20/12/2015	314,348	CER	CDM
21/12/2015 to 24/06/2019	388,547	VCU	VCS
25/06/2019 to 24/04/2021	146,592	VCU	VCS

Besides, the PP has issued the statement that the PP will not request the issuance from other GHG programs/15/ for this monitoring period 25/04/2021 to 31/12/2022. Therefore, CCSC consider the project is eligible to participate under the VCS Program as there is no double counting for the emission reduction during any period.

Since China has initiated ETS in July 2021, and As per the Notice (Huan ban qi hou [2021] No.9) issued by Ministry of Ecology and Environment of P.R.China (MEE), the fossil fuel power and/or heat generation plants in Guangdong Province are covered by China ETS, and also other seven industries will be included in the future. However, as per the notice, the project activity is not covered by the mandatory emission control scheme and there is no emission cap enforced for the project owner. Also, the CCSC verification team reviewed the regulation, and realises that the allowance (CEA) for power generation industries will be allocated on the basis of carbon emission intensity, i.e. the CEA allocation is not related with the components of local grid. Furthermore, the CCSC verification team checked the No Double Counting Statement issued by the project owner, and confirms the PP has not applied for and will not apply for another form of GHG-related environmental credit, including renewable energy certificates, during this monitoring period. In summary, CCSC verification team can conclude that net GHG emission reductions generated during this monitoring period have not been used and will not be used for compliance under other programs or mechanisms.

3.2 Methodology Deviations

Not applicable as there is no methodology deviation in this monitoring period.

3.3 Project Description Deviations

The CCSC has checked the VCS-PD/3/ for the crediting period renewal and its corresponding validation report/5/, and confirmed the 1st and 2nd renewable crediting periods are determined and validated as 25/06/2009 to 24/06/2019 and 25/06/2019 to 24/06/2029.

As for the deviation mentioned in the monitoring period/13/, the CCSC has checked the UNFCCC website and the validation opinion/16/ on the post-registration change (PRC), and found this PRC has been validated and approved by the CDM-EB on 26/08/2013, which does not influence the applicability of the methodology, additionality or the appropriateness of the baseline scenario.

The CCSC confirm that there is no project description deviation in this monitoring period.

3.4 Grouped Project

Not applicable as this project is not a grouped project.

4 VERIFICATION FINDINGS

CL-1 is raised that:

PP is required to supplement the following documents:

1. PP's business license

2. Accreditation certificates for Electric energy Measuring and Testing Center of Inner Mongolia Electric Power Science Research Institute issued by Quality and Technical Supervision Bureau of Inner Mongolia.

And the PP has provided the following documents:

1. PP's business license

2. Accreditation certificates for Electric energy Measuring and Testing Center of Inner Mongolia Electric Power Science Research Institute issued by Quality and Technical Supervision Bureau of Inner Mongolia.

All the documents provided by the PP have been received and confirmed by CCSC, therefore **CL-1** is closed.

4.1 Project Implementation Status

Project description.

CCSC verification team has performed an on-site visit and found that the Project has been put into operation and the electricity generated is supplied to North China Power Grid (NCPG) according to the signed Power Purchase Agreement (PPA)/9/. It's witnessed that the Project installs 66 sets of wind turbine with a unit capacity of 0.75MW and the total installed capacity of the Project is 49.5MW. The project produces clean electricity without GHG emissions for NCPG as per the approved VCS-PD/3/. Through checking the Arrangement Plan for Project Wind Turbines/17/, the verification team can confirm the information of the physically installed facilities has been consistently reported in the monitoring report. The technical parameters of the wind turbines are listed as below:

Table 3 Major technical parameters of the wind turbines of the Project

Parameter	Value
Type	Jinfeng S50/750
No. of vane	3

Rated power(kW)	750
Rotor diameter(m)	50
Cut-in speed(m/s)	3.5
Cut-off speed(m/s)	25
Rated-speed(m/s)	14-15
Hub height(m)	60
Manufacturer	Xinjiang Goldwind Science & Technology Co., Ltd.

In this case, the verification team confirmed that there is no change from the project design to actual implementation have been identified during this verification. The operation of the project activity has been conducted in accordance with the description of the approved VCS-PD/3/. There is no any discrepancy between project implementation and the project description.

The verification team has checked the Form of Completion Acceptance Record/14/ and the Completion Acceptance Opinion for Environmental Protection/11/, and confirm that the Project started construction on 15/09/2008 and operation on 25/06/2009. The project began generating GHG emission reductions from the project start date.

Power System

As shown in the diagram of the power connection system/10/, the electricity generated by the Project is delivered to on-site 35kV/220kV substation, and then delivered to NCPG.

Metering System

The monitoring meter is the key Meter, and a check meter is installed in case that the key meter is malfunctioned. During this monitoring period, the key meter has operated normally.

Other GHG program

The project has been registered as a CDM project and the monitoring reports of the three monitoring periods, 25/11/2010-20/11/2012, 21/11/2012-20/01/2013 and 21/01/2013-20/12/2015, have been published on the UNFCCC website.

The VCU's of the periods 01/07/2009-24/11/2010, 21/12/2015-24/06/2019 and 25/06/2019 to 24/04/2021 have been issued, and this monitoring period is 25/04/2021 to 31/12/2022. There is no gap between the previous monitoring period and this monitoring period in both CDM and VCS.

Besides, the project has not participated or been rejected under any other GHG programs. The project has not received or sought any other form of environmental credit since previous verification, or has not become eligible to do so since previous verification. The GHG emission reductions or removals generated by the project have not become included in an emissions trading program or any other mechanism that includes GHG allowance trading except for VCS.

The project produces and supplies electricity to the grid, and the project does not affect emissions associated with a good or service. Therefore, supply chain emission is not applicable.

Sustainable development contributions

By checking the registered VCS-PD/3/, previous verification reports/6/, employee roster/12/ and interviewing with the project owner, the verification team can confirm that the Project has contributed to sustainable development goals as follows:

SDG7.2: Renewable energy share in the total final energy consumption. This Project has provided 146,788.50 MWh renewable energy to NCPG during this monitoring period, which can be verified against Electronic Transaction Notes (ETN) issued by the grid company.

SDG8.5.1: Average hourly earnings of employees, by sex, age, occupation and persons with disabilities. By checking the employee roster/12/ provided by the PP, the verification team can confirm that 7 men and 3 women have been provided with job opportunities during this monitoring period. The verification team also check the local annual average salary levels in 2021 and 2022 by looking up the Statistical Yearbook of Inner Mongolia¹ online, and confirmed the employees in the wind farm have been offered with a salary higher than the local average in 2021, as shown below:

Table 4 Average yearly salary of the Project

Year	Average yearly salary of the project (CNY)	Local average salary (CNY)
2021	106,742	93,266
2022	112,983	Not available yet

SDG13.0: Tonnes of greenhouse gas emissions avoided or removed. The project has avoided 121,378 tonnes of carbon dioxide emissions during this monitoring period.

Project Audit History

Audit Type	Period	Program	VVB Name	Number of years
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¹ http://tj.nmg.gov.cn/files_pub/content/PAGEPACK/cd1ebd873e844e50844846b25256a59b/zk/indexch.htm

Validation	08/03/2010	CDM	Korean Foundation for Quality (KFQ)	/
Validation	02/06/2021	VCS	CCSC	/
Verification	01/07/2009 to 24/11/2010	VCS	Bureau Veritas Certification	512 days (1 years and 147 days)
Verification	25/11/2010 to 20/11/2012	CDM	Bureau Veritas Certification	727 days (1 years and 361 days)
Verification	21/11/2012 to 20/01/2013	CDM	CCSC	61 days (0 years and 61 days)
Verification	21/01/2013 to 20/12/2015	CDM	CCSC	1064 days (2 years and 334 days)
Verification	21/12/2015 to 24/06/2019	VCS	LGA Technological Center, S.A. (Applus+)	1282 days (3 years and 186 days)
Verification	25/06/2019 to 24/04/2021	VCS	CCSC	670 days (1 years and 304 days)
Verification	25/04/2021 to 31/12/2022	VCS	CCSC	616 days (1 year and 251 days)
Total	01/07/2009 to 31/12/2022	CDM and VCS	/	4932 days (13 years and 184 days)

Through reviewing the project documents of audit history/6/, including validation reports/5/ and verification reports/6/ and public information online, the verification team confirms the accuracy of previous audits on this project.

In conclusion, through document review and site visits, the verification team confirms that this project has been implemented according to the registered PD/3/.

4.2 Safeguards

4.2.1 No Net Harm

By checking the Environmental Acceptance Opinion and conclusion provided in the registered PD/2/, it is confirmed that wind power is green power and the impact caused by wind power on the surrounding ecosystem and residents, water, and atmosphere etc. is very little, there would be no net harm caused due to the project activity. Also, the EIA of the project are approved by the government. There is no transboundary impact involved with the project. Negative impacts are mitigated with a set of environmental protection measures in consistent with national and local laws and regulations. During the project operation, the project continues to contribute to the local society and economy.

Also, no significant environment or social economic matter was found during the site visit. The project is renewable energy project and thus no net harm observed in air or water quality on-site.

4.2.2 Local Stakeholder Consultation

According to the VCS-PD/3/, local stakeholders were invited to provide comments in May 2009. The comments from local stakeholders have been compiled, and the process has been described within the VCS-PD/3/. Furthermore, representatives from the local community were interviewed, the relevant evidence was presented to CCSC for assessment. In general, the interviewees show adequate understanding of the nature of the Project and agreed that the Project would benefit the environment, society and economic development. The response is overall supportive.

The verification team has tested the on-going stakeholder communication mechanism and confirm the mechanism is functional. The local stakeholders may express their opinions through a notebook near the notice board of the local village and their will get their feedbacks in time. The verification team checked the notebook records and confirmed that no negative comments were received. Along with the interviews with local herdsmen, the verification team can confirm that the local stakeholders generally expressed their support to the project.

4.3 AFOLU-Specific Safeguards

Not applicable as this is not an AFOLU project.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

Data and Parameters monitored

The verification team has performed the following activities to determine whether the monitoring of parameters related to the GHG emission reductions has been implemented in accordance with the monitoring plan.

- Through the on-site inspection of the monitoring system, interview with the operation staff, document review including relevant records, procedures and technical specifications, the verification team has assessed the implementation of the monitoring plan followed by the PP;
- The verification team has checked the installation of the electricity meter by onsite inspection against PPA/9/, diagram of power connection system/10/ and calibration reports/21/ by qualified third party;
- The Meter Reading Records/19/ and ETNs/20/ were checked by the team to confirm the monitoring results;
- Based on the interview with the top management and operation staff and the review of the VCS Monitoring Manual/18/, the verification team has assessed the quality assurance and quality control procedures applied by the PP.

No sampling plan was involved in the project activity.

The monitoring parameter has been carried out in accordance with the monitoring plan contained in the registered PD/3/. All parameters were monitored and determined as per the monitoring plan which is listed in below table:

Data / Parameter	EG _{facility,y}
Data unit	MWh
Description	Quantity of net electricity supplied by the project to the grid in year y
Source of data	Quantity of net electricity generation supplied by the project to the grid in year y (EG_{facility,y}) are calculated by power exported to (EG_{PJ to grid,y}) and used from the grid (EG_{grid to PJ,y}) as below: $EG_{facility,y} = EG_{PJ to grid,y} - EG_{grid to PJ,y}$ For both power exported to the grid (EG_{PJ to grid,y}) and power used from the grid (EG_{grid to PJ,y}) are all sourced from Meter Reading Records (MRRs) /19/ issued by the project owner, Electricity Transaction Notes (ETNs) /20/ issued by power grid company covering monitoring period.
Description of measurement methods and procedures to be applied	Both EG _{PJ to grid,y} and EG _{grid to PJ,y} are monitored continuously through the two-way metering equipment (Key meter) at the onsite substation.

Frequency of monitoring/recording	Continuously monitored and monthly recorded
Value monitored	146,788.50
Monitoring equipment	See table below. The monitoring meter is the key Meter, and a check meter is installed in case the key meter is malfunctioned. During this monitoring period, the key meter has operated normally. Type: Bidirectional electricity meter Accuracy class: 0.2S Serial number: 94349628 (key Meter) Calibration frequency: Once per year Date of calibration: 22/04/2021; 16/02/2022 Calibration validity: until 15/02/2023
QA/QC procedures to be applied	Cross-checked with Electricity Transaction Notes (ETNs). A check meter (S/N: 94349626) was installed in case the key meter is malfunctioned, which has been calibrated on the same dates when the key meter has been calibrated.
Purpose of the data	Used for baseline emission calculation
Calculation method	Calculated by $EG_{\text{facility},y} = EG_{\text{PJ to grid},y} - EG_{\text{grid to PJ},y}$
Comments	-

Parameters available at validation stage:

The combined grid emission factor, as shown in the table below, is checked by CCSC and found consistent with the VCS-PD/3/, which is fixed and ex-ante calculated for this crediting period.

Parameter	Description	Value	Unit	Source of data
$EF_{\text{grid,CM},y}$	Combined Margin Emission Factor of NCPG which the Project is connected to	0.8269	tCO ₂ e/MWh	VCS-PD for 2 nd crediting period /3/

Calculation of baseline GHG emissions

The verification team has performed the following activities to assess the data and calculations of GHG emission reductions achieved by the Project as per the methodology:

- Through desk review and on-site inspection on the Meter Reading Records/19/ and ETNs/20/, to verify that a complete set of data for the specified monitoring period is available.
- Information provided in the monitoring report has been cross-checked with other sources such as Meter Reading Records, Electricity Transaction Notes (ETNs).
- Review the calculations of baseline GHG emissions have been carried out in accordance with the formulae and methods described in the registered VCS-PD/3/, and the methodology/7/;
- Review emission factors, IPCC default values, GWPs and other reference values as per the registered VCS-PD/3/.

The verification team confirms that the baseline emission of the project is calculated as below:

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

Table 5 Baseline Emission Calculation

Year	EG _{facility,y}	EF _{grid,CM,y}	BE _y
	MWh	tCO ₂ e/MWh	tCO ₂ e
2021 (25/04/2021 to 31/12/2021)	64,122.32	0.8269	53,022
2022 (01/01/2022 to 31/12/2022)	82,666.18	0.8269	68,356
Total	146,788.50		121,378

The net electricity supply ($EG_{\text{facility},y}$) is calculated as:

Table 6 $EG_{\text{facility},y}$ Calculation

Period		$EG_{PJ \text{ to grid},y}$			$EG_{\text{grid to PJ},y}$			$EG_{\text{facility},y} = EG_{PJ \text{ to grid},y} - EG_{\text{grid to PJ},y}$ ($G=C-F$)
Start	End	Values from meter readings (A)	Values from Electricity Transaction Notes (ETNs) (B)	Conservative values ($C=\min[A,B]$)	Values from meter readings (D)	Values from Electricity Transaction Notes (ETNs) (E)	Conservative values ($F=\max[D,E]$)	
		MWh	MWh	MWh	MWh	MWh	MWh	MWh
25/04/2021	25/05/2021	13,075.29	13,075.29	13,075.29	40.85	40.85	40.85	13,034.44
26/05/2021	24/06/2021	7,157.54	7,157.54	7,157.54	51.24	51.24	51.24	7,106.30
25/06/2021	25/07/2021	6,277.92	6,277.92	6,277.92	60.97	60.97	60.97	6,216.95
26/07/2021	25/08/2021	5,517.41	5,517.41	5,517.41	57.47	57.47	57.47	5,459.94
26/08/2021	24/09/2021	4,763.62	4,763.62	4,763.62	53.64	53.64	53.64	4,709.98
25/09/2021	25/10/2021	6,808.91	6,808.91	6,808.91	59.60	59.60	59.60	6,749.31
26/10/2021	24/11/2021	10,384.65	10,384.65	10,384.65	43.58	43.58	43.58	10,341.07
25/11/2021	25/12/2021	9,022.64	9,022.64	9,022.64	51.59	51.59	51.59	8,971.05
26/12/2021	31/12/2021	1,551.68	1,551.68	1,551.68	18.40	18.40	18.40	1,533.28
Subtotal in 2021		/	/	/	/	/	/	64,122.32
01/01/2022	25/01/2022	3,827.74	3,827.74	3,827.74	96.86	96.86	96.86	3,730.88
26/01/2022	23/02/2022	3,553.38	3,553.38	3,553.38	125.12	125.12	125.12	3,428.26
24/02/2022	25/03/2022	9,487.09	9,487.09	9,487.09	58.24	58.24	58.24	9,428.85
26/03/2022	24/04/2022	10,839.98	10,839.98	10,839.98	33.21	33.21	33.21	10,806.77

25/04/2022	25/05/2022	9,253.81	9,253.81	9,253.81	44.57	44.57	44.57	9,209.24
26/05/2022	24/06/2022	6,473.57	6,473.57	6,473.57	51.63	51.63	51.63	6,421.94
25/06/2022	31/07/2022	8,332.57	8,332.57	8,332.57	51.23	51.23	51.23	8,281.34
01/08/2022	31/08/2022	4,725.90	4,725.90	4,725.90	66.79	66.79	66.79	4,659.11
01/09/2022	30/09/2022	6,287.08	6,287.08	6,287.08	53.96	53.96	53.96	6,233.12
01/10/2022	31/10/2022	5,241.60	5,241.60	5,241.60	76.58	76.58	76.58	5,165.02
01/11/2022	30/11/2022	5,876.07	5,876.07	5,876.07	60.54	60.54	60.54	5,815.53
01/12/2022	31/12/2022	9,566.56	9,566.56	9,566.56	80.44	80.44	80.44	9,486.12
Subtotal in 2022								82,666.18
		/						
Total		-	-	148,025.01	-	-	1,236.51	146,788.50

Calculation of project GHG emissions

The verification team has reviewed the project emission calculation as per the approved VCS-PD/3/ and the applied methodology/7/. As per the methodology and the approved VCS-PD, the project emission is 0.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

The monitoring has been carried out in accordance with the monitoring plan contained in the VCS-PD/3/.

As a result of verification of the ER calculation process, the assessment team confirmed that all the parameters required for the determination of the emission reductions have been included in the Monitoring Report/13/ and ER Calculation Spreadsheet/4/ and are consistent with the applied methodology ACM0002 version 20.0/7/ and the monitoring plan contained in the VCS-PD/3/. The parameters are complete in this monitoring period.

After verifying the reported figures with the raw data sources, it's confirmed that the values of the parameters from the raw data sources are consistent with those quoted in the ER Calculation Spreadsheet/4/ and the Monitoring Report/13/. The verification process for the same has been clearly described above in section 4.4 of the report.

4.6 Non-Permanence Risk Analysis

Not applicable as this is a renewable project.

5 VERIFICATION OPINION

China Classification Society Certification Co., Ltd. (CCSC) has performed the verification of Inner Mongolia Yihewusu Phase II 49.5 MW Wind Power Project covering the monitoring period from 25/04/2021 to 31/12/2022 within the 2nd 10-year crediting period from 25/05/2019 to 24/05/2029, on the basis of requirements set out in VCS Version 4.4/1/

The review of the project documentation and the subsequent follow-up site visits and interviews have provided CCSC sufficient evidence to determine that the project conforms with the verification criteria for projects and their GHG emission reductions or removals set out in VCS Version 4.4/1/ and has been implemented in accordance with the registered project description/3/.

In the course of the verification, One Clarification Request (CL), Zero Corrective Action Request (CAR) and Zero Forward Action Request (FAR) were raised for the project activity/13/ in relation to all relevant VCS requirements. Before the issuance of this version of report, the raised CLs and CARs were successfully closed.

The verification is based on the baseline and monitoring methodology ACM0002 version 20.0, and the Monitoring Report/13/. The project proponents are responsible for the collection, calculation and determination of the GHG data in accordance with the monitoring plan and the reporting of GHG emission reductions on the basis set out within the Monitoring Report/13/. Our verification approach was based on the requirements as defined under the applicable VCS Standard Version 4.4/1/. Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. The verification can confirm that:

- The monitoring complies with the monitoring plan in the Monitoring Report/13/;
 - The Monitoring Report/13/ and other supporting documents provided are complete and verifiable and in accordance with the applicable VCS Standard Version 4.4/1/;
 - The monitoring equipment being essential for monitoring and determination of emission reduction runs reliably and is calibrated appropriately;
 - The monitoring system is in place and generates GHG emission reductions data;
 - The GHG emission reductions are calculated without material misstatements.
- It is CCSC's responsibility to provide an independent verification statement on the reported GHG emission reductions for the project. Based on an understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these, CCSC planned and performed our work to obtain the information and explanations that we considered necessary to provide reasonable assurance that reported GHG emission reductions are fairly stated.
 - CCSC does not assume any responsibility towards the issuance and utilization of the VCU's hereby verified and certified. Request for issuance of VCU's shall be made by the project proponent to an approved VCS Program Registry based on the requirements set out under the most recent version of the VCS Program Guidelines clause on VCS Registration.
 - The verification of reported emission reductions is based on the information made available to CCSC and the engagement conditions detailed in this report. CCSC cannot be held liable by any party for decisions made or not made based on this report.
 - In conclusion, it is CCSC's opinion that the project "Inner Mongolia Yihewusu Phase II 49.5 MW Wind Power Project", in the Monitoring Report/13/ meets all relevant requirements for VCS activities and all relevant host Party criteria and in conformity with the registered VCS-PD/3/. And, CCSC confirms the following statement:

Verification period: From 25/04/2021 to 31/12/2022

Verified GHG emission reductions and removals in the above verification period, broken down by calendar year:

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
2021 (25/04/2021 to 31/12/2021)	53,022	0.00	0.00	53,022
2022 (01/01/2022 to 31/12/2022)	68,356	0.00	0.00	68,356
Total	121,378	0.00	0.00	121,378

And the comparison between estimated ex-ante GHG emission reductions and removals and the achieved emission reductions and removals for this monitoring period is reported as below:

Year	Ex-ante emissions reductions / removals	Achieved emissions reductions / removals	Percent difference	Justification for the difference
2021 (25/04/2021 to 31/12/2021)	57,824	53,022	-8.30%	Annual estimated emission reductions are 84,086 tCO ₂ e Total days during this monitoring period are 616 days
2022 (01/01/2022 to 31/12/2022)	84,086	68,356	-18.71%	Calculated estimation of the emission reductions: $84,086 \times 616 / 365 = 141,910$ tCO ₂ e The actual emission reductions achieved during this monitoring period are 14.47% lower than the

Total	141,910	121,378	-14.47%	estimated ex-ante amount, resulting from lower wind power resources during this monitoring period.
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APPENDIX A: ABBREVIATIONS

Abbreviations	Full texts
<i>BM</i>	Build Margin
<i>CAR</i>	Corrective Action Request
<i>CCSC</i>	China Classification Society Certification Co., Ltd.
<i>CCER</i>	China Certified Emission Rrductions
<i>CDM</i>	Clean Development Mechanism
<i>CL</i>	Clarification Request
<i>CM</i>	Combined Margin
<i>CO₂</i>	Carbon dioxide
<i>CO₂e</i>	Carbon dioxide equivalent
<i>DNA</i>	Designated National Authority
<i>CDM-EB</i>	CDM Executive Board
<i>EF</i>	Emission Factor
<i>EIA</i>	Environmental Impact Assessment
<i>ETN</i>	Electronic Transaction Notes
<i>FAR</i>	Forward Action Request
<i>GHG(s)</i>	Greenhouse gas(es)
<i>IPCC</i>	Intergovernmental Panel on Climate Change
<i>MEE</i>	Ministry of Ecology and Environment of the People's Republic of China
<i>MP</i>	Monitoring Plan
<i>NCPG</i>	North China Power Grid
<i>OM</i>	Operating Margin
<i>PD</i>	Project Description
<i>PP</i>	Project Proponent

<i>PPA</i>	Power Purchase Agreement
<i>PRC</i>	post-registration change
<i>UNFCCC</i>	United Nations Framework Convention on Climate Change
<i>VCS</i>	Verified Carbon Standard
<i>VCU</i>	Voluntary Carbon Unit
<i>VVB</i>	Validation / Verification Body

APPENDIX B: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWERS

CCS 认证公司
Appendix 9

CERTIFICATE OF COMPETENCE
Date of issue: 04/01/2023

Mr. Li Xingtong

Has been qualified in accordance with *CDM Personnel Competence Requirements and Professional Competence Evaluation Instructions (CDMI0301)* as

■ CDM/VCS validator for Technical Area(s):
TA1.1/TA1.2/TA3.1/TA9.2/TA13.1, SS14 for VCS

■ CDM/VCS verifier for Technical Area(s):
TA1.1/TA1.2/TA3.1/TA9.2/TA13.1, SS14 for VCS

☐ Technical expert for Technical Area(s): _____


Tian Wei
CCSC General Manager

CCS 认证公司
Appendix 9

CERTIFICATE OF COMPETENCE
Date of issue: 04/01/2023

Mr. Sun Chunlin

Has been qualified in accordance with *CDM Personnel Competence Requirements and Professional Competence Evaluation Instructions (CDMI0301)* as

■ CDM validator for Technical Area(s): TA1.2

■ CDM verifier for Technical Area(s): TA1.2

☐ Technical expert for Technical Area(s): _____


Tian Wei
CCSC General Manager

CCS 认证公司
Appendix 9

CERTIFICATE OF COMPETENCE
Date of issue: 04/01/2023

Ms. Liu Ruyun

Has been qualified in accordance with *CDM Personnel Competence Requirements and Professional Competence Evaluation Instructions (CDMI0301)* as

■ CDM/VCS validator for Technical Area(s):
TA1.2/TA13.2, SS14 for VCS

■ CDM/VCS verifier for Technical Area(s):
TA1.2/TA13.2, SS14 for VCS

☐ Technical expert for Technical Area(s): _____


Tian Wei
CCSC General Manager

APPENDIX C: DOCUMENTS REVIEWED OR REFERENCED

- /1/ VCS Standard Version 4.4
- /2/ Registered CDM-PDD Version 4, dated 19/03/2013; Version 5, 22/09/2022
- /3/ Approved VCS-PD Version 01 (for Renewal of Crediting Period), dated 01/06/2021)
- /4/ ER calculation spreadsheet Version 2, dated 31/03/2023
- /5/ VCS RCP Validation report Version 1.1, dated 02/06/2021
- /6/ Previous VCS verification reports, dated 20/01/2022
- /7/ ACM0002.Version 20.0- "Grid-connected electricity generation from renewable sources"
- /8/ CDM Validation Report Version 01, dated 23/09/2020
- /9/ Signed Power Purchase Agreement (PPA) with grid company
- /10/ Diagram of the power connection system
- /11/ Completion Acceptance Opinion for Environmental Protection issued by Department of Environmental Protection in Ordos City (Ehuanjian(2010) No.1491)
- /12/ Employee Roster
- /13/ Monitoring report version 03, dated 21/04/2023
- /14/ Form of Completion Acceptance Record
- /15/ Statement on Non-Double Counting of Emission Reductions
- /16/ CDM Validation Opinion on PRC Version 01, dated 20/03/2013
- /17/ Arrangement Plan for Project Wind Turbines
- /18/ VCS Monitoring Manual
- /19/ Meter Reading Records
- /20/ Electronic Transaction Notes
- /21/ Calibration certificates of meters covering the whole monitoring period issued by Electric energy Measuring and Testing centre of Inner Mongolia Electric Power Science Research Institute
- /22/ Maintenance Manual for the wind turbines

/23/ PP's business license

/24/ Training Records

/25/ Nameplate of wind turbines

/26/ Notebook placed near the notice board of the local village for the purpose of collecting local comments

APPENDIX D: RESOLUTION OF CLARIFICATION REQUESTS AND CORRECTIVE ACTION REQUESTS AND FORWARD ACTION REQUESTS

Table 1. CL from this validation and verification

CL ID	CL-1	Section no.	2.2	Date: 27/03/2023
Description of CL				
PP is required to supplement the following documents:				
1. PP's business license				
2. Accreditation certificates for Electric energy Measuring and Testing center of Inner Mongolia Electric Power Science Research Institute issued by Quality and Technical Supervision Bureau of Inner Mongolia				
Project proponent response				Date: 10/04/2023
Provided the required documents.				
Documentation provided by Project proponent				
1. PP's business license				
2. Accreditation certificates for Electric energy Measuring and Testing center of Inner Mongolia Electric Power Science Research Institute issued by Quality and Technical Supervision Bureau of Inner Mongolia				
VVB assessment				Date: 10/04/2023
All the documents provided by the PP have been received and confirmed by CCSC, therefore CL-1 is closed.				

Table 2. CAR from this validation and verification

CAR ID	/	Section no.	/	Date: /
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Description of CAR	
Project proponent response	Date:
Documentation provided by Project proponent	
VVB assessment	Date:

Table 3. FAR from this validation and verification

FAR ID	FAR-1	Section no.		Date:
Description of FAR				
/				
Project proponent response				Date:
Documentation provided by project proponent				
VVB assessment				Date: