



**Verified Carbon
Standard**

INNER MONGOLIA WUJIER PHASE I WIND POWER PROJECT

Document Prepared by

China Carbon N.V

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1 PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

The Inner Mongolia Wujier Phase I Wind Power Project (hereafter referred to as the “Project”) developed by Inner Mongolia Xinjin Wind Power Co., Ltd. is a grid-connected renewable energy project in Ordos city, Inner Mongolia, in the People’s Republic of China.

The Project involves the installation of 33 wind turbines, each of which has a rated output of 1500kW, providing a total installed capacity of 49.5 MW, with a predicted power supplied to the grid of 128,821MWh per annum.

The purpose of the Project is to utilize a wind power facility to generate zero greenhouse gas (GHG) emissions electricity for the North China Power Grid (NCPG) thereby displacing electricity that is relatively carbon intensive. The project is therefore expected to reduce emissions of GHG by an estimated 106,522 tCO_{2e} per year during the first crediting period by displacing electricity from the Grid.

This project has been registered as a CDM project on 04/07/2010, and the registration number is #3387. The project has been registered as a VCS project with registration number of #1947.

This VCS monitoring period covered the time from 04/07/2020 to 24/04/2021 and the emission reductions in this monitoring period are 90,295tCO_{2e}.

1.2 Sectoral Scope and Project Type

This category would fall within sectoral scope 1: energy industries (Renewable sources).

Project type: wind power project.

The project is not a grouped project.

1.3 Project Proponent

Organization name	Inner Mongolia Xinjin Wind Power Co., Ltd.
Contact person	Li Qiang
Title	Director
Address	Shengli South Street, Xini Town, Hangjin County, Ordos City, Inner Mongolia, China.

Telephone	+86 134 8882 3841
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1.4 Other Entities Involved in the Project

Organization name	China Carbon N.V
Role in the Project	Buyer
Contact person	Yiyu Li
Title	Manager
Address	Zuidplein 138, 1077 XV Amsterdam
Telephone	+86 13910966481
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1.5 Project Start Date

16/09/2010, which is the day when the project began to generate emission reductions..

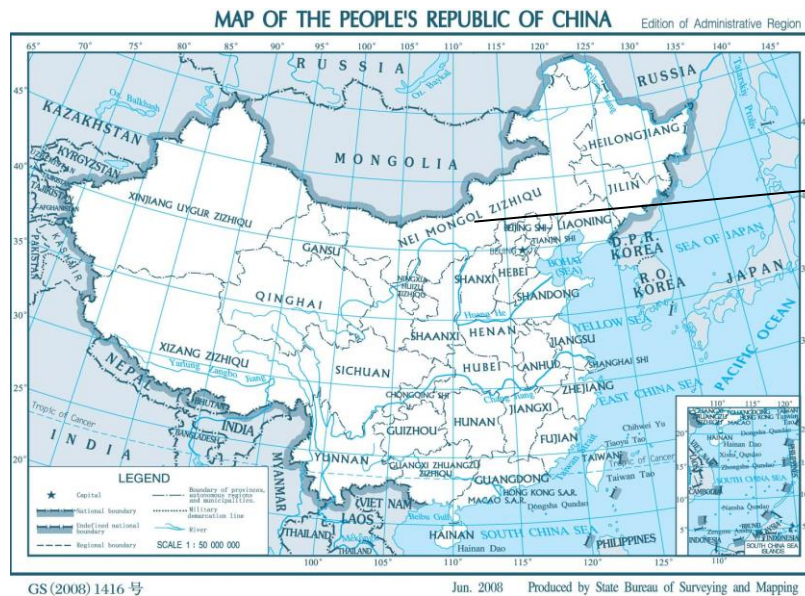
1.6 Project Crediting Period

As described in the PD, the first crediting period of the Project was '04/07/2010 to 03/07/2020', totally 10 years; the second credit period was set as '04/07/2020 to 03/07/2030' totally of 10 years.

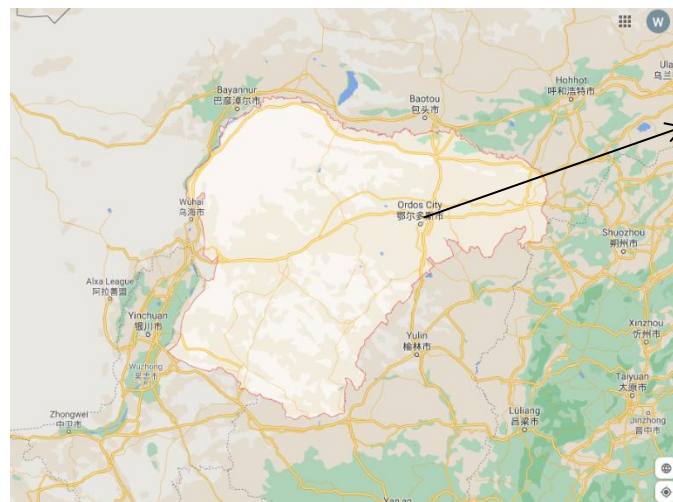
In this Monitoring Report, the monitoring period is from 04/07/2020 to 24/04/2021.

1.7 Project Location

The project is located in the Hangjin County, Ordos City, Inner Mongolia, People's Republic of China (P.R. China). The exact location of the Project center is defined using geographic coordinates obtained with a Global Positioning System (GPS) receiver: E 107°21'39" Longitude, N 40°11'40" Latitude. These geographic coordinates are for the centre of the wind farm.



Inner Mongolia



The project site in Ordos city

1.8 Title and Reference of Methodology

The approved consolidated baseline and monitoring methodology ACM0002: "Consolidated methodology for grid-connected electricity generation from renewable sources", Version 20, in effect as of EB47;

The approved "Tool to calculate the emission factor for an electricity system", Version 7, in effect as of EB 100 are applied to the Project activity.

1.9 Participation under other GHG Programs

This project has been registered as a CDM project on 04/07/2010, the registration number is #3387. And the project has been registered as a VCS project on 29/10/2019 with registration number #1947.

The emission reductions from 04/07/2020 to 24/04/2021 will only participate under the VCS program. The project has not and will not be counted or issued under CDM or any other kind of credit.

Monitoring period	Program	Status	Note
04/07/2010 ~ 20/11/2012	CDM	Issued	-
21/11/2012 ~ 20/01/2013	CDM	Issued	-
21/01/2013 ~ 20/12/2015	CDM	Issued	-
21/12/2015 ~ 20/12/2019	VCS	Issued	-
21/12/2019 ~ 03/07/2020	VCS	Issued	-
04/07/2020 ~ 24/04/2021	VCS	In progress	-

1.10 Other Forms of Credit

Emission Trading Programs and Other Binding Limit:

The project has not been registered nor traded in any other emission trading program except VCS and CDM program as described in section 1.9 above.

Other Forms of Environmental Credit:

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 Inner Mongolia are covered by China ETS, and also other seven industries will be included in the future.

However, as per the regulation, the project activity is not covered by the mandatory emission control scheme and there is no emission cap enforced for the project owner. In addition, the regulation realized 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 the local grid.

Besides, the project has not sought and will not seek any other kind of GHG-related environmental credit, including renewable energy certificates.

Also, PP has provided a “No Double Counting Statement” in which confirms that the PP has not issued and will not issue the GHG emission reductions generated during this monitoring period in any other GHG programmes.

1.11 Sustainable Development Contributions

Table 1: Sustainable Development Contributions

Row number	SDG Target	SDG Indicator	Net Impact on SDG Indicator	Current Project Contributions	Contributions Over Project Lifetime
1)	7.2	7.2.1 Renewable energy share in the total final energy consumption	Implemented activities to increase	The power generated by the project in this monitoring period is 109,197 MWh.	The contributions over the project lifetime are the same as the current project contribution, providing renewable energy..
2)	13.0	Tonnes of greenhouse gas emissions avoided or removed	Implemented activities to increase	The GHG emission reduction achieved by the project in this monitoring period is 90,295tCO ₂ e.	The contributions over the project lifetime are the same as the current project contribution, achieving GHG emission reductions.

2 SAFEGUARDS

2.1 No Net Harm

The project uses wind to generate electricity. It is environmentally friendly and there is no harm to the environment. An Environmental Impact Assessment (EIA) for the project was completed in 2008 by Inner Mongolia Institute of Electricity Power Survey and Design. The EIA was approved by Inner Mongolia Environmental Protection Bureau on 07/05/2008. A summary of the EIA is presented below.

There is no transboundary impact related to the Project, and there is no requisite resettlement or relocation of population, buildings, or public services. Therefore, social and environmental influences are considered partial, short-term, and reversible. Where impacts of the project were identified, mitigation measures were suggested and defined. The EIA highlights the following with regards to the Project, as shown in the following discussion.

Noise

The noise pollution mainly comes from the manual drills and cement mixers during the construction period, and aerodynamic interaction between the wind and turbine blades during operation. The noise levels will be naturally attenuated by ambient conditions. It is stated in the EIA that the project location is far away from the nearest resident area. Therefore, the noise of the turbines will not affect the local residents.

Solid Waste

Most of the waste produced during the construction shall be landfilled or disposed of in an appropriate solid waste disposal site. The household waste will be collected and sent to the local refuse dump.

Wastewater and sewage

The total amount of waste water and sewage from the operation of the project will be very small. The wastewater and sewage from the construction and operational periods will be treated and reused for plant irrigation, which indicates no impact on the surrounding environment.

Ecological impact

The wind farm is in an area of natural grassland. During the construction period, some vegetation will be affected, but this will be restored within a short period. The installation height of the turbines is lower than 100m, so there is not expected to be any significant effect on birds' migration. In conclusion, the construction work of this project is not expected to affect the local ecological environment.

With mitigation controls planned as part of the Project construction and EIA process, and the contribution made by the project to sustainable development for the local and national area, the Project is expected to have an overall positive impact on the local and global environments. Mitigation measures will ensure that there are no significant residual impacts associated with the Project.

2.2 Local Stakeholder Consultation

The stakeholder consultation for the Project activity took place during May 2009.

The consultation invited local stakeholders to submit comments on the Project activity by filling in a questionnaire sent out by the Project Developer. The Project Developer put the notice at the gate of the Hangjin County government office which made the local stakeholders aware that the project developer would undertake a consultation on the Project.

The notice included a technical description of the Project as well as a brief explanation of how the project activity mitigates climate change through the Clean Development Mechanism of the Kyoto Protocol, and brings other sustainable development benefits. The questionnaires were sent out around the project site. The questions asked were as follows:

- What impacts do you think the CDM Project activity will have on the local environment?
- What impacts do you think the CDM Project activity will have on employment in the local area?
- What impacts do you think the CDM Project activity will have on your livelihood?
- What impacts do you think the CDM Project activity will have on social welfare in the local area?
- What would be the overall effects of the construction and operation of the CDM Project?
- What is your attitude towards the construction of the CDM Project?

34 questionnaires were sent to the stakeholders by the Project Developer. The stakeholders are all local residents including governmental officials (4 people), local residents (27 people) and related employees (3 people).

A full list of stakeholders consulted is available from the Project Developer. Conclusion The survey received 100% participation (34 questionnaires returned out of 34). The survey shows the stakeholders believe that the CDM project activity will have positive impacts on the local ecological, environmental, employment and social life. All stakeholders expressed their support for the project.

During the operation of the project, the project participates welcomed any kind of stakeholders communication by means of:

Appointed working staff take charge of the stakeholder communicating via email/phone calls that published on the company website.

A bulletin board is placed at the project site for sharing the project operation information and also collecting feedback from the Stakeholders. This information is fed back to the project proponent by the appointed working staff for a timely response.

The project participates organize a meeting with the local stakeholders to collect their comments and suggestions yearly. The stakeholders meeting during this monitoring period was completed on 20/04/2021.

In line with VCS requirements all the processed have been implemented by the project participate to receive comments from local stakeholders and deal with the negative concerns if any. No negative comments were received during the monitoring period.

2.3 AFOLU-Specific Safeguards

It is not applicable because this is a non-AFOLU project.

3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

During the monitoring period (from 04/07/2020 to 24/04/2021), the monitoring activities were conducted strictly in accordance with the monitoring plan in the registered VCS PD. The project has operated smoothly without any accidental or emergency events that might impact the accuracy and/or implementation of monitoring activities during the monitoring period. No abnormal circumstance occurred during this monitoring period.

The Project installed 33 wind turbines, each of which has a rated output of 1500kW, providing a total installed capacity of 49.5 MW. Wind turbines and their corresponding generators employed by the Project were provided by Xinjiang Goldwind Science & Technology Co., Ltd. Please see Table 2 below for key technical specifications.

Table 2 Main Technical Parameters of the wind turbines

Wind Turbines Technical Parameters	
Parameter	Value
Type	Jinfeng 82/1500
No. of Vane	3
Rated Power(kW)	1500
Rotor Diameter(m)	82
Cut-in speed (m/s)	3
Cut-in speed (m/s)	22
Rated speeds (m/s)	10.3
Hub height (m)	70
Manufacturer	Xinjiang Goldwind Science & Technology Co., Ltd.

3.2 Deviations

3.2.1. Methodology Deviations

There is no methodology description deviation in this monitoring period.

3.2.1. Project Description Deviations

There is no project description deviation in this monitoring period. There were no project description deviations in previous monitoring reports.

3.3 Grouped Projects

This is not a grouped project.

4 DATA AND PARAMETERS

4.1 Data and Parameters Available at Validation

Data / Parameter	EF _y
Data unit	tCO ₂ e/MWh
Description	Combined Margin Emission Factor for the NCPG
Source of data	Baseline Emission Factors for Power Grids in China, sourced from http://mee.gov.cn
Value applied	0.8269
Justification of choice of data or description of measurement methods and procedures applied	Data or description of measurement methods and procedures applied Calculated according to the updated Baseline Emission Factors for Power Grids in China based on ACM0002 and EB guidance
Purpose of Data	Baseline emission calculations.
Comments	The emission factor of the Project was ex-ante determined and is fixed during the first crediting period. All data and parameters had been determined at registration.

4.2 Data and Parameters Monitored

Data / Parameter	$EG_{facility,y}$
Data unit	MWh/yr
Description	Quantity of net electricity generation supplied by the project to the grid in year y
Source of data	Electricity Meter
Description of measurement methods and procedures to be applied	Both the electricity exported to the grid by the project and the power imported from the grid will be monitored continuously through the two-way metering equipment (Key meter) at the onsite substation.
Frequency of monitoring/recording	Measuring continuously/Reading monthly/Recording monthly
Value monitored	109,197
Monitoring equipment	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. The information about the meters:		
QA/QC procedures to be applied	Type Bidirectional electricity meter		
	Meters	S/N:96407521	S/N:96281616
		Main Meter	Check meter
	Accuracy class	0.2S	0.2S
	Calibration Date	13/05/2020	08/09/2020
	Expired date	12/05/2021	07/09/2021
	Calibration frequency	Once per year	
	Calibration entity	Electric energy Measuring and Testing canter of Inner Mongolia Electric Power Science Research	
	Purpose of the data	Cross check measurement results with sales receipts.	
Calculation method	Baseline emission calculations.		
Comments	It is the difference between the monitored electricity exported to the Grid and monitored electricity imported from the Grid		

4.3 Monitoring Plan

1. Monitoring system organization

Roles and responsibilities will be defined for relevant staff involved in project monitoring, and the prospect of nominating a project Manager will be considered. If appointed, the Project Manager will have the overall responsibility for the monitoring system on this project. All staff involved in the collection of data and records will be coordinated by him.

2. Staff training

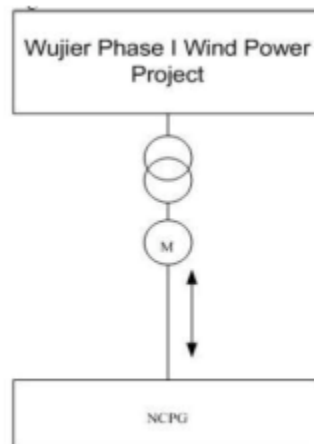
Training is conducted on-site to ensure that staff can perform their designated tasks to high standards. This will include CDM-specific training to warrant that they understand the importance of complete and accurate data and records for CDM monitoring.

3. Maintenance and calibration of monitoring equipment

The electricity meter(s) measuring power output to the grid will be calibrated in line with the relevant and applicable standard. This will ensure that the accuracy of the meters will be within $\pm 0.5\%$.

4. Data collection and record-keeping arrangements

The meter installed at the high voltage side of the on-site transformer is used to obtain the amount of electricity effectively supplied to the Grid and the amount of imported electricity from the Grid. The line loss from the high voltage side of the on-site transformer to the substation of Grid Company has been deducted in the calculation of emission reductions accordingly.



All relevant data will be measured and collected. All data required for verification and issuance will be backed-up and retained for at least two years after the end of the crediting period or the last issuance of the Project, whichever occurs later.

5. Data Quality Control and Quality Assurance

All data collected on-site will be checked internally. The electricity meter is calibrated according to national standard.

5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

5.1 Baseline Emissions

According to ACM0002 and the registered VCS PD of the Project, The baseline emission BE_y during the monitoring period results from:

$$BE_y = EG_{facility,y} \times EF_y$$

$$EG_{facility,y} = EG_{export,y} - EG_{import,y}$$

Where:

BE_y is the baseline emissions of the Project;

EF_y is the combined margin baseline emission factor of the NCPG;

EG_{facility,y} is Quantity of net electricity generation supplied by the project to the grid in year y;

EG_{export,y} is the quantity of electricity exported to the grid by the Project;

EG_{import,y} is the quantity of electricity imported from the grid by the Project. The monthly electricity data is listed in following Table 3:

Table 3. Calculation of the net electricity supplied to the grid by the Project

Vintage	EG _{facility,y} (MWh)	EF _y (tCO ₂ e/MWh)	BE _y (tCO ₂)
04/07/2020-24/12/2020	54,017	0.8269	44,667
25/12/2020-24/04/2021	55,180	0.8269	45,628
Total	109,197		90,295

5.2 Project Emissions

Project emission (PE_y) is 0 tCO₂e as per the registered VCS PD.

5.3 Leakage

No leakage emissions are considered as per the applied methodology ACM0002 and the registered VCS PD.

5.4 Net GHG Emission Reductions and Removals

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)
04/07/2020-24/12/2020	44,667	0	0	44,667
25/12/2020-24/04/2021	45,628	0	0	45,628
Total	90,295	0	0	90,295

The estimated annual emission reductions are 106,522tCO₂e as per PD. The monitoring period covers 295 days. The ex-ante emission reductions during this monitoring period are $106,522/365 \times 295 = 86,093\text{tCO}_2\text{e}$. The actual emission reductions in this period are 90,295tCO₂e, which are =4.88% more than the estimated value. This would not influence the additionality of the project.

According to the registered PD, the IRR is still less than the benchmark of 8% when the net exported electricity increases by 4.88%. Only when the electricity generation increase by 16.5% could the IRR reach the benchmark. The reasons for the electricity increase are as follows: First, in this monitoring period, the wind volume is larger than the estimation in project FSR. Second, the wind turbine generators operate at good status.