



MONITORING REPORT FORM (F-CDM-MR)
Version 02.0

MONITORING REPORT

Title of the project activity	Gansu Guazhou Ganhekou No.8 Wind Farm Project
Reference number of the project activity	4138
Version number of the monitoring report	01
Completion date of the monitoring report	27/06/2012
Registration date of the project activity	19/02/2011
Monitoring period number and duration of this monitoring period	Monitoring period Number: 01 Monitoring period Dates: 19 /02 /2011 – 31/05/2012 (first and last days included)
Project participant(s)	Gansu Guazhou Xiehe Wind Power Co., Ltd.
Host Party(ies)	China
Sectoral scope(s) and applied methodology(ies)	Approved consolidated baseline and monitoring methodology ACM0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” (Version 11).
Estimated amount of GHG emission reductions or net anthropogenic GHG removals by sinks for this monitoring period in the registered PDD	411,927 tCO₂e
Actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved in this monitoring period	280,671 t CO₂e

**SECTION A. Description of project activity****A.1. Purpose and general description of project activity**

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Gansu Guazhou Ganhekou No.8 Wind Farm Project (hereinafter referred as the proposed project) is developed by Gansu Guazhou Xiehe Wind Power Co., Ltd.. It is located in Guazhou County, Jiuquan City, Gansu Province, P. R. of China. The objective of the Project is to utilize wind power to generate electricity.

The proposed project will install 134 wind turbines with each capacity of 1500 kW, and total up an installation capacity of 201 MW. The estimated electricity generated by the project activity is 443,278 MWh per year, and the expected volume of emission reduction is 411,927 tCO₂e per year.

The project helps reduce GHG emissions generated from the high-growth, coal-dominated power generation. And also, it contributes to sustainable development in the region by reducing pollution, creating employment opportunities, promoting the local tourism industry and improving the living standard of local people. At a larger scale, the project assists China in stimulating and accelerating the commercialization of grid-connected renewable energy technologies and markets.

The Project commenced construction on 11/04/2010. The first turbine was commissioned on 11/12/2010, And all the 134 sets of turbine have been put into operation gradually till 08/03/2011. The expected technical lifetime of the Project is 20 years as stated in the registered PDD.

This Monitoring Report is for the first phase of monitoring period, which is from 19/02/20011-31/05/2012. The total emission reduction achieved in this monitoring period is 280,671 tCO₂e.

A.2. Location of project activity

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The project is located in Guazhou County, Jiuquan City, Gansu Province, P.R.of China. The geographical coordinates of the proposed project is between the east longitude 95°17'00"~95°20'30"E and the north latitude 40°36'16"~40°40'29"N. The center geographical coordinates of the project are east longitude 95°18'45"and north latitude 40°38'23".

A.3. Parties and project participant(s)

Party involved ((host) indicates a host Party)	Private and/or public entity(ies) project participants (as applicable)	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
People's Republic of China (host)	Gansu Guazhou Xiehe Wind Power Co., Ltd.	No
		No

A.4. Reference of applied methodology

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The proposed project will use the approved consolidated baseline and monitoring methodology ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" (Version 11).

The methodology also refers to the latest approved versions of the following tools:

- Tool to calculate the emission factor for an electricity system (Version 02);



- Tool for the demonstration and assessment of additionality (Version 05.2).

For more information regarding the methodology and the tools as well as their consideration by the Executive Board, please refer to the web site:

<http://cdm.unfccc.int/methodologies/PAmethodologies/approved.html>

A.5. Crediting period of project activity

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A renewable crediting period is chosen. There is no post-registration change to the start date of the crediting period. The first crediting period of the project activity is from 19/02/2011 to 18/02/2018.

SECTION B. Implementation of project activity

B.1. Description of implemented registered project activity

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The Project commenced construction on 11/04/2010. The first turbine was commissioned on 11/12/2010, And all the 134 sets of turbine have been put into operation gradually till 08/03/2011.

The project implementation follows monitoring plan in the registered PDD.

B.2. Post registration changes

B.2.1. Temporary deviations from registered monitoring plan or applied methodology

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There is no deviation request proposed for the current monitoring period.

B.2.2. Corrections

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There is no corrections request proposed for the current monitoring period.

B.2.3. Permanent changes from registered monitoring plan or applied methodology

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There is no permanent change from registered monitoring plan or applied methodology request proposed for the current monitoring period.

B.2.4. Changes to project design of registered project activity

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There is no change to project design of registered project activity request proposed for the current monitoring period.

B.2.5. Changes to start date of crediting period

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There is no change to start date of crediting period request proposed for the current monitoring period.

B.2.6. Types of changes specific to afforestation or reforestation project activity

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There is no changes specific to afforestation or reforestation request proposed for the current monitoring period.

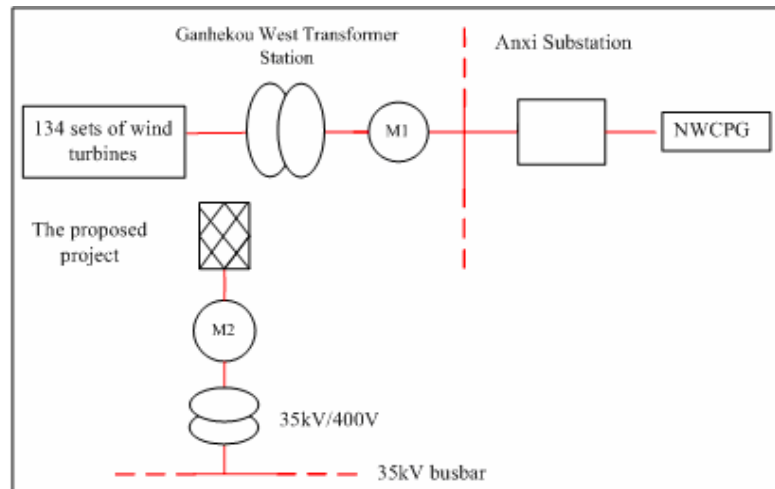
SECTION C. Description of monitoring system

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Monitoring System

The net electricity generation of the Ganzhou Ganhekou No.8 Wind Farm project is monitored through the main metering equipment installed at the Ganhekou West Transformer Substation, recording exports to the

grid (supply) and imports from the grid (consumption). Net generation supplied is calculated as exports minus imports. The backup meter is also installed at the same substation. The accuracy of the meters is 0.2s.

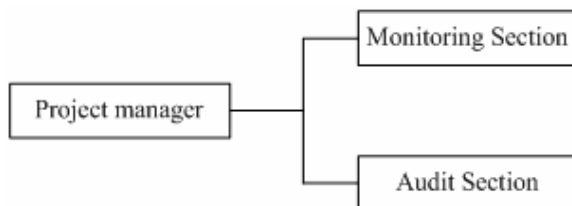


Data Collection Procedures

- $EG_{GEN,y}$ and $EG_{CON,y}$ are continuously measured and monthly recorded by Monitoring meter.
- As per the regulation of the grid company, the designated personnel from Grid Company and the project owner record meter reading at 00:00 of last day of each month on Monthly Reading Records.
- Based on the Monthly Reading Records, the grid company issue electricity transaction.
- wind farm carries out an internal audit on and reports the readings to the DOE before the verification is requested.

Organizational structure

The project owner will take the responsibility for the monitoring plan implementation. A CDM working team is established which consists of project manager, monitoring section, audit section. The project manager is responsible for the implementation and monitoring of the monitoring activity. There are 2 departments organized for monitoring section and audit section. Monitoring section is to monitor, collect and archive the data according to the Monitoring and Management Manual, while the audit section is to audit the work of the monitoring section and execute the QC/QA procedures according to the Monitoring and Management Manual. The monitoring system flowchart of this project is shown in following figure.



Roles and responsibilities

The Project manager supervises the whole monitoring activities and management. And all the monitored data was recorded by Reporting manager and checked by QA & QC manager. The QA & QC manager is also duty on maintenance of the meters.

Emergency procedures



A main meter and a back-up meter are installed at Ganhekou West 220 kV Transformer Substation to monitor electricity delivered to Northeast China Grid. The back-up meter will be used for measurement if the main meter fails to function in a normal or satisfactory manner.

SECTION D. Data and parameters

D.1. Data and parameters fixed ex ante or at renewal of crediting period

Data/Parameter	EF
Unit	tCO ₂ /MWh
Description	Emission factor which is ex-anted according to the applied methodology.
Source of data	The baseline emission factor $EF_{grid,CM,y}$ of NWCPG is calculated as the weighted average of the Operating Margin emission factor ($EF_{grid,OM,y}$) and the Build Margin emission factor ($EF_{grid,BM,y}$), where the weight of Operating Margin, ω_{OM} is 0.75 and Build Margin, ω_{BM} is 0.25 by default.
Value(s) applied	0.92928
Purpose of data	The data is used for the baseline emission calculation.
Additional comment	The baseline emission factor was determined ex ante and will be used throughout the first crediting period.

**D.2. Data and parameters monitored**

Data/Parameter	EG _{export,y}					
Unit	MWh					
Description	Electricity exported to grid by the proposed project through the main line in year y.					
Measured/Calculated /Default	Continuously measured and monthly recording.					
Source of data	Measured by meter.					
Value(s) of monitored parameter	304161.464					
Monitoring equipment	Meters	Serial No.	Accuracy class	Calibration date	Validity	Calibration frequency
	M1	57036858	0.2s	21/12/2011	Yes	annually
	M2	57036859	0.2s	21/12/2011	Yes	annually
Measuring/Reading/ Recording frequency	Continuously measurement and monthly recording					
Calculation method (if applicable)	NA					
QA/QC procedures	The electricity supplied to the grid is monitored and recorded and the project operator is responsible for recording this set of data. Data will be archived for 2 years following the end of the last crediting period by means of electronic and paper backup. Receipts from electricity sales are obtained for double check. The calibration frequency is once a year.					
Purpose of data	Baseline emission calculation					
Additional comment	-					



Data/Parameter	EG _{import,y}						
Unit	MWh						
Description	Electricity imported from the grid to the project through the main line in year y.						
Measured/Calculated /Default	Continuously measured and monthly recording.						
Source of data	Measured by meter.						
Value(s) of monitored parameter	2130.48						
Monitoring equipment	Meters		Serial No.	Accuracy class	Calibration date	Validity	Calibration frequency
	M1		57036858	0.2s	21/12/2011	Yes	annually
	M2		57036859	0.2s	21/12/2011	Yes	annually
Measuring/Reading/ Recording frequency	Continuously measurement and monthly recording						
Calculation method (if applicable)	Not applicable						
QA/QC procedures	The measurement will be in compliance with the national guidelines and requirements of the grid company for accuracy and reliability. The calibration will be carried out according to relevant national standards and regulations by authorized organization.						
Purpose of data	Baseline emission calculation						
Additional comment	-						



Data/Parameter	EG _{auxiliary line,y}
Unit	MWh
Description	Electricity delivered to the project through the auxiliary line in year y.
Measured/Calculated/Default	Continuously measured at the spare 10kV agriculture line and monthly recording.
Source of data	Measured by meter.
Value(s) of monitored parameter	0
Monitoring equipment	NA
Measuring/Reading/Recording frequency	Continuously measurement and monthly recording
Calculation method (if applicable)	Not applicable
QA/QC procedures	The measurement will be in compliance with the national guidelines and requirements of the grid company for accuracy and reliability. The calibration will be carried out according to relevant national standards and regulations by authorized organization.
Purpose of data	Baseline emission calculation
Additional comment	-



Data/Parameter	$EG_{fancility, y}$					
Unit	MWh					
Description	Quantity of net electricity generation supplied to the Grid by the project activity in year y.					
Measured/Calculated /Default	Measured by $EG_{export, y}$ minus $EG_{import, y}$ minus $EG_{auxiliary\ line, y}$					
Source of data	Measured by meter.					
Value(s) of monitored parameter	302030.984					
Monitoring equipment	Meters	Serial No.	Accuracy class	Calibration date	Due Date	Calibration frequency
	M1	57036858	0.2s	21/12/2011	Yes	annually
	M2	57036859	0.2s	21/12/2011	Yes	annually
Measuring/Reading/ Recording frequency	Continuously measurement and monthly recording					
Calculation method (if applicable)	Not applicable					
QA/QC procedures	The metering equipments at the project site will be calibrated by a qualified Meter Calibration Organization according to the management standard. Power imported from the grid will be double checked according to electricity sales receipts. The accuracy of the metering equipments is not lower 0.5s.					
Purpose of data	Baseline emission calculation					
Additional comment	-					

D.3. Implementation of sampling plan

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The parameters monitored described in section D.2 above are not involved the sampling approach.

SECTION E. Calculation of emission reductions or GHG removals by sinks

E.1. Calculation of baseline emissions or baseline net GHG removals by sinks

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The baseline emission BE_y (tCO₂) during the monitoring period results from:

$$BE_y = EG_{PJ, y} \times EF_{grid, CM, y} = (EG_{export, y} - EG_{import, y} - EG_{auxiliary\ line, y}) \times EF_{grid, CM, y}$$

Where:



$EG_{export,y}$ - Electricity supplied by the project activity to the grid in year y (MWh)..

$EG_{import,y}$ - Electricity imported from the grid by the proposed project during year y (MWh).

$EG_{auxiliary\ line,y}$ - Electricity delivered to the project through the auxiliary line in year y. (MWh).

$EG_{facility,y}$ - Quantity of net electricity generation supplied to the Grid by the project activity in year y (MWh).

Electricity supplied to the NCPG by the Project

Monitoring period	Electricity supplied to the grid ($EG_{export,y}$) unit: MWh	Electricity imported from the grid ($EG_{import,y}$) unit: MWh	Electricity delivered to the project through the auxiliary line ($EG_{auxiliary\ line,y}$) unit: MWh	Quantity of net electricity generation supplied to the Grid ($EG_{facility,y}$) unit: MWh
2011-2	7706.16	388.08	0	
2011-3	27244.8		0	
2011-4	23525.04		0	
2011-5	4242.48	10.56	0	
2011-6	15148.12	50.16	0	
2011-7	18097.2	55.44	0	
2011-8	31988.88	92.4	0	
2011-9	38887.2	71.28	0	
2011-10	12064.8	134.64	0	
2011-11	15698.524	161.04	0	
2011-12	11879.497	242.88	0	
2012-1	14300.88	271.92	0	
2012-2	16029.476	192.72	0	
2012-3	9517.2	227.04	0	
2012-4	23679.568	116.16	0	
2012-5	34151.639	116.16	0	

Net Electricity supplied to the NCPG by the Project

Monitoring Period	Electricity supplied to the grid for CERs calculation $EG_{export,y}$ (MWh)	Electricity imported from the grid for CERs calculation $EG_{import,y}$ (MWh)	Electricity delivered to the project through the auxiliary line for CERs calculation $EG_{auxiliary\ line,y}$ (MWh)	Quantity of net electricity generation supplied to the Grid for CERs calculation $EG_{facility,y}$ (MWh)
	A	B	C	D=A-B-C



19/02/20011-31/05/2012	304161.464	2130.48	0	302030.984
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According to the registered PDD, the Emission factor of the grid is determined ex-ante; the ex-ante determined emission factor is 0.92928 CO₂e/MWh.

$$BE_y = EG_{PJ,y} \times EF_{grid,CM,y} = 302030.984 \text{ MWh} \times 0.92928 \text{ tCO}_2\text{e/MWh} = 280,671 \text{ tCO}_2\text{e}.$$

E.2. Calculation of project emissions or actual net GHG removals by sinks

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According to the ACM0002 (Version 11), the emissions of wind power project activity is zero, PE_y=0

E.3. Calculation of leakage

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According to the applied methodology, as a renewable energy project, the project leakage of this project is zero

E.4. Summary of calculation of emission reductions or net anthropogenic GHG removals by sinks

Time Period	Baseline emissions or baseline net GHG removals by sinks (tCO ₂ e)	Project emissions or actual net GHG removals by sinks (tCO ₂ e)	Leakage (tCO ₂ e)	Emission reductions or net anthropogenic GHG removals by sinks (tCO ₂ e)
Total	280,671	0	0	280,671

E.5. Comparison of actual emission reductions or net anthropogenic GHG removals by sinks with estimates in registered PDD

Item	Values estimated in ex-ante calculation of registered PDD	Actual values achieved during this monitoring period
Emission reductions or GHG removals by sinks (tCO ₂ e)	528,169	280,671

E.6. Remarks on difference from estimated value in registered PDD

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The actual emission reductions during this monitoring period are 280,671 tCO₂e, which is lower than the estimation in the registered PDD.

History of the document

Version	Date	Nature of revision
02.0	EB 66 13 March 2012	Revision required to ensure consistency with the "Guidelines for completing the monitoring report form" (EB 66, Annex 20).
01	EB 54, Annex 34 28 May 2010	Initial adoption.
Decision Class: Regulatory Document Type: Form Business Function: Issuance		