

**MONITORING REPORT****Version: 02****Date: 18/11/2010****Gansu Guazhou Daliangxi Wind Power Project****CDM registration reference number: 2916****The monitoring period: 01/01/2009 – 03/05/2010****SECTION A. General description of the project activity****A.1. Brief description of the project activity: >>**

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The Gansu Guazhou Daliangxi Wind Power Project (hereafter referred to as the “Project”), developed by Gansu CGN Wind Power Co., Ltd, (hereafter referred to as the “Project Developer”) is a grid connected renewable energy project in Guazhou County, Gansu Province, in the People’s Republic of China (hereafter referred to as the “Host Country”). It involves the installation of 33 turbines, each of which has a rated output of 1500 kW, providing a total installed capacity of 49.5 MW, with a predicted power supplied to the grid of 115,144 MWh per annum.

Purpose of the Project:

The purpose of the project is to generate power through wind energy thereby reducing greenhouse gas (GHG) emissions in electricity generation in the Northwest China Power Grid (hereafter referred to as the “Grid”). The Project Developer has obtained permission to sell generated electricity to the Gansu Power Grid which is an integral part of the Grid.

Relevant dates for the project activity:Timeline of the project activity

Construction start date	31/05/2008
Commissioning start date	04/12/2008
Date of CDM registration	04/05/2010
Monitoring period	01/01/2009-03/05/2010

Emission reductions during this monitoring period:

Based on the calculation in section E of this report, emission reductions of the Project during this monitoring period (01/01/2009-03/05/2010) are 141, 633tCO₂e.

A.2. Project Participants

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Name of Party involved (*) ((host) indicates a host Party)	Private and/or public entity(ies) project participants (*) (as applicable)	Kindly indicate if the Party involved wishes to be considered as project participant (Yes/No)
P.R.China (host)	Gansu CGN Wind Power Co., Ltd	No

(*) In accordance with the CDM modalities and procedures, at the time of making the CDM-PDD public at the stage of validation, a Party involved may or may not have provided its approval. At the time of requesting registration, the approval by the Party(ies) involved is required.

A.3. Location of the project activity:

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The Project is located near Guazhou County, Jiuquan City, Gansu Province, People's Republic of China (P. R. China).

The exact location of the project is defined using geographic coordinates obtained with a Global Positioning System (GPS) receiver: E 95°36' 37" Longitude, N 40°42' 55" Latitude. These geographic coordinates are for the centre of the wind farm.

A.4. Technical description of the project

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The project involves the installation of 33 wind turbines each of which with a rated capacity of 1,500 kW, providing a total capacity of 49.5MW. The power generated is delivered to the Northwest China Power Grid by 110kV step-up substation. The power in the 110kV step-up substation transmits to Guazhou Substation. Then the electricity generated transmits to the Northwest China Power Grid. The key technical parameters of wind turbines are listed in Table 1.

Table 1. Key technical parameters of the wind turbines of the Project

Wind turbines	
Wind Turbines Type	FD77A
No. of vanes	3
Rated Power (kW)	1500
Rotor diameter (m)	77
Cut-in speed (m/s)	3
Cut-out speed (m/s)	20
Rated speed (m/s)	12.5
Height of rotor hub (m)	61.5
Manufacturer	Dongfang Steam Turbine Works

The technology flow chart of the Project is shown as below:

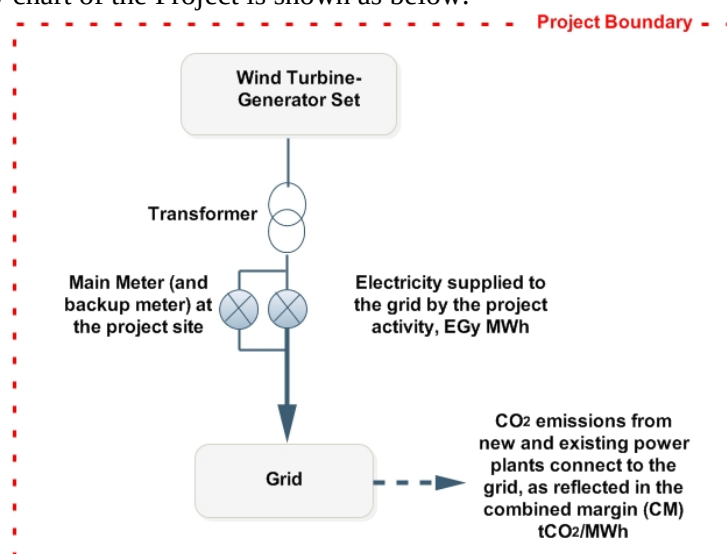


Figure 1 Technology flow chart of the Project

**A.5. Title, reference and version of the baseline and monitoring methodology applied to the project activity:**

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1. The methodology applied for the Project is the approved consolidated baseline and monitoring methodology ACM0002: “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” Version 09, in effect as of 5 December 2008; and
2. The approved “Tool for demonstration and assessment of additionality”, Version 05.2, in effect as of EB 39; and
3. The approved “Tool to calculate the emission factor for an electricity system”, Version 02, in effect as of EB 50, are applied to the Project activity.

More information about the methodology can be obtained at:

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

A.6. Registration date of the project activity:

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04/05/2010

A.7. Crediting period of the project activity and related information (start date and choice of crediting period):

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According to the VCS 2007.1, the starting date of the crediting period is 01/01/2009¹. The VCS Project crediting period is from 01/01/2009 to 03/05/2010.

A.8. Name of responsible person(s)/entity(ies):

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Entity: CGN Wind Power Co., Ltd

Address: No.2 Building, Area 12 of Advanced Business Park, No.188 west of South 4th ring road, Beijing, China

Tel: +86-10-63705611

Fax: +86-10-63705685

¹ The starting date of the crediting period is based on the potential buyer's demand. They need the emission reductions from the year 2009.

**SECTION B. Implementation of the project activity****B.1. Implementation status of the project activity**

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The Project was started construction on 31 May 2008 and put into operation on 4 Dec. 2008. Technology and equipments adopted in the Project are consistent with the registered PDD. During this monitoring period (01/01/2009-03/05/2010), all the equipments and metering systems worked normally. No events or situations, which may impact the applicability of the methodology, occurred during this monitoring period.

B.2. Revision of the monitoring plan

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Not applicable.

B.3. Request for deviation applied to this monitoring period

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Not applicable.

B.4. Notification or request of approval of changes

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Not applicable.

SECTION C. Description of the monitoring system

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In the registered PDD, emission factor of the Project is determined ex-ante. Therefore the net electricity supplied to the grid by the Project is defined as the key data to be monitored.

1. Organizational structure and responsibility

The Project owner, Gansu CGN Wind Power Co., Ltd., takes the responsibility of the monitoring plan implementation.

The staffs from technology and financial departments undertake the monitoring tasks including watching metering equipments, collecting electricity data and completing records, checking and analyzing the data, archiving relevant records, reporting to company administrator or supervisor.

The concerned staffs had been trained on monitoring and measurement to ensure the implementation of this monitoring plan according to the requirements.

Organizing structure of the team is shown as figure 2.

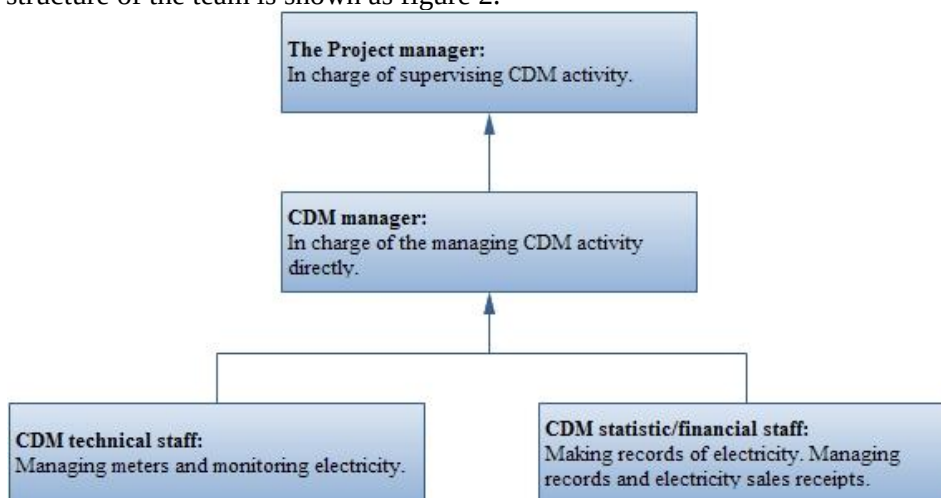


Figure 2 Structure of the team

2. Monitoring system and data collection

The net electricity supplied to grid by the Project is continuously monitored through two meters (one as main meter and one as backup meter) located at the output of the project site. The electricity exported to the Grid and imported from the Grid is monitored and recorded by the main meter that is bidirectional. The Project Developer and the Grid Company collects the meter readings on the account date (usually every 18th or 19th of each month) and confirm the electricity transactions. The records of meter readings and copies of sales receipts are obtained to reflect the actual data of supplied electricity.

The project developer will archive the data electronically until two years after the end of the crediting period, whichever occurs later.

Indicative electric connection diagram of the Project is described as follow:

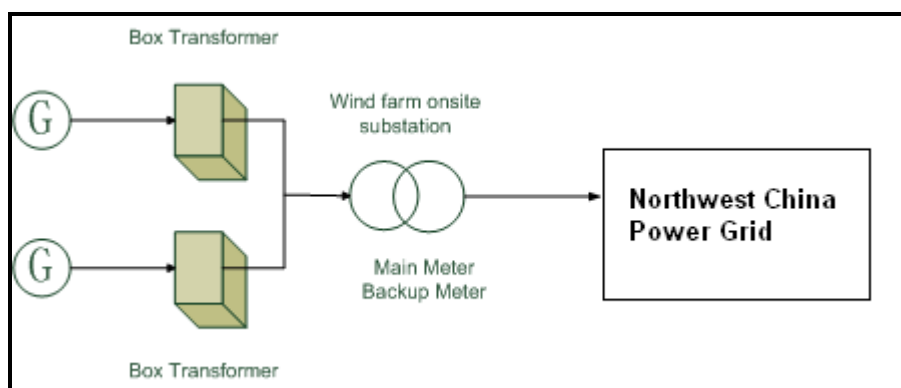


Figure 3 Indicative electric connection diagram of the project activity

3. Quality assurance and quality control

Calibration of Meters has been implemented by the qualified third parties. No errors occurred during this monitoring period. And all the records could be documented and maintained by the project owner for DOE's verification. The detailed information on meter equipments is listed in the table 2.

Table 2. The detailed information on meter equipments

Meter	Type	Accuracy Class	SN	Calibration Date	Validity Period
Main meter	SL7000	0.2S	36032119	24/09/2008	24/09/2008-23/09/2009
				20/06/2009	20/06/2009-19/06/2010
Backup meter	SL7000	0.2S	36056210	29/08/2008	29/08/2008-28/08/2009
				20/06/2009	20/06/2009-19/06/2010

The electricity exported to the Grid and imported from the Grid is monitored and recorded by the main meter that is bidirectional. The Project Developer and the Grid Company confirm the electricity transactions. Data measured by the meters had been cross checked using electricity sales receipts. The accuracy of the measurement is ensured through calibration by a qualified party. The accuracy of the main meter reaches 0.2s.

Problem occurred in monitoring and measurement process will be recorded and reported to company administrator or supervisor. Consequently, the corrective resolution will be adopted to deal with that problem and to avoid it occur again in future.

4. Emergency procedures

Problem occurred in monitoring and measurement process will be recorded and reported to company administrator. Consequently, the corrective resolution will be adopted to deal with that problem and to avoid it occur again in future.

When the main meter or back-up meter have a breakdown, the electricity generation difference will be treated as follows:

- (1) When both meters are fine, the main meter will be used;
- (2) When one of the two meters has a breakdown, the readings of the other meter will be adopted;
- (3) If both the main meter and back-up meter have breakdowns, the net electricity supplied to the grid



will be calculated from the readings of other meters and deducting the line losses.

**SECTION D. Data and parameters****D.1. Data and parameters determined at registration and not monitored during the monitoring period, including default values and factors**

Data / Parameter:	$EF_{grid,CM,y}$
Data unit:	tCO ₂ e/MWh
Description:	<i>The Baseline emission factor of Northwest China Power Grid.</i>
Source of data used:	<i>Registered PDD</i>
Value(s) :	<i>0.99685</i>
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	<i>The data are used for Baseline emission calculations</i>
Additional comment:	<i>The data is calculated ex-ante according to the applied methodology.</i>

D.2. Data and parameters monitored

Data / Parameter:	EG_y
Data unit:	MWh
Description:	<i>Net electricity supplied to the grid by the Project.</i>
Measured /Calculated /Default:	<i>Continuously Measurement, Monthly recording. Two meters will be installed at the output of the project site, one as main meter and one as backup meter. The electricity exported to the Grid and imported from the Grid will be monitored by the main meter that is bidirectional. The net electricity supplied to the grid is calculated as the exported amount minus the imported amount.</i>
Source of data:	<i>Measured by the Main Meter installed at the output of the project site.</i>
Value(s) of monitored parameter:	<i>Detailed data and calculation is presented in section E1 of the monitoring report. EG_y during the monitoring period is 142,082.283MWh.</i>
Indicate what the data are used for (Baseline/ Project/ Leakage emission calculations)	<i>The data are used for Baseline emission calculations.</i>
Monitoring equipment (type, accuracy class, serial number, calibration frequency, date of last calibration, validity)	<i>The accuracy of the main meter and backup meter reaches 0.2s. The detailed information on meter equipments is listed in the Section C.3.</i>
Measuring/ Reading/ Recording frequency:	<i>Continuously measurement and monthly recording</i>
Calculation method (if applicable):	<i>EG_y is calculated by the electricity exported to the Grid (EG_{export}) minus the electricity imported from the Grid (EG_{import}). $EG_y = EG_{export} - EG_{import}$</i>
QA/QC procedures applied:	<i>Meters will be calibrated according to the relevant national standard. Data measured by the meters will be cross checked using electricity</i>



	<i>sales receipts. The accuracy of the measurement is ensured through calibration by a qualified party.</i>
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**SECTION E. Emission reductions calculation****E.1. Baseline emissions calculation**

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Baseline emissions (BE_y in tCO₂e) are the product of the baseline emissions factor ($EF_{grid,CM,y}$ in tCO₂e/MWh) multiplied by the net electricity supplied by the Project to the grid (EG_y in MWh):

$$BE_y = EG_y \times EF_{grid,CM,y}$$

Where

EG_y -- Net electricity supplied to the grid during the monitoring period (MWh).

$EF_{grid,CM,y}$ --Emission factor of the grid (tCO₂e /MWh) (0.99685tCO₂e /MWh, as calculated ex-ante in the registered PDD and will not be updated during the crediting period).

Net electricity supplied by the Project to the grid and corresponding baseline emission is listed as below:

Period	Electricity exported to the grid EG_{export} (MWh)	Electricity imported from the grid EG_{import} (MWh)	Net electricity supplied to the grid (EG_y) (MWh)	$EF_{grid,CM,y}$ (tCO ₂ e /MWh)	BE_y tCO ₂ e
	A	B	C=A-B	D	E=C*D
01/01/2009-29/01/2009	2968.35	214.970	2753.380	0.99685	2744.707
30/01/2009-27/02/2009	2580.072	333.638	2246.434	0.99685	2239.357
28/02/2009-29/03/2009	10417.308	309.440	10107.868	0.99685	10076.028
30/03/2009-28/04/2009	13527.36	304.202	13223.158	0.99685	13181.505
29/04/2009-29/05/2009	11497.794	325.365	11172.429	0.99685	11137.236
30/05/2009-28/06/2009	10397.706	306.446	10091.260	0.99685	10059.472
29/06/2009-29/07/2009	10841.754	318.831	10522.923	0.99685	10489.776
30/07/2009-29/08/2009	10273.164	315.531	9957.633	0.99685	9926.267
30/08/2009-28/09/2009	10305.174	311.594	9993.580	0.99685	9962.100
29/09/2009-29/10/2009	10500.006	325.761	10174.245	0.99685	10142.197
30/10/2009-28/11/2009	9557.724	323.606	9234.118	0.99685	9205.030
29/11/2009-29/12/2009	7417.476	342.063	7075.413	0.99685	7053.126
Subtotal	110,283.888	3,731.447	106,552.441	0.99685	106,216.801
30/12/2009-29/01/2010	7935.246	330.909	7604.337	0.99685	7580.384
30/01/2010-27/02/2010	7186.542	318.194	6868.348	0.99685	6846.712
28/02/2010-29/03/2010	11334.51	302.510	11032.000	0.99685	10997.249
30/03/2010-28/04/2010	8970.192	308.228	8661.964	0.99685	8634.678



29/04/2010-03/05/2010	1520.376	157.183	1363.193	0.99685	1358.899
Subtotal	36,946.866	1,417.024	35,529.842	0.99685	35,417.923
Total					141,633

The net electricity supplied to the grid (EG_y) by the Project is:

$$EG_y = 142,082.283 \text{ MWh}$$

The baseline emission (BE_y) can be calculated by the formula below:

$$BE_y = EG_y \times EF_{grid,CM,y} = 141,633 \text{ tCO}_2\text{e}$$

E.2. Project emissions calculation

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According to the applied methodology, the Project does not have backup power generation, therefore project emissions from the Project are not considered. The Project emissions is zero, as $PE_y = 0 \text{ tCO}_2\text{e}$.

E.3. Leakage calculation

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According to the applied methodology, as a new renewable energy project, no leakage needs to be considered in the Project, as $L_y = 0 \text{ tCO}_2\text{e}$.

E.4. Emission reductions calculation / table

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The emission reductions (ER_y) by the Project activity during a given year y is the difference between baseline emissions (BE_y), project activity emissions (PE_y) and leakage (L_y), as follows:

$$ER_y = BE_y - PE_y - L_y$$

As the project emissions and leakages from the Project are zero, emission reductions are numerically equal to baseline emissions.

Emission reductions during the monitoring period (01/01/2009-03/05/2010) are thus calculated as 141,633 tCO₂e.

E.5. Comparison of actual emission reductions with estimates in the CDM-PDD

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Item	Values applied in ex-ante calculation of the registered CDM-PDD	Actual values reached during the monitoring period
Emission reductions (tCO₂e)	153,945 *	141,633



*Note: The data is average one calculated based on the registered PDD. The annual emission reductions estimated in the registered PDD are 115,144 tCO₂e. The monitoring period covers 488 days, so the average one is calculated as below:
 $115,144/365*488=153,945\text{tCO}_2\text{e}$

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

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It can be concluded from Section E.5 that there is no increase in the actual emission reductions achieved during the monitoring period compared to the ex-ante calculation of the registered PDD.
