

CECIC HKC GANSU CHANGMA WIND POWER PROJECT



Document Prepared By CECEP Wind Power Incorporation Company.

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1 PROJECT DETAILS

1.1 Summary Description of Project

CECIC HKC Gansu Changma Wind Power project (hereinafter referred as “the Project”) is located in Yumen Town, Yumen City, Gansu Province, the People's Republic of China. The purpose of the Project is to generate electricity using wind power resources in the project region and to deliver to the Northwest China Power Grid (NWPG) which is predominated by connected fossil fuel fired power plants, especially coal fired plants. So the Project can reduce GHG emissions by replacing the electricity generated by fossil fuel fired power plants in NWPG.

The Project involves the installation of 134 wind turbines with 1.5MW capacity per unit, with a total installed capacity of 201 MW. Total of 431,949 MWh clean electricity generated by the Project are expected to be delivered to the NWPG annually. Accordingly, the Project estimated can reduce GHG emissions about 430,588 tCO₂ annually.

The Project started construction on 16/06/2008. The wind turbines of the Project commissioning started on 21/11/2009. The Project started full commissioning on 15/02/2011. The wind farm operates normally and smoothly.

This monitoring period of the Project is from 21/11/2009 to 23/09/2011. The total emission reduction of the first monitoring period is: 663,650 tCO₂e.

1.2 Sectoral Scope and Project Type

The Project comes under sectoral scope 1, Energy Industries renewable sources.

Project Category: Renewable electricity in grid connected applications

1.3 Project Proponent

CECIC HKC Gansu Wind Power Co., LTD.

1.4 Other Entities Involved in the Project

No other entities.

1.5 Project Start Date

The Project started commissioning on 21/11/2009.

1.6 Project Crediting Period

The Project crediting period is from 24/09/2011 to 23/09/2018.

1.7 Project Location

The Project site is located 7-10 km southwest of Yumen Town, Yumen City, Gansu Province in the People's Republic of China. It is located at Latitude between +40.1417 and +40.2572, longitude between +96.8583 and +96.9575..

1.8 Title and Reference of Methodology

Title: Approved consolidated baseline and monitoring methodology ACM0002: "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" (Version 12.1), and,

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

- Tool for the demonstration and assessment of additionality (version 5.2),
- Tool to calculate the emission factor for an electricity system (version 02.1).

2 IMPLEMENTATION STATUS

2.1 Implementation Status of the Project Activity

The Project was started construction on 16/06/2008. The first wind turbine of the Project started commissioning on 21/11/2009. The Project started full commissioning on 15/02/2011. The electricity generated by the Project is delivered to NWPG, according to the signed power purchase agreement (PPA) with Gansu Province Electric Power Co., Ltd.

The wind farm operates smoothly and normally during this monitoring period. There have been no emergencies happened to the monitoring system in this monitoring period.

2.2 Deviations from the Monitoring Plan

Not Applicable.

2.3 Grouped Project

Not Applicable.

3 DATA AND PARAMETERS

3.1 Data and Parameters Available at Validation

Data Unit / Parameter:	EF_{grid,CM,y}
Data unit:	tCO ₂ e/MWh
Description:	Baseline emission factor: the combined emission factor of the project grid system.

Source of data:	Source from the Section B.6 of the registered PDD for the Project.
Value applied:	0.99685
Purpose of the data:	Used for baseline emission calculations.
Any comment:	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.

3.2 Data and Parameters Monitored

Data Unit / Parameter:	$EG_{facility,y}$
Data unit:	MWh
Description:	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y
Source of data:	Meter reading record of onsite main meters
Description of measurement methods and procedures to be applied:	Two sets of meters measuring continuously. Then calculate the net electricity generation supplied by the project to the grid.
Frequency of monitoring/recording:	Measuring continuously/Recording monthly
Value monitored:	Used for the baseline emission calculations.
Monitoring equipment:	See as follow table 1
QA/QC procedures to be applied:	Monthly power exported and imported to the NWPG are cross-checked against ETNs or sales receipts. The calibrations are done by a qualified organization at least once per year for the main meters and backup meters according to local industry standards.
Calculation method:	$EG_{facility,y} = EG_{export,y} - EG_{import,y}$ $EG_{facility,y}$ is electricity exported to the grid by the project ($EG_{export,y}$) minus electricity imported from the grid by the project ($EG_{import,y}$).
Any comment:	-

Table 1. Monitoring equipments of the Project

Serial No.	Accuracy	Calibration date	Validity of the Calibration	Calibration frequency
51000040 Main meter1	0.2s	20/07/2009	19/07/2010	Annually
		25/06/2010	24/06/2011	
		24/12/2010	23/12/2011	
51000042 Backup meter1	0.2s	20/07/2009	19/07/2010	Annually
		25/06/2010	24/06/2011	
		24/12/2010	23/12/2011	
51000044 Main meter2	0.2s	20/07/2009	19/07/2010	Annually
		25/06/2010	24/06/2011	
		24/12/2010	23/12/2011	
51000043 Backup meter2	0.2s	20/07/2009	19/07/2010	Annually
		25/06/2010	24/06/2011	
		24/12/2010	23/12/2011	

3.3 Description of the Monitoring Plan

The implementation of monitoring system and Management organization for the Project are fully in consistent with the description in the PDD Monitoring Plan.

1. Organizational structure and responsibilities

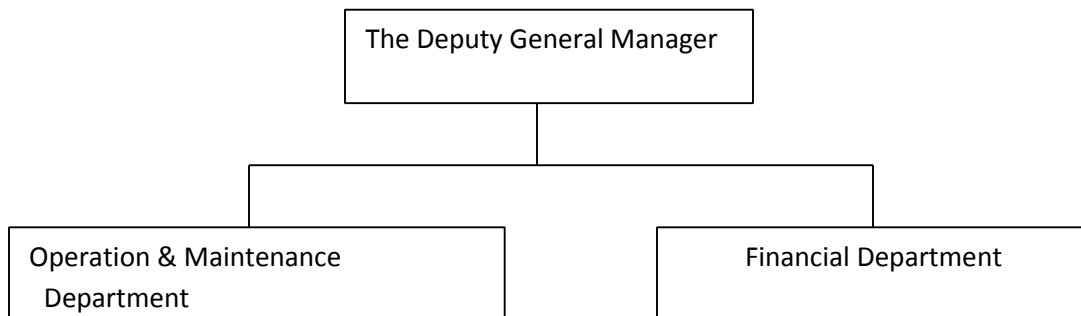
The Project owner (CECIC HKC Gansu Wind Power Co., Ltd) established a CDM Project Management Office (PMO). The roles and responsibilities of monitoring team persons from the Project owner see as follow:

Mr. Zhao Dongsheng, Deputy General Manager of the Project and also is the Manager of the Operation & Maintenance Department, is general responsible for the operation and maintenance, which includes the monitoring, of the Project. He was appointed the CDM Monitoring Manager if the PMO.

Mr. Wu Fei, etc, operators of Department of Operation & Maintenance of the Project, are responsible for the normal operation and maintenance of the monitoring meters, regular calibration and malfunction examine & repair, also responsible for the statistical treatment of the original monitoring data. Provide achieved emission reduction results for verification, and archive them in the form of document and electronic version.

Mr. Tian Dacun, Manager of Financial Department of the Project, is responsible for the cross-check via the Electricity Transaction Notes or sales receipts monthly.

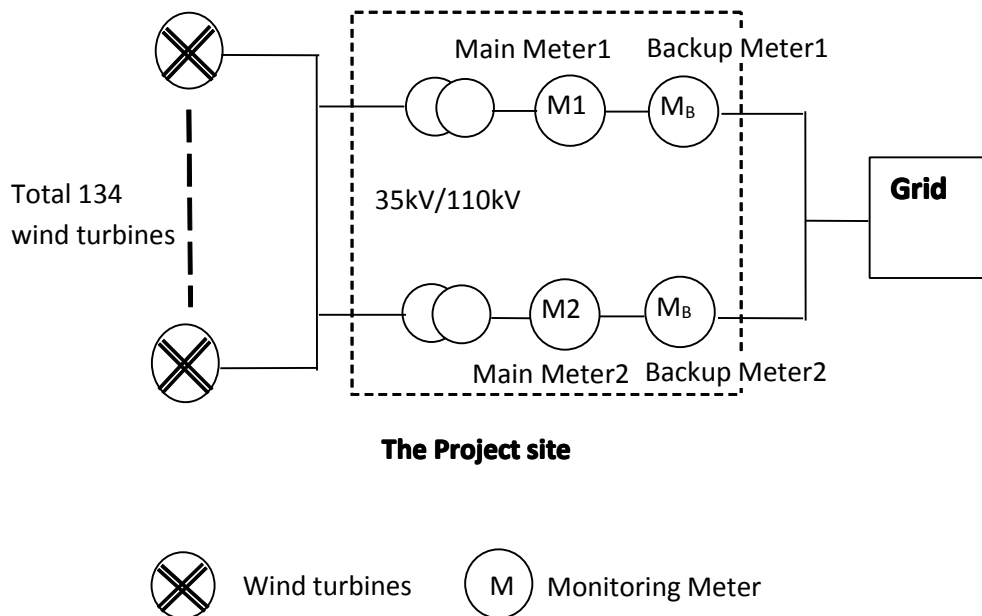
The organization structure is illustrated as follows:



2. Data collection and management

As described in the monitoring plan, the Project wind farm records reading monthly from the meter equipments within the project site.

The net electricity generation of the Project was feed to the Grid through two 110kV transmission lines after transformed by two 35kV/110kV booster transformers located within the Project site. The net electricity generated by the Project was monitored through the meters installed at the high voltage side of each 35kV/110kV booster transformer, totally four meters installed within the Project site, recording exported to the grid by the Project and imported from the grid by the Project. The net electricity generation supplied by the Project (EGfacility,y) was calculated as exports minus imports. The data was monitored continuously, and the results of reading was recorded and supplied to Gansu Grid Company monthly. The monitoring points shows below:



Designated personnel of the wind farm read and record the readings of the meters mentioned above monthly. The CDM manager of the Project wind farm checked out the reported data against with the Electricity Transaction Notes (ETN) or sale invoice before archived.

All data collected as part of monitoring was archived electronically and was kept until 2 years after the end of the total crediting period of the Project.

Emergency Procedures

When reading error of either meter exceeds the allowable range or any inconsistency occurs, the meter should be repaired and followed by calibration by a third part in accordance with the standard, within 10 days. The grid company must be informed before the calibration and all the record should be kept by the Project owner.

When the main meter detects the error beyond the allowable range or inconsistency, the backup meter, located within the site, will be used. In case that both meters detect errors, the Project owner shall repair the meter, recalibrate, or replace, while giving the grid company sufficient notice to allow their representative to attend during any corrective activities. When this happen, the net power generated is calculated by read the backup meter. In case where both meters fail, the both parties should formulate reasonable and conservative estimation based on historical or the nearest month power generation data. Also, the Project owner should provide the evidence to testify the method is reasonable and conservative.

4 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

4.1 Baseline Emissions

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

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

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

Where:

BE_y is the baseline emissions of the Project;

EF_{grid,CM,y} is the combined margin baseline emission factor of the NCPG;

EG_{facility,y} is the net electricity supplied to the grid by the Project;

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 2:

Table2. Calculation of the net electricity supplied to the grid by the Project

Period	Electricity exported to the grid by the Project EG _{export,y} (MWh)	Electricity imported from the grid by the Project EG _{import,y} (MWh)	Net electricity supplied to the grid by the Project EG _{facility,y} (MWh)
	A	B	EG _{export,y} minus EG _{import,y} C=A-B
21/11/2009-29/12/2009	8049.360	24.816	8024.544
30/12/2009-31/12/2009	1607.760	22.704	1585.056
Subtotal	9,657.120	47.520 *	9,609.600
01/01/2010-29/01/2010	23445.840	22.704	23423.136
30/01/2010-26/02/2010	22540.320	24.288	22516.032
27/02/2010-29/03/2010	29639.280	35.904	29603.376
30/03/2010-28/04/2010	38430.480	54.384	38376.096
29/04/2010-29/05/2010	35901.360	62.040	35839.320

30/05/2010-28/06/2010	27764.880	61.512	27703.368
29/06/2010-29/07/2010	20452.080	66.792	20385.288
30/07/2010-29/08/2010	33179.520	68.904	33110.616
30/08/2010-28/09/2010	20203.920	68.640	20135.280
29/09/2010-29/10/2010	27149.760	70.752	27079.008
29/10/2010-28/11/2010	59217.840	59.664	59158.176
29/11/2010-29/12/2011	50107.200	53.064	50054.136
30/12/2010-31/12/2010	2373.360	112.992	2260.368
Subtotal	390,405.840	761.640 **	389,644.200
01/01/2011-29/01/2011	34388.640	112.992	34275.648
30/01/2011-26/02/2011	47327.280	65.208	47262.072
27/02/2011-29/03/2011	41822.880	60.984	41761.896
30/03/2011-28/04/2011	25945.920	47.784	25898.136
29/04/2011-29/05/2011	21384.000	25.872	21358.128
30/05/2011-28/06/2011	23134.320	45.144	23089.176
29/06/2011-29/07/2011	19963.680	48.576	19915.104
30/07/2011-29/08/2011	23374.560	79.464	23295.096
30/08/2011-23/09/2011	29718.48	78.936	29639.544
Subtotal	267,059.760	564.960 ***	266,494.800

*Note: * For a conservative calculation, the data in the column of electricity imported from the grid by the Project ($EG_{import,y}$) is the total amount of electricity imported from the grid by the Project from 21/11/2009 to 19/01/2010.*

***For a conservative calculation, the data in the column of electricity imported from the grid by the Project ($EG_{import,y}$) is the total amount of electricity imported from the grid by the Project from 20/12/2009 to 19/01/2011.*

****For a conservative calculation, the data in the column of electricity imported from the grid by the Project ($EG_{import,y}$) is the total amount of electricity imported from the grid by the Project from 20/12/2010 to 19/10/2011.*

The data in this table has been double checked with the Electricity Transaction Notes (ETNs).

The baseline emission during this monitoring period calculated as following:

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

Table3. Baseline emissions

Period	EG _{facility,y} (MWh)	EF _{grid,CM,y} (MWh)	BE _y (tCO ₂ e)
21/11/2009- 31/12/2009	9,609.600	0.99685	9,579
01/01/2010- 31/12/2010	389,644.200	0.99685	388,416
01/01/2011- 23/09/2011	266,494.800	0.99685	265,655

4.2 Project Emissions

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

4.3 Leakage

Leakage (L_y) is 0 tCO₂e as per the registered PDD.

4.4 Summary of GHG Emission Reductions and Removals

The total Emission Reduction (ER_y) during this monitoring period is calculated as follow:

$$ER_y = BE_y - PE_y - L_y$$

Table4. Emission reduction calculation (tCO₂e)

Period	Project Emissions (tCO ₂ e)	Baseline Emissions (tCO ₂ e)	Leakage Emissions (tCO ₂ e)	Emission Reductions (tCO ₂ e)
21/11/2009- 31/12/2009	0	9,579	0	9,579
01/01/2010- 31/12/2010	0	388,416	0	388,416

01/01/2011- 23/09/2011	0	265,655	0	265,655
Total	-	-	-	663,650

5 ADDITIONAL INFORMATION

The total emission reduction during this monitoring period is 663,650tCO₂e.

According to the registered PDD on UNFCCC website, the annual emission reduction of this project is 430,588tCO₂e. As the length of first phase in year 2009 of this monitoring period is 41 days, 11.23% of a whole year, so the estimated emission reduction during the first phase should be 48,367 tCO₂e, and actual emission reduction in the first phase is 9,579 tCO₂e. The actual emission reduction of the second phase in year 2010 of this monitoring period is 388,416 tCO₂e which is 9.79% less than that estimated in PDD. The length of third phase in year 2011 of this monitoring period is 266 days, 72.87% of a whole year, so the estimated emission reduction during the third phase should be 313,798 tCO₂e, and actual emission reduction of the third phase is 265,655 tCO₂e. So, the actual emission reduction in the three phases of this monitoring period all are lower than the estimation in the registered PDD. There is no any significantly increase compared with the estimated emission reduction in the registered PDD. So the emission reduction during this monitoring period is reasonable and acceptable.

Annex 1 Clarification of the Sections 1.2, 1.3, 1.5 1.6, 1.7, 1.9, 1.10, 1.12.1, 1.12.2, 1.12.3, 1.12.4 and 1.13 of the VCS Project Description template

The proposed project was registered as CDM project on 24 September 2011 and the reference number is 3670. As VCS Version 3.0 came into force on 8 September 2011, the pre-CDM VER shall be verified against the VCS version 3 in terms of the VCS version 3. This clarification is annexed to cover all the requirements set out in the VCS version 3 for project validation together with the UNFCCC registered PDD (Version 3, May 24, 2011), according to the Policy Announcement from the VCS Association.. (<http://www.v-c-s.org/documents.html>)

Clarification of the Sections 1.2, 1.3, 1.5 1.6, 1.7, 1.9, 1.10, 1.12.1, 1.12.2, 1.12.3, 1.12.4 and 1.13 of the VCS Project Description template:

1.2 Sectoral Scope and Project Type

Clarification: The Project comes under sectoral scope 1, Energy Industries renewable sources.

Project Category: Renewable electricity in grid connected applications

1.3 Project Proponent

Clarification: The project proponent as follow:

CECEP Wind Power Incorporated Company.

Address: 12th Floor, A Building Jieneng Mansion, No.42 Xizhenmen North Street, Haidian District, Beijing, China 100082.

Mr. Shen Hongshuai. Project Manager. Tel: +86-10-62248705, Email: shenhongshuai@gmail.com;

Ms. Chen Dongjuan. Office Manager. Tel: +86-10-62248705, Email: dongjuan.chen@gmail.com;

Mr. Yao Xi. Project Manager. Tel: +86-10-62248706, Email: yaoxi@cecwpc.cn.

1.5 Project Start Date.

Clarification: The Project started commissioning on 21/11/2009.

1.6 Project Crediting Period.

Clarification: The Project crediting period is from 24/09/2011 to 23/09/2018.

1.7 Project Scale and Estimated GHG Emission Reductions or Removals.

Clarification:

Project	√
Mega-project	

Years	Estimated GHG emission reductions or removals (tCO ₂ e)
September 2011-August 2012	430,588
September 2012-August 2013	430,588
September 2013-August 2014	430,588
September 2014-August 2015	430,588
September 2015-August 2016	430,588
September 2016-August 2017	430,588
September 2017-August 2018	430,588
Total estimated ERs	3,014,116
Total number of crediting years	7
Average annual ERs	430,588

1.9 Project Location

Clarification: The Project site is located 7-10 km southwest of Yumen Town, Yumen City, Gansu Province in the People's Republic of China. It is located at Latitude between +40.1417N and +40.2572N, longitude between +96.8583E and +96.9575E.

1.10 Conditions Prior to Project Initiation.

Clarification: Prior to the Project initiation, the electricity in the area of NWPG mainly supplied by the fossil fuel fired power plants, especially coal fired plants. The purpose of the Project is to generate electricity using wind power resources in the project region and to deliver to the Northwest China Power Grid (NWPG). So the Project can reduce GHG emissions by replacing the electricity generated by fossil fuel fired power plants in NWPG.

1.12.1 Proof of Title

Clarification: Evidence of proof of title has been demonstrated via documentation proving ownership of the plant and equipment at the site. The owner has also obtained all relevant permits for to the proposed project including a Business License, FSR (Feasibility Study Report) approval, LoA and PPA. The project's design and implementation has been carried out in compliance with all relevant and national legislation in China.

1.12.2 Emissions Trading Programs and Other Binding Limits

Clarification: The project is not included in an emissions trading program except for that registered as CDM project, and does not take place in a jurisdiction or sector in which binding limits are established on GHG emissions.

1.12.3 Participation under Other GHG Programs

Clarification: The project does not participate in an emissions trading program, so this clause is not applicable.

1.12.4 Other Forms of Environmental Credit

Clarification: The project is located in China and is developed and operated by CECIC HKC Gansu Wind Power Co., LTD. The project is just purely registered as CDM project. There is no other environmental credit (for example renewable energy certificate) which has or will be produced by or obtained for the project during this monitoring period.

1.13 Additional Information Relevant to the Project**Eligibility Criteria**

This project is wind farm project, a renewable energy project.

Leakage Management

There no leakage in the project.

Commercially Sensitive Information

N/A

Further Information

No further information.