



Monitoring report form
(Version 04.0)

Complete this form in accordance with the Attachment "Instructions for filling out the monitoring report form" at the end of this form.

MONITORING REPORT

Title of the project activity	Gansu Jinchang Magang and Huangmaopo Bundled Wind Power Project
Reference number of the project activity	GS2499
Version number of the monitoring report	03
Completion date of the monitoring report	15/04/2015
Registration date of the project activity	06/06/2014
Monitoring period number and duration of this monitoring period	1 th monitoring period, (11/01/2014-30/01/2015, first and last days included)
Project participant(s)	Three Gorges New Energy Jinchang Wind Power Co., Ltd. (Project owner) Carbon Invcap International Trading Co., Ltd. (Buyer)
Host Party(ies)	People's Republic of China
Sectoral scope and selected methodology(ies), and where applicable, applied standardized baseline(s)	01 Energy industries (Renewable sources), ACM0002 "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" (version 13.0.0)
Estimated amount of GHG emission reductions or net anthropogenic GHG removals by sinks for this monitoring period in the registered PDD	184,109tCO ₂ e
Actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved in this monitoring period	99,626tCO ₂ e
Actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved during the period up to 31 December 2012 (if applicable)	N/A
Actual GHG emission reductions or net anthropogenic GHG removals by sinks achieved during the period from 1 January 2013 onwards (if applicable).	-

SECTION A. Description of project activity

A.1. Purpose and general description of project activity

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The purpose of the report is to calculate the emission reductions generated by Gansu Jinchang Magang and Huangmaopo Bundled Wind Power Project (hereafter referred to as the bundled Project) during the first monitoring period (11/01/2014-30/01/2015, including both days), and to serve as basis for the verification and issuance of corresponding GS VERs. The bundled Project has been registered as a GS VER project on 06/06/2014 (GS registration reference number: GS2499).

The bundled project consists of two projects as follows:

Jinchuan Magang 49.5MW Wind Power Project (hereafter referred to as Magang project) is sited on north of Jinchuan district, Jinchang City. The purpose of Magang project is to install 33 sets of 1.5MW wind turbine-generators to generate clean and renewable electricity with zero emissions. The total installed capacity of the Magang project is 49.5MW. It is estimated that the quantity of net electricity generation supplied by Magang project is approximately 102.8687GWh per year under full operation. Magang project activity will achieve average greenhouse gas (GHG) emission reductions of 88,137tCO₂e annually.

Yongchang Huangmaopo 49.5MW Wind Power Project (hereafter referred to as Huangmaopo project) is sited in Yongchang County, Jinchang City. The purpose of Huangmaopo project is to install 24 sets of 2MW wind turbine-generators and 1 set of 1.5MW wind turbine-generators to generate clean and renewable electricity with zero emissions. The total installed capacity of Huangmaopo project is 49.5MW. It is estimated that the quantity of net electricity generation supplied by Huangmaopo project is approximately 101.3816GWh per year under full operation. Huangmaopo project activity will achieve average greenhouse gas (GHG) emission reductions of 86,863tCO₂e annually.

The total installed capacity of the bundled project is 99MW, and annual net power generation amounts to 204.2503GWh. Prior to the implementation of the bundled project activity, the electricity is supplied by the operation of grid-connected power plants and by the addition of new generation sources within the Northwest China Power Grid (NWPG), which is the same as baseline scenario. The bundled project activity is a renewable energy project and estimated to achieve average annual greenhouse gas (GHG) emission reductions of 175,000tCO₂e annually, and totally 1,225,000tCO₂e for the first crediting period by displacing power generation from those fossil fuel-fired power plants connected to the NWPG under the baseline scenario.

Relevant dates for the bundled Project are as follows:

The start date for Magang project was 24/05/2013.

The start date for Huangmaopo project was 30/04/2013.

Commissioning start date for Magang project (the first wind generator began to operate): 11/01/2014

Commissioning start date for Huangmaopo project (the first wind generator began to operate): 11/01/2014

Continued operation periods: 20 year

During the retroactive monitoring period (11/01/2014-30/01/2015, including both days), the net electricity supplied to the grid is 116,278.14MWh. The monitoring activities were conducted in accordance with the monitoring plan in the registered GS-PDD and the registered GS passport. The project has operated without any accidental or emergency events that might impact the accuracy and/or implementation of monitoring activities. And during the monition period, no any

events might impact the sustainability. The total emission reductions in this monitoring period (11/01/2014-30/01/2015, including both days) are 99,626 tCO₂e.

A.2. Location of project activity

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The bundled project is sited in Jinchang City, Gansu Province, P. R. of China, and the geographical coordinates of the bundled project are as follows. Figure 1 is a map showing the location of Jinchang City, Figure 2 is a map showing the location of the bundled project.

The geographical coordinates of the bundled project

Project	East longitude	North latitude
Magang project	102°13'04.74"~102°15'36.93"	38°44'48.19"~38°47'48.67"
Huangmaopo project	101°33'45"~101°38'41"	38°23'04"~38°25'05"

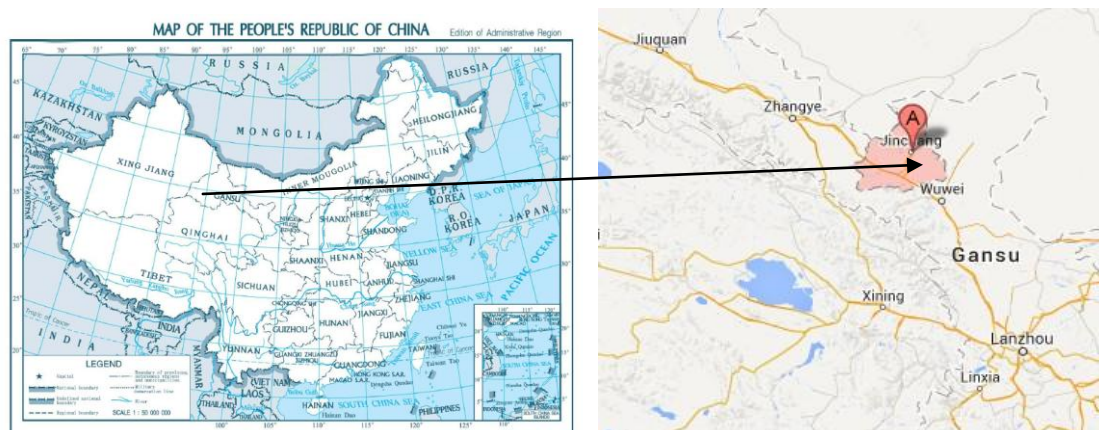


Figure 1. Map showing the location of Jinchang City, Gansu Province



Figure 2. Map showing the location of Magang project and Huangmaopo project

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)	Three Gorges New Energy Jinchang Wind Power Co., Ltd. (Project owner)	No
United Kingdom of Great Britain and Northern Ireland	Carbon Invcap International Trading Co., Ltd. (Buyer)	No

A.4. Reference of applied methodology and standardized baseline

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Approved consolidated baseline and monitoring methodology ACM0002 "*Consolidated baseline methodology for grid-connected electricity generation from renewable sources*" (version 13.0.0) will be employed for the bundled project.

The approved "*Tool to calculate the emission factor for an electricity system*" (version 03.0.0) will be employed for the calculation of emission factor.

The methodology and tools can be found from:

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

A.5. Crediting period of project activity

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Crediting period: 11/01/2014 – 10/01/2021 (Renewable)

A.6. Contact information of responsible persons/ entities

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Dr. Zheng Zhaoning of Goldchina Consultancy International Co., Ltd. is responsible for completing the CDM-MR-FORM and the contact information is as follows:

Address: Room 3103, Tangning One Building, Zhongguancun East Road, Haidian District, Beijing, P.R. of China (100083)

Telephone: (8610)6268 2682

Fax: (8610)6268 2682

Email: zzn01@mails.tsinghua.edu.cn, zzn@gcci-carbon.com

Website: www.gcci-carbon.com

The person/entity is not project participant listed in Annex 1.

SECTION B. Implementation of project activity**B.1. Description of implemented registered project activity**

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Magang project and Huangmaopo project started operation on 11/01/2014. During the monitoring

period, the bundled Project was in continuous operation. No equipment was exchanged or overhauled. No events occurred that affected the applicability of the methodology. The bundled Project owner implements and operates the Project as per the registered GS-PDD and GS passport.

Major technical parameters of the key equipments employed by the bundled project are illustrated in Table 1.

Table 1. Major technical parameters of the key equipment of the bundled project

			Magang project		Huangmaopo project	
			GW93/1500	EN93/1.5	W2000CH	W1500CH
Wind turbine	Type					
	Number		22	11	24	1
	Rated power	kW	1500	1500	2000	1500
	Lifetime	year	20	20	20	20
	Cut in wind speed	m/s	2.5	3	3.0	3.0
	Cut out wind speed	m/s	19	20	20	20
	Rated wind speed	m/s	9.5	9.5	10.2	10.2
	survival wind speed	m/s	49	52.5	52.5	52.5
Generator	Rated power	kW	1580	1560	2100	1600
	Rated voltage	V	720	690	690	690

B.2. Post registration changes

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

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There is no temporary deviation from registered monitoring plan or applied methodology.

B.2.2. Corrections

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There is no correction.

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

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There is no permanent change from registered monitoring plan or applied methodology.

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.

B.2.5. Changes to start date of crediting period

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There is no change to start date of crediting period.

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

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Not applicable

SECTION C. Description of monitoring system

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Management Structure

For details regarding the management structure of the monitoring plan, please refer to Figure 3.

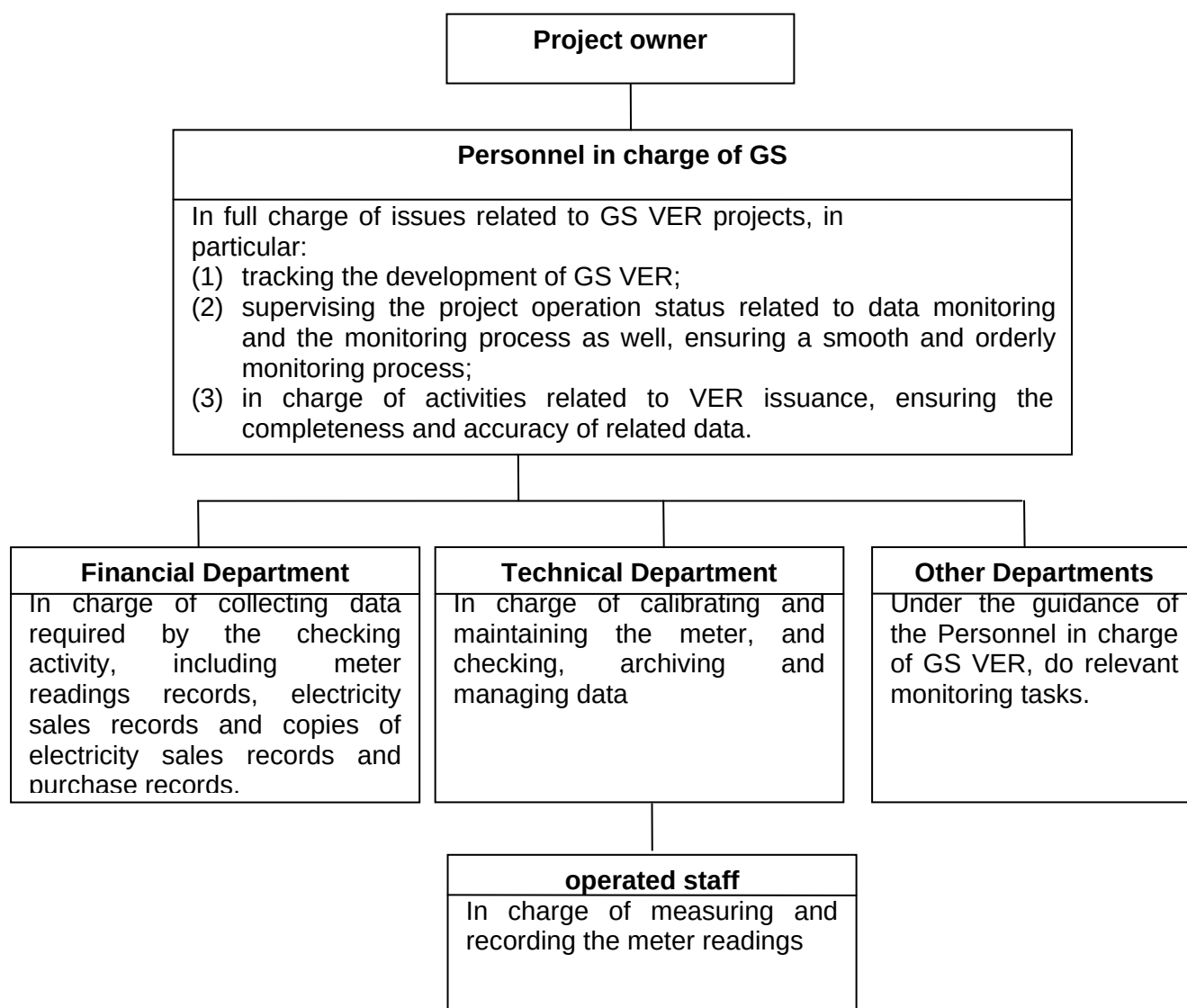


Figure 3. Operational and management structure

Monitoring system arrangement

The diagram of the technical process was shown in figure 4.

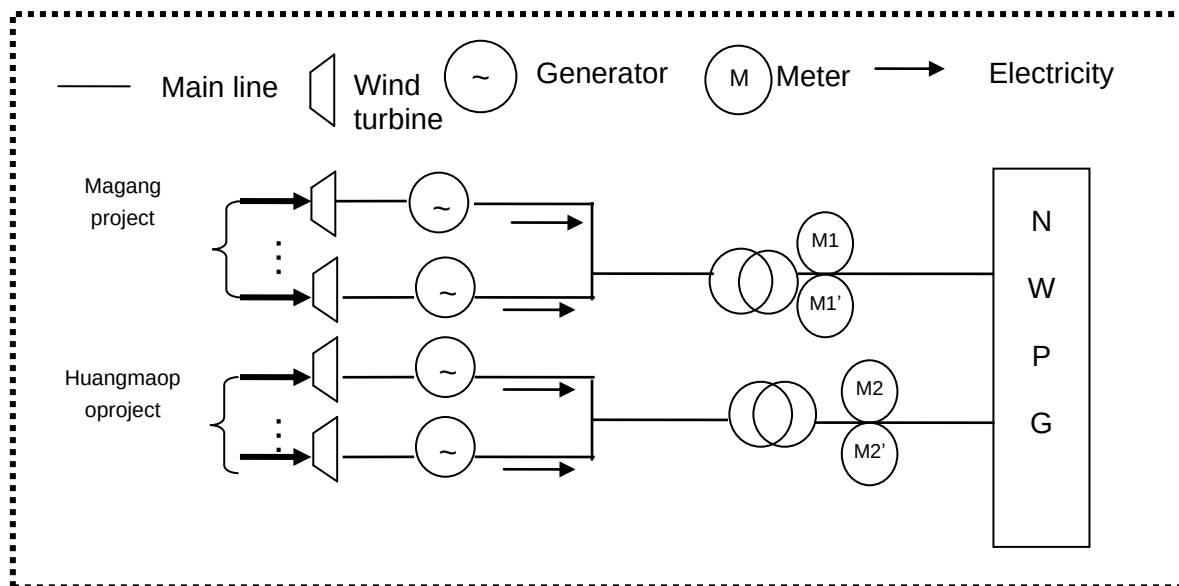


Figure 4. The diagram of the technical process of the bundled project

The net electricity supply of the bundled project to the grid will be measured by the electricity meters installed at the outlet of the 35kV/110kV substation. The net electricity supply of the bundled project activity to the grid will be double checked by the records of electricity purchase and sale.

The diagram of the technical process was shown in figure 1.

Monitoring Measures

The net electricity supply of the bundled project to the grid will be measured by the electricity meters installed at the outlet of the 35kV/110kV substation. The net electricity supply of the bundled project activity to the grid will be double checked by the records of electricity purchase and sale.

For the relevant monitoring requirements, please refer to the Power Purchase Agreement and Parallel Operation Agreement of the bundled project. The project owner ensures that all of the readings of electricity meters are available for DOE's verification.

Installation of monitoring devices

The electricity meters of the bundled project will be installed according to the Technical Administrative Code of Electric Energy Metering (DL/T 448-2000). Before the operation of the bundled project, the project owner and the local grid company will check and accept those electricity meters as per the Technical Administrative Code of Electric Energy Metering.

Calibration of Meters & Metering

The regular calibration and on-site verification should be implemented as per the Technical Administrative Code of Electric Energy Metering (DL/T 448-2000) to ensure the accuracy of

electricity meters. Electricity meters should be calibrated every year. After calibration, the electricity meters must be sealed. When the measurement error of electricity meter is larger than the permitted error or the electricity meter must be repaired because of a malfunction, the electricity will be determined as per the Power Purchase Agreement signed between the project owner and the local grid company.

Quality Assurance and Quality Control

The quality assurance and quality control procedures for recording, maintaining and archiving data shall be enhanced in line with the needs for verification of the emission reductions on an annual basis according to this PDD. All calibration records and all metering records will be stored by the bundled project owner for DOE verification.

Data Management System

Specific staff will be appointed by the bundled project owner to take on the overall responsibility for monitoring greenhouse gas emission reductions and keeping all the data collected as part of monitoring. Data shall be archived electronically and kept at least for two years after the end of the last crediting period, or the last issuance of ERs, whichever occurs later.

SECTION D. Data and parameters

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

(Copy this table for each piece of data and parameter.)

Data / Parameter:	$EF_{grid,CM,y}$
Unit:	tCO ₂ e/MWh
Description:	Emission factor of NWPG in the monitoring period.
Source of data:	Registered GS-PDD
Value(s) applied:	0.8568
Purpose of data:	Calculation of baseline emissions
Additional comment:	This parameter is ex ante determined in PDD and fixed during the first crediting period.

D.2. Data and parameters monitored

(Copy this table for each piece of data and parameter.)

Data / Parameter:	$EG_{facility, Magang, y}$
Unit:	MWh
Description:	Quantity of net electricity generation supply of Magang project to the grid in year y
Measured/ Calculated / Default:	Measured
Source of data:	Directly measured by electricity meter
Value(s) of monitored parameter:	71,963.10

Monitoring equipment:	The monitoring meter M1: Type: electricity meter Model: SL7000 Accuracy class: 0.2S Serial number: 67009036 Calibration frequency: annually Previous calibration date:03/12/2013 and 01/12/2014 validity: 30/11/2015 The monitoring meter M1': Model: SL7000 Type: electricity meter Accuracy class: 0.2S Serial number: 67009039 Calibration frequency: annually Previous calibration date:03/12/2013 and 01/12/2014 validity: 30/11/2015
Measuring/ Reading/ Recording frequency:	The readings of electricity meter were continuously measured and at least monthly recorded. Data will be archived for 2 years following the end of the crediting period or the last issuance of ERs, whichever is later.
Calculation method (if applicable):	-
QA/QC procedures:	Cross check measurement results with records for sold electricity. The electricity meters are calibrated as stated B.7.2. in PDD
Purpose of data:	Calculation of baseline emissions
Additional comment:	-

Data / Parameter:	$EG_{\text{facility,Huangmaopo},y}$
Unit:	MWh
Description:	Quantity of net electricity generation supply of Magang project to the grid in year y
Measured/ Calculated / Default:	Measured
Source of data:	Directly measured by electricity meter
Value(s) of monitored parameter:	44,315.04

Monitoring equipment:	The monitoring meter M2: Type: electricity meter Model: SL7000 Accuracy class: 0.2S Serial number: 67008961 Calibration frequency: annually Previous calibration date:03/12/2013 and 01/12/2014 validity: 30/11/2015 The monitoring meter M2': Type: electricity meter Model: SL7000 Accuracy class: 0.2S Serial number: 67008962 Calibration frequency: annually Previous calibration date:03/12/2013 and 01/12/2014 validity: 30/11/2015
Measuring/ Reading/ Recording frequency:	The readings of electricity meter were continuously measured and at least monthly recorded. Data will be archived for 2 years following the end of the crediting period or the last issuance of ERs, whichever is later.
Calculation method (if applicable):	-
QA/QC procedures:	Cross check measurement results with records for sold electricity. The electricity meters are calibrated as stated B.7.2. in PDD
Purpose of data:	Calculation of baseline emissions
Additional comment:	-

Data and parameters monitored for Gold Standard sustainable development indicators

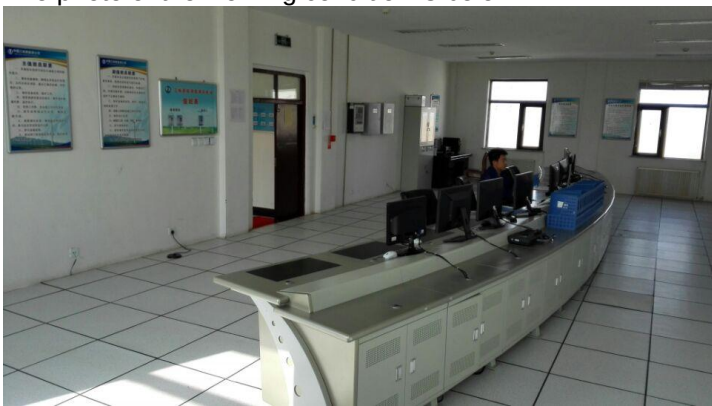
According to the requirements of the Gold Standard, the project activity must be assessed against a matrix of sustainable development indicators. Six indicators were added to the monitoring plan.

For Magang project

No	1
Indicator	Air quality
Mitigation measure	Water sprayed at the construction site on a regular basis, and sand and stone materials location site will be sheltered. No additional air pollutant during operation period is expected from the project activity. No mitigation measure is required.
<i>Repeat for each parameter</i>	
Chosen parameter	Indirect parameter of clean and renewable electricity supplied by the Magang project is measured in order to calculate the concentrations of SO ₂ and NO _x , as multiplied by default national emission factor from the Chinese government
Current situation of parameter	Equivalent electricity supplied by NWPG which is dominated by fossil fuel -fired power plants.
Estimation of baseline situation of parameter	In the baseline, equivalent electricity supplied by NWPG which is generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid.
Future target for parameter	The clean electricity produced by Magang project, which replaces of fossil fuel consumption for the equivalent electricity generation and thus reduce air pollutants emissions and improve the air quality. Right now, there is no available public data on average

		atmospheric pollutant emissions per kWh of electricity associated with the largely fossil fuel-based grid electricity in NWPG. Therefore, the average data for China is used to clarify the issue. The SO₂ emission factor is 2.3 g/kWh for sulphur fossil fuel-based power plants. The NO_x emission factor is 2.6 g/kWh for fossil fuel-based power plants. http://www.cpn.com.cn/zdyw/201206/t20120605412843.html
Way of monitoring	How	Record water sprinkling and sand and stone materials location site sheltering during the construction period for first verification. The net electricity supplied by Magang project was continuously measured by electricity meters.
	When	Check the records of sand and stone materials location site sheltering and water spray, and interview with local villagers during the first verification. The net electricity regularly measured and monthly recorded.
	By who	Sand and stone materials location site sheltering and water spray were recorded by Magang project owner. The net electricity was monitored by Magang project owner and cross checked measurement results with records for sold electricity.
Result		Record water sprinkling and sand and stone materials location site sheltering during the construction period for first verification. The net electricity supplied by the Magang project to NWPG is 71,963.10MWh during the monitoring period (11/01/2014-30/01/2015, first and last days included). SO₂ emission factor: 2.3 g/kWh NO_x emission factor: 2.6 g/kWh Total clean and renewable electricity supplied by the project in the monitoring period is 71,963.10MWh. So, SO₂ emission reduction: 165.515t NO_x emission reduction: 187.104t
Conclusion		No impact on the air quality in the construction period was found. The air quality in the operation quality was effectively improved against the baseline scenario.

No	2
Indicator	Quality of employment
Mitigation measure	N/A as indicator scored positive.
<i>Repeat for each parameter</i>	
Chosen parameter	Training of staff / The safe and healthy working condition
Current situation of parameter	Without Magang project, local people have no such opportunities to be trained on the technology and the monitoring of the plant operation, and the emergency and safety procedures.
Estimation of baseline situation of parameter	In the baseline, local people have no such opportunities to be trained on the technology and the monitoring of the plant operation, and the emergency and safety procedures.
Future target for parameter	Together with the technology supplier, Magang project organise training for the staff on the technology and the

		monitoring of the plant operation, and the emergency and safety procedures. And the employee work in a safe and healthy working condition.																								
Way of monitoring	How	The training records for all the employees and the photos of safe and healthy working condition																								
	When	Record each training when it happens for each monitoring period. Check the working condition and take photos during each monitoring period.																								
	By who	Monitored by Magang project owner																								
Result		As per the training records of the Magang project, the staffs have accepted a series of training on the plant operation, the emergency and safety procedures, and maintenance and safe operation, which contributes to the quality of employment. <table border="1"> <thead> <tr> <th>No</th> <th>Time of the training</th> <th>Training subject</th> <th>Attendees</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>14/01/2014</td> <td>maintenance and safe operation</td> <td>10 workers</td> </tr> <tr> <td>2</td> <td>03/04/2014</td> <td>plant operation</td> <td>8 workers</td> </tr> <tr> <td>3</td> <td>03/09/2014</td> <td>maintenance and safe operation</td> <td>8 workers</td> </tr> <tr> <td>4</td> <td>24/09/2014</td> <td>plant operation</td> <td>13 workers</td> </tr> <tr> <td>5</td> <td>30/11/2014</td> <td>plant operation</td> <td>11 workers</td> </tr> </tbody> </table> The photo of the working condition is below: 	No	Time of the training	Training subject	Attendees	1	14/01/2014	maintenance and safe operation	10 workers	2	03/04/2014	plant operation	8 workers	3	03/09/2014	maintenance and safe operation	8 workers	4	24/09/2014	plant operation	13 workers	5	30/11/2014	plant operation	11 workers
No	Time of the training	Training subject	Attendees																							
1	14/01/2014	maintenance and safe operation	10 workers																							
2	03/04/2014	plant operation	8 workers																							
3	03/09/2014	maintenance and safe operation	8 workers																							
4	24/09/2014	plant operation	13 workers																							
5	30/11/2014	plant operation	11 workers																							
Conclusion		The staff of the project were trained the plant operation, the emergency and safety procedures, and maintenance and safe operation. The trainings not only improve the operation level of the Magang project, and also enhance the technical skill of the staff.																								

No	3
Indicator	Quantitative employment and income generation
Mitigation measure	N/A as indicator scored positive.
<i>Repeat for each parameter</i>	
Chosen parameter	Number of jobs created in the operations of Magang project and their salary levels.
Current situation of parameter	Without Magang project, local people have no such job opportunities from Magang project, and their income has no increase.

Estimation of baseline situation of parameter		In the baseline, local people have no such job opportunities from the bundled project, and their income has no increase.
Future target for parameter		Consistency in the number of jobs created during operational period, and the salary of employees will be above the local average.
Way of monitoring	How	HR records or report
	When	Monthly
	By who	Monitored by Magang project owners.
Result		Parameter 1: creating 22 long term work positions for local people during operational period Parameter 2: The average salary of employees is 51716CNY/y, above the local average salary level, 18,746CNY/y, referring to (http://www.stats.gov.cn/tjsj/ndsj/2013/indexch.htm 4-16). The statement of the project owner was provided for verification.
Conclusion		With the operation of the Project, 22 long term work positions are created for local people with higher salary level, which effectively improve the family income status of those employees.

No	4
Indicator	Water quality and quantity
Mitigation measure	The industrial wastewater and sanitary wastewater are generated during the construction period of Magang project. The industrial wastewater includes washing water of the concrete mixing system and other machines. The industrial wastewater is reused after oil separation and sedimentation without discharge outside. The sanitary wastewater is from the temporary living area, including excrement and urine, washing water, shower water, etc. The sanitary wastewater after collection and treatment by a wastewater treatment facility and is used as spraying water for dust control. The major pollutant during operation period is sanitary sewage, including the discharge from toilets, washrooms, and shower water, etc. is collected and treated by wastewater treatment installation, then re-used as greening water after satisfying the requirement
<i>Repeat for each parameter</i>	
Chosen parameter	N/A
Current situation of parameter	N/A
Estimation of baseline situation of parameter	N/A
Future target for parameter	All waste water cannot be discharged without treatment
Way of monitoring	How Check the waste water treatment records during the construction period, and interview with local villagers during the first verification Check the wastewater treatment system to verify the waste water treatment and re-use as the greening water, and interview with local villagers.

	When	For first verification, waste water treatment records during the construction period, and interview with local villagers. For other verification, check the wastewater treatment system, and interview with local villagers.
	By who	Monitored by the project owner.
Result		The sanitary wastewater after collection and treatment by a wastewater treatment facility and is used as spraying water for dust control. sanitary sewage, including the discharge from toilets, washrooms, and shower water, etc. is collected and treated by wastewater treatment installation, then re-used as greening water after satisfying the requirement. The wastewater treatment system was checked and photo was provided as follow: 
Conclusion		The waste water was treated, and then re-use as the greening water.

No		5
Indicator		Soil condition
Mitigation measure		Measures including the vegetations recovery will be adopted to reduce soil erosion. After the construction is finished, the land will be smoothed, and the greening measures will be implemented as well, so in the operation, the soil erosion will be resumed.
Repeat for each parameter		
Chosen parameter		The vegetation conditions in the project site before and after the project construction
Current situation of parameter		The vegetable greening measures has been carried out in and around the project site so as to resume and improve the ecological environment.
Estimation of baseline situation of parameter		N/A
Future target for parameter		N/A
Way of monitoring	How	The photos of vegetation condition before and after the construction of the Project.
	When	during the first verification
	By who	Monitored by the project owner.

Result	According to the photos of vegetation condition before and after the construction of the Project, the vegetation were recovered and improved. The photo of vegetation condition before the construction of the Project:  The photo of vegetation condition after the construction of the Project: 
Conclusion	The soil condition was recovered and improved.

No	6
Indicator	Other pollutants
Mitigation measure	(1) The construction period: Solid waste: The residues generated during the construction period are reused as much as possible, while the remaining is delivered to the designated disposal site; the household garbage is cleared and collected to garbage can, then household garbage is cleared and delivered to be landfilled at regular intervals. Noise: No construction is implemented during night time, thus, the impact of construction noise can be ignored. (2) The operation period: Solid waste: The household garbage produced by the operation staff will be collected and cleared by the sanitation department periodically to avoid any impact on the environment.

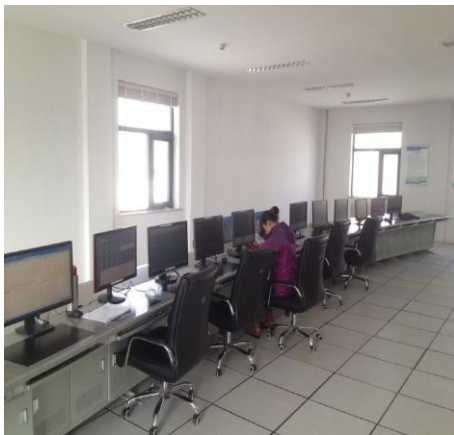
		Noise: Magang project site is located in the arid desertificational wasteland, and distance between nearest residential area and the wind turbine is more than 500m, so no noise impact on the surrounding environment is resulted from the operation of Magang project.
Repeat for each parameter		
Chosen parameter		N/A
Current situation of parameter		N/A
Estimation of baseline situation of parameter		N/A
Future target for parameter		N/A
Way of monitoring	How	Recorded solid waste treatment, interview with local villagers about the noise during the construction period.
	When	Solid waste treatment will be recorded for each verification period the noise during the construction period will be interviewed in the first verification.
	By who	Monitored by the project owner.
Result		According to the result of questionnaire, solid waste was effectively reused and periodically cleaned by the sanitation department, no any impact on local environment and community, on-site staff and local residents give higher positive comment on solid waste treatment. There is no any impact No construction will be implemented during night time
Conclusion		The solid waste was collected and cleared at regular intervals to landfill to be disposed, and not impact on environment.

For Huangmaopo Project

No	1
Indicator	Air quality
Mitigation measure	The dust prevention as the labour protection measures were strengthened by the front line workers. The water spraying was adopted for the traffic road surface to reduce dust, and the slag disposal site conduct greening after residual cleaning to prevent dust. No additional air pollutant during operation period is expected from the project activity. No mitigation measure is required.
<i>Repeat for each parameter</i>	
Chosen parameter	Indirect parameter of clean and renewable electricity supplied by Huangmaopo project is measured in order to calculate the concentrations of SO ₂ and NO _x , as multiplied by default national emission factor from the Chinese government
Current situation of parameter	Equivalent electricity supplied by NWPG which is dominated by fossil fuel -fired power plants.
Estimation of baseline situation of parameter	In the baseline, equivalent electricity supplied by NWPG which is generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid.
Future target for parameter	The clean electricity produced by Huangmaopo project, which replaces of fossil fuel consumption for the equivalent electricity generation and thus reduce air pollutants emissions and improve the air quality. Right now, there is no available public data on average

		atmospheric pollutant emissions per kWh of electricity associated with the largely fossil fuel-based grid electricity in NWPG. Therefore, the average data for China is used to clarify the issue. The SO₂ emission factor is 2.3 g/kWh for sulphur fossil fuel-based power plants. The NO_x emission factor is 2.6 g/kWh for fossil fuel-based power plants http://www.cpn.com.cn/zdyw/201206/t20120605412843.html
Way of monitoring	How	Check the records of water spray and mask distribution, and interview with local villagers during the first verification. The net electricity supplied by Huangmaopo project was continuously measured by electricity meters.
	When	Check the records of mask distribution and water spray, and interview with local villagers during the first verification. The net electricity continuously measured and monthly recorded.
	By who	Mask distribution and water spray are recorded by Huangmaopo project owner. The net electricity will be monitored by Huangmaopo project owners and cross checked measurement results with records for sold electricity.
Result		Record water sprinkling and sand and stone materials location site sheltering during the construction period for first verification. The net electricity supplied by the Huangmaopo project to NWPG is 44,315.04 MWh during the monitoring period. (11/01/2014-30/01/2015, first and last days included) SO₂ emission factor: 2.3 g/kWh NO_x emission factor: 2.6 g/kWh Total clean and renewable electricity supplied by the project in the monitoring period is 44,315.04MWh. So, SO₂ emission reduction: 101.924t NO_x emission reduction: 115.219t
Conclusion		No impact on the air quality in the construction period was found. The air quality in the operation quality was effectively improved against the baseline scenario.

No	2
Indicator	Quality of employment
Mitigation measure	N/A as indicator scored positive.
<i>Repeat for each parameter</i>	
Chosen parameter	Training of staff / The safe and healthy working condition
Current situation of parameter	Without Huangmaopo project, local people have no such opportunities to be trained on the technology and the monitoring of the plant operation, and the emergency and safety procedures.
Estimation of baseline situation of parameter	In the baseline, local people have no such opportunities to be trained on the technology and the monitoring of the plant operation, and the emergency and safety procedures.
Future target for parameter	Together with the technology supplier, Huangmaopo project organise training for the staff on the technology and the monitoring of the plant operation, and the emergency and safety procedures. And the employee work in a safe and healthy working condition.
Way	How
	The training records and the photos of safe and healthy

of monitoring		working condition																								
	When	Record each training when it happens for each monitoring period. Check the working condition and take photos during each monitoring period.																								
	By who	Monitored by Huangmaopo project owner																								
Result	As per the training records of the Huangmaopo project, the staffs have accepted a series of training on the plant operation, the emergency and safety procedures, and maintenance and safe operation, which contributes to the quality of employment. Part of the information of training records was as follows. <table border="1"> <thead> <tr> <th>No</th><th>Time of the training</th><th>Training subject</th><th>Attendees</th></tr> </thead> <tbody> <tr> <td>1</td><td>07/04/2014</td><td>maintenance and safe operation</td><td>11 workers</td></tr> <tr> <td>2</td><td>16/06/2014</td><td>plant operation</td><td>9 workers</td></tr> <tr> <td>3</td><td>22/12/2014</td><td>the emergency and safety procedures</td><td>16 workers</td></tr> <tr> <td>4</td><td>24/12/2014</td><td>maintenance and safe operation</td><td>11 workers</td></tr> <tr> <td>5</td><td>30/12/2014</td><td>maintenance and safe operation</td><td>13 workers</td></tr> </tbody> </table> The photo of the working condition is below: 		No	Time of the training	Training subject	Attendees	1	07/04/2014	maintenance and safe operation	11 workers	2	16/06/2014	plant operation	9 workers	3	22/12/2014	the emergency and safety procedures	16 workers	4	24/12/2014	maintenance and safe operation	11 workers	5	30/12/2014	maintenance and safe operation	13 workers
No	Time of the training	Training subject	Attendees																							
1	07/04/2014	maintenance and safe operation	11 workers																							
2	16/06/2014	plant operation	9 workers																							
3	22/12/2014	the emergency and safety procedures	16 workers																							
4	24/12/2014	maintenance and safe operation	11 workers																							
5	30/12/2014	maintenance and safe operation	13 workers																							
Conclusion	The staffs of the project were trained on the plant operation, the emergency and safety procedures, and maintenance and safe operation. The trainings not only improve the operation level of the Huangmaopo project, and also enhance the technical skill of the staff.																									

No	3
Indicator	Quantitative employment and income generation
Mitigation measure	N/A as indicator scored positive.
<i>Repeat for each parameter</i>	
Chosen parameter	Number of jobs created in the operations of Huangmaopo project and their salary levels.
Current situation of parameter	Without Huangmaopo project, local people have no such job opportunities from Huangmaopo project, and their income has no increase.
Estimation of baseline situation of parameter	In the baseline, local people have no such job opportunities from the bundled project, and their income has no increase.

Future target for parameter		Consistency in the number of jobs created during operational period, and the salary of employees will be above the local average.
Way of monitoring	How	HR records or report
	When	Monthly
	By who	Monitored by Huangmaopo project owners.
Result		Parameter 1: creating 22 long term work positions for local people during operational period Parameter 2: The average salary of employees is 51742.9CNY/y, above the local average salary level, 18,746CNY/y, referring to (http://www.stats.gov.cn/tjsj/ndsj/2013/indexch.htm 4-16). The statement of the Huangmaopo project owner was provided for verification.
Conclusion		With the operation of the Huangmaopo project, 22 long term work positions are created for local people with higher salary level, which effectively improve the family income status of those employees.

No		4
Indicator		Water quality and quantity
Mitigation measure		The industrial wastewater was reused after oil separation and sedimentation. For the limited generation and discharge of the wastewater, the impact on surrounding environment is slight. The quantity of the sanitary wastewater is very little, it could be used as spraying water of the construction site, which would not form ground surface runoff, and thus would not enter into the ground surface water system to pollute the water environment. The major pollutant during operation period is sanitary sewage, including the discharge from toilets, washrooms, and shower water, etc. were collected and treated by wastewater treatment installation, then re-used as greening water after satisfying the requirement.
<i>Repeat for each parameter</i>		
Chosen parameter		N/A
Current situation of parameter		N/A
Estimation of baseline situation of parameter		N/A
Future target for parameter		All waste water cannot be discharged without treatment
Way of monitoring	How	Check the waste water treatment records during the construction period, and interview with local villagers during the first verification Check the wastewater treatment system to verify the waste water treatment and re-use as the greening water, and interview with local villagers.
	When	For first verification, waste water treatment records during the construction period, and interview with local villagers. For other verification, check the wastewater treatment system, and interview with local villagers.
	By who	Monitored by the project owner.

Result	The sanitary wastewater after collection and treatment by a wastewater treatment facility and is used as spraying water for dust control. sanitary sewage, including the discharge from toilets, washrooms, and shower water, etc. will be collected and treated by wastewater treatment installation, then re-used as greening water after satisfying the requirement. The wastewater treatment system was checked and photo was provided as follow: 
Conclusion	The waste water was treated, and then re-use as the greening water.

No		5
Indicator		Soil condition
Mitigation measure		Measures including the vegetations recovery were adopted to reduce the water and soil erosion. After the construction is finished, the land was smoothed, and the greening measures was be implemented as well, so in the operation, the soil erosion was be resumed.
Repeat for each parameter		
Chosen parameter		The vegetation conditions in the project site before and after the project construction
Current situation of parameter		The vegetable greening measures has been carried out in and around the project site so as to resume and improve local ecological environment.
Estimation of baseline situation of parameter		N/A
Future target for parameter		N/A
Way of monitoring	How	The photos of vegetation condition before and after the construction of the Project.
	When	during the first verification
	By who	Monitored by the project owner.
Result		According to the photos of vegetation condition before and after the construction of the Project, the vegetation were recovered and improved. The photo of vegetation condition before the construction of the Project:

	 The photo of vegetation condition after the construction of the Project:  
Conclusion	The soil condition was recovered and improved.

No	6
Indicator	Other pollutants
Mitigation measure	(1) The construction period: Solid waste: The solid waste produced during the construction period was excavating waste, which was used as backfilling materials as much as possible to reduce the abandoned slag. The abandoned slag must be cleaned timely, and at the same time land leveling and original plants recovery should be conducted. For the living garbage from the construction period, it was collected and cleared at regular intervals to designated landfill to be disposed.

		Noise: The construction of Huangmaopo project is implemented during the day. Construction equipments with high efficiency and low noise intensity will be applied as possible. By calculation, the noise intensity will be lower than 55 dB(A) if the distance is 100 m far away from the noise source, satisfying the limit value during the day time stipulated in the Noise limits for construction site (GB12533-2011). (2) The operation period: Solid waste: After Huangmaopo project is put into operation, no discarded residue was produced by Huangmaopo project itself, only the household garbage produced by the operation staff was collected and cleared by the sanitation department periodically to avoid any impact on the environment. Noise: Huangmaopo project site is located in the arid desertificational wasteland, and wind turbines equipment with low noise intensity used by Huangmaopo project will be required. The distance between nearest residential area and the wind turbine is more than 150m; consequently, the wind turbine noise will not impact on the nearby residents basically.
Repeat for each parameter		
Chosen parameter		N/A
Current situation of parameter		N/A
Estimation of baseline situation of parameter		N/A
Future target for parameter		N/A
Way of monitoring	How	Recorded solid waste treatment, interview with local villagers about the noise during the construction period.
	When	Solid waste treatment will be recorded for each verification period the noise during the construction period will be interviewed in the first verification.
	By who	Monitored by the project owner.
Result		According to the result of questionnaire, solid waste was effectively reused and periodically cleaned by the sanitation department, no any impact on local environment and community, on-site staff and local residents give higher positive comment on solid waste treatment. There is no any impact No construction will be implemented during night time
Conclusion		The solid waste was collected and cleared at regular intervals to landfill to be disposed, and not impact on environment.

D.3. Implementation of sampling plan

>>

Not applicable.

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

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

>>

Baseline emissions include only CO₂ emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity. The methodology assumes that all project electricity generation above baseline levels would have been generated by existing grid-connected power plants and the addition of new grid-connected power plants. The baseline emissions are to be calculated as follows:

$$BE_y = EG_{PJ,y} \times EF_{grid,CM,y} \quad (1)$$

Where

BE_y = Baseline emissions in year y (t CO₂)

$EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the bundled project activity in year y (MWh/yr)

Because the bundled project activity is the installation of two new grid-connected renewable power plant/units at site where no renewable power plant was operated prior to the implementation of the bundled project activity, then:

$$EG_{PJ,y} = EG_{facility,y} \quad (2)$$

$EG_{facility,y}$ Quantity of net electricity generation supplied by the bundled project plant/unit to the grid.

It shall be determined as a difference between quantity of electricity supplied by the bundled project plant/unit to the grid and quantity of electricity delivered to the bundled project plant/unit from the grid in year y (MWh);

So

$$BE_y = EG_{facility,y} \times EF_{grid,CM,y} \quad (3)$$

The calculation for BE_y was listed as following:

(1) Electricity supplied to the grid by the bundled project:

Data and parameters monitored	Electricity supplied to the grid by Magang Project			Electricity supplied to the grid by Huangmaopo Project		
	reading record	Record for sold electricity	value used to calculate VERs	reading record	Record for sold electricity	value used to calculate VERs
	MWh	MWh	MWh	MWh	MWh	MWh
	A	B	C=MIN (A,B)	D	E	F=MIN (D,E)
11/01/2014 - 30/01/2014	579.81	579.81	579.81	368.28	368.28	368.28
31/01/2014 - 27/02/2014	1,037.85	1,037.85	1,037.85	617.10	617.10	617.10
28/02/2014 - 30/03/2014	3,043.92	3,043.92	3,043.92	3,163.38	3,163.38	3,163.38
31/03/2014 - 29/04/2014	3,003.66	3,003.66	3,003.66	2,683.89	2,683.89	2,683.89
30/04/2014 - 30/05/2014	9,702.00	9,702.00	9,702.00	6,521.79	6,521.79	6,521.79
31/05/2014 - 29/06/2014	8,373.42	8,373.42	8,373.42	5,979.60	5,979.60	5,979.60
30/06/2014 - 30/07/2014	7,045.50	7,045.50	7,045.50	2,811.60	2,811.60	2,811.60
31/07/2014 - 30/08/2014	7,229.97	7,229.97	7,229.97	3,512.85	3,512.85	3,512.85
31/08/2014 - 29/09/2014	4,889.61	4,889.61	4,889.61	1,605.45	1,605.45	1,605.45

30/09/2014 - 30/10/2014	5,396.49	5,396.49	5,396.49	3,278.22	3,278.22	3,278.22
31/10/2014 - 29/11/2014	4,786.32	4,786.32	4,786.32	2,022.57	2,022.57	2,022.57
30/11/2014 - 30/12/2014	9,985.14	9,985.14	9,985.14	7,877.76	7,877.76	7,877.76
31/12/2014 (0:00-24:00)	251.79	251.79	251.79	148.17	148.17	148.17
Total from 11/01/2014-31/12/2014			65,325.48			40,590.66
01/01/2015 - 30/01/2015	7,298.94	7,298.94	7,298.94	4,295.28	4,295.28	4,295.28
Total from 01/01/2015-30/01/2015			7,298.94			4,295.28
sum			72,624.42			44,885.94

(2) Electricity supplied from the grid to the bundled project:

Data and parameters monitored	Electricity imported from the grid to Magang Project			Electricity imported from the grid to Huangmaopo Project		
	reading record	Record for sold electricity	value used to calculate VERs	reading record	Record for sold electricity	value used to calculate VERs
	MWh	MWh	MWh	MWh	MWh	MWh
	A	B	C=Max (A,B)	D	E	F=Max(D,E)
11/01/2014 - 21/01/2011	3.63	3.63	3.63	8.91	8.91	8.91
22/01/2014 - 21/02/2014	23.10	23.10	23.10	24.09	24.09	24.09
22/02/2014 - 21/03/2014	30.36	30.36	30.36	47.85	47.85	47.85
22/03/2014 - 21/04/2014	18.15	18.15	18.15	50.16	50.16	50.16
22/04/2014 - 21/05/2014	57.42	57.42	57.42	43.89	43.89	43.89
22/05/2014 - 21/06/2014	40.59	40.59	40.59	36.30	36.30	36.30
22/06/2014 - 21/07/2014	41.25	41.25	41.25	43.23	43.23	43.23
22/07/2014 - 21/08/2014	50.49	50.49	50.49	33.66	33.66	33.66
22/08/2014 - 21/09/2014	89.43	89.43	89.43	77.22	77.22	77.22
22/09/2014 - 21/10/2014	65.34	65.34	65.34	50.49	50.49	50.49
22/10/2014 - 21/11/2014	75.57	75.57	75.57	38.94	38.94	38.94
22/11/2014 - 21/12/2014	62.37	62.37	62.37	37.62	37.62	37.62
22/12/2014 - 31/12/2014	21.45	21.45	21.45	21.78	21.78	21.78
Total from 11/01/2014-31/12/2014			579.15			514.14
01/01/2015 - 30/01/2015	82.17	82.17	82.17	56.76	56.76	56.76

Total from 01/01/2015- 30/01/2015			82.17			56.76
sum			661.32			570.90

(3) Net electricity generation supplied by the bundled project:

Period	EG _{facility, Magang, y}	EG _{facility, Huangmaopo, y}	EF _{grid, CM, y}	BE _y
	(MWh)	(MWh)	(CO ₂ e/MWh)	tCO ₂ e
11/01/2014- 31/12/2014	64,746.33	40,076.52	0.8568	89,812
01/01/2015 – 30/01/2015	7,216.77	4,238.52	0.8568	9,814
TOTAL	71,963.10	44,315.04		
SUM		116,278.14	0.8568	99,626

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

>>

The bundled project is wind power project, and the bundled project emissions should not be considered as per the methodology ACM0002, $PE_y = 0$ tCO₂e.

E.3. Calculation of leakage

>>

As per the methodology ACM0002 Version 13.0.0, no leakage needs to be considered in the bundled project, $LE_y = 0$ tCO₂e.

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

Item	Baseline emissions or baseline net GHG removals by sinks (t CO ₂ e)	Project emissions or actual net GHG removals by sinks (t CO ₂ e)	Leakage (t CO ₂ e)	Emission reductions or net anthropogenic GHG removals by sinks (t CO ₂ e)
11/01/2014 – 31/12/2014	89,812	0	0	89,812
01/01/2015 – 30/01/2015	9,814	0	0	9,814
Total	99,626	0	0	99,626

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
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Item	Values estimated in ex-ante calculation of registered PDD	Actual values achieved during this monitoring period
Emission reductions or GHG removals by sinks (t CO ₂ e)	184,109	99,626

*The estimated annual emission reductions are 175,000tCO₂e as per registered PDD. The monitoring period covers 384 days, $175,000 \times 384 / 365 = 184,109$ tCO₂e.

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

>>

The emission reductions during current monitoring period are lower than estimate in the registered GS-PDD.

E.7. Actual emission reductions or net anthropogenic GHG removals by sinks during the first commitment period and the period from 1 January 2013 onwards

Item	Actual values achieved up to 31 December 2012	Actual values achieved from 1 January 2013 onwards
Emission reductions or GHG removals by sinks (t CO ₂ e)	N/A	99,626

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Appendix 1. Contact information of project participants and responsible persons/ entities

Project participant and/or responsible person/ entity	☐ Project participant ☒ Responsible person/ entity for completing the CDM-MR-FORM
Organization name	Goldchina Consultancy International Co., Ltd.
Street/P.O. Box	Zhongguancun East Road
Building	Tangning One Building
City	Beijing City
State/Region	
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Appendix 2. Declaration

Declaration of no RECs are being issued for this project under consideration for GS VERs of Gansu Jinchang Magang and Huangmaopo Bundled Wind Power Project (GS2499)

The Project Developer warrants it has, and continues to have, (or if acting in the capacity as an Agent, the person or entity it represents has and continues to have) full legal and beneficial title to any Units listed by User in accordance with the Gold Standard Registry Terms of Use and the underlying Environmental Benefits corresponding to such Units and it has not sold, transferred, assigned, licensed, disposed of, granted or otherwise created any interest or encumbrance in or agreed to sell, assign, license, dispose of, grant or otherwise create any interest or encumbrance in the Units or the underlying Environmental Benefits corresponding to such Units other than as contemplated under the Gold Standard Registry Terms of Use.



General Manager
Carbon Invcap International Trading Co., Ltd
13/04/2015

Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
04.0	25 June 2014	Revisions to: • Include the Attachment: Instructions for filling out the monitoring report form (these instructions supersede the "Guideline: Completing the monitoring report form" (Version 04.0)); • Include provisions related to standardized baselines; • Add contact information on a responsible person(s)/ entity(ies) for completing the CDM-MR-FORM in A.6 and Appendix 1; • Change the reference number from <i>F-CDM-MR</i> to <i>CDM-MR-FORM</i>; • Editorial improvement.
03.2	5 November 2013	Editorial revision to correct table in page 1.
03.1	2 January 2013	Editorial revision to correct table in section E.5.
03.0	3 December 2012	Revision required to introduce a provision on reporting actual emission reductions or net anthropogenic GHG removals by sinks for the period up to 31 December 2012 and the period from 1 January 2013 onwards (EB70, Annex 11).
02.0	13 March 2012	Revision required to ensure consistency with the "Guidelines for completing the monitoring report form" (EB 66, Annex 20).
01	28 May 2010	EB 54, Annex 34. Initial adoption.
Decision Class: Regulatory Document Type: Form Business Function: Issuance Keywords: monitoring report		