

VERIFICATION REPORT AND CERTIFICATION STATEMENT

Of Gansu Jinchang Magang and Huangmaopo Bundled Wind Power Project

(GS Ref. No. 2499)

Monitoring period #1: 11/01/2014 - 30/01/2015

Report No. A+SH_SYST_00815 Gs

Client: Carbon Invcap International Trading Co., Ltd.

DATE: 15/04/2015

Report No.	Date of first issue	Revision No.	Date of this revision
A+SH_SYST_00815 Gs	03/03/2015	02.0	15/04/2015
Subject	First periodical verification of a GS project		
Client	Carbon Invcap International Trading Co., Ltd.		
Project Title	Gansu Jinchang Magang and Huangmaopo Bundled Wind Power Project		
Project Participants	Three Gorges New Energy Jinchang Wind Power Co., Ltd. (Project Owner) Carbon Invcap International Trading Co., Ltd. (GS VER buyer)		
Project Location	Jinchang City, Gansu Province, P. R. of China Geographic coordinates: Magang: East longitude 102°13'04.74"~102°15'36.93" and North latitude 38°44'48.19"~38°47'48.67" Huangmaopo: East longitude 101°33'45"~101°38'41" and North latitude 38°23'04"~38°25'05"		
Contact Person	Dr. Zheng Zhaoning		
Operational Unit	Three Gorges New Energy Jinchang Wind Power Co., Ltd.		
Monitoring period:		11/01/2014 - 30/01/2015	
Published Monitoring Report (version/date)		Version 01 / 01/02/2015	
Final Monitoring Report (version/date)		Version 03 / 15/04/2015	
Published GS SUSTAINABLITY MONITORING REPORT (version/date)		Version 01 / 01/02/2015 (same document with MR)	
Final GS Monitoring Report (version/date)		Version 03 / 15/04/2015 (same document with MR)	
Applied Methodology/Version		ACM0002 Version 13.0.0	
Scope		1	
Technical Area		1.2	
Registered PDD and Passport:		PDD Version 05 / 18/06/2014 Passport Version 05 / 18/06/2014	
Summary:			
LGAI Technological Center, S.A. (hereafter referred to as Applus+ LGAI) has been contracted by Carbon Invcap International Trading Co., Ltd. to perform the first periodical verification of Gansu Jinchang Magang and Huangmaopo Bundled Wind Power Project (GS Ref. No. 2499) applying the methodology ACM0002 Version 13.0.0. The management of Three Gorges New Energy Jinchang Wind Power Co., Ltd. is responsible for the preparation of the GHG emissions data and the reported GHG emission reductions.			
A desk review and a site visit have been conducted to verify the data submitted in the monitoring report. Applus+ LGAI confirms the following has been reviewed:			

- (a) The registered PDD and Passport, including the monitoring plan and the corresponding validation report;
- (b) Monitoring report(s);
- (c) Validation Report;
- (d) The applied monitoring methodology;
- (e) Relevant decisions, clarifications and guidance from the CMP and the CDM Executive Board;
- (f) The Gold Standard Toolkit Version 2.2 and related Annex.
- (g) All information and references relevant to the project activity's resulting in emission reductions.

The purpose of the Magang Project is to install 33 sets of wind turbine-generators with per unit capacity of 1.5 MW to generate clean renewable electricity with zero emissions. The total installed capacity is 49.5 MW. The purpose of the Huangmaopo Project is to install 24 sets of 2 MW wind turbine-generators and 1 set of 1.5 MW wind turbine-generators to generate clean renewable electricity with zero emissions. The total installed capacity is 49.5 MW. The total installed capacity for the bundled project is 99 MW.

Applus+ LGAI confirms that the project is implemented in accordance with the validated and registered PDD and Passport. The monitoring plan complies with the applied methodology ACM0002 Version 13.0.0 and the Gold Standard Toolkit Version 2.2, the monitoring has been carried out in accordance with the monitoring plan. The monitoring system is in place and the emission reductions are calculated without material misstatements. Our opinion relates to the projects GHG emissions and the resulting GHG emission reductions reported and related to the valid and registered project baseline and monitoring and its associated documents. Based on the information reviewed and evaluated Applus+ LGAI confirms that the implementation of the project has resulted in **99,626** tCO₂e emission reductions during period 11/01/2014 - 30/01/2015.

Assessment team	Role	Organization
Hanshen (Denny) Xue	Lead Auditor / Team Leader	Applus+ LGAI, Shanghai

ABBREVIATIONS

ACM	Approved Consolidated Methodology
AM	Approved Methodology
AMS	Approved Methodology Small Scale
Applus+ LGAI	LGAi Technological Center, S.A. (Applus)
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CER	Certified Emission Reduction
CM	Combined Margin
CMP	Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol
DNA	Designated National Authority
DOE	Designated Operational Entity
EF	Emission Factor
EIA	Environmental Impact Assessment
ER	Emission Reduction
FAR	Forward Action Request
FSR	Feasibility Study Report
GHG	Greenhouse Gas(es)
GS	Gold Standard
IPCC	Intergovernmental Panel on Climate Change
IRL	Information Reference List
IRR	Internal Rate of Return
KP	Kyoto Protocol
MP	Monitoring Plan
MR	Monitoring Report
NGO	Non Governmental Organisation
NWPG	Northwest China Power Grid
TAC	Gold Standard Technical Advisory Committee
OM	Operational Margin
PDD	Project Design Document
PP	Project Participant
UNFCCC	United Nations Framework Convention for Climate Change
VVS	Validation and Verification Standard

TABLE OF CONTENT

1.	INTRODUCTION	1
1.1.-	Objective	1
1.2.-	Scope	1
1.3.-	Description of the Project Activity:	1
2.	METHODOLOGY	3
2.1.-	Review of Documentation	4
2.2.-	On-site Assessment and follow-up Interviews	4
2.3.-	Quality of Evidences	5
2.4.-	Reporting of Findings.....	5
2.5.-	Internal Quality Control.....	6
3.	VERIFICATION FINDINGS.....	7
3.1.-	FARs from Validation / Previous Verification	7
3.2.-	Project Implementation in accordance with the registered Project Design Document ..	7
3.3.-	Compliance of the Monitoring Plan with the Monitoring Methodology	8
3.4.-	Completeness of Monitoring	8
3.5.-	Parameter not monitored	9
3.6.-	Assessment of Data and Calculation of Greenhouse Gas Emission Reductions	10
3.7.-	Management and Operational System.....	13
3.8.-	Assessment of Sustainable Monitoring	14
4.	SUMMARY OF FINDINGS.....	26
5.	REFERENCE	27
6.	VERIFICATION STATEMENT	28

Annex 1: Verification Checklist and Resolution of Audit Findings

1. INTRODUCTION

1.1.- Objective

LGAI Technological Center, S.A. (hereafter referred to as Applus+ LGAI) has been contracted by Carbon Invcap International Trading Co., Ltd. to perform the first periodical verification of Gansu Jinchang Magang and Huangmaopo Bundled Wind Power Project (GS Ref. No. 2499) applying the methodology ACM0002 Version 13.0.0 /6/ and the Gold Standard Toolkit Version 2.2 /9/. Gold Standard projects must undergo periodic audits and verification of emission reductions as the basis for issuance of Gold Standard VERs.

The objective of the verification work is to comply with the requirements of paragraph 62 of the CDM Modalities and Procedures as well as the Gold Standard Toolkit Version 2.2 /9/. According to this assessment Applus+ LGAI shall:

- ensure that the project activity has been implemented and operated as per the registered PDD and Passport "Gansu Jinchang Magang and Huangmaopo Bundled Wind Power Project" version 06, dated 18/06/2014 /3/ /4/, and that all physical features (technology, project equipment, monitoring and metering equipment) of the project are in place;
- ensure that the published MR and other supporting documents provided are complete, verifiable and in accordance with applicable VVS /8/ and Gold Standard requirements;
- ensure that the actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan and the approved methodology;
- evaluate the data recorded and stored as per the Grid connected renewable electricity generation, ACM0002 Version 13.0.0 /6/.

1.2.- Scope

The verification scope encompasses an independent and objective review and ex-post determination of the monitored reductions in GHG emissions by the DOE. The verification is based on the submitted monitoring report, the validated and registered PDD and Passport as well as its validation report, the applied monitoring methodology, relevant decisions, clarifications and guidance from the CMP and the EB, The Gold Standard Toolkit Version 2.2 and any other information and references relevant to the project activity's resulting emission reductions. These documents are reviewed against the requirements of the Kyoto Protocol, the CDM Modalities and Procedures, The Gold Standard Toolkit Version 2.2 and related rules and guidance.

Based on the requirements in the VVS version 09.0 /8/ as well as the Gold Standard Toolkit Version 2.2 /9/, Applus+ LGAI has applied a rule-based approach for the verification of the project. The principles of accuracy, completeness, relevance, reliability and credibility were combined with a conservative approach to establish a traceable and transparent verification opinion.

The verification considers both quantitative and qualitative information on emission reductions. The verification also considers the monitoring of sustainable parameters.

The verification is not meant to provide any consultancy towards the client. However, stated requests for clarifications, corrective and/or forward actions may provide input for improvement of the monitoring activities.

1.3.- Description of the Project Activity:

Project activity: Gansu Jinchang Magang and Huangmaopo Bundled
Wind Power Project

Gold Standard registration number: 2499

Project Participants: Three Gorges New Energy Jinchang Wind Power Co., Ltd. (project owner)
Carbon Invcap International Trading Co., Ltd. (GS VER buyer)

Location of the project: Jinchang City, Gansu Province, P. R. of China
Geographic coordinates (Verified by site visit and Google Earth):
Magang: East longitude 102°13'04.74"~102°15'36.93" and North latitude 38°44'48.19"~38°47'48.67"
Huangmaopo: East longitude 101°33'45"~101°38'41" and North latitude 38°23'04"~38°25'05"

Date of registration: 06/06/2014

Starting date of the crediting period: 11/01/2014

Gansu Jinchang Magang and Huangmaopo Bundled Wind Power Project (hereafter referred to as "the bundled project" or "the bundled project activity" or "the project") is located at Jinchang City, Gansu Province, P. R. of China.

The bundled project includes 2 new-built wind farm projects. The purpose of the Magang Project is to install 33 sets of wind turbine-generators with per unit capacity of 1.5 MW to generate clean renewable electricity with zero emissions. The total installed capacity is 49.5 MW. The purpose of the Huangmaopo Project is to install 24 sets of 2 MW wind turbine-generators and 1 set of 1.5 MW wind turbine-generators to generate clean renewable electricity with zero emissions. The total installed capacity is 49.5 MW. The total installed capacity for the bundled project is 99 MW. The bundled project will contribute to the reduction of GHG emission by displacing part of the electricity from Northwest China Power Grid (NWPG) which is dominated by fossil fuel-fired power plants.

2. METHODOLOGY

Applus+ LGAI's approach to the verification is a two-stage process.

In the 1st stage, Applus+ LGAI completed a strategic review and risk assessment of the projects activities and processes in order to gain a full understanding of:

- Activities associated with all the sources contributing to the project emissions and emission reductions, including leakage if relevant;
- Protocols used to estimate or measure GHG emissions from these sources;
- Collection and handling of data;
- Controls on the collection and handling of data;
- Means of verifying reported data; and
- Compilation of the monitoring report.

Applus+ LGAI used a periodical Verification Checklist which, based on the risk-based assessment of the parameters and data collection and handling processes for each of those parameters, describes the verification approach and the sampling plan.

In the 2nd stage, using the Verification Checklist, Applus+ LGAI verified the implementation of the monitoring plan and the data presented in the Monitoring Report for the period in question. This involved a site visit and a desk review of the Monitoring Report. This Verification Report describes the findings of this assessment.

Assessment team

According to the sectoral scopes / technical area and experiences in the sectoral or national business environment, Applus+ LGAI has composed a project assessment team in accordance with the appointment rules in Applus+ LGAI complying with EB's requirements. The composition of assessment team has to be approved by the Applus+ LGAI ensuring that the required skills are covered by the team. The four qualification levels for team members that are assigned by formal appointment rules as below:

- Leader Auditor (LA)
- Auditor (A)
- Auditor Trainee (T)
- Technical Experts (E)

It is required that the sectoral scope / technical area linked to the methodology has to be covered by the assessment team.

Name	Qualification	Coverage of scope	Coverage of technical Area	Host country experience	Attendance to the On-Site Assessment
<i>Hanshen (Denny) Xue</i>	<i>LA</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>

Intermediate Technical Reviewer:

- Meng (Simon) Shen

Technical Reviewer:

- Miquel SITJES CABANAS

The curricula vitae of the DOE's validation team members are provided below:

Hanshen (Denny) Xue (Master Degree in Environmental Engineering, Bachelor Degree in Thermal Engineering) is a lead auditor appointed by Applus+ LGAI for the GHG project assessment. He is based on Shanghai. He has 1.5 years of work experiences in CDM project development. Before he joined Applus+ LGAI, he has been worked for Shanghai Chuanji Investment and Management which is a CDM consultancy company as a project manager for CDM project development.

Meng (Simon) Shen (Master Degree in Thermal Energy Engineering, Bachelor Degree in Environmental Engineering) has been appointed as a Technical Reviewer by Applus+ LGAI for the GHG project assessment. He is based in Shanghai. He has several years of work experience in environmental protection field. Before he joined Applus+ LGAI, he had been worked for TÜV SÜD as a GHG Validator/Verifier and ISO 9001/14001 Lead Auditor for 3.5 years.

Miquel SITJES CABANAS (B. Sc. degree in Chemistry 1975, Universidad de Barcelona – Spain). He has 15 years of experience in a Spanish chemical group company specialized in the manufacturing of raw chemical products, where he worked as the Manager of Quality Control, Production Manager and Environmental Manager. He also worked in the Spanish pharmaceutical industry for 7 years as Quality, Manufacturing and Environmental Manager. He has been working in the Applus+ LGAI Technological Centre since 1999: he started working there as an auditor (quality, environment, CDM, VCS, greenhouse gas verification and others) and since 2006 he has been the Systems Certification Technical Manager.

2.1.- Review of Documentation

The Monitoring Report version 01 /1/ was submitted to DOE before the verification activities started. The MR was assessed based on all the relevant documents. The aim of the assessment in the desk review was to:

- verify the completeness of the data and the information presented in the MR;
- check the compliance of the MR with respect to the monitoring plan depicted in the registered PDD and Passport, verify that the applied methodology was carried out. Particular attention to the frequency of measurements, the quality of the metering equipment including calibration requirements, and the quality assurance and quality control procedures was paid;
- evaluate the data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

A complete list of documents reviewed is available in chapter 6 of this report.

2.2.- On-site Assessment and follow-up Interviews

As a part of the verification, the on-site inspection has been performed by the assessment team.

Location: Jinchang City, Gansu Province, P. R. of China		
Date: 12/02/2015 - 13/02/2015		
Dai Xiangqin	Project Manager	Three Gorges New Energy Jinchang Wind Power Co., Ltd.
Su Long	Engineer	Three Gorges New Energy Jinchang Wind Power Co., Ltd.
Lai Zhengkuan	Section Chief	DRC of Jinchang City
Nie Zhenghua	Chief	EPB of Jinchang City
Guo Wenguang	Villager	Xiasi Village

Wang Zhong	Villager	Xiasi Village
Liu Haiying	Villager	Xiasi Village
Xu Hongmei	Project Manager	Goldchina Consultancy International Co., Ltd.

The objective of the on-site assessment is to:

- confirm the implementation and operation of the project;
- review the data flow for generating, aggregating and reporting the monitoring parameters;
- confirm the correct implementation of procedures for operations and data collection;
- cross-check the information provided in the MR documentation with other sources;
- check the monitoring equipment against the requirements of the PDD, Passport and the approved methodology, including calibrations, maintenance, etc.;
- review the calculations and assumptions used to obtain the GHG data and ER;
- identify if the quality control and quality assurance procedures are in place to prevent or correct errors or omissions in the reported parameters.

2.3.-Quality of Evidences

Sufficient evidence covering the full verification period in the required frequency is available to verify the figures stated in the final MR. The source of the evidences will be discussed in section 3 of this report. Specific cross-checks have been done in cases that further sources were available. The monitoring report's figures were checked by the assessment team against the raw data. The data collection system meets the requirements of the monitoring plan as per the methodology.

2.4.-Reporting of Findings

As an outcome of the verification process, the assessment team can raise different types of findings.

Where a non-conformance arises the assessment team shall raise a Corrective Action Request (CAR). A CAR is issued, where:

- Non-compliance with the monitoring plan or methodology are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient;
- Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;
- Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants.

The assessment team shall raise a Clarification Request (CR) if information is insufficient or not clear enough to determine whether the applicable GS requirements have been met.

All CARs and CRs raised during verification shall be resolved prior to submitting a request for issuance.

Forward Action Requests (FARs) may be raised during verification for actions where the monitoring and reporting require attention and/or adjustment for the next verification period.

All CARs, CRs and FARs for this verification period are included in Section 5 of the verification checklist in the annex 1 of the report.

2.5.-Internal Quality Control

As a final step of verification, the final documentation including the verification report have to undergo an internal quality control by the Technical Reviewer. Each report has to be finally approved either by the DOE's Technical Manager or the Deputy. In case one of these two persons is part of the assessment team, the approval can only be given by the person who is not a part of the assessment team. If the documents have been satisfactorily approved, the Request for Issuance is submitted to the GS Registry along with the relevant documents.

3. **VERIFICATION FINDINGS**

In the following sections, the results of the verification are stated. The verification results related to the project performance as documented and described in the registered PDD (dated 18/06/2014, version 06) /3/, registered Passport (dated 18/06/2014, version 06) and Monitoring Report (dated 15/04/2015, version 03) /1/. The verification findings for each verification subject are presented below.

3.1.-FARs from Validation / Previous Verification

As this is the first periodical verification, after checking validation report /5/, there is no FARs requested.

3.2.-Project Implementation in accordance with the registered Project Design Document

The project activity was fully implemented according to the description presented in the registered PDD and Passport. The assessment team confirms, through the visual inspection that all physical features of the proposed project activity including data collecting systems and storage have been implemented in accordance with the registered PDD.

The technical features of the equipments have been verified by the assessment team during site visit by checking nameplate of main equipment /10/ which is detailed listed below:

	Parameter	Unit	Magang project		Huangmaopo project	
Wind turbine	Type		GW93/1500	EN93/1.5	W2000CH	W1500CH
	Number		22	11	24	1
	Rated power	kW	1,500	1,500	2,000	1,500
	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	1,580	1,560	2,100	1,600
	Rated voltage	V	720	690	690	690

The bundled project activity was in normal operational and the same has been confirmed on-site. The start date for both projects is 24/05/2013 and 30/04/2013 respectively confirmed by checking validation report /5/ and was put into full operation on 11/01/2014 confirmed by checking Operation log for Magang and Huangmaopo project /22/.

The bundled project was registered at 06/06/2014 as confirmed by the mail sent by Gold Standard, according to the Gold Standard Toolkit Version 2.2 /9/, for retroactive project, the start date of the crediting period could be extend to two years before the date for the

registration, therefore, as the project started operation on 11/01/2014, then the crediting period of the project started at 11/01/2014.

By comparing the actual ER claimed in this monitoring period with the estimate in the registered PDD, the actual emission reductions (99,626 tCO₂e) are lower than what is stated in the PDD (i.e. 184,109 tCO₂e) which will not lead to a substantial increment of the ER in this period

Applus+ LGAI confirms that none of the data affects the additionality, scale or applicability of the project. There's no post registration change has been occurred during this monitoring period.

3.3.-Compliance of the Monitoring Plan with the Monitoring Methodology

The monitoring plan is in accordance with the approved methodology ACM0002 Version 13.0.0 /6/, applied by the proposed GS project activity. No deviation, correction or permanent change to the monitoring plan has been requested.

3.4.-Completeness of Monitoring

The monitoring has been carried out in accordance with the monitoring plan contained in the registered PDD. All parameters were monitored and determined as per the monitoring plan which is listed in below table:

Meth/tool	PDD	MR	Compliance?
EG _{facility,y}	EG _{facility,Magang,y}	EG _{facility,Magang,y}	Yes. Small different as the this is the bundled project
EG _{facility,y}	EG _{facility,Huangmaopo,y}	EG _{facility,Huangmaopo,y}	Yes. Small different as the this is the bundled project

The verification of the parameters required by the monitoring plan is provided as follows:

Data / Parameter:	EG _{facility,Magang,y}
Data unit:	MWh
Description:	Quantity of net electricity supplied of Magang project to the grid in year y
Purpose of the data:	Calculation of baseline emissions
Parameter value:	71,963.10
Source of data used:	Monthly Reading Record /15/ based on M1, ETNs /16/ issued by the grid company are used for the calculation.
Information flow:	There are 2 meters installed at Outlet of the 35kV/ 220kV Substation (M1 as main meter and M1' as backup meter). Both meters are used to monitor net electricity exported to the grid. Net electricity exported to the grid is continuous monitoring, hourly measurement and at least monthly recording. At 00:00 of the last day of every month, the raw data of meter reading of main meter are recorded by the project owner and form Monthly Reading Record /15/, and then send to the power grid company, after the confirmation of power grid company, the power grid company will issue ETNs /16/. Then the conservative value between the Monthly Reading Record /15/ and ETNs /16/ issued by the power grid company would be used for ER calculation. All these have been confirmed by site visit.
Monitoring method, frequency and equipments:	The parameter was measured continuously, hourly measurement and at least monthly recording by 2 electricity meters (M1 and M1'). All information of M1 and M1' meter are listed and verified by site visit and checking calibration certificate, see below:

	Meter	Model	Serial Number	Accuracy
	M1	SL7000	67009036	0.2s
	M1'	SL7000	67009039	0.2s
Calibration:	Meters	Calibration date	Valid until	Certification Institution
	M1 /18/	03/12/2013	02/12/2014	Electric energy measurement test center of Gansu Power Grid Company /19/
		01/12/2014	30/11/2015	
	M1' /18/	03/12/2013	02/12/2014	
		01/12/2014	30/11/2015	
QA/QC procedure:	Electronic and paper records will be kept for a minimum of two years after the end of the crediting period.			
Means of verification:	Data of the parameter was verified by checking Monthly Reading Record /15/ based on 2 meters and ETNs /16/. All data is in line with Monthly Reading Record /15/ based on 2 meters and ETNs /16/; Information flow was verified by checking Monthly Reading Record /15/ based on 2 meters and ETNs /16/. All information are consistent; Monitoring method was verified by site visit, checking calibration certificate /18/, all monitoring method meets the description in the PDD; Calibration was verified by checking calibration certificate /18/ and Accreditation certificate /19/, all monitoring equipment meets the requirement indicated in the PDD.			
Cross-check:	Monthly Reading Record /15/ based on raw data is crosschecked with ETNs /16/. All data are logically consistent and conservative data are used to in the ER calculation.			

Data / Parameter:	EG _{facility,Huangmaopo,y}
Data unit:	MWh
Description:	Quantity of net electricity supplied of Huangmaopo project to the grid in year y
Purpose of the data:	Calculation of baseline emissions
Parameter value:	44,315.04
Source of data used:	Monthly Reading Record /15/ based on M2, ETNs /16/ issued by the grid company are used for the calculation.
Information flow:	There are 2 meters installed at Outlet of the 35kV/ 220kV Substation (M2 as main meter and M2' as backup meter). Both meters are used to monitor net electricity exported to the grid. Net electricity exported to the grid is continuous monitoring, hourly measurement and at least monthly recording. At 00:00 of the last day of every month, the raw data of meter reading of main meter are recorded by the project owner and form Monthly Reading Record /15/, and then send to the power grid company, after the confirmation of power grid company, the power grid company will issue ETNs /16/. Then the conservative value between the Monthly Reading Record /15/ and ETNs /16/ issued by the power grid company would be used for ER calculation. All these have been confirmed by site visit.
Monitoring method, frequency and	The parameter was measured continuously, hourly measurement and at least monthly recording by 2 electricity meters (M2 and M2'). All information of M2 and M2' meter are listed and verified by site visit and checking calibration

equipments:	certificate, see below:			
	Meter	Model	Serial Number	Accuracy
	M2	SL7000	67008961	0.2s
	M2'	SL7000	67008962	0.2s
Calibration:	Meters	Calibration date	Valid until	Certification Institution
	M1 /18/	03/12/2013	02/12/2014	Electric energy measurement test center of Gansu Power Grid Company /19/
		01/12/2014	30/11/2015	
	M1' /18/	03/12/2013	02/12/2014	
		01/12/2014	30/11/2015	
	QA/QC procedure:	Electronic and paper records will be kept for a minimum of two years after the end of the crediting period.		
Means of verification:	Data of the parameter was verified by checking Monthly Reading Record /15/ based on 2 meters and ETNs /16/. All data is in line with Monthly Reading Record /15/ based on 2 meters and ETNs /16/; Information flow was verified by checking Monthly Reading Record /15/ based on 2 meters and ETNs /16/. All information are consistent; Monitoring method was verified by site visit, checking calibration certificate /18/, all monitoring method meets the description in the PDD; Calibration was verified by checking calibration certificate /18/ and Accreditation certificate /19/, all monitoring equipment meets the requirement indicated in the PDD.			
Cross-check:	Monthly Reading Record /15/ based on raw data is crosschecked with ETNs /16/. All data are logically consistent and conservative data are used to in the ER calculation.			

3.5.-Parameter not monitored

Below data has been verified against the data sources and the PDD.

Parameter title	Data	Source
EF _{grid,CM,y}	0.8568	Chinese Regional Grid Baseline Emission Factors 2013 /11/

As the project was registered in 11/01/2014, the latest version of Chinese Regional Grid Baseline Emission Factors available at that time is 2013, also comparing with Chinese Regional Grid Baseline Emission Factors in the previous year, the emission reduction is getting smaller, then it is more conservative to use the data in the Chinese Regional Grid Baseline Emission Factors 2013 for the calculation.

Applus+ LGAI has verified the defaulted figures which are not monitored in crediting period and confirmed that the figures are consistent with their sources.

3.6.-Assessment of Data and Calculation of Greenhouse Gas Emission Reductions

As a result of verification of the ER calculation process, the assessment team confirmed that all the parameters required for the determination of the emission reductions have been included in the Monitoring report Version 03 /1/ and ER calculation spreadsheet /2/ and are consistent with the applied methodology ACM0002 Version 13.0.0 /6/, Tool to calculate the emission factor for an electricity system Version 03.0 /7/ and the monitoring plan contained in the registered PDD /3/. The parameters are complete in this monitoring period.

After verifying the reported figures with the raw data sources, it's confirmed that the values of the parameters from the raw data sources are consistent with those quoted in the Monitoring report Version 03 /1/ and ER calculation spreadsheet /2/. The verification process for the same has been clearly described in section 3.4 of the report. See below for the detailed data:

Baseline emissions:

Electricity supplied to the grid

Data and parameters monitored	Electricity supplied to the grid by Magang Project			Electricity supplied to the grid by Huangmaopo Project		
	MRRs MWh A	ETNs MWh B	Conservative value used in the calculation MWh C = Min (A, B)	MRRs MWh D	ETNs MWh E	Conservative value used in the calculation MWh 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) ¹	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 ²	7,298.94	4,295.28	4,295.28 ²	4,295.28
Total from 01/01/2015-30/01/2015	7,298.94			4,295.28		
Sum	72,624.42			44,885.94		

1. This data is quoted from statement issued by power grid company regarding to raw data of the meters dated 02/02/2015 /17/.
2. These data are determined by statement issued by power grid company regarding to raw data of the meters dated 02/02/2015 /17/ and ETNs issued by the power grid company /16/.

Electricity supplied from the grid

Data and parameters monitored	Electricity supplied from the grid by Magang Project	Electricity supplied from the grid by Huangmaopo Project
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Monitoring Period	MRRs MWh A	ETNs MWh B	Conservative value used in the calculation MWh C = Max (A, B)	MRRs MWh D	ETNs MWh E	Conservative value used in the calculation MWh F = Max (D, E)
11/01/2014 - 30/01/2014	3.63	3.63	3.63	8.91	8.91	8.91
31/01/2014 - 27/02/2014	23.10	23.10	23.10	24.09	24.09	24.09
28/02/2014 - 30/03/2014	30.36	30.36	30.36	47.85	47.85	47.85
31/03/2014 - 29/04/2014	18.15	18.15	18.15	50.16	50.16	50.16
30/04/2014 - 30/05/2014	57.42	57.42	57.42	43.89	43.89	43.89
31/05/2014 - 29/06/2014	40.59	40.59	40.59	36.30	36.30	36.30
30/06/2014 - 30/07/2014	41.25	41.25	41.25	43.23	43.23	43.23
31/07/2014 - 30/08/2014	50.49	50.49	50.49	33.66	33.66	33.66
31/08/2014 - 29/09/2014	89.43	89.43	89.43	77.22	77.22	77.22
30/09/2014 - 30/10/2014	65.34	65.34	65.34	50.49	50.49	50.49
31/10/2014 - 29/11/2014	75.57	75.57	75.57	38.94	38.94	38.94
30/11/2014 - 30/12/2014	62.37	62.37	62.37	37.62	37.62	37.62
31/12/2014 (0:00-24:00) ¹	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 ²	82.17	56.76	56.76 ²	56.76
Total from 01/01/2015- 30/01/2015	82.17			56.76		
Sum	661.32			570.90		

1. This data is quoted from statement issued by power grid company regarding to raw data of the meters dated 02/02/2015 /17/.
2. These data are determined by statement issued by power grid company regarding to raw data of the meters dated 02/02/2015 /17/ and ETNs issued by the power grid company /16/.

Net electricity generation supplied

Monitoring Period	EG _{facility, Magang, y} MWh	EG _{facility, Huangmaopo, y} MWh	EF _{grid, CM, y} CO ₂ e/MWh	BE _y 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		9,814
Total	71,963.10	44,315.04		99,626
Sum	116,278.14			

Therefore, the net electricity generation supplied is determined as 116,278.14 MWh. As EF_{grid, CM, y} is fix as 0.8568 tCO₂e/MWh, then:

$$\text{Then, BE}_y = 116,278.14 * 0.8568 = 99,626 \text{ tCO}_2\text{e}$$

Project emissions:

The project is a wind power project, no fossil fuel will be consumed according to the methodology ACM0002 /6/, then, according to registered PDD, $PE_y = 0 \text{ tCO}_2\text{e}$

Leakage:

According to ACM0002 Version 13.0.0 /6/, if energy generating equipment is transferred from another activity, leakage is to be considered. As a newly built project, the equipments of the project are all new but the equipment transfer from other activities. Then this part of leakage should be considered as zero.

In summary, $LE_y = 0 \text{ tCO}_2\text{e}$

Emission reductions:

$$ER = BE_y - PE_y - LE_y = 99,626 \text{ tCO}_2\text{e} - 0 \text{ tCO}_2\text{e} - 0 \text{ tCO}_2\text{e} = 99,626 \text{ tCO}_2\text{e}$$

The calculation tool, i.e. the ER calculation spreadsheet /2/ clearly and transparently describes the calculation of emission reductions. The ER calculation spreadsheet /2/ is indicated with the issuing date and revision number. The assessment team re-produced the calculation process and confirmed that the methods and formulae used to obtain the baseline, project and leakage emissions are appropriate. The calculation has been done in accordance with the methods and formulae described in the registered monitoring plan and applicable methodology.

The reported data have been cross-checked against other sources available as explained above in section 3.4 of the report.

Applus+ LGAI checked all registries including VCS (<http://www.vcsprojectdatabase.org/>) and REC (<http://www.epa.gov/greenpower/gpmarket/tracking.htm>), there are no double counting for this monitor period for the project. Also in the MR, the project owner made a declaration that states no RECs are been issued.

The assessment team confirms that all the assumptions, emission factors and default values (ex-ante values) from PDD have been correctly justified. All the emission factors and default values are explicitly mentioned in the monitoring report.

3.7.- Management and Operational System

The responsibilities of data measurement, collection, verifying, archiving etc. have been clearly defined in the Project Operation Manual /12/. The data related to ER calculation as well as data monitoring, collection process etc. have been internally reviewed by the management of the Monitoring team regularly. The responsibility of each function is consistent with the monitoring plan in the registered PDD.

For Magang project:

- Ms. Da Xiangqin as Office director is responsible for supervising the whole GS issues in the project activity;
- Mr. Zhang Xiangjin is responsible for the GS sustainable development indicators monitoring;
- Mr. Su Long is responsible for equipment maintenance data collection, verifying and archiving;
- Ms. Su Yixuan is responsible for collating electricity sale receipts and sale invoice and management of Gold Standard verification materials;
- Ms. Xu Hongmei from the Goldchina Consultancy International Co., Ltd. is responsible for preparing the Monitoring Report and ER calculation.

For Huangmaopo project:

- Ms. Da Xiangqin as Office director is responsible for supervising the whole GS issues in the project activity;
- Mr. Zhang Zhaoxu is responsible for the GS sustainable development indicators monitoring;
- Mr. Yan Pingshan is responsible for equipment maintenance data collection, verifying and archiving;
- Ms. Su Yixuan is responsible for collating electricity sale receipts and sale invoice and

management of Gold Standard verification materials;

- Ms. Xu Hongmei from the Goldchina Consultancy International Co., Ltd. is responsible for preparing the Monitoring Report and ER calculation.

The information flow of each parameter has been verified by the assessment team via interviewing with responsible personnel and checking with the Project Operation Manual /12/. The details of information flow of each parameter are described in annex 1 of the verification report.

It's verified during the on-site verification, the monitoring procedure as well as the internal quality management and control procedures are stipulated in the Project Operation Manual /12/. The procedure are issued and approved by the top management. The monitoring personnel have been interviewed by the assessment team and it's confirmed that the monitoring is implemented as per the procedure. Also the training record and work certificate /13/ has been checked by the assessment team and it is confirmed that the monitoring personnel are get sufficient train to perform the monitoring.

All the data and documents, either hard copies or electric copies, will be kept for two years after the end of the last crediting period or the last issuance of GS VERs for this Project, whichever occurs later.

3.8.- Assessment of Sustainable Monitoring

In the Registered Passport Version 06 /4/, 6 indicators are chosen for the monitoring of sustainable monitoring for both projects:

Meth/tool	Passport	MR	Compliance?
Air Quality	Air Quality	Air Quality	Yes
Quality of employment	Quality of employment	Quality of employment	Yes
Quantitative employment and income generation	Quantitative employment and income generation	Quantitative employment and income generation	Yes
Water quality and quantity	Water quality and quantity	Water quality and quantity	Yes
Soil condition	Soil condition	Soil condition	Yes
Other pollutants	Other pollutants	Other pollutants	Yes

The verification of the parameters required by the monitoring plan is provided as follows:

For Magang project:

Indicator:	Air Quality
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
Parameter value:	71,963.10 MWh
Mitigation Measures:	According to the EIA form, the major ambient air pollutant during construction period is dust. Water sprayed at the construction site on a regular basis, and sand and stone materials location site will be sheltered. According to the EIA form, no additional air pollutant during operation period is expected from the project activity. No mitigation measure is required.
Data Source:	Monthly Reading Record /15/ based on M1 and M2, ETNs /16/ issued by the grid company, Record for water spraying /23/ and Record for sand and stone materials sheltering /25/.

Original situation of parameter:	Equivalent electricity supplied by NWPG which is dominated by fossil fuel-fired power plants.
Baseline situation of parameter:	Equivalent electricity supplied by NWPG which is dominated by fossil fuel-fired power plants.
Target achieved?	Yes, bases on online data, the SO₂ and NO_x that could be generated in the baseline scenario are calculated as 165.515 tons and 187.104 tons respectively. The operation of the project surely improves the air quality. The data for SO₂ and NO_x are calculated by on-line data source (http://news.bjx.com.cn/html/20120606/364987.shtml) which indicates SO₂ emission factor is 2.3 g/kWh and the NO_x emission factor is 2.6 g/kWh and net electricity generated by the project activity. Water sprayed at the construction site on a regular basis, and sand and stone materials location site will be sheltered.
Procedure of monitoring:	The net electricity supplied by the project will be continuously measured by electricity meters. Please refer to table in the 3.4. Water spray and sand and stone materials were recorded during the construction period. Also Questionnaires for environmental survey /24/ are checked to confirm that the villagers around are satisfied with water sprayed and sand and stone materials sheltering status
Means of verification:	Monthly Reading Record /15/ based on M1 and M2, ETNs /16/ are checked to determine the net electricity generated by the project activity. Record for water spraying /23/, Questionnaires for environmental survey /24/ and Record for sand and stone materials sheltering /25/ are checked to determine the water sprayed and sand and stone materials sheltering status during the construction period.
Cross-check:	Not applicable

Indicator:	Quality of employment
Chosen parameter:	Training of staff / safe and healthy working condition
Parameter value:	Not applicable
Data Source:	Training Record /13/
Mitigation Measures:	Not applicable as indicator scored positive
Original 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.
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.
Target achieved?	Yes, the project owner provides a lot of training during monitoring period and Labor protection device are well distributed.
Procedure of monitoring:	Training are and distribution of Labor protection device are well recorded.
Means of verification:	By checking all the training records /13/, it is confirmed that the project owner provide sufficient training for the employee for skill and safety training. Also some interviews were made with employee and confirmed that they are working in a safety environment and get sufficient trained.
Cross-check:	Not applicable

Indicator:	Quantitative employment and income generation
Chosen parameter:	Number of jobs created in the operations of the project and their salary levels
Data Source:	Statement for salary of employee /14/
Parameter value:	22 long-term work positions for local people have been created with 51,716 RMB yearly salaries for every employee
Mitigation Measures:	Not applicable as indicator scored positive
Original situation of parameter:	Without the project, local people have no such job opportunities from the project, and their income has no increase
Baseline situation of parameter:	In the baseline, local people have no such job opportunities from the project, and their income has no increase.
Target achieved?	Yes. 22 long-term work positions for local people have been created with 51,716 RMB yearly salaries for every employee.
Procedure of monitoring:	The project owner records the quantity of the work position and salary monthly.
Means of verification:	After checking Statement for salary of employee /14/, it is confirmed that 22 long-term work positions for local people have been created with 51,716 RMB yearly salaries for every employee. Also some interview with employee and general manager of the project owner was made to confirm the authentic of the information. Also, after checking China Statistical Yearbook 2013 /20/, it is found the average salary of the project activity is higher than the value of Gansu province.
Cross-check:	Not applicable

Indicator:	Water quality and quantity
Chosen parameter:	Not applicable
Data Source:	Not applicable
Parameter value:	Not applicable
Mitigation Measures:	According to the EIA form, the industrial wastewater and sanitary wastewater will be 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 will be 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 will be used as spraying water for dust control. According to the EIA form, the major pollutant during operation period is 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.
Original situation of parameter:	Not applicable
Baseline situation of parameter:	Not applicable
Target achieved?	Yes, the waste water was treated, and then re-use as the greening water. During the construction period, industrial wastewater and sanitary wastewater are well treated.

Procedure monitoring:	of	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 by the project in each verification period.
Means of verification:		After checking Record for waste water treatment during the construction period /26/, Questionnaires for environmental survey /24/ and interview with the local resident, it is confirmed that waste water were well treated during the construction period. During the site visit, it is able to confirm that wastewater treatment system are used for waste water treatment and re-use as the greening water.
Cross-check:		Not applicable

Indicator:	Soil condition
Chosen parameter:	Not applicable
Data Source:	Not applicable
Parameter value:	Not applicable
Mitigation Measures:	During the construction phase, the construction activities including construction of the wind farm, road building as well as the pipeline arrangement will bring about certain soil and water erosion. Measures including the vegetations recovery will be adopted to reduce the water and 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.
Original situation of parameter:	Not applicable
Baseline situation of parameter:	Not applicable
Target achieved?	Yes
Procedure of monitoring:	The photos of vegetation condition before and after the construction of the Project were taken.
Means of verification:	After site visit, it is confirmed that the project has no negative effect for the soil condition, even soil condition was recovered and improved, and the same has been confirmed by interview with the local residents. Also after comparing photos of vegetation condition before and after the construction of the Project as well as checking Questionnaires for environmental survey /24/, it is confirmed that the project has no negative effect for the soil condition; even soil condition was recovered and improved.
Cross-check:	Not applicable

Indicator:	Other pollutants
Chosen parameter:	Not applicable
Data Source:	Not applicable
Parameter value:	Not applicable
Mitigation Measures:	(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 land filled 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 desertification 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.
Original situation of parameter:	Not applicable
Baseline situation of parameter:	Not applicable
Target achieved?	Yes
Procedure of monitoring:	Waste treatment records for both construction and operation period are checked, villagers are interviewed
Means of verification:	After checking with the Waste Handle Report /21/ and Questionnaires for environmental survey /24/, it is confirmed that the project has no negative effect for the other pollutant. During the construction and operation period of the project, waste has been well handled, and the same has been confirmed by interview with the local residents.
Cross-check:	Not applicable

For Huangmaopo project:

Indicator:	Air Quality
Chosen parameter:	Indirect parameter of clean and renewable electricity supplied by the 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
Parameter value:	44,315.04 MWh
Mitigation Measures:	According to the EIA form, the major ambient air pollutant during construction period is dust. The dust prevention as the labour protection measures will be strengthened by the front line workers. The water spraying will be adopted for the traffic road surface to reduce dust, and the slag disposal site should conduct greening after residual cleaning to prevent dust. According to the EIA form, no additional air pollutant during operation period is expected from the project activity. No mitigation measure is required.
Data Source:	Monthly Reading Record /15/ based on M1 and M2, ETNs /16/ issued by the grid company, Record for water spraying /23/ and Record for mask distribution during the construction /27/.
Original situation of parameter:	Equivalent electricity supplied by NWPG which is dominated by fossil fuel-fired power plants.

Baseline situation of parameter:	Equivalent electricity supplied by NWPG which is dominated by fossil fuel-fired power plants.
Target achieved?	Yes, bases on online data, the SO₂ and NO_x that could be generated in the baseline scenario are calculated as 101.924 tons and 115.219 tons respectively. The operation of the project surely improves the air quality. The data for SO₂ and NO_x are calculated by on-line data source (http://news.bjx.com.cn/html/20120606/364987.shtml) which indicates SO₂ emission factor is 2.3 g/kWh and the NO_x emission factor is 2.6 g/kWh and net electricity generated by the project activity. Water sprayed at the construction site on a regular basis, and masks for protection are well distributed.
Procedure monitoring: of	The net electricity supplied by the project will be continuously measured by electricity meters. Please refer to table in the 3.4. Water spray and distribution of masks were recorded during the construction period. Also Questionnaires for environmental survey /24/ are checked to confirm that the villagers around are satisfied with water sprayed. After interview with the staffs of the project, it is confirmed masks are well distributed.
Means of verification:	Monthly Reading Record /15/ based on M1 and M2, ETNs /16/ are checked to determine the net electricity generated by the project activity. Record for water spraying /23/, Questionnaires for environmental survey /24/ and Record for mask distribution during the construction /27/ are checked to determine the water sprayed and masks distribution during the construction period.
Cross-check:	Not applicable

Indicator:	Quality of employment
Chosen parameter:	Training of staff / safe and healthy working condition
Parameter value:	Not applicable
Data Source:	Training Record /13/
Mitigation Measures:	Not applicable as indicator scored positive
Original 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.
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.
Target achieved?	Yes, the project owner provides a lot of training during monitoring period and Labor protection device are well distributed.
Procedure monitoring: of	Training are and distribution of Labor protection device are well recorded.
Means of verification:	By checking all the training records /13/, it is confirmed that the project owner provide sufficient training for the employee for skill and safety training. Also some interviews were made with employee and confirmed that they are working in a safety environment and get sufficient trained.
Cross-check:	Not applicable

Indicator:	Quantitative employment and income generation
Chosen parameter:	Number of jobs created in the operations of the project and their salary levels
Data Source:	Statement for salary of employee /14/
Parameter value:	22 long-term work positions for local people have been created with 51,742.9 RMB yearly salaries for every employee
Mitigation Measures:	Not applicable as indicator scored positive
Original situation of parameter:	Without the project, local people have no such job opportunities from the project, and their income has no increase
Baseline situation of parameter:	In the baseline, local people have no such job opportunities from the project, and their income has no increase.
Target achieved?	Yes. 22 long-term work positions for local people have been created with 51,742.9 RMB yearly salaries for every employee.
Procedure of monitoring:	The project owner records the quantity of the work position and salary monthly.
Means of verification:	After checking Statement for salary of employee /14/, it is confirmed that 22 long-term work positions for local people have been created with 51,742.9 RMB yearly salaries for every employee. Also some interview with employee and general manager of the project owner was made to confirm the authentic of the information. Also, after checking China Statistical Yearbook 2013 /20/, it is found the average salary of the project activity is higher than the value of Gansu province.
Cross-check:	Not applicable

Indicator:	Water quality and quantity
Chosen parameter:	Not applicable
Data Source:	Not applicable
Parameter value:	Not applicable
Mitigation Measures:	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.
Original situation of parameter:	Not applicable
Baseline situation of parameter:	Not applicable
Target achieved?	Yes, the waste water was treated, and then re-use as the greening water. During the construction period, industrial wastewater and sanitary wastewater are well treated.
Procedure of monitoring:	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 by the project in each verification period.
Means of verification:	After checking Record for waste water treatment during the construction period /26/, Questionnaires for environmental survey /24/ and interview with the local resident, it is confirmed that waste water were well treated during the construction period. During the site visit, it is able to confirm that wastewater treatment system are used for waste water treatment and re-use as the greening water.
Cross-check:	Not applicable

Indicator:	Soil condition
Chosen parameter:	Not applicable
Data Source:	Not applicable
Parameter value:	Not applicable
Mitigation Measures:	During the construction phase, the construction activities including construction of the wind farm, road building as well as the pipeline arrangement will bring about certain soil and water erosion. Measures including the vegetations recovery will be adopted to reduce the water and 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.
Original situation of parameter:	Not applicable
Baseline situation of parameter:	Not applicable
Target achieved?	Yes
Procedure of monitoring:	The photos of vegetation condition before and after the construction of the Project were taken.
Means of verification:	After site visit, it is confirmed that the project has no negative effect for the soil condition, even soil condition was recovered and improved, and the same has been confirmed by interview with the local residents. Also after comparing photos of vegetation condition before and after the construction of the Project as well as checking Questionnaires for environmental survey /24/, it is confirmed that the project has no negative effect for the soil condition; even soil condition was recovered and improved.
Cross-check:	Not applicable

Indicator:	Other pollutants
Chosen parameter:	Not applicable
Data Source:	Not applicable
Parameter value:	Not applicable
Mitigation Measures:	(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 desertification 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.
Original situation of parameter:	Not applicable
Baseline situation of parameter:	Not applicable
Target achieved?	Yes
Procedure of monitoring:	Waste treatment records for both construction and operation period are checked, villagers are interviewed
Means of verification:	After checking with the Waste Handle Report /21/ and Questionnaires for environmental survey /24/, it is confirmed that the project has no negative effect for the other pollutant. During the construction and operation period of the project, waste has been well handled, and the same has been confirmed by interview with the local residents.
Cross-check:	Not applicable

For Magang project

The list of questions interviewed and the feedback collected from the stakeholders is summarized as following table:

Topic 1. PP	Three Gorges New Energy Jinchang Wind Power Co., Ltd.	
	Questions	Feedback received
	Please introduce the timeline of the project	Magang project obtained the approval from the Gansu Development and Reform Commission on 21/12/2012, and the EIA was approved on 13/11/2012. Construction contract of Engineering Road and Wind Turbine Foundation was signed on 24/05/2013, and the first wind generator began to operate on 11/01/2014.

	Does the project receive the ODA?	No, the project does not receive any public funding or ODA.
	How the stakeholder consultation feedback meeting was organized? What were the outcomes? How did you follow up the feedback?	We invited the GS experts, the Gold standard supporters, the local NGO, the Chinese DNA, the local government and local residential through all kinds of ways. For example, there are emails, fax, and pasting notice. SFR meeting is organized and meeting records is summarized. No any negative comments were received during the SFR process. Additionally, the continuous input/grievance mechanism is in place to seek relevant stakeholder's feedback on the continuous input/grievance expression.
	Please introduce the impact of the project on the sustainability development?	The project involves generation and delivery of electricity from wind energy source, so the project reduces the GHG emissions. What's more, the project provides job opportunities for local residents.
	How the matrix was completed together with the stakeholders?	The questionnaires were delivered to the stakeholders during the SFR meeting and then the stakeholders filled the questionnaires, where the questions were based on the sustainable development indicators.
Topic 2	Representative of local government: DRC of Jinchang City	
	Questions	Feedback received
	Does the project comply with the national and local requirements? Please introduce the approval procedures for the project?	The project complies with the national and local energy policy and requirements, and the project take advantage of the wind energy to produce electricity. We certainly support the development and construction of project. When the project owner submitted some related materials, we organized some experts and discussed all kinds of issues and communicated with the project owner until it got approved on 21/12/2012.
	What about the energy structure in local area?	Although the wind power projects increase recent years, the electricity consumption mainly comes from the plants using fossil fuel.
	Is there any comment or feedback?	So far there are not any comments.
	Please introduce the impact on the sustainability development from the aspect of environment, social and local economy?	The project can reduce the emission of other pollutants resulting from the power generation industry, and the project can create job opportunities for local residents and increase their income. In addition, the project is cited in the arid desertificational wasteland, which utilize the natural resources.
Topic 3	Local residents	

	Do you know about the project? Where and how do you know the project?	Yes, I know the project, and I filled the questionnaire at that time. I noticed the project long time ago, and I think the project is very good for local residents.
	How far is between the project site and your house? Is there any impact on your life?	About 5 kilometers between my house and the project site. There is not any negative impact on my life.
	What do you think about the project?	I think the project is very good and I absolutely support the development, because the operation the project reduces the emission of pollution. Recently all of us pay close attention to the environment, and I think the project contributes to the sustainable development of local community.

For Huangmaopo project

The list of questions interviewed and the feedback collected from the stakeholders is summarized as following table:

Topic 1. PP	Three Gorges New Energy Jinchang Wind Power Co., Ltd.	
	Questions	Feedback received
	Please introduce the timeline of the project	Huangmaopo project obtained the approval from the Gansu Development and Reform Commission on 21/12/2012, and the EIA was approved on 13/11/2012. The wind turbines and the auxiliary equipment purchase contract of Huangmaopo project was signed was signed on 30/04/2013, and the first wind generator began to operate on 11/01/2014.
	Does the project receive the ODA?	No, there isn't any public funding or ODA for Huangmaopo Project.
	How the stakeholder consultation feedback meeting was organized? What were the outcomes? How did you follow up the feedback?	We invited the GS experts, the Gold standard supporters, the local NGO, the Chinese DNA, the local government and local residential through all kinds of ways. For example, there are emails, fax, and pasting notice. SFR meeting is organized and meeting records is summarized. No any negative comments were received during the SFR process. Additionally, the continuous input/grievance mechanism is in place to seek relevant stakeholder's feedback on the continuous input/grievance expression.
	Please introduce the impact of the project on the sustainability development?	The project involves generation and delivery of electricity from wind energy source, so the project reduces the GHG emissions. The project provides job opportunities for local residents.
	How the matrix was	The questionnaires were delivered to the

	completed together with the stakeholders?	stakeholders during the SFR meeting and then the stakeholders filled the questionnaires, where the questions were based on the sustainable development indicators.
Topic 2	Representative of local government: EPB of Jinchang City	
	Questions	Feedback received
	Does the project comply with the national and local requirements? Please introduce the approval procedures for the project?	The project complies with the national and local energy policy and requirements. We absolutely support the development and construction of project. When the project owner submitted some related materials, we organized some experts and discussed all kinds of issues and communicated with the project owner until it got approved on 21/12/2012.
	What about the energy structure in local area?	The plants using fossil fuel produce the electricity for local residents.
	Is there any comment or feedback?	There are not any comments at all.
	Please introduce the impact on the sustainability development from the aspect of environment, social and local economy?	The project helps to create job opportunities for local residents, and the project reduces the emission GHG.
Topic 3	Local residents	
	Do you know about the project? Where and how do you know the project?	Yes. I worked here during the construction period, so I know the project very much.
	How far is between the project site and your house? Is there any impact on your life?	It is about 3 kilometers. There is not any negative impact on my life. If there is any impact, that is the positive impact.
	What do you think about the project?	I think the project does us good to seek the sustainable development and I absolutely support the project.

In Summary, it is Applus+ LGAI's opinion that the monitoring of the project owner regarding to sustainability is in line with requirement of the Gold Standard Toolkit Version 2.2 /9/

4. **SUMMARY OF FINDINGS**

The assessment team can confirm that the published MR and related documents are complete and verifiable in accordance with the GS requirements. All the findings that were raised by the assessment team, the responses by the PPs and the conclusion from the team are presented in section 5 of Annex 1. The means of verification and resulting changes in the MR or related documents are identified in the following tables:

Findings
CR#1: Please provide more information of M1, M1', M2 and M2' including the model in the MR.
Means of verification
After checking calibration information and site visit, it is confirmed that the correct information of M1, M1', M2 and M2' has been included in the MR.
Changes in the MR or related documents
More information of M1, M1', M2 and M2' has been included in the MR.

Findings
CR#2: Please clarify how quantity of net electricity supplied of the project activity (including Magang and Huangmaopo) to the grid in year y is monitored and the information flow of the data.
Means of verification
After interview with the staff of the project, it is confirmed that the cut off time is the 00:00 of the last day of each month, the staff of the project would record the meter readings (MRRs) and report to the grid company, and then the grid company will confirm the data then issue the ETNs. The conservative value between MRRs and ETNs would be used for ER calculation.
Changes in the MR or related documents
More description in MR

5. REFERENCE

- /1/ Monitoring Report Version 01 dated 01/02/2015 and Monitoring Report Version 03 dated 15/04/2015
- /2/ ER calculation spreadsheet
- /3/ Registered PDD Version 06 dated 18/06/2014
- /4/ Registered Passport Version 06 dated 18/06/2014
- /5/ Gs Validation Report issued by TÜV Rheinland dated 23/06/2014 Version 04.0 Report No. 01 997 9105076803
- /6/ ACM0002 Version 13.0.0 - Grid connected renewable electricity generation
- /7/ Tool to calculate the emission factor for an electricity system Version 03.0
- /8/ Validation and Verification Standard Version 09.0
- /9/ The Gold Standard Toolkit Version 2.2
- /10/ Nameplate of main equipment
- /11/ Chinese Regional Grid Baseline Emission Factors 2013
<http://cdm.ccchina.gov.cn/Detail.aspx?newsId=41386&TId=3>
- /12/ Project Operation Manual issued by project owner for both project
- /13/ Training record for Magang and Huangmaopo project
- /14/ Statement for salary of employee issued by the project owner dated 16/02/2015
- /15/ Monthly Reading Record of M1 and M2 covering the monitoring period
- /16/ ETNs covering the monitoring period for both electricity exported and imported
- /17/ Statement issued by the Power Grid Company regarding to raw data of the meters dated 02/02/2015
- /18/ Calibration Certificate for M1, M1', M2 and M2' covering the monitoring period issued by Electric energy measurement test center of Gansu Power Grid Company covering the monitoring period
- /19/ Accreditation of Electric energy measurement test center of Gansu Power Grid Company valid from 26/01/2011 to 25/01/2016
- /20/ China Statistical Yearbook 2013
- /21/ Waste Handle Report under the operation and construction period
- /22/ Operation log for Magang and Huangmaopo project
- /23/ Record for water spraying during the construction period for both projects
- /24/ Questionnaires for environmental survey
- /25/ Record for sand and stone materials sheltering during the construction period for both projects
- /26/ Record for waste water treatment during the construction period for both projects
- /27/ Record for mask distribution during the construction period for both projects

6. VERIFICATION STATEMENT

Applus+ LGAI has been engaged by Carbon Invcap International Trading Co., Ltd. to perform the first periodical verification of the Gansu Jinchang Magang and Huangmaopo Bundled Wind Power Project (GS Ref. No. 2499).

The management of Carbon Invcap International Trading Co., Ltd. is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project's Monitoring Plan in the registered PDD version 06 completed on 18/06/2014, registered Passport version 06 completed on 18/06/2014 and the applied methodology ACM0002 Version 13.0.0.

Our verification approach was based on the requirements as defined under the Kyoto Protocol, Marrakesh accord, as well as those defined by the CDM Executive Board and Gold Standard. Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. The verification can confirm that:

- the project is operated as planned and described in the project design document and passport approved by the EB and GS;*
- the monitoring plan is as per the applied methodology;*
- the monitoring in Monitoring Report is as per the PDD and Passport and the monitoring plan approved by the EB and GS;*
- the development and maintenance of records and reporting procedures are in accordance with the registered monitoring plan;*
- the installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately;*
- the monitoring system is in place and generates GHG emission reductions data;*
- the GHG emission reductions are calculated without material misstatements.*

In our opinion, the GHG emission reductions for Gansu Jinchang Magang and Huangmaopo Bundled Wind Power Project for the monitoring period 11/01/2014 to 30/01/2015 as reported in Monitoring Report, prepared on the basis of the project's Monitoring Plan are fairly stated.

Based on the information we have seen and evaluated, we confirm the following statement:

Reporting period: From 11/01/2014 to 30/01/2015

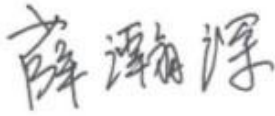
Verified emissions in the above reporting period:

<i>Leakage emissions</i>	<i>0 tCO₂ equivalents</i>
<i>Project emissions</i>	<i>0 tCO₂ equivalents</i>
<i>Baseline emissions</i>	<i>99,626 tCO₂ equivalents</i>
<i>Emission reductions in 2014</i>	<i>89,812 tCO₂ equivalents</i>
<i>Emission reductions in 2015</i>	<i>9,814 tCO₂ equivalents</i>
<i>Emission reductions</i>	<i>99,626 tCO₂ equivalents</i>

Signature

Date: 15/04/2015

Assessment team: Hanshen (Denny) Xue (Team Leader / Leader Auditor)



DOE Representative: Miquel Sitjes Cabanas (CDM Technical Manager)



B.U. Systems Certification Area Manager: Juan Sendín Caballero



Annex 1:

**VERIFICATION CHECKLIST
for GS PROJECT ACTIVITY**

PROJECT TITLE:	Gansu Jinchang Magang and Huangmaopo Bundled Wind Power Project
REFERENCE NO:	A+SH_SYST_00815
VERSION NO.	01
CLIENT NAME:	Carbon Invcap International Trading Co., Ltd.
ASSESSMENT TEAM:	
Lead Auditor:	Hanshen (Denny) Xue
Technical Expert:	Hanshen (Denny) Xue

1. Compliance of Project Activity Implementation

1.1. Basic information

Location				
	Real situation	Consistency of PDD/Passport	Consistency of MR	Conclusion
Address:	Jinchang City, Gansu Province, P. R. of China	Jinchang City, Gansu Province, P. R. of China	Jinchang City, Gansu Province, P. R. of China	OK
GPS coordinates:	Magang: East longitude 102°13'04.74" ~ 102°15'36.93" and North latitude 38°44'48.19" ~ 38°47'48.67" Huangmaopo: East longitude 101°33'45" ~ 101°38'41" and North latitude 38°23'04" ~ 38°25'05"	Magang: East longitude 102°13'04.74" ~ 102°15'36.93" and North latitude 38°44'48.19" ~ 38°47'48.67" Huangmaopo: East longitude 101°33'45" ~ 101°38'41" and North latitude 38°23'04" ~ 38°25'05"	Magang: East longitude 102°13'04.74" ~ 102°15'36.93" and North latitude 38°44'48.19" ~ 38°47'48.67" Huangmaopo: East longitude 101°33'45" ~ 101°38'41" and North latitude 38°23'04" ~ 38°25'05"	OK
Technical specification of main Equipment				
	Real situation	Consistency of PDD/Passport	Consistency of MR	Conclusion
Description	The purpose of the Magang Project is to install 33 sets of wind turbine-generators with per unit capacity of 1.5MW to generate clean renewable electricity with zero emissions. The total installed capacity is 49.5 MW. The purpose of the Huangmaopo Project is to install 24 sets of 2MW wind turbine-generators and 1 set of 1.5MW wind turbine-generators to generate clean renewable electricity with zero emissions. The total installed capacity is 49.5	The purpose of the Magang Project is to install 33 sets of wind turbine-generators with per unit capacity of 1.5MW to generate clean renewable electricity with zero emissions. The total installed capacity is 49.5 MW. The purpose of the Huangmaopo Project is to install 24 sets of 2MW wind turbine-generators and 1 set of 1.5MW wind turbine-generators to generate clean renewable electricity with zero emissions. The total in-	The purpose of the Magang Project is to install 33 sets of wind turbine-generators with per unit capacity of 1.5MW to generate clean renewable electricity with zero emissions. The total installed capacity is 49.5 MW. The purpose of the Huangmaopo Project is to install 24 sets of 2MW wind turbine-generators and 1 set of 1.5MW wind turbine-generators to generate clean renewable electricity with zero emissions. The total in-	OK

	MW. The total installed capacity for the bundled project is 99 MW.				stalled capacity is 49.5 MW. The total installed capacity for the bundled project is 99 MW.				stalled capacity is 49.5 MW. The total installed capacity for the bundled project is 99 MW.				
Component 1: Wind turbine (Magang)	Type		GW93/1500	EN93/1.5	Type		GW93/1500	EN93/1.5	Type		GW93/1500	EN93/1.5	OK
	Rated	kW	1,500	1,500	Rated	kW	1,500	1,500	Rated	kW	1,500	1,500	
	Lifetime	year	20	20	Lifetime	year	20	20	Lifetime	year	20	20	
	Cut in	m/s	2.5	3	Cut in	m/s	2.5	3	Cut in	m/s	2.5	3	
	Cut out	m/s	19	20	Cut out	m/s	19	20	Cut out	m/s	19	20	
	Rated	m/s	9.5	9.5	Rated	m/s	9.5	9.5	Rated	m/s	9.5	9.5	
	survival	m/s	49	52.5	survival	m/s	49	52.5	survival	m/s	49	52.5	
Component 2: Generator (Ma-gang)	Type		GW93/1500	EN93/1.5	Type		GW93/1500	EN93/1.5	Type		GW93/1500	EN93/1.5	OK
	Rated	kW	1,580	1,560	Rated	kW	1,580	1,560	Rated	kW	1,580	1,560	
	Rated	V	720	690	Rated	V	720	690	Rated	V	720	690	
Component 3: Wind turbine (Huangmaopo)	Type		W2000CH	W1500CH	Type		W2000CH	W1500CH	Type		W2000CH	W1500CH	OK
	Rated	kW	2,000	1,500	Rated	kW	2,000	1,500	Rated	kW	2,000	1,500	
	Lifetime	year	20	20	Lifetime	year	20	20	Lifetime	year	20	20	
	Cut in	m/s	3.0	3.0	Cut in	m/s	3.0	3.0	Cut in	m/s	3.0	3.0	
	Cut out	m/s	20	20	Cut out	m/s	20	20	Cut out	m/s	20	20	
	Rated	m/s	10.2	10.2	Rated	m/s	10.2	10.2	Rated	m/s	10.2	10.2	
	survival	m/s	52.5	52.5	survival	m/s	52.5	52.5	survival	m/s	52.5	52.5	
Component 4:	Type		W2000CH	W1500CH	Type		W2000CH	W1500CH	Type		W2000CH	W1500CH	OK

Generator (Huangmaopo)	Rated	kW	2,100	1,600		Rated	kW	2,100	1,600		Rated	kW	2,100	1,600		
	Rated	V	690	690		Rated	V	690	690		Rated	V	690	690		
Operation Status during verification																
	Real situation					Consistency of PDD/PASSPORT					Consistency of MR					Conclusion
Actual Operation Status	The start date of Magang project is 24/05/2013 and was put into fully operation since 11/01/2014, during this monitoring period, the project is under normal operation. The start date of Huangmaopo project is 30/04/2013 and was put into fully operation since 11/01/2014, during this monitoring period, the project is under normal operation.					The start date of Magang project is 24/05/2013 and was put into fully operation since 11/01/2014, during this monitoring period, the project is under normal operation. The start date of Huangmaopo project is 30/04/2013 and was put into fully operation since 11/01/2014, during this monitoring period, the project is under normal operation.					The start date of Magang project is 24/05/2013 and was put into fully operation since 11/01/2014, during this monitoring period, the project is under normal operation. The start date of Huangmaopo project is 30/04/2013 and was put into fully operation since 11/01/2014, during this monitoring period, the project is under normal operation.					OK

1.2. Organization

Project Participant (s)		
	Verified Situation	Conclusion
Entity / Responsible person:	Through site visit, the verification team confirms Ms. Da Xiangqin is responsible for supervising the whole CDM issues in the project activity.	OK
Project management:	Ms. Da Xiangqin, Office director is responsible for supervising the whole GS issues in the project activity; For Magang project: - Ms. Da Xiangqin as Office director is responsible for supervising the whole GS issues in the project activity; - Mr. Zhang Xiangjin is responsible for the GS sustainable development indicators monitoring; - Mr. Su Long is responsible for equipment maintenance data collection, verifying and archiving; - Ms. Su Yixuan is responsible for collating electricity sale receipts and sale invoice and management of Gold Standard verification materials;	OK

	- Ms. Xu Hongmei from the Goldchina Consultancy International Co., Ltd. is responsible for preparing the Monitoring Report and ER calculation. For Huangmaopo project: - Ms. Da Xiangqin as Office director is responsible for supervising the whole GS issues in the project activity; - Mr. Zhang Zhaoxu is responsible for the GS sustainable development indicators monitoring; - Mr. Yan Pingshan is responsible for equipment maintenance data collection, verifying and archiving; - Ms. Su Yixuan is responsible for collating electricity sale receipts and sale invoice and management of Gold Standard verification materials; - Ms. Xu Hongmei from the Goldchina Consultancy International Co., Ltd. is responsible for preparing the Monitoring Report and ER calculation.	
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1.3. Quality Management System

General aspects of the Quality Management System		
	Verified Situation	Conclusion
Quality Management Manual:	After site visit, it is confirmed that Project Operation Manual is well followed.	OK
Responsibilities:	For Magang project: - Ms. Da Xiangqin as Office director is responsible for supervising the whole GS issues in the project activity; - Mr. Zhang Xiangjin is responsible for the GS sustainable development indicators monitoring; - Mr. Su Long is responsible for equipment maintenance data collection, verifying and archiving; - Ms. Su Yixuan is responsible for collating electricity sale receipts and sale invoice and management of Gold Standard verification materials; - Ms. Xu Hongmei from the Goldchina Consultancy International Co., Ltd. is responsible for preparing the Monitoring Report and ER calculation. For Huangmaopo project: - Ms. Da Xiangqin as Office director is responsible for supervising the whole GS issues in the	OK

	project activity; - Mr. Zhang Zhaoxu is responsible for the GS sustainable development indicators monitoring; - Mr. Yan Pingshan is responsible for equipment maintenance data collection, verifying and archiving; - Ms. Su Yixuan is responsible for collating electricity sale receipts and sale invoice and management of Gold Standard verification materials; Ms. Xu Hongmei from the Goldchina Consultancy International Co., Ltd. is responsible for preparing the Monitoring Report and ER calculation.	
Qualification and Training:	After checking training record, it is confirmed that training are appropriated held by the project owner	OK
Implementation of QM-system	After site visit, it is confirmed that Project Operation Manual is well followed.	OK

1.4. Remaining FARs from previous Verifications (or forwarded issues of validation report)

Remaining Requests from Previous Verifications	Summary of project owner response	Assessment team Conclusion
Forward action request No. 1: None	-N.A	-OK

2. Monitoring Plan of Parameters

2.1. Parameters

Parameters					
Meth/tool	PDD	MR	Included in below table	Compliance	Conclusion
Quantity of net electricity supplied of the Project activity to the grid in year	Quantity of net electricity supplied of Magang project to the grid in year y	Quantity of net electricity supplied of Magang project to the grid in year y	Section 2.2 Table 1	Small different as the this is the bundled project	OK

Parameters					
Meth/tool	PDD	MR	Included in below table	Compliance	Conclusion
y					
Quantity of net electricity supplied of the Project activity to the grid in year y	Quantity of net electricity supplied of Huangmaopo project to the grid in year y	Quantity of net electricity supplied of Huangmaopo project to the grid in year y	Section 2.2 Table 2	Small different as the this is the bundled project	OK

2.2. Parameters measured directly with instruments

Table 1: Quantity of net electricity supplied of Magang project to the grid in year y

Parameter and instrumentation Information					
	PDD	Meth/Tool	MR	Verified	Conclusion
Parameter title:	Quantity of net electricity supplied of Magang project to the grid in year y	Quantity of net electricity supplied of the Project activity to the grid in year y	Quantity of net electricity supplied of Magang project to the grid in year y	Small different as the this is the bundled project	OK
Parameter ID (if available):	EG _{facility,Magang,y}	EG _{facility,y}	EG _{facility,Magang,y}	Small different as the this is the bundled project	OK
Data Unit:	MWh	MWh	MWh	Fully consistent	OK
Monitoring frequency (reading):	Continuously monitored	Continuously monitored	Continuously monitored	Fully consistent	OK
Monitoring frequency (recording):	Monthly Record	Monthly Record	Monthly Record	Fully consistent	OK
Calibration requirements:	Technical administrative code of electric energy metering (DL/T 448-	N.A	Technical administrative code of electric energy metering (DL/T 448-	Although not mentioned in the methodology, it is assumed that the calibra-	OK

	2000)		2000)	tion should be at least once a year	
Uncertainty level:	N.A	N.A	N.A	Fully consistent	OK
Measurement Principle (if applicable):	N.A	N.A	N.A	Fully consistent	OK
	Technical aspects				Conclusion
Instrument Type:	Electricity Meter: M1, M1'				OK
Serial Number:	M1: 67009036 M1': 67009039				OK
Manufacturer Model Nr.:	CR#1: Please provide more information of M1, M1', M2 and M2' including the model in the MR.				CR#1 OK
Specific Location:	M1 and M1' are both installed at outlet of the 35kV/ 220kV Substation.				OK
Measurement Range:	M1: 0.2s Backup M1': 0.2s				OK
Calibration of the instrument:	Meter	Calibration Date	Valid Date	OK	
	M1	03/12/2013	02/12/2013		
		01/12/2014	30/11/2015		
	M1'	03/12/2013	02/12/2013		
		01/12/2014	30/11/2015		
Accreditation of the calibration institute:	(Gan)Faji(2011)No.62055 Valid since 26/01/2011 to 25/01/2016				OK
Gaps in operating time of instrument:	Period: N.A				OK
	Default value used: N.A				OK
	Justification: N.A				OK
	QA/QC aspects				Conclusion
Source of data:	Source: The conservative value between the MRR and ETNs. CR#2: Please clarify how quantity of net electricity supplied of the project activity (including Magang and				CR#2 OK

	Huangmaopo) to the grid in year y is monitored and the information flow of the data.	
	Procedures: Project operation manual	OK
	Implementation of procedure: By site visit, the verification team confirms Project operation manual has been corrected performed for the project activity.	OK
	Responsibility: The project owner and power grid company is responsible for collecting the raw data	OK
Archiving of raw data and protection measures:	All the data will be kept until two years after the end of credit period.	OK
Data transfer and protection of input data for calculations:	CR#2: Please clarify how quantity of net electricity supplied of the project activity (including Magang and Huangmaopo) to the grid in year y is monitored and the information flow of the data.	CR#2 OK
	Quality of evidence	Conclusion
Completeness of data:	The MRRs and statement are checked to verify the completeness of the data.	OK
Data verification:	Consistency of raw data with calculation tool: Yes	OK
	Consistency of calculation tool with monitoring report: Yes	OK
Crosscheck (if available):	MRRs based on raw data is crosschecked with ETNs. All data are logically consistent.	OK

Table 2: Quantity of net electricity supplied of Huangmaopo project to the grid in year y

Parameter and instrumentation Information					
	PDD	Meth/Tool	MR	Verified	Conclusion
Parameter title:	Quantity of net electricity supplied of Huangmaopo project to the grid in year y	Quantity of net electricity supplied of the Project activity to the grid in year y	Quantity of net electricity supplied of Huangmaopo project to the grid in year y	Small different as the this is the bundled project	OK
Parameter ID (if available):	EG _{facility,Huangmaopo,y}	EG _{facility,y}	EG _{facility,Huangmaopo,y}	Small different as the this is the bundled project	OK

Data Unit:	MWh	MWh	MWh	Fully consistent	OK
Monitoring frequency (reading):	Continuously monitored	Continuously monitored	Continuously monitored	Fully consistent	OK
Monitoring frequency (recording):	Monthly Record	Monthly Record	Monthly Record	Fully consistent	OK
Calibration requirements:	Technical administrative code of electric energy metering (DL/T 448-2000)	N.A	Technical administrative code of electric energy metering (DL/T 448-2000)	Although not mentioned in the methodology, it is assumed that the calibration should be at least once a year	OK
Uncertainty level:	N.A	N.A	N.A	Fully consistent	OK
Measurement Principle (if applicable):	N.A	N.A	N.A	Fully consistent	OK
Technical aspects					Conclusion
Instrument Type:	Electricity Meter: M2, M2'				OK
Serial Number:	M2: 67008961 M2': 67008962				OK
Manufacturer Model Nr.:	CR#1: Please provide more information of M1, M1', M2 and M2' including the model in the MR.				CR#1 OK
Specific Location:	M2 and M2' are both installed at outlet of the 35kV/ 220kV Substation.				OK
Measurement Range:	M2: 0.2s Backup M2': 0.2s				OK
Calibration of the instrument:	Meter	Calibration Date	Valid Date	OK	
	M2	03/12/2013	02/12/2013		
		01/12/2014	30/11/2015		
	M2'	03/12/2013	02/12/2013		
		01/12/2014	30/11/2015		
Accreditation of the calibration:	(Gan)Faji(2011)No.62055 Valid since 26/01/2011 to 25/01/2016				OK

tion institute:		
Gaps in operating time of instrument:	Period: N.A	OK
	Default value used: N.A	OK
	Justification: N.A	OK
	QA/QC aspects	Conclusion
Source of data:	Source: The conservative value between the MRR and ETNs. CR#2: Please clarify how quantity of net electricity supplied of the project activity (including Magang and Huangmaopo) to the grid in year y is monitored and the information flow of the data.	CR#2 OK
	Procedures: Project operation manual	OK
	Implementation of procedure: By site visit, the verification team confirms Project operation manual has been corrected performed for the project activity.	OK
	Responsibility: The project owner and power grid company is responsible for collecting the raw data	OK
Archiving of raw data and protection measures:	All the data will be kept until two years after the end of credit period.	OK
Data transfer and protection of input data for calculations:	CR#2: Please clarify how quantity of net electricity supplied of the project activity (including Magang and Huangmaopo) to the grid in year y is monitored and the information flow of the data.	CR#2 OK
	Quality of evidence	Conclusion
Completeness of data:	The MRRs and statement are checked to verify the completeness of the data.	OK
Data verification:	Consistency of raw data with calculation tool: Yes	OK
	Consistency of calculation tool with monitoring report: Yes	OK
Crosscheck (if available):	MRRs based on raw data is crosschecked with ETNs. All data are logically consistent.	OK

2.3. Other parameters not included in the methodology/tool but included in the PDD

N.A

2.4. Data and parameter not monitored in the monitoring period but available at validation

Data and parameter not monitored in the monitoring period but available at validation					
	Meth/Tool	PDD or approved MP	MR	Verified	Conclusion
Parameter title	EF _{grid,CM,y}	EF _{grid,CM,y}	EF _{grid,CM,y}	Fully consistent	OK
Data Unit	tCO ₂ /MWh	tCO ₂ /MWh	tCO ₂ /MWh	Fully consistent	OK
Parameter Description	CM Emission factor	CM Emission factor of NCPG	CM Emission factor of NCPG	Fully consistent	OK
Source of data	N.A.	Public data from Chinese NDRC	Registered PDD	Fully consistent	OK
Value	N.A.	0.8568	0.8568	Fully consistent	OK

3. Sustainability Monitoring Plan

3.1. Indicators

Indicators					
GS requirements	Passport	MR	Included in below table	Compliance	Conclusion
Air Quality	Air Quality	Air Quality	Section 3.2 Table 1	Yes, all information are compliance	OK
Quality of employment	Quality of employment	Quality of employment	Section 3.2 Table 2	Yes, all information are compliance	OK
Quantitative employment and income generation	Quantitative employment and income generation	Quantitative employment and income generation	Section 3.2 Table 3	Yes, all information are compliance	OK
Water quality and quan-	Water quality and quan-	Water quality and quan-	Section 3.2 Table 4	Yes, all information are	OK

Indicators					
GS requirements	Passport	MR	Included in below table	Compliance	Conclusion
tity	tity	tity		compliance	
Soil condition	Soil condition	Soil condition	Section 3.2 Table 5	Yes, all information are compliance	OK
Other pollutants	Other pollutants	Other pollutants	Section 3.2 Table 6	Yes, all information are compliance	OK
Air Quality	Air Quality	Air Quality	Section 3.2 Table 7	Yes, all information are compliance	OK
Quality of employment	Quality of employment	Quality of employment	Section 3.2 Table 8	Yes, all information are compliance	OK
Quantitative employment and income generation	Quantitative employment and income generation	Quantitative employment and income generation	Section 3.2 Table 9	Yes, all information are compliance	OK
Water quality and quantity	Water quality and quantity	Water quality and quantity	Section 3.2 Table 10	Yes, all information are compliance	OK
Soil condition	Soil condition	Soil condition	Section 3.2 Table 11	Yes, all information are compliance	OK
Other pollutants	Other pollutants	Other pollutants	Section 3.2 Table 12	Yes, all information are compliance	OK

3.2. Indicators monitored

Table 1 Air Quality

Indicators Information					
	Passport	GS requirements	MR	Verified	Conclusion
Indicator title:	Air Quality	Air Quality	Air Quality	Fully consistent	OK

Indicator Nr. (if available):	1	N.A	1	Fully consistent	OK
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	N.A	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	Fully consistent	OK
Monitoring measures (how):	Check the records of sand and stone materials location site sheltering and water spray, and net electricity supplied by Magang project will be continuously measured by electricity meters	N.A	Check the records of sand and stone materials location site sheltering and water spray, and net electricity supplied by Magang project will be continuously measured by electricity meters	Fully consistent	OK
Monitoring frequency (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.	N.A	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.	Fully consistent	OK
Responsibility (by who):	Project Owner	N.A	Project Owner	Fully consistent	OK
	Technical aspects				Conclusion and IRL

Original situation of parameter:	Equivalent electricity supplied by NWPG which is dominated by fossil fuel-fired power plants.	OK
Baseline situation of parameter:	Equivalent electricity supplied by NWPG which is dominated by fossil fuel-fired power plants.	OK
Mitigation measures:	According to the EIA form, the major ambient air pollutant during construction period is dust. Water sprayed at the construction site on a regular basis, and sand and stone materials location site will be sheltered. According to the EIA form, no additional air pollutant during operation period is expected from the project activity. No mitigation measure is required.	OK
The situation of the parameter at the stage of verification:	During the monitoring period, 71,963.10 MWh was supplied by the project to the grid; therefore bases on online data, the SO ₂ and NO _x that could be generated in the baseline scenario are calculated as 165.515 tons and 187.104 tons respectively. The air quality in the operation quality was effectively improved against the baseline scenario. Water sprayed at the construction site on a regular basis, and sand and stone materials location site will be sheltered.	OK
Target achieved?	Yes, bases on online data, the SO ₂ and NO _x that could be generated in the baseline scenario are calculated as 165.515 tons and 187.104 tons respectively. The air quality in the operation quality was effectively improved against the baseline scenario. After checking record for water spraying and sand and stone materials sheltering, it is confirmed that during the construction period, water are sprayed on a regular basis and sand an stone are well sheltered to avoid the dust.	OK
	QA/QC aspects	Conclusion
Procedure of monitoring:	The net electricity supplied by the project will be continuously measured by electricity meters. Refer to the 2.2.1.	OK
Archiving of documents and protection measures:	All the data will be kept until two years after the end of credit period.	OK
	Quality of evidence	Conclusion
Means of verification:	Document Review and Interview	OK
Documents verified:	MRR and ETNs http://news.bjx.com.cn/html/20120606/364987.shtml	OK

	Record for water spraying and sand and stone materials sheltering Record for interview with villagers	
Practice witnessed:	N.A	OK
Person interviewed:	The general manager of the Magang project and local villagers	OK
Crosscheck (if available):	N.A	OK

Table 2 Quality of employment

Indicators Information					
	Passport	GS requirements	MR	Verified	Conclusion and IRL
Indicator title:	Quality of employment	Quality of employment	Quality of employment	Fully consistent	OK
Indicator Nr. (if available):	2	N.A	2	Fully consistent	OK
Chosen parameter:	Training of staff / The safe and healthy working condition	N.A	Training of staff / The safe and healthy working condition	Fully consistent	OK
Monitoring measures (how):	The training records for all the employees and the photos of safe and healthy working condition	N.A	The training records for all the employees and the photos of safe and healthy working condition	Fully consistent	OK
Monitoring frequency (when):	Record each training when it happens for each monitoring period. Check the working condition and take photos during each monitoring period	N.A	Record each training when it happens for each monitoring period. Check the working condition and take photos during each monitoring period	Fully consistent	OK

Responsibility (by who):	Project owner	N.A	Project owner	Fully consistent	OK
	Technical aspects				Conclusion
Original 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.				OK
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.				OK
Mitigation measures:	Not applicable as indicator scored positive				OK
The situation of the parameter at the stage of verification:	The staffs have accepted a series of training on the monitoring system, Basic knowledge of the transmission line, the plant operation, the emergency and safety procedures, and maintenance and safe operation, which contributes to the quality of employment.				OK
Target achieved?	Yes				OK
	QA/QC aspects				Conclusion
Procedure of monitoring:	Checking training record				OK
Archiving of documents and protection measures:	All the data will be kept until two years after the end of credit period.				OK
	Quality of evidence				Conclusion
Means of verification:	Document Review, Interview and site visit				OK
Documents verified:	Training Record				OK
Practice witnessed:	Staffs are well trained on the technology and the monitoring of the plant operation, and the emergency and safety procedures. The working condition is safe.				OK
Person interviewed:	The general manager of the project and employees				OK
Crosscheck (if available):	N.A				OK

Table 3 Quantitative employment and income generation

Indicators Information

	Passport	GS requirements	MR	Verified	Conclusion
Indicator title:	Quantitative employment and income generation	Quantitative employment and income generation	Quantitative employment and income generation	Fully consistent	OK
Indicator Nr. (if available):	3	N.A	3	Fully consistent	OK
Chosen parameter:	Number of jobs created in the operations of Magang project and their salary levels.	N.A	Number of jobs created in the operations of Magang project and their salary levels.	Fully consistent	OK
Monitoring measures (how):	HR records or report	N.A	HR records or report	Fully consistent	OK
Monitoring frequency (when):	Monthly	N.A	Monthly	Fully consistent	OK
Responsibility (by who):	Project owner	N.A	Project owner	Fully consistent	OK
	Technical aspects				Conclusion
Original situation of parameter:	Without Magang project, local people have no such job opportunities from Magang project, and their income has no increase.				OK
Baseline situation of parameter:	In the baseline, local people have no such job opportunities from the project, and their income has no increase.				OK
Mitigation measures:	Not applicable as indicator scored positive				OK
The situation of the parameter at the stage of verification:	22 long-term work positions for local people have been created with 51,716 yearly salaries for every employee.				OK
Target achieved?	Yes				OK
	QA/QC aspects				Conclusion
Procedure of monitoring:	Salary and number of position would be checked monthly				OK
Archiving of documents and protection measures:	All the data will be kept until two years after the end of credit period.				OK

	Quality of evidence	Conclusion
Means of verification:	Document Review and Interview	OK
Documents verified:	Statement for salary of employees	OK
Practice witnessed:	N.A	OK
Person interviewed:	The general manager of the project and employees	OK
Crosscheck (if available):	N.A	OK

Table 4 Water quality and quantity

Indicators Information					
	Passport	GS requirements	MR	Verified	Conclusion
Indicator title:	Water quality and quantity	Water quality and quantity	Water quality and quantity	Fully consistent	OK
Indicator Nr. (if available):	4	N.A	4	Fully consistent	OK
Chosen parameter:	N.A	N.A	N.A	Fully consistent	OK
Monitoring measures (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.	N.A	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.	Fully consistent	OK

Monitoring frequency (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.	N.A	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.	Fully consistent	OK
Responsibility (by who):	The project owner	N.A	The project owner	Fully consistent	OK
	Technical aspects				Conclusion
Original situation of parameter:	Not applicable				OK
Baseline situation of parameter:	Not applicable				OK
Mitigation measures:	According to the EIA form, the industrial wastewater and sanitary wastewater will be 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 will be 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 will be used as spraying water for dust control. According to the EIA form, the major pollutant during operation period is sanitary sewage, including the discharge from toilets, washrooms, and shower water, etc. will be collected and treated by wastewater treatment installation, then re-sued as greening water after satisfying the requirement.				OK
The situation of the parameter at the stage of verification:	The waste water was treated, and then re-use as the greening water. During the construction period, industrial wastewater and sanitary wastewater are well treated.				OK
Target achieved?	Yes				OK
	QA/QC aspects				Conclusion

Procedure of monitoring:	For first verification, waste water waste water treatment records during the construction period, and interview with local villagers. Check the wastewater treatment system to verify the waste water treatment and re-use as the greening water by the project in each verification period.	OK
Archiving of documents and protection measures:	All the data will be kept until two years after the end of credit period.	OK
	Quality of evidence	Conclusion
Means of verification:	Interview, Document Review and Site visit	OK
Documents verified:	Record for waste water treatment and Record for interview with villagers	OK
Practice witnessed:	The wastewater treatment system	OK
Person interviewed:	The general manager of the project and village	OK
Crosscheck (if available):	N.A	OK

Table 5 Soil condition

Indicators Information					
	Passport	GS requirements	MR	Verified	Conclusion
Indicator title:	Soil condition	Soil condition	Soil condition	Fully consistent	OK
Indicator Nr. (if available):	N.A	N.A	N.A	Fully consistent	OK
Chosen parameter:	N.A	N.A	N.A	Fully consistent	OK
Monitoring measures (how):	The photos of vegetation condition before and after the construction of the Project.	N.A	The photos of vegetation condition before and after the construction of the Project.	Fully consistent	OK
Monitoring frequency (when):	During the first verification	N.A	During the first verification	Fully consistent	OK

Responsibility (by who):	The project owner	N.A	The project owner	Fully consistent	OK
	Technical aspects				Conclusion
Original situation of parameter:	N.A				OK
Baseline situation of parameter:	N.A				OK
Mitigation measures:	During the construction phase, the construction activities including construction of the wind farm, road building as well as the pipeline arrangement will bring about certain soil and water erosion. Measures including the vegetations recovery will be adopted to reduce the water and 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.				OK
The situation of the parameter at the stage of verification:	The vegetable greening measures has been carried out in and around the project site so as to resume and improve the local ecological environment.				OK
Target achieved?	Yes				OK
	QA/QC aspects				Conclusion
Procedure of monitoring:	Picture was taken in before and after the construction period				OK
Archiving of documents and protection measures:	All the data will be kept until two years after the end of credit period.				OK
	Quality of evidence				Conclusion
Means of verification:	Document Review, Interview and site visit				OK
Documents verified:	Picture, Record for interview with villagers				OK
Practice witnessed:	The soil condition was recovered and improved.				OK
Person interviewed:	The general manager of the project and Local Resident				OK
Crosscheck (if available):	N.A				OK

Table 6 Other pollutants

Indicators Information					
	Passport	GS requirements	MR	Verified	Conclusion
Indicator title:	Other pollutants	Other pollutants	Other pollutants	Fully consistent	OK
Indicator Nr. (if available):	N.A	N.A	N.A	Fully consistent	OK
Chosen parameter:	N.A	N.A	N.A	Fully consistent	OK
Monitoring measures (how):	Recorded solid waste treatment, interview with local villagers about the noise during the construction period.	N.A	Recorded solid waste treatment, interview with local villagers about the noise during the construction period.	Fully consistent	OK
Monitoring frequency (when):	Solid waste treatment will be recorded for each verification period The noise during the construction period will be interviewed in the first verification.	N.A	Solid waste treatment will be recorded for each verification period The noise during the construction period will be interviewed in the first verification.	Fully consistent	OK
Responsibility (by who):	The project owner	N.A	The project owner	Fully consistent	OK
	Technical aspects				Conclusion
Original situation of parameter:	N.A				OK
Baseline situation of parameter:	N.A				OK
Mitigation measures:	(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 land filled at regular intervals.				OK

	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 desertification 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.	
The situation of the parameter at the stage of verification:	The living garbage from the construction period were collected and cleared at regular intervals to landfill to be disposed. No noise impacts are detected by the villager during the operation and construction period.	OK
Target achieved?	Yes	OK
	QA/QC aspects	Conclusion
Procedure of monitoring:	Waste treatment records for both construction and operation period are checked, villagers are interviewed	OK
Archiving of documents and protection measures:	All the data will be kept until two years after the end of credit period.	OK
	Quality of evidence	Conclusion
Means of verification:	Document Review, Interview and Site visit	OK
Documents verified:	Waste Treatment record, Record for interview with villagers	OK
Practice witnessed:	Waste are treated by the project owner, and no noise impact for the project	OK
Person interviewed:	The general manager of the project and Local Resident	OK
Crosscheck (if available):	N.A	OK

Table 7 Air Quality

Indicators Information					
	Passport	GS requirements	MR	Verified	Conclusion
Indicator title:	Air Quality	Air Quality	Air Quality	Fully consistent	OK
Indicator Nr. (if available):	1	N.A	7	Fully consistent	OK
Chosen parameter:	Indirect parameter of clean and renewable electricity supplied by the Huangmapo 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	N.A	Indirect parameter of clean and renewable electricity supplied by the Huangmapo 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	Fully consistent	OK
Monitoring measures (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.	N.A	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.	Fully consistent	OK
Monitoring frequency (when):	Check the records of mask distribution and water spray, and interview with local villagers during the first verification.	N.A	Check the records of mask distribution and water spray, and interview with local villagers during the first verification.	Fully consistent	OK

	The net electricity continuously measured and monthly recorded.		The net electricity continuously measured and monthly recorded.		
Responsibility (by who):	Project Owner	N.A	Project Owner	Fully consistent	OK
	Technical aspects				Conclusion and IRL
Original situation of parameter:	Equivalent electricity supplied by NWPG which is dominated by fossil fuel-fired power plants.				OK
Baseline situation of parameter:	Equivalent electricity supplied by NWPG which is dominated by fossil fuel-fired power plants.				OK
Mitigation measures:	According to the EIA form, the major ambient air pollutant during construction period is dust. The dust prevention as the labour protection measures will be strengthened by the front line workers. The water spraying will be adopted for the traffic road surface to reduce dust, and the slag disposal site should conduct greening after residual cleaning to prevent dust. According to the EIA form, no additional air pollutant during operation period is expected from the project activity. No mitigation measure is required.				OK
The situation of the parameter at the stage of verification:	During the monitoring period, 44,315.04 MWh was supplied by the project to the grid; therefore bases on online data, the SO₂ and NO_x that could be generated in the baseline scenario are calculated as 101.924 tons and 115.219 tons respectively. The air quality in the operation quality was effectively improved against the baseline scenario. Water sprayed at the construction site on a regular basis, and masks are well distributed.				OK
Target achieved?	Yes, bases on online data, the SO₂ and NO_x that could be generated in the baseline scenario are calculated as 101.924 tons and 115.219 tons respectively. The air quality in the operation quality was effectively improved against the baseline scenario. After checking record for water spraying and mask distribution, it is confirmed that during the construction period, water are sprayed on a regular basis and masks are well distributed.				OK
	QA/QC aspects				Conclusion
Procedure of monitoring:	The net electricity supplied by the project will be continuously measured by electricity meters. Refer to the 2.2.2.				OK
Archiving of documents and	All the data will be kept until two years after the end of credit period.				OK

protection measures:		
	Quality of evidence	Conclusion
Means of verification:	Document Review and Interview	OK
Documents verified:	MRR and ETNs http://news.bjx.com.cn/html/20120606/364987.shtml Record for water spraying and mask distribution Record for interview with villagers	OK
Practice witnessed:	N.A	OK
Person interviewed:	The general manager of the Magang project and local villagers	OK
Crosscheck (if available):	N.A	OK

Table 8 Quality of employment

Indicators Information					
	Passport	GS requirements	MR	Verified	Conclusion and IRL
Indicator title:	Quality of employment	Quality of employment	Quality of employment	Fully consistent	OK
Indicator Nr. (if available):	2	N.A	2	Fully consistent	OK
Chosen parameter:	Training of staff / The safe and healthy working condition	N.A	Training of staff / The safe and healthy working condition	Fully consistent	OK
Monitoring measures (how):	The training records for all the employees and the photos of safe and healthy working condition	N.A	The training records for all the employees and the photos of safe and healthy working condition	Fully consistent	OK
Monitoring frequency	Record each training when it happens for each	N.A	Record each training when it happens for each	Fully consistent	OK

(when):	monitoring period. Check the working condition and take photos during each monitoring period		monitoring period. Check the working condition and take photos during each monitoring period		
Responsibility (by who):	Project owner	N.A	Project owner	Fully consistent	OK
	Technical aspects				Conclusion
Original 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.				OK
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.				OK
Mitigation measures:	Not applicable as indicator scored positive				OK
The situation of the parameter at the stage of verification:	The staffs have accepted a series of training on the monitoring system, Basic knowledge of the transmission line, the plant operation, the emergency and safety procedures, and maintenance and safe operation, which contributes to the quality of employment.				OK
Target achieved?	Yes				OK
	QA/QC aspects				Conclusion
Procedure of monitoring:	Checking training record				OK
Archiving of documents and protection measures:	All the data will be kept until two years after the end of credit period.				OK
	Quality of evidence				Conclusion
Means of verification:	Document Review, Interview and site visit				OK
Documents verified:	Training Record				OK
Practice witnessed:	Staffs are well trained on the technology and the monitoring of the plant operation, and the emergency and safety procedures. The working condition is safe.				OK
Person interviewed:	The general manager of the project and employees				OK
Crosscheck (if available):	N.A				OK

Table 3 Quantitative employment and income generation

Indicators Information					
	Passport	GS requirements	MR	Verified	Conclusion
Indicator title:	Quantitative employment and income generation	Quantitative employment and income generation	Quantitative employment and income generation	Fully consistent	OK
Indicator Nr. (if available):	3	N.A	3	Fully consistent	OK
Chosen parameter:	Number of jobs created in the operations of Huangmaopo project and their salary levels.	N.A	Number of jobs created in the operations of Huangmaopo project and their salary levels.	Fully consistent	OK
Monitoring measures (how):	HR records or report	N.A	HR records or report	Fully consistent	OK
Monitoring frequency (when):	Monthly	N.A	Monthly	Fully consistent	OK
Responsibility (by who):	Project owner	N.A	Project owner	Fully consistent	OK
	Technical aspects				Conclusion
Original situation of parameter:	Without Huangmaopo project, local people have no such job opportunities from Huangmaopo project, and their income has no increase.				OK
Baseline situation of parameter:	In the baseline, local people have no such job opportunities from the project, and their income has no increase.				OK
Mitigation measures:	Not applicable as indicator scored positive				OK
The situation of the parameter at the stage of verification:	22 long-term work positions for local people have been created with 51,742.9 yearly salaries for every employee.				OK
Target achieved?	Yes				OK

	QA/QC aspects	Conclusion
Procedure of monitoring:	Salary and number of position would be checked monthly	OK
Archiving of documents and protection measures:	All the data will be kept until two years after the end of credit period.	OK
	Quality of evidence	Conclusion
Means of verification:	Document Review and Interview	OK
Documents verified:	Statement for salary of employees	OK
Practice witnessed:	N.A	OK
Person interviewed:	The general manager of the project and employees	OK
Crosscheck (if available):	N.A	OK

Table 4 Water quality and quantity

Indicators Information					
	Passport	GS requirements	MR	Verified	Conclusion
Indicator title:	Water quality and quantity	Water quality and quantity	Water quality and quantity	Fully consistent	OK
Indicator Nr. (if available):	4	N.A	4	Fully consistent	OK
Chosen parameter:	N.A	N.A	N.A	Fully consistent	OK
Monitoring measures (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	N.A	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	Fully consistent	OK

	verify the waste water treatment and re-use as the greening water, and interview with local villagers.		verify the waste water treatment and re-use as the greening water, and interview with local villagers.		
Monitoring frequency (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.	N.A	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.	Fully consistent	OK
Responsibility (by who):	The project owner	N.A	The project owner	Fully consistent	OK
	Technical aspects				Conclusion
Original situation of parameter:	Not applicable				OK
Baseline situation of parameter:	Not applicable				OK
Mitigation measures:	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, wash-rooms, and shower water, etc. were collected and treated by wastewater treatment installation, then re-used as greening water after satisfying the requirement.				OK
The situation of the parameter at the stage of	The waste water was treated, and then re-use as the greening water. During the construction period, industrial wastewater and sanitary wastewater are well treated.				OK

verification:		
Target achieved?	Yes	OK
	QA/QC aspects	Conclusion
Procedure of monitoring:	For first verification, waste water waste water treatment records during the construction period and interview with local villagers. Check the wastewater treatment system to verify the waste water treatment and re-use as the greening water by the project in each verification period.	OK
Archiving of documents and protection measures:	All the data will be kept until two years after the end of credit period.	OK
	Quality of evidence	Conclusion
Means of verification:	Interview, Document Review and Site visit	OK
Documents verified:	Record for waste water treatment and Record for interview with villagers	OK
Practice witnessed:	The wastewater treatment system	OK
Person interviewed:	The general manager of the project and village	OK
Crosscheck (if available):	N.A	OK

Table 5 Soil condition

Indicators Information					
	Passport	GS requirements	MR	Verified	Conclusion
Indicator title:	Soil condition	Soil condition	Soil condition	Fully consistent	OK
Indicator Nr. (if available):	N.A	N.A	N.A	Fully consistent	OK
Chosen parameter:	N.A	N.A	N.A	Fully consistent	OK
Monitoring measures (how):	The photos of vegetation condition before and after the construction of	N.A	The photos of vegetation condition before and after the construction of	Fully consistent	OK

	the Project.		the Project.		
Monitoring frequency (when):	During the first verification	N.A	During the first verification	Fully consistent	OK
Responsibility (by who):	The project owner	N.A	The project owner	Fully consistent	OK
	Technical aspects				Conclusion
Original situation of parameter:	N.A				OK
Baseline situation of parameter:	N.A				OK
Mitigation measures:	During the construction phase, the construction activities including construction of the wind farm, road building as well as the pipeline arrangement will bring about certain soil and water erosion. Measures including the vegetations recovery will be adopted to reduce the water and 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.				OK
The situation of the parameter at the stage of verification:	The vegetable greening measures has been carried out in and around the project site so as to resume and improve the local ecological environment.				OK
Target achieved?	Yes				OK
	QA/QC aspects				Conclusion
Procedure of monitoring:	Picture was taken in before and after the construction period				OK
Archiving of documents and protection measures:	All the data will be kept until two years after the end of credit period.				OK
	Quality of evidence				Conclusion
Means of verification:	Document Review, Interview and site visit				OK
Documents verified:	Picture, Record for interview with villagers				OK
Practice witnessed:	The soil condition was recovered and improved.				OK
Person interviewed:	The general manager of the project and Local Resident				OK

Crosscheck (if available):	N.A	OK
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Table 6 Other pollutants

Indicators Information					
	Passport	GS requirements	MR	Verified	Conclusion
Indicator title:	Other pollutants	Other pollutants	Other pollutants	Fully consistent	OK
Indicator Nr. (if available):	N.A	N.A	N.A	Fully consistent	OK
Chosen parameter:	N.A	N.A	N.A	Fully consistent	OK
Monitoring measures (how):	Recorded solid waste treatment, interview with local villagers about the noise during the construction period.	N.A	Recorded solid waste treatment, interview with local villagers about the noise during the construction period.	Fully consistent	OK
Monitoring frequency (when):	Solid waste treatment will be recorded for each verification period The noise during the construction period will be interviewed in the first verification.	N.A	Solid waste treatment will be recorded for each verification period The noise during the construction period will be interviewed in the first verification.	Fully consistent	OK
Responsibility (by who):	The project owner	N.A	The project owner	Fully consistent	OK
	Technical aspects				Conclusion
Original situation of parameter:	N.A				OK
Baseline situation of parameter:	N.A				OK
Mitigation measures:	(1) The construction period:				OK

	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 desertification 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.	
The situation of the parameter at the stage of verification:	The living garbage from the construction period were collected and cleared at regular intervals to landfill to be disposed. No noise impacts are detected by the villager during the operation and construction period.	OK
Target achieved?	Yes	OK
	QA/QC aspects	Conclusion
Procedure of monitoring:	Waste treatment records for both construction and operation period are checked, villagers are interviewed	OK
Archiving of documents and protection measures:	All the data will be kept until two years after the end of credit period.	OK
	Quality of evidence	Conclusion

Means of verification:	Document Review, Interview and Site visit	OK
Documents verified:	Waste Treatment record, Record for interview with villagers	OK
Practice witnessed:	Waste are treated by the project owner, and no noise impact for the project	OK
Person interviewed:	The general manager of the project and Local Resident	OK
Crosscheck (if available):	N.A	OK

4. Data Processing and ER calculation

Description of data processing from transferred data to final results in the calculation tool		
Step	Description	Conclusion
Consistency	All abbreviations and units are consistent with PDD, Passport or approved monitoring plan and Methodology and traceable to the raw data.	OK
Calculation Tool description	The calculation tool is clearly described and transparent. The issuing date and revision number is indicated. All formulae, intermediate steps and constants are described transparently including correct units and in compliance with the methodology and the PDD, Passport or approved monitoring plan.	OK
Elimination of not plausible data (if applicable)	N.A.	OK
Transformation from use-able data to input data for further calculation (if applicable)	N.A.	OK
Ex-ante data	Ex-ante data are in compliance with the PDD, Passport or approved monitoring plan and methodology/tool.	OK
Default parameter	Default parameter is in compliance with the PDD, Passport or approved monitoring plan and methodology/tool.	OK
Formulae check	All formulae included in the calculation tool are in compliance with the PDD or approved monitoring plan and methodology/tool.	OK
Rounding functions	Included rounding functions are correctly and conservatively applied.	OK

Calculation tool changes and protection measures	The tool is delivered to the verification team directly from people in charge of GS matters of the PPs and consulting company which ensure there are no unauthorized change happened. As this is the first periodic verification, no modification is done against last periodic verification.	OK
Reported data	The result of the calculation tool is consistent with the value in the MR.	OK

5. Additional assessment

5.1. Internal Review

Description and performance of internal review		
	Description	Conclusion
Procedure	N.A	OK
Documentation	N.A	OK
Responsibilities	N.A	OK

5.2. Peculiarities

Description of Peculiarities and unexpected Daily Events during the verification period		
	Description	Conclusion
Performance	The verification confirms there are no peculiarities occur during this monitoring period by checking archived data and site visit.	OK
Documentation	The verification confirms there are no peculiarities occur during this monitoring period by checking archived data and site visit.	OK
Measures	The verification confirms there are no peculiarities occur during this monitoring period by checking archived data and site visit.	OK

5.3. Further additional requirements

Description of additional requirements to be checked		
	Description	Conclusion
Compliance Environmental requirements	By interview with the local stakeholders, it is confirmed that the project meet the requirement for environment.	OK

5.4. Data Reporting

Description of the Monitoring Report		
	Comments and Results	Conclusion
Compliance with regulations	The monitoring report version 03 dated 15/04/2015 covering period from 14/04/2014 to 30/01/2015 considers all related regulations (e.g. requirements of the methodology and the monitoring report).	OK
Completeness and Transparency	The monitoring report version 03 dated 15/04/2015 covering period from 14/04/2014 to 30/01/2015 is complete and transparent.	OK
Correctness	All of the provided values are correctly transferred from the related and assessed sources (e.g. calculation tool).	OK

6. Compilation and Resolutions of CARs, CL/CRs and FARs

Type:	☐ CAR ☒ CL/CR ☐ FAR	Number:	#1
Raised by:	Denny (Hanshen) Xue	Ref. to checklist in above tables:	Table 2.2.1, 2.2.2
Description of the audit finding	Date: 15/02/2015		
Please provide more information of M1, M1', M2 and M2' including the model in the MR.			
Project Participant's response	Date: 02/03/2015		
The model of the meters was added in the monitoring report. Please see more details in 9-10 pages.			
Documentation provided as evidence by Project Participant			
N.A			
Auditor's assessment comment	Date: 03/03/2015		
After checking the information added in the MR, it is confirmed that such information are consistent with the real situation.			
Conclusion by Lead Auditor	Date: 03/03/2015		
CR#1 is closed out.			

Type:	☐ CAR ☒ CL/CR ☐ FAR	Number:	#2
Raised by:	Denny (Hanshen) Xue	Ref. to checklist in above tables:	Table 2.2.1, 2.2.2
Description of the audit finding	Date: 15/02/2015		
Please clarify how quantity of net electricity supplied of the project activity (including Magang and Huangmaopo) to the grid in year y is monitored and the information flow of the data.			
Project Participant's response	Date: 02/03/2015		

For Magang project

The electricity supplied to the gird and imported from the grid were continuously measured by main meter M1 and backup meter M1' and at least monthly recorded by the project owner, and were cross-checked with the ETN issued by local grid at regular time. If any difference, the conservative value will be adopted, i.e, for the electricity supplied to the gird, the min value will be adopted; for the electricity imported from the grid, the max value will be adopted,

The quantity of net electricity generation supply was calculated by the electricity supplied to the gird minus the electricity imported from the grid.

The related information was added to the MR of the project. Please see the more details in 23-25 pages

For Huangmaopo project

The electricity supplied to the gird and imported from the grid were continuously measured by main meter M2 and backup meter M2' and at least monthly recorded by the project owner, and were cross-checked with the ETN issued by local grid at regular time. If any difference, the conservative value will be adopted, i.e, for the electricity supplied to the gird, the min value will be adopted; for the electricity imported from the grid, the max value will be adopted,

The quantity of net electricity generation supply was calculated by the electricity supplied to the gird minus the electricity imported from the grid.

The related information was added to the MR of the project. Please see the more details in 23-25 pages

Documentation provided as evidence by Project Participant

The daily meter reading record

The ETN

The ER calculation sheet

Auditor's assessment comment

Date:

03/03/2015

After interview with the staff of the project, it is confirmed that the cut off time is the 00:00 of the last of each month, the staff of the project would record the meter readings (MRRs) and report to the grid company, and then the grid company will confirm the data then issue the ETNs. The conservative value between MRRs and ETNs would be used for ER calculation. This is in line with the description in the MR.

Conclusion by Lead Auditor

Date:

03/03/2015

CR#2 is closed out.