

CECIC HKC GANSU CHANGMA WIND POWER PROJECT



Document Prepared By LGAI Technological Center, S.A.

Project Title	CECIC HKC Gansu Changma Wind Power project
Version	01.1
Report ID	A+SH_SYST_00318

Report Title	CECIC HKC Gansu Changma Wind Power project
Client	Beijing Ruifang Information Technology Co., Ltd
Pages	19
Date of Issue	06/10/2018
Prepared By	LGAi Technological Center, S.A.
Contact	Address: Ctra. Accés a la facultat de Medicina, s/n Campus UAB, E - 08193 Bellaterra (Barcelona) – Spain Tel.: +34 935 672 008 Website: http://www.appluscertification.com Email: agustin.calle@applus.com carla.debat@applus.com
Approved By	Applus+ Certification B.U. Managing Director: Juan Sendín Caballero
Work Carried Out By	Lead Auditor/ Technical Expert: Denny Xue Technical Reviewer: Simon Shen

Summary:

LGA Technological Center, S.A. (hereafter referred to as “Applus+ Certification”) has been commissioned by Beijing Ruifang Information Technology Co., Ltd to perform the verification of greenhouse gas emission reductions of the project activity “CECIC HKC Gansu Changma Wind Power project” (UNFCCC Ref. No. 3670, VCS Ref. No. 717, hereafter referred to as “the project activity”) reported in the monitoring report /1/ during monitoring period 01/01/2016 to 23/09/2018.

The project activity has been validated by TÜV Rheinland Japan Ltd. based on the CDM PDD /3/ version 3 dated 24/05/2011 and reported in the validation report No. 01 997 9105052517 /5/, version 06, completed on 31/05/2011. The project activity was registered as a CDM project activity on 24/09/2011 which is available at <http://cdm.unfccc.int/Projects/DB/TUEV-RHEIN1272607295.17/view>. Also a PRC has been made and approved by UNFCCC, then CDM PDD version 3.2 /4/ dated 20/08/2012 would also be the basis for this verification. A gap validation was performed by LGA Technological Center, S.A. (Applus+ Certification) through the first VCS verification which is available at https://www.vcsprojectdatabase.org/#/project_details/717.

The project activity is a wind farm project located at Yumen Town, Yumen City, Gansu Province, People's Republic of China which is to use wind resource for electricity generation. The installed capacity of the project activity is 201 MW, consisting of 134 sets of wind turbines with unit capacity of 1.5 MW. The average annual power delivered to the grid by the project is expected to be 431,949 MWh. The Project can reduce GHG emissions by replacing the electricity generated by fossil fuel fired power plants Northwest China Power Grid (NWPG). It's estimated that the proposed project could achieve GHG emission reductions of 430,588 tCO₂e annually.

The purpose and scope of this verification is to ensure that reported emission reductions are complete and accurate in accordance with applicable VCS standards and relevant UNFCCC requirements in order to be certified. A desk review and a site visit have been conducted to verify the data submitted in the monitoring report /1/. Applus+ Certification confirms the following has been reviewed:

- Monitoring plan included in the revised CDM PDD /4/, version 3,2, dated 20/08/2012 and CDM PDD /3/ version 3 dated 24/05/2011;
- Validation report No. 01 997 9105052517 /5/, version 06, completed on 31/05/2011;
- Verification report /6/, version 01.0, completed 04/03/2016 by Shenzhen CTI International Certification Co., Ltd;
- Approved methodology, ACM0002 /8/, version 12.3.0, dated 17/09/2010;
- VCS standards and guidance version 3.7, as well as relevant UNFCCC requirements;
- All information and references relevant to the project activity's resulting in emission reductions.

During this verification, no finding was identified related to the monitoring, implementation or operations of the project activity in relation to relevant VCS standards, guidance and UNFCCC requirements and relevant host party criteria and the applied baseline and monitoring methodology etc.

- Applus+ Certification confirms that the project is implemented in accordance with the revised CDM PDD /4/. The monitoring plan complies with the applied methodology ACM0002 /8/ version 12.3.0 and the monitoring has been carried out in accordance with the monitoring plan in the revised CDM PDD /4/. The monitoring system is in place and the emission reductions are calculated without material misstatements. The level of assurance of the verification is reasonable. 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+ Certification confirms that the implementation of the project has resulted in 1,242,991 tCO₂e emission reductions during period 01/01/2016 to 23/09/2018.

Table of Contents

Table of Contents	4
1 Introduction	6
1.1 Objective	6
1.2 Scope and Criteria	6
1.3 Level of Assurance	6
1.4 Summary Description of the Project	7
2 Verification Process	9
2.1 Method and Criteria	9
2.2 Document Review	10
2.3 Interviews	10
2.4 Site Inspections	11
2.5 Resolution of Findings	11
2.5.1 Forward Action Requests	11
2.6 Eligibility for Validation Activities	11
3 Validation Findings	12
3.1 Participation under Other GHG Programs	12
3.2 Methodology Deviations	12
3.3 Project Description Deviations	12
3.4 Grouped Project	12
4 Verification Findings	13
4.1 Project Implementation Status	13
4.2 Accuracy of GHG Emission Reduction and Removal Calculations	14
4.3 Quality of Evidence to Determine GHG Emission Reductions and Removals	17
4.4 Non-Permanence Risk Analysis	17

5	Safeguards	17
5.1	No Net Harm	17
5.2	Local Stakeholder Consultation	17
6	Verification conclusion.....	18
APPENDIX 1: Reference list.....		19

1 INTRODUCTION

1.1 Objective

LGAI Technological Center, S.A. has been commissioned by Beijing Ruifang Information Technology Co., Ltd to perform the verification¹ of greenhouse gas emission reductions of the project activity “CECIC HKC Gansu Changma Wind Power project” (UNFCCC Ref. No. 3670, VCS Ref. No. 717) reported in the Monitoring Report /1/ during monitoring period 01/01/2016 to 23/09/2018.

LGAI Technological Center, S.A. as the verification body of the project activity has been accredited as a DOE by UNFCCC and also meets the competence requirements as set out in ISO 14065:2007.

The objective of verification is to have an independent review and ex post determination by a Designated Operational Entity (DOE) of the monitored reductions in GHG emissions that have occurred as a result of the pre-registered CDM project activity during the monitoring period from the date when the project started to operate until the date when the project was actually registered as a CDM project activity by the CDM-EB. Certification is the written assurance by the DOE that, during a specific time period, a proposed VCS project activity achieved the reductions in anthropogenic emissions by sources of GHGs as verified.

The objective of this verification/certification is to verify and certify emission reductions, reported for the “CECIC HKC Gansu Changma Wind Power project” in China for the period 01/01/2016 to 23/09/2018.

1.2 Scope and Criteria

The verification scope is defined as an independent and objective review of the revised CDM PDD, the Project's baseline study and Monitoring Report (MR) and other relevant documents. The information in these documents is reviewed against VCS Version 3 requirements, UNFCCC rules and associated interpretations.

The verification is not meant to provide any consulting towards the client. However, stated requests for forward actions and/or corrective actions may provide input for improvement of the Project monitoring towards reductions in the GHG emissions.

1.3 Level of Assurance

The verification report is based on the CDM-PDD, the VCS Monitoring Report (MR), supporting evidences made available to the verifier and information collected through performing interviews and during the on-site assessment.

¹ According to 5.3.12 of VCS Standard Version 3.7: Validation (including project crediting period renewal validation) and the first verification of a project (in a given project crediting period) may be undertaken by the same validation/verification body. However, the subsequent verification shall be undertaken by a different validation/verification body. The gap validation of a project registered under an approved GHG program may be disregarded when assessing adherence to these requirements. Therefore, it is in line with the requirement of the standard that Applus+ Certification is able to undertake the this VCS verification.

The verification conclusion is assured a reasonable level of assurance.

1.4 Summary Description of the Project

Project title	CECIC HKC Gansu Changma Wind Power project
UNFCCC reference number	3670
VCS reference number	717
Project Participants	CECIC HKC Gansu Wind Power Co., LTD. (Project Owner, host country, P. R. China);
Location of the project	Yumen Town, Yumen City, Gansu Province, People's Republic of China Geographic coordinates: Latitude between +40.1417 and +40.2572, Longitude between +96.8583 and +96.9575
Project start date	Construction start date: 16/06/2008 Operation start date: 21/11/2009 Fully operation start date: 15/02/2011
Date of registration as CDM project	24/09/2011
Version of registered CDM PDD and VCS PD	Version 3, dated 24/05/2011 (CDM) Version 3.2 dated 20/08/2012 (CDM and basis for verification)
Monitoring period	01/01/2016 to 23/09/2018
First monitoring report	Version 01, dated 25/09/2018
Final monitoring report	Version 02, dated 30/09/2018
Applied Methodology/Version	ACM0002, version 12.3.0, dated 17/09/2010
Scope/Technical Area	1/1.2

The project activity is a wind farm project located at Yumen Town, Yumen City, Gansu Province, People's Republic of China which is to use wind resource for electricity generation. The installed capacity of the project activity is 201 MW, consisting of 134 sets of wind turbines with unit capacity of 1.5 MW. The average annual power delivered to the grid by the project is expected to be 431,949 MWh. The Project can reduce GHG emissions by replacing the electricity generated by fossil fuel fired power plants Northwest China Power Grid (NWPG). It's estimated that the proposed project could achieve GHG emission reductions of 430,588 tCO₂e annually.

The project activity has been validated by TÜV Rheinland Japan Ltd. based on the CDM PDD /3/ version 3 dated 24/05/2011 and reported in the validation report No. 01 997 9105052517 /5/, version 06, completed on 31/05/2011. The project activity was registered as a CDM project activity on 24/09/2011 which is available at <http://cdm.unfccc.int/Projects/DB/TUEV-RHEIN1272607295.17/view>. Also a PRC has been made and approved by UNFCCC, then CDM PDD version 3.2 /4/ dated 20/08/2012 would also be the basis for this verification. A gap validation was performed by LGAI Technological Center, S.A. (Applus+ Certification) through the first VCS verification which is available at https://www.vcsprojectdatabase.org/#!/project_details/717.

2 VERIFICATION PROCESS

2.1 Method and Criteria

Verification was conducted using Applus+ Certification's procedures in line with the requirements specified in the VCS Standard version 3, CDM M&P, the latest version of the CDM Validation and Verification Standard, and relevant UNFCCC requirements and applying standard auditing techniques.

Applus+ Certification 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+ Certification verified the implementation of the monitoring plan and the data presented in the Monitoring Report /1/ 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.

The information of the assessment team is included in section 2.1.1 of this report.

Assessment team

According to the sectoral scopes / technical area and experiences in the sectoral or national business environment, Applus+ Certification has composed a project assessment team in accordance with the appointment rules in Applus+ Certification. The composition of assessment team has to be approved by the Applus+ Certification 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 (AiT)
- Technical Reviewer (TR)
- Technical Experts (TE)

Name	Qualification	Coverage of scope	Coverage of Technical Area	Host country experience
<i>Hanshen (Denny) Xue</i>	<i>LA/TE</i>	<i>Y (1.2)</i>	<i>Y</i>	<i>Y</i>
<i>Meng (Simon) Shen</i>	<i>TR</i>	<i>Y (1.2)</i>	<i>Y</i>	<i>Y</i>

Hanshen (Denny) Xue (Master Degree in Environmental Engineering, Bachelor Degree in Thermal Engineering) is a lead auditor appointed by Applus+ Certification 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+ Certification, 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) is a Lead Auditor appointed by Applus+ Certification 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+ Certification, he had been worked for TÜV SÜD as a GHG Validator/Assessment team and ISO 9001/14001 Lead Auditor for 3.5 years.

2.2 Document Review

The VCS monitoring report /1/ version 01 dated 25/09/2018, version 02 dated 30/09/2018 and the emission reduction calculations spreadsheet /2/, were assessed as part of the verification. In addition the revised CDM PDD /4/ version 3.2 dated 20/08/2012 in particular the baseline estimations and the monitoring plan, and the registered CDM validation report version 06 dated 31/05/2011, as well as relevant documents, were reviewed. A detailed documents reviewed are listed in Annex 1 of the report.

2.3 Interviews

The key personnel interviewed are summarized in the table below:

Interviewed personnel	Role	Organization	Subject
Mr. Zhang Bing	Chief	CECIC HKC Gansu Wind Power Co., LTD.	Operation of the project activity; Implementation of the monitor plan of the project activity; Data collection and data achievement; Calibration of meters and equipment maintenance
Ms. Liu Ting	Operator	CECIC HKC Gansu Wind Power Co., LTD.	
Mr. Wang Shuai	Operator	CECIC HKC Gansu Wind Power Co., LTD.	

Mr. Teng Haipeng	Project Manager	Demeter Venture UK Limited	Data collection and ER calculation
------------------	-----------------	----------------------------	------------------------------------

2.4 Site Inspections

The assessment team performed the on-site verification (Yumen Town, Yumen City, Gansu Province, People's Republic of China) on 29/09/2018. The interviewed personnel and objective are listed in above table.

2.5 Resolution of Findings

As an outcome of the verification process, the 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 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 (CL) if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

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

There is no CARs and CLs raised for this monitoring period for the project.

2.5.1 Forward Action Requests

None FAR was raised during the verification process. Also there are no remaining from former verification and validation.

2.6 Eligibility for Validation Activities

Not applicable as LGAI Technological Center, S.A. holds the accreditation for the validation and verification for projects under scope 1.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

Through reviewing the revised CDM PDD /4/ and validation report /5/ at UNFCCC website <http://cdm.unfccc.int/Projects/DB/TUEV-RHEIN1272607295.17/view>, it was validated that the project has been registered as a CDM project on 24/09/2011 with reference No. 3670. Also, after checking http://www.vcsprojectdatabase.org/#!/project_details/717, it is confirmed that the project also registered as a VCS project. The project does not participate in the other emissions trading program by checking public information on Internet and interviewing with project owner.

During the period from 24/09/2011 to 23/09/2018 as the monitoring period, the project would claim for other CERs or VCUs, however CERs and VCUs would not been claimed together in the same period.

Therefore, Applus+ Certification consider the project is eligible to participate under the VCS Program as there is no double counting for the emission reduction during any period.

3.2 Methodology Deviations

Not applicable as not deviation for methodology.

3.3 Project Description Deviations

Not applicable as not deviation for project description.

3.4 Grouped Project

Not applicable as not a grouped project.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

By means of on-site visit, the assessment team confirms that all physical features of the proposed CDM project activity proposed in the revised CDM PDD /4/ are in place and the PP has operated the project as per revised CDM PDD /4/. The installed capacity of the project is 201 MW, consisting of 134 sets of wind turbines with unit capacity of 1.5 MW. The electricity generated is transmitted to the local Yumen town grid via a newly built 35kV/110kV transformer station located within the Project site, which was then exported to the NWPG. The project activity was expected to supply 431,949 MWh of electricity to the grid. The construction of the project started on 16/06/2008, the first wind turbine of the project has been put into operation on 21/11/2009 and the commissioning time of all 134 wind turbines was 15/02/2011 verified by checking information on the UNFCCC website. There are no changes on the key equipment and technology since the validation of the project. No special event which would affect the monitoring of the project has been observed during the monitoring period.

The emission reduction resulted from the project during this monitoring period would apply for VCUs. The project only applies CERs and VCUs under CDM and VCS (no other form of environmental credit) and no rejection from CDM and VCS occurs. The project would contribute to sustainable development in Job creation, Reduction in GHG emissions, Reduction of fossil fuel use and Increase of power supply aspects confirmed during site visit.

The technical parameters have been verified with the nameplates /10/ as below:

Item	FD77A/1500
1. Data for Unit	
Rated capacity (kW)	1,500
Number of unit	134
Capacity control method	Pitch-controlled
Turbine diameter (m)	77
Hub height (m)	70
Cut in wind speed (m/s)	3.0
Rated wind speed (m/s)	12.5
Cut out wind speed (m/s)	20
Wind speed limit (m/s)	53.3
Technical lifetime (y)	20
Material of blade	GRP
Blade tip speed (m/s)	69.6
2. Generator	
Type of generator	Double-fed induction generator
Rated capacity (kW)	1,500
Output Voltage (V)	690
Rated speed (rpm)	1,000-1,800 (+10.0%)

By comparing the actual ER claimed in this monitoring period with the estimate in the revised PD, the actual emission reductions (1,242,991 tCO₂e) are 5.68% higher than what is stated in the revised CDM PDD (i.e. 1,176,154 tCO₂e, equals to annual emission reductions, 430,588 tCO₂e multiplied by the actual operational days (997 days) then divided by 365 days) which is under normal variation range and will not lead to the overestimation of VERs.

The assessment team confirmed that there is no proposed or actual change to the project design during this monitoring period.

All required equipments and procedures are available and implemented in an appropriate manner.

All necessary monitoring instruments are installed. All required instruments including standby and operating procedures for the same have been implemented in an appropriate manner.

The project is completely operational and the same has been confirmed on-site. Neither mistakes nor malfunction on main meters have been observed during this monitoring period.

4.2 Accuracy of GHG Emission Reduction and Removal Calculations

The monitoring has been carried out in accordance with the monitoring plan contained in the revised CDM PDD /4/. All parameters were monitored and determined as per the monitoring plan which is listed in below table:

Data / Parameter:	EG _{facility,y}
Data unit:	MWh
Description:	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y
Purpose of the data:	Calculation of baseline emissions
Parameter value:	1,246,919.71
Source of data used:	EG _{facility,y} is the difference of the quantity of net electricity generation supplied by the Project and the electricity exported to the grid by the Project. The quantity of net electricity generation supplied by the Project and the electricity exported to the grid by the Project are all sourced from Meter Reading Record (MRRs) /11/ issued by the project owner, Electricity Transaction Notes (ETNs) /12/ issued by power grid company covering monitoring period, Statement issued by power grid company regarding to electricity generated and electricity supplied to the grid /13/.
Information flow:	For the quantity of net electricity generation supplied by the Project: The data of 2 sets of bi-direction ammeters (one for main and another for backup for each set) were measured continuously, recorded monthly and archived electronically. At 24:00 hr of third day to last day of each month, the staff from project owner and power grid company will record main meter's readings and form Meter Reading Records (MRRs). The staff from power grid

	company then transcribes the data into Electricity Transaction Notes (ETNs), then after the confirmation of the project owner for the ETNs, the project owner will issue the invoice. For the electricity exported to the grid by the Project: The data of 2 sets of bi-direction ammeters (one for main and another for backup for each set) were measured continuously, recorded monthly and archived electronically. At 00:00 hr of 9th of each month, the staff from project owner and power grid company will record main meter's readings and form Meter Reading Records (MRRs). The staff from power grid company then transcribes the data into Electricity Transaction Notes (ETNs), then after the confirmation of the project owner for the ETNs, the power grid company will issue the invoice. For the data on 01/01/2016, 31/12/2016, 31/12/2017 and 23/09/2018 was determined through Statement issued by power grid company regarding to electricity generated and electricity supplied to the grid. The data for MRRs, ETNs along with Statement issued by power grid company regarding to electricity generated and electricity supplied to the grid have been sent to the CDM consulting company for reporting of GHG emission reduction. The conservative one would be used for ER calculation.																				
Monitoring method, frequency and equipments:	The parameter was measured continuously and recorded monthly by 2 sets of bi-direction ammeters installed at high voltage side of 35kV/110KV substation by the Project during the monitoring period verified by site visit. See below for the information of 2 sets of bi-direction ammeters verified by site visit and checking calibration certificates /14/: <table><tr><th>Meter</th><th>Type</th><th>Serial Number</th><th>Accuracy</th></tr><tr><td>Main meter A</td><td>SL7000</td><td>51000040</td><td>0.2s</td></tr><tr><td>Backup meter A</td><td>SL7000</td><td>51000042</td><td>0.2s</td></tr><tr><td>Main meter B</td><td>SL7000</td><td>51000044</td><td>0.2s</td></tr><tr><td>Backup meter B</td><td>SL7000</td><td>51000043</td><td>0.2s</td></tr></table> The type, serial number and accuracy have been confirmed by site visit.	Meter	Type	Serial Number	Accuracy	Main meter A	SL7000	51000040	0.2s	Backup meter A	SL7000	51000042	0.2s	Main meter B	SL7000	51000044	0.2s	Backup meter B	SL7000	51000043	0.2s
Meter	Type	Serial Number	Accuracy																		
Main meter A	SL7000	51000040	0.2s																		
Backup meter A	SL7000	51000042	0.2s																		
Main meter B	SL7000	51000044	0.2s																		
Backup meter B	SL7000	51000043	0.2s																		
Calibration:	The calibration information are shown as below /14/: <table><tr><th>Meter</th><th>Calibration date</th><th>Valid until</th></tr><tr><td rowspan="3">Main and backup meter(s)</td><td>02/04/2015</td><td>01/04/2016</td></tr><tr><td>17/03/2016</td><td>16/03/2017</td></tr><tr><td>19/12/2016</td><td>18/12/2017</td></tr></table>	Meter	Calibration date	Valid until	Main and backup meter(s)	02/04/2015	01/04/2016	17/03/2016	16/03/2017	19/12/2016	18/12/2017										
Meter	Calibration date	Valid until																			
Main and backup meter(s)	02/04/2015	01/04/2016																			
	17/03/2016	16/03/2017																			
	19/12/2016	18/12/2017																			

		24/09/2017	23/09/2018
	The calibration was conducted by an accredited third party which is Electric Energy Measurement Centre of Gansu Electric Power Corporation was accredited by Quality and Technical Supervision Bureau of Gansu Province /14/.		
QA/QC procedure:	Data record will be archived for a period of 2 years after the crediting period to which the records pertain.		
Means of verification:	Data of the parameter was verified by checking MRRs, ETNs and Statement issued by power grid company regarding to electricity generated and electricity supplied to the grid. All data is in line with MRRs, ETNs and Statement issued by power grid company regarding to electricity generated and electricity supplied to the grid; Information flow was verified by checking MRRs, ETNs and Statement issued by power grid company regarding to electricity generated and electricity supplied to the grid, and all information are consistent; Monitoring method was verified by site visit, checking calibration certificates, all monitoring method meets the description in the PDD; Calibration was verified by checking calibration certificate and Accreditation certificate, all calibration of monitoring equipment meets the requirement indicated in the PDD.		

Parameters available at validation stage:

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

Parameter title	Description	Data	Source
EF _{grid,CM,y*}	Baseline emission factor of NWPG in the monitoring period.	0.99685	Notification on 2008 baseline emission factors for regional power grids in China, issued by China on 30/12/2008 /15/.

* $EF_{grid,CM,y}$ are not directly available at validation but calculated based on other parameter in the PDD available at validation, therefore in this monitoring period, only $EF_{grid,CM,y}$ are included and rest of parameter are either used to calculate $EF_{grid,CM,y}$ or not used in the MR.

4.3 Quality of Evidence to Determine GHG Emission Reductions and Removals

The monitoring has been carried out in accordance with the monitoring plan contained in the revised CDM PDD /4/ version 3.2 dated 20/08/2012.

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 MR Report and ER Calculation Spreadsheet /2/ and are consistent with the applied methodology ACM0002 version 12.3.0 and the monitoring plan contained in the revised CDM PDD. 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 ER Calculation Spreadsheet and the MR Report. The verification process for the same has been clearly described above in section 4.2 of the report.

4.4 Non-Permanence Risk Analysis

Not applicable as a renewable project.

5 SAFEGUARDS

5.1 No Net Harm

By checking the EIA summary and conclusion provided in the registered PD or PDD, it is confirmed that Wind power is green power and the impact caused by wind farm on the surrounding ecosystem and residents, water, and atmosphere etc is very little, there would be no net harm caused due to the project activity. Also the EIA of the project are approved by the government.

Also no potential environment or social economic matter was found during the site visit. The project is renewable energy project and thus no net harm observed in Air or water quality on-site.

5.2 Local Stakeholder Consultation

The local stakeholder's meeting was held in Yumen County on 06/03/2008. 44 participants attended the meeting including local residents, builders and members of the local authorities. The project CECIC introduced the proposed project, and then a survey was arranged through a one-page questionnaire, which was designed to be easily filled in. The opinions expressed by the stakeholders were recorded and are available on request.

The stakeholder meeting and the survey showed that the proposed project receives strong support from the local community. They all believe the proposed project will promote local economic development and agree with the project development and construction.

Communications with Local stakeholders was being carried out at periodic intervals. There are no negative comments received for the project.

All such conclusion has been verified through site visit and check revised CDM PDD.

6 VERIFICATION CONCLUSION

Applus+ Certification has been commissioned by Beijing Ruifang Information Technology Co., Ltd to perform the verification of greenhouse gas emission reductions of the project activity “CECIC HKC Gansu Changma Wind Power project” (UNFCCC Ref. No. 3670, VCS Ref. No. 717).

The management of CECIC HKE Wind Power 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 revised CDM PDD /4/, version 3.2 dated 20/08/2012.

Our verification approach was based on the requirements as defined under the applicable VCS standards and relevant UNFCCC requirements. 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 implemented and operated as per the revised CDM PDD and VCS PD;
- the monitoring plan in CDM PDD and VCS PD is as per the applied methodology;
- the monitoring complies with the monitoring plan in the revised CDM PDD and VCS PD;
- the monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable VCS and CDM requirements;
- 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 “CECIC HKC Gansu Changma Wind Power project” during the monitoring period 01/01/2016 to 23/09/2018 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 01/01/2016 to 23/09/2018 (divided into 3 vintage periods). Verified GHG emission reductions or removals in the above reporting period:

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage (tCO ₂ e)	Emission Reductions (tCO ₂ e)
01/01/2016 to 31/12/2016	457,299	0	0	457,299
01/01/2017 to 31/12/2017	443,868	0	0	443,868
01/01/2018 to 23/09/2018	341,824	0	0	341,824
Total	1,242,991	0	0	1,242,991

APPENDIX 1: REFERENCE LIST

1. Monitoring report, version 01, dated 25/09/2018; version 02, dated 30/09/2018
2. ER calculation spreadsheet
3. Registered CDM PDD, version 3, dated 24/05/2011
4. Revised CDM PDD, version 3.2, dated 20/08/2012
5. Validation report, No. 01 997 9105052517, version 06, completed by TÜV Rheinland Japan Ltd.
6. Verification report, Version 01.0, completed on 04/03/2016 by Shenzhen CTI International Certification Co., Ltd
7. VCS standard version 3.7, dated on 21/06/2017
8. Approved methodology ACM0002, version 12.3.0, dated 17/09/2010
9. CDM Monitoring procedure
10. Nameplate of the equipment
11. Meter Reading Record (MRRs) for Main Meter(s)
12. Electricity Transaction Notes covering the monitoring period
13. Statement issued by power grid company regarding to electricity generated and electricity supplied to the grid
14. Calibration certificates of meters covering the whole monitoring period issued by Electric Energy Measurement Centre of Gansu Electric Power Corporation
15. Notification on 2008 baseline emission factors for regional power grids in China issued by China on 30/12/2008