GUAZHOU BEIDAQIAO NO.1 WIND FARM PROJECT IN GANSU PROVINCE, CHINA

Document Prepared By LGAI Technological Center, S.A. (Applus+ Certification)

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Approved By	LGAI Technological Center S.A. (Applus+ Certification) CDM Technical Manager: Agustín Calle de Miguel
Work Carried Out By	Lead Auditor / Technical Expert: Doris Dai Technical Reviewer: Simon Shen

Summary:

LGAI Technological Center, S.A. (hereafter referred to as "Applus+ Certification") has been commissioned by Beijing MD Energy Technology Co., Ltd. to perform the verification of greenhouse gas emission reductions of the project activity "Guazhou Beidaqiao No.1 Wind Farm Project in Gansu Province, China" (VCS Ref. No. 1037, hereafter referred to as "the project activity") reported in the monitoring report /1/ during monitoring period 03/01/2021 to 31/08/2022.

The project activity has been validated by ERM based on the CDM PDD /3/ version 3.0 dated 28/09/2011 and reported in the validation report No. 1940.V1 /4/, version 02, completed on 28/09/2011. The project activity was registered as a CDM project activity on 29/09/2011 which is available at https://cdm.unfccc.int/Projects/DB/ERM-CVS1292512044.7/view. A gap validation was performed by BV during the VCS verification and project has been successfully renewed by Applus+ Certification which is available at https://registry.verra.org/app/projectDetail/VCS/1037. The renewed registered VCS PD /3/ version 3.0 dated 30/03/2022 would be the basis for verification.

The project activity is a wind power project located at Guazhou County, Jiuquan City, Gansu Province, P. R. China which is to use wind power resource for electricity generation. The installed capacity of the project activity is 201 MW, involves the installation of 134 wind turbines with a unit capacity of 1,500 kW. The average annual power delivered to the grid by the project is expected to be 461,464 MWh. The project can reduce GHG emissions by replacing the electricity generated by fossil fuel fired power plants in Northwest China Power Grid (NWPG). It's estimated that the proposed project could achieve GHG emission reductions of 359,630 tCO_2e 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 registered VCS PD /3/ version 3.0 dated 30/03/2022;

- Validation report No. A+SH_SYST_VCS_VER_RCP_14521 /4/ version 01.1, dated 31/03/2022;
- Approved methodology, ACM0002 /7/, version 20.0, dated 28/11/2019;
- VCS standards version 4.3 and guidance version 4.2, 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 registered PD /3/. The monitoring plan complies with the applied methodology ACM0002 /7/ version 20.0 and the monitoring has been carried out in accordance with the registered PD. 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 452,938 tCO_2e emission reductions during period 03/01/2021 to 31/08/2022.

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1 INTRODUCTION

1.1 Objective

- LGAI Technological Center, S.A. (Applus+ Certification) has been commissioned by Beijing MD Energy Technology Co., Ltd. to perform the verification of greenhouse gas emission reductions of the project activity "Guazhou Beidaqiao No.1 Wind Farm Project in Gansu Province, China" (VCS Ref. No. 1037) reported in the Monitoring Report /1/ during monitoring period 03/01/2021 to 31/08/2022.
- LGAI Technological Center, S.A. (Applus+ Certification) 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 14065:2020.
- The objective of verification is to have an independent review and ex post determination by a Validation and Verification Body (VVB) of the monitored reductions in GHG emissions that have occurred as a result of the registration of VCS project. Certification is the written assurance by the VVB 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 "Guazhou Beidaqiao No.1 Wind Farm Project in Gansu Province, China" in China for the period 03/01/2021 to 31/08/2022.

1.2 Scope and Criteria

- The verification scope is defined as an independent and objective review of the registered VCSPD and 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 4.3 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 PD, the VCS Monitoring Report (MR), supporting evidences made available to the verifier and information collected through performing interviews and during the on-site assessment.
- The verification conclusion is assured a reasonable level of assurance.

1.4 Summary Description of the Project

Project title	Guazhou Beidaqiao No.1 Wind Farm Project in Gansu Province, China
VCS reference number	1037
Project Participants	Hydrochina Guazhou Wind Power Co., Ltd. (Project Owner, host country, P. R. China)
Location of the project	Guazhou County, Jiuquan City, Gansu Province, P. R. China Geographic coordinates: East longitude: +95.8037° North latitude: +40.6025°
Project start date	Construction start date: 28/10/2009 Operation start date: 03/01/2011
Version of VCS PD	Version 03, dated 30/03/2022 (basis for verification)
Monitoring period	03/01/2021 to 31/08/2022
First monitoring report	Version 01, dated 20/09/2022
Final monitoring report	Version 02, dated 27/09/2022
Applied Methodology/Version	ACM0002, version 20.0, dated 28/11/2019
Scope/Technical Area	1/1.2

The project activity is a wind power project located at Guazhou County, Jiuquan City, Gansu Province, P. R. China which is to use wind power resource for electricity generation. The installed capacity of the project activity is 201 MW, involves the installation of 134 wind turbines with a unit capacity of 1,500 kW. The average annual power delivered to the grid by the project is expected to be 461,464 MWh. The project can reduce GHG emissions by replacing the electricity generated by fossil fuel fired power plants in Northwest China Power Grid (NWPG). It's estimated that the proposed project could achieve GHG emission reductions of 359,630 tCO_2e annually.

The project activity has been validated by ERM based on the CDM PDD /3/ version 3.0 dated 28/09/2011 and reported in the validation report No. 1940.V1 /4/, version 02, completed on 28/09/2011. The project activity was registered as a CDM project activity on 29/09/2011 which is available at https://cdm.unfccc.int/Projects/DB/ERM-CVS1292512044.7/view. A gap validation was performed by BV during the VCS verification and project has been successfully renewed by Applus+ Certification which is available at https://registry.verra.org/app/projectDetail/VCS/1037. The VCS PD /3/ version 3.0 dated 30/03/2022 would be the basis for verification.

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 4.3, 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 below:

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
Doris Dai	LA/TE	Y (1.2)	Y	Y
Simon Shen	TR	Y (1.2)	Y	Y

- **Doris Dai** (Master's Degree in Environmental Sciences, Bachelor's Degree in Environmental Technology) is an Auditor appointed by Applus+ LGAI for the GHG project assessment and auditing. She has more than 6 years of work experience in CDM/VCS project assessment. Before she joined Applus+ LGAI, she has been working for CTI Certification as senior GHG Auditor for 3.5 years.

- **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 20/09/2022, version 02 dated 27/09/2022 and the emission reduction calculations spreadsheet /2/, were assessed as part of the verification. In addition, the VCS PD /3/ version 3.0 dated 30/03/2022 in particular the baseline estimations and the monitoring plan, the VCS Validation Report /4/ dated 31/03/2022, as well as relevant documents, were reviewed. A detailed document reviewed are listed in Appendix 1 of the report.

2.3 Interviews

The key personnel interviewed are summarized in the table below, the assessment team made a site visit, and during the site visit, interview with staffs from project owner has been made to confirm the actual capacity, implementation status, and if there were no design changes since last validation/verification.:

Interviewed personnel	Role	Organization	Subject
Mr. Yang Fubin	General Manager	Hydrochina Guazhou 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. Data collection and ER calculation.
Mr. Pan Xiaoyu	Vice plant manager	Hydrochina Guazhou Wind Power Co., Ltd.	
Mr. Wang Chao	Technical Director	Hydrochina Guazhou Wind Power Co., Ltd.	
Mr. You Yushen	Director	Local environmental protection bureau	
Mr. Song Qiyu	Villager	Guazhou County	
Mr. Wang Xiaobo	Villager	Guazhou County	
Ms. Fan Lingling	Villager	Guazhou County	
Ms. Yang Huahua	Villager	Guazhou County	

2.4 Site Inspections

- The assessment team performed the on-site verification (Guazhou County, Jiuquan City, Gansu Province, P. R. China) on 26/09/2022. 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:
- a) 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;
- b) Modifications to the implementation, operation and monitoring of the project activity has not been sufficiently documented by the project participants;
- c) Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;
- d) 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 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 registered PDD /3/ and validation report /4/, it was validated that the project has been registered as a CDM project with reference No. 1744 first which is available at https://cdm.unfccc.int/Projects/DB/ERM-CVS1292512044.7/view. Then the project has been registered as VCS project and successfully renewed which is available at https://registry.verra.org/app/projectDetail/VCS/1037. The project does not participate in the other emissions trading program by checking public information on Internet, interviewing with project owner and statement issued by project owner.
- During the period from 03/01/2021 to 02/01/2031 as the second VCS crediting period, the project would claim only for VCUs or CERs. But VCUs and CERs will not be claimed in the same period. Also, for period 29/09/2011 to 28/06/2012, the project has applied for the issuance of CERs.
- The project is also registered as a CDM project with a seven year twice renewable project crediting period, which is from 29/09/2011 to 28/09/2032. Therefore, the total length of VCS crediting period should be no more than 21 years which is from 03/01/2011 to 02/01/2032.
- 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

- There is a deviation on calculation of Build Margin when adopting the methodological tool – "Tool to calculate the emission factor for an electricity system" by the Chinese DNA in the "2019 Baseline Emission Factors for Regional Power Grids in China". The deviation has been approved by the EB Board in a response letter entitled "Request for clarification on use of approved methodology AM0005 for several projects in China", thus the same deviation method has been adopted in the first and second crediting periods of the project by the Chinese DNA.

3.3 Project Description Deviations

- The project is registered under VCS scheme in 2012, then the first crediting period should be from 03/01/2011 to 02/01/2021. Consequently, the second crediting period under VCS would be from 03/01/2021 to 02/01/2031.

- Furthermore, according to revised CDM PDD, the accuracy of the meter M_{21} is changed from 0.5 to 1.0, which has been approved by CDM EB on 15/01/2013. The net electricity will be determined by the following formula:
- $EG_{facility,y} = EG_{export,y} - EG_{import1,y} - EG_{import2,y} \times (1 + 0.5\%)$
- The assessment team confirm this is in line with the requirement of VCS and it has no impacts on the applicability, additionality or baseline of the project.

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 project activity proposed in the registered VCS PD /3/ are in place and the PP has operated the project as per registered VCS PD /3/. The installed capacity of the project is 201 MW, involves the installation of 134 wind turbines with a unit capacity of 1,500 kW. The electricity generated is transmitted to the local Power Grid via a newly built transformer station, which was then exported to the NWPG. The project activity was expected to supply 461,464 MWh of electricity to the grid. The construction of the project started on 28/10/2009, the project has been put into operation on 03/01/2011 verified by checking information on the UNFCCC website and site visit. 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.
- By checking online information and interview with the project owner, it is confirmed that the project was registered under VCS and CDM and won't apply for any carbon credits or environmental credits under any other scheme.
- By checking information of other GHG programs such as CDM, GS, GCC, CCER etc., it is able to confirm:
- The project has not participated or been rejected under any other GHG programs since validation or previous verification;
- The project has not received or sought any other form of environmental credit, or has become eligible to do so since validation or previous verification;
- The GHG emission reductions or removals generated by the project have not become included in an emissions trading program or any other mechanism that includes GHG allowance trading.
- The project would contribute to sustainable development in as below:
- Because the wind power plants of the project will generate electricity without GHG emission, the project can help the local areas reduce GHG emissions by replacing some part of the electricity from coal-fired power plants. And the project also helps decrease the local environmental pollution caused by coal burning, which has remarkable environmental benefits. The project has achieved a GHG emission reduction of 452,938 tCO_2e during this monitoring period. Thus, the project achieved SDG 13 Climate Action.
- During this monitoring period, 581,204.171 MWh of electricity from renewable sources has been exported to the power grid. And the project makes good use of the local water resource

to solve the difficulties of lack of power and unstable voltage, which help improve local life quality. Thus, the project achieved SDG 7 Affordable and Clean Energy.

- During the construction, operation, and maintenance of this project, the project, directly and indirectly, generates more job opportunities, which helps improve local employment and reduce local poverty. Thus, the project achieved SDG 8 Decent Work and Economic Growth.
- Moreover by checking public information, staff roaster of project /16/ and site visit, following information has been confirmed:

Row number	SDG Target	SDG Indicator	Net Impact on SDG Indicator	Current Project Contributions	Contributions Over Project Lifetime
1	7.2	7.2.1 Renewable energy share in the total final energy consumption	Implemented activities to increase	During this monitoring period, 581,204.171 MWh of electricity from renewable sources has been exported to the power grid.	The SDG 7 contributions over project lifetime (since project start date, i.e. 03/01/2011) is 3,557,948.75 MWh of electricity from renewable sources has been exported to the power grid.
2	8.3	8.3.1 Proportion of informal employment in non- agriculture employment, by sex	Implemented activities to increase	During this monitoring period, 27 people including 3 females were employed for operation, and maintenance of this project.	The project activity generates temporary working opportunities during the construction period. From the operation start date of this project activity to the end of this monitoring period, 27 people were employed including 3 females.
3	13	Tonnes of greenhouse gas emissions avoided or removed	Implemented activities to increase	During this monitoring period, the project has achieved GHG emission reductions of 452,938 tCO_2e.	The SDG 13 contributions over project lifetime (since project start date, i.e. 03/01/2011) is 3,125,353 tCO_2e of GHG emission reductions.

- The technical parameters have been verified with the nameplates /9 / as below:

Parameter of Turbines	Unit	Value	
Type	/	SL1500/77	GW77/1500

Quantity of Turbine	/	67	67
Rated Power	kW	1,500	1,500
Cut-in Wind Speed	m/s	3.0	3.0
Cut-out Wind Speed	m/s	20.0	22.0
Rated Wind Speed	m/s	11.0	11.5
Rated Voltage	V	690	690

- By comparing the actual ER claimed in this monitoring period with the estimate in the registered PD, the actual emission reductions (452,938 tCO_2e) are lower than what is stated in the registered PD (i.e. 597,084 tCO_2e, equals to annual emission reductions, 359,630 tCO_2e multiplied by the actual operational days (606 days) then divided by 365 days). The assessment team consider this variation is acceptable due to the conservativeness.
- Therefore, the assessment team confirmed the ER in this monitoring period is not overestimated.
- 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 Safeguards

4.2.1 No Net Harm

- By checking the EIA summary and conclusion provided in the registered PD, it is confirmed that wind power is green power and the impact caused by wind power 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.

4.2.2 Local Stakeholder Consultation

- A survey was carried out through the information publication, distributing and collecting responses to questionnaires targeting on local residents, builders and members of the local authorities. The project owner 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 registered PD.

4.3 AFOLU-Specific Safeguards

- Not applicable as non-AFOLU project.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

- The monitoring has been carried out in accordance with the monitoring plan contained in the VCS PD /3/. 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:	581,204.171
Source of data used:	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y ($EG_{facility,y}$) is determined by Electricity supplied by the project activity to the grid in year y ($EG_{export,y}$), Electricity imported from the grid through the main meter to the project ($EG_{import1,y}$) and Electricity

	imported from the grid through the backup line to the project ($EG_{import2,y}$) as below formula: $EG_{facility,y} = EG_{export,y} - EG_{import,y}$ $EG_{import,y} = EG_{impor1,y} + EG_{import2,y} * (1 + 0.5\%)$ $EG_{facility,y} = EG_{export,y} - EG_{impor1,y} - EG_{import2,y} * (1 + 0.5\%)$
Information flow:	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y ($EG_{facility,y}$) is determined by Electricity supplied by the project activity to the grid in year y ($EG_{export,y}$), Electricity imported from the grid through the main meter to the project ($EG_{import1,y}$) and Electricity imported from the grid through the backup line to the project ($EG_{import2,y}$) as below formula: $EG_{facility,y} = EG_{export,y} - EG_{import,y}$ $EG_{import,y} = EG_{impor1,y} + EG_{import2,y} * (1 + 0.5\%)$ $EG_{facility,y} = EG_{export,y} - EG_{impor1,y} - EG_{import2,y} * (1 + 0.5\%)$
Monitoring method, frequency and equipments:	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y ($EG_{facility,y}$) is determined by Electricity supplied by the project activity to the grid in year y ($EG_{export,y}$), Electricity imported from the grid through the main meter to the project ($EG_{import1,y}$) and Electricity imported from the grid through the backup line to the project ($EG_{import2,y}$) as below formula: $EG_{facility,y} = EG_{export,y} - EG_{import,y}$ $EG_{import,y} = EG_{impor1,y} + EG_{import2,y} * (1 + 0.5\%)$ $EG_{facility,y} = EG_{export,y} - EG_{impor1,y} - EG_{import2,y} * (1 + 0.5\%)$
Calibration:	Not applicable
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:	Not applicable

Data / Parameter:	$EG_{export,y}$
Data unit:	MWh
Description:	Electricity supplied by the project activity to the grid in year y
Purpose of the data:	Calculation of baseline emissions
Parameter value:	583,979.571

<table>
<tr><td>Source of data used:</td><td>Electricity supplied by the project activity to the grid in year y ($EG_{export,y}$) are all sourced from Meter Reading Record (MRRs) /10/ issued by the project owner, Electricity Transaction Notes (ETNs) /11/ issued by power grid company and Statement issued by power grid company /15/ covering monitoring period.</td></tr>
<tr><td>Information flow:</td><td>2 electricity meters (M_{11} as main and M_{12} as backup) installed at the 330kV West Beidaqiao Substation were measured continuously, recorded monthly and archived electronically. At 24:00 hr of last day of each month, the staff from project owner will record main meters' readings and form Meter Reading Records (MRRs). The staff from power grid company will record the meter readings of meters (M_{11}) then transcribes the data into Electricity Transaction Notes (ETNs).
For the data for 03/01/2021 are determined by MRRs and Statement issued by power grid company.
The data for MRRs, ETNs and Statement issued by power grid company have been sent to the CDM consulting company for reporting of GHG emission reduction. The conservative one would be used for ER calculation.</td></tr>
<tr><td>Monitoring method, frequency and equipments:</td><td>The parameter was measured continuously and recorded monthly by 2 electricity meters (M_{11} as main and M_{12} as backup) installed at the 330kV West Beidaqiao Substation during the monitoring period verified by site visit.
See below for the information of 2 electricity meters verified by site visit and checking calibration certificates /12/:
<table>
<tr><th>Meter</th><th>Type</th><th>Serial Number</th><th>Accuracy</th></tr>
<tr><td>M_{11}</td><td>MK6E</td><td>219208569</td><td>0.2s</td></tr>
<tr><td>M_{12}</td><td>MK6E</td><td>219208564</td><td>0.2s</td></tr>
</table>
The type, serial number and accuracy have been confirmed by site visit.</td></tr>
<tr><td>Calibration:</td><td>The calibration information is shown as below /12/:
<table>
<tr><th>Meter</th><th>Calibration date</th><th>Valid until</th></tr>
<tr><td rowspan="3">M_{11}</td><td>23/03/2020</td><td>22/03/2021</td></tr>
<tr><td>23/03/2021</td><td>22/03/2022</td></tr>
<tr><td>23/03/2022</td><td>22/03/2023</td></tr>
<tr><td rowspan="3">M_{12}</td><td>23/03/2020</td><td>22/03/2021</td></tr>
<tr><td>23/03/2021</td><td>22/03/2022</td></tr>
<tr><td>23/03/2022</td><td>22/03/2023</td></tr>
</table>
The calibration was conducted by accredited third parties which is Electric Energy measurement Center Gansu Electric Power Corporation was</td></tr>
</table>

	accredited by Quality and Technical Supervision Bureau of Gansu Province /13/.
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. All data is in line with MRRs, ETNs and Statement issued by power grid company; Information flow was verified by checking MRRs and ETNs, and all information are consistent; Monitoring method was verified by site visit, checking calibration certificates, all monitoring method meets the description in the PD; Calibration was verified by checking calibration certificate and Accreditation certificate, all calibration of monitoring equipment meets the requirement indicated in the PD.

Data / Parameter:	$EG_{import1,y}$
Data unit:	MWh
Description:	Electricity imported from the grid through the main meter to the project
Purpose of the data:	Calculation of baseline emissions
Parameter value:	2,775.400
Source of data used:	Electricity imported from the grid through the main meter to the project ($EG_{import1,y}$) are all sourced from Meter Reading Record (MRRs) /10/ issued by the project owner, Electricity Transaction Notes (ETNs) /11/ issued by power grid company and Statement issued by power grid company /15/ covering monitoring period.
Information flow:	2 electricity meters (M_{11} as main and M_{12} as backup) installed at the 330kV West Beidaqiao Substation were measured continuously, recorded monthly and archived electronically. At 24:00 hr of last day of each month, the staff from project owner will record main meters' readings and form Meter Reading Records (MRRs). The staff from power grid company will record the meter readings of meters (M_{11}) then transcribes the data into Electricity Transaction Notes (ETNs). For the data for 03/01/2021 are determined by MRRs and Statement issued by power grid company.

<table>
<tr><td></td><td>The data for MRRs, ETNs and Statement issued by power grid company have been sent to the CDM consulting company for reporting of GHG emission reduction. The conservative one would be used for ER calculation.</td></tr>
<tr><td>Monitoring method, frequency and equipments:</td><td>The parameter was measured continuously and recorded monthly by 2 electricity meters (M_{11} as main and M_{12} as backup) installed at the 330kV West Beidaqiao Substation during the monitoring period verified by site visit.
See below for the information of 2 electricity meters verified by site visit and checking calibration certificates /12/:
<table>
<tr><th>Meter</th><th>Type</th><th>Serial Number</th><th>Accuracy</th></tr>
<tr><td>M_{11}</td><td>MK6E</td><td>219208569</td><td>0.2s</td></tr>
<tr><td>M_{12}</td><td>MK6E</td><td>219208564</td><td>0.2s</td></tr>
</table>
The type, serial number and accuracy have been confirmed by site visit.</td></tr>
<tr><td>Calibration:</td><td>The calibration information is shown as below /12/:
<table>
<tr><th>Meter</th><th>Calibration date</th><th>Valid until</th></tr>
<tr><td rowspan="3">M_{11}</td><td>23/03/2020</td><td>22/03/2021</td></tr>
<tr><td>23/03/2021</td><td>22/03/2022</td></tr>
<tr><td>23/03/2022</td><td>22/03/2023</td></tr>
<tr><td rowspan="3">M_{12}</td><td>23/03/2020</td><td>22/03/2021</td></tr>
<tr><td>23/03/2021</td><td>22/03/2022</td></tr>
<tr><td>23/03/2022</td><td>22/03/2023</td></tr>
</table>
The calibration was conducted by accredited third parties which is Electric Energy measurement Center Gansu Electric Power Corporation was accredited by Quality and Technical Supervision Bureau of Gansu Province /13/.</td></tr>
<tr><td>QA/QC procedure:</td><td>Data record will be archived for a period of 2 years after the crediting period to which the records pertain.</td></tr>
<tr><td>Means of verification:</td><td>Data of the parameter was verified by checking MRRs, ETNs and Statement issued by power grid company. All data is in line with MRRs, ETNs and Statement issued by power grid company;
Information flow was verified by checking MRRs and ETNs, and all information are consistent;
Monitoring method was verified by site visit, checking calibration certificates, all monitoring method meets the description in the PD;</td></tr>
</table>

	Calibration was verified by checking calibration certificate and Accreditation certificate, all calibration of monitoring equipment meets the requirement indicated in the PD.

Data / Parameter:	$EG_{import2,y}$
Data unit:	MWh
Description:	Electricity imported from the grid through the backup line to the project
Purpose of the data:	Calculation of baseline emissions
Parameter value:	0
Source of data used:	Electricity imported from the grid through the backup line to the project ($EG_{import2,y}$) are all sourced from Meter Reading Record (MRRs) /10/ issued by the project owner, Electricity Transaction Notes (ETNs) /11/ issued by power grid company and Statement issued by power grid company /15/ covering monitoring period.
Information flow:	1 electricity meters (M_{21}) installed at the project site were measured continuously, recorded monthly and archived electronically. At 24:00 hr of last day of each month, the staff from project owner will record meters' readings and form Meter Reading Records (MRRs). The staff from power grid company will record the meter readings of meters (M_{21}) then transcribes the data into Electricity Transaction Notes (ETNs). For the data for 03/01/2021 are determined by MRRs and ETNs of 01/2021 as there are no electricity imported from the grid through backup line in the whole monitoring period. The data for MRRs and ETNs 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 1 electricity meters (M_{21}) installed at the project site during the monitoring period verified by site visit. See below for the information of 1 electricity meter verified by site visit and checking calibration certificates /12/:

Meter	Type	Serial Number	Accuracy
M_{21}	DTS607	1000759046	1.0

The type, serial number and accuracy have been confirmed by site visit.

Calibration:	The calibration information is shown as below /12/:

<table>
<tr><td></td><td>
<table>
<tr><th>Meter</th><th>Calibration date</th><th>Valid until</th></tr>
<tr><td rowspan="3">M21</td><td>23/03/2020</td><td>22/03/2021</td></tr>
<tr><td>23/03/2021</td><td>22/03/2022</td></tr>
<tr><td>23/03/2022</td><td>22/03/2023</td></tr>
</table>
The calibration was conducted by accredited third parties which is Electric Energy measurement Center Gansu Electric Power Corporation was accredited by Quality and Technical Supervision Bureau of Gansu Province /13/.
</td></tr>
<tr><td>QA/QC procedure:</td><td>Data record will be archived for a period of 2 years after the crediting period to which the records pertain.</td></tr>
<tr><td>Means of verification:</td><td>Data of the parameter was verified by checking MRRs and ETNs. All data is in line with MRRs and ETNs;
Information flow was verified by checking MRRs and ETNs, and all information are consistent;
Monitoring method was verified by site visit, checking calibration certificates, all monitoring method meets the description in the PD;
Calibration was verified by checking calibration certificate and Accreditation certificate, all calibration of monitoring equipment meets the requirement indicated in the PD.</td></tr>
</table>

- Parameters available at validation stage:
- Below data has been verified against the data sources and the PDD.

Parameter title	Description	Data	Source
$EF_{grid,CM,y}$	Combined margin CO_2 emission factor for grid connected power generation in year y	0.779325	2019 Baseline Emission Factors for Regional Power Grids in China, issued by China DNA on 29/12/2020 /14/.

- * $EF_{grid,CM,y}$ is not directly available in the registered PD but calculated based on the ex-ante data fixed in the registered PD.
- In conclusion, the assessment team confirmed GHG emission reductions and removals have been quantified correctly in accordance with the project description and applied methodology.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

- The monitoring has been carried out in accordance with VCS PD /3/ dated 30/03/2022.
- 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 20.0 and the monitoring plan. The parameters are complete in this monitoring period.
- By checking the original record, crosscheck with the supporting evidence issued from other party than project owner, checking calibration related documents and interview with project owner through the site visit, the VVB is able to confirm there are no transposition errors between data sets. All data are consistent in all data sets.
- 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 4.4 of the report.

4.6 Non-Permanence Risk Analysis

- Not applicable as a renewable project.

5 VERIFICATION CONCLUSION

- Applus+ Certification has been commissioned by Beijing MD Energy Technology Co., Ltd. to perform the verification of greenhouse gas emission reductions of the project activity "Guazhou Beidaqiao No.1 Wind Farm Project in Gansu Province, China" (VCS Ref. No. 1037).
- The management of Hydrochina Guazhou 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 VCS PD /3/ dated 30/03/2022.
- 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 registered PD;
- the monitoring plan in the registered PD is as per the applied methodology;
- the monitoring complies with the registered 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 "Guazhou Beidaqiao No.1 Wind Farm Project in Gansu Province, China" during the monitoring period 03/01/2021 to 31/08/2022 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:
- Verification period: From 03/01/2021 to 31/08/2022 (divided into 2 vintage periods). Verified GHG emission reductions or removals in the above reporting period:

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
2021	275,358	0	0	275,358
2022	177,580	0	0	177,580
Total	452,938	0	0	452,938

APPENDIX 1: REFERENCE LIST

1. Monitoring report, Version 01, dated 20/09/2022; Version 02, dated 27/09/2022

2. ER calculation spreadsheet

3. Registered CDM PDD, version 3.0, dated 28/09/2011

   Revised CDM PDD, version 4.0, dated 09/10/2012;

   VCS PD, version 02, dated 30/11/2012

   VCS PD, version 3.0, dated 30/03/2022

4. Validation report, No. 1940.V1, version 02, completed by ERM;

   VCS Verification report, completed on 03/12/2012 by BV

   Validation report, No. A+SH_SYST_VCS_VER_RCP_14521, version 01.1, completed on 31/03/2022 by Applus+ Certification

5. VCS standard version 4.3, dated on 22/06/2022

6. Statement issued by project owner

7 Approved methodology ACM0002, version 20.0, dated 28/11/2019

8 CDM Monitoring procedure

9 Nameplate of the equipment

10 Meter Reading Record (MRRs) for Meters

11 Electricity Transaction Notes covering the monitoring period

12 Calibration certificates of meters covering the whole monitoring period issued by Electric Energy measurement Center Gansu Electric Power Corporation

13 Accreditation certificates for Electric Energy measurement Center Gansu Electric Power Corporation issued by Quality and Technical Supervision Bureau of Gansu Province

14 2019 Baseline Emission Factors for Regional Power Grids in China, issued by China DNA on 29/12/2020

15 Statement issued by power grid company

16 Staff roaster of project