GANSU YUMEN SANSHILIJINGZI WIND POWER PROJECT

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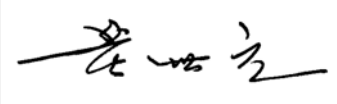
Approved By	Mr. HUANG Shiyuan, Chairman of the Board 
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Summary:

China Classification Society Certification Co., Ltd. (CCSC), commissioned by Longyuan (Beijing) Carbon Asset Management Technology Co., Ltd., has performed the 2nd periodic verification of Gansu Yumen Sanshilijingzi Wind Power Project (hereafter referred to as “the project”) covering the monitoring period from 30-March-2012 to 29-March-2018, on the basis of requirements of VCS Version 4.

The project involves the construction and operation of 49.3 MW wind farm project in Yumen Town, Yumen City, Gansu province, China, which consists of 58 Gamesa58-850KW wind turbines with capacities of 850 kW each. The project is expected to supply 107,872 MWh of electricity per year to the Northwest China Power Grid (NWPG) and displaces the equivalent power generated by the existing power plants and likely capacity additions within the given grid.

The project started operation on 01-June-2008 and is a registered CDM project with reference No. 2193 (https://cdm.unfccc.int/Projects/DB/TUEV-SUED1218655051.51/view). After conduct the project validation under VCS program, the project was allocated with VCS ID 124 (https://registry.verra.org/app/projectDetail/VCS/124).

The objective of the verification is to have an independent review ex-post determination by a VVB (Validation and Verification Body) of the monitored GHG emission reductions that have occurred as a result of the implementation of the project during a defined monitoring period.

CCSC appointed a qualified verification team in accordance with internal procedures to perform the verification. During the verification, 2 Clarification Requests (CLs), no Corrective Action Request (CAR) and no forward action request (FAR) were raised.

There are no restrictions of uncertainty with the verification.

As a result of this verification, the verification team confirms that:

-All operations of the project are implemented and installed as planned and described in the validated PDD;

-The revised monitoring plan is in accordance with the applied approved CDM methodology, i.e., ACM0002 (version 06) "Consolidated baseline methodology for grid-connected electricity generation from renewable sources".

-The implementation of monitoring follows the revised monitoring plan that was validated by SGS and approved by CDM EB on 18-December-2009.

-The monitoring system is in place and functional;

-The installed equipment for measuring parameters required for calculating emission reductions are calibrated appropriately.

Based on the information observed and evaluated, the verification team confirms that the emission reductions are correctly calculated in the MR (version 02 dated 27-July-2022).

In conclusion, it is CCSC's opinion that the project "Gansu Yumen Sanshilijingzi Wind Power Project", as described in the MR (version 02 dated 27-July-2022), meets all relevant requirements for VCS and all relevant host Party criteria. Hence, CCSC is able to certify that the emission reductions from the project during the monitoring period from 30-March-2012 to 29-March-2018 amount to 273,926 tCO_2e and requests issuance of the equivalent VCUs.

CONTENTS

1 INTRODUCTION

1.1 Objective

Longyuan (Beijing) Carbon Asset Management Technology Co., Ltd., has commissioned CCSC to verify and provide a verification statement of the emission reductions of the Gansu Yumen Sanshilijingzi Wind Power Project (hereafter referred to as "the project") for the monitoring period from 30-March-2012 to 29-March-2018, based on requirement of VCS Standard (version 4.3)/11/ as well as criteria to provide for consistent project operations, monitoring and reporting.

CCSC as the validation/verification body (VVB) of the project has been accredited as a DOE by UNFCCC and meets the competence requirements as set out in ISO 14065:2020.

Verification of emission reductions from a project activity is the independent review and ex post determination by VVB of the monitored reductions in GHG emissions during the reported monitoring period. The objectives of verification are to:

a) Ensure that the project has been implemented and operated as per the registered CDM PDD /3/ and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;

b) Ensure that the monitoring report and other supporting documents provided are complete in accordance with the latest applicable version of Registration and Issuance Process /15/ and in accordance with the additional requirements stated by the VERRA;

c) Ensure that actual monitoring systems and procedures comply with the monitoring systems and procedures described in the revised monitoring plan /4/ and the approved methodology ACM0002(Version 06)/12/;

d) Evaluate the data recorded and stored as per the monitoring methodology /12/.

1.2 Scope and Criteria

The verification scope encompasses an independent and objective review and ex-post determination of the monitored reductions in GHG emissions by the CCSC. The verification scope covers the relevant documents (e.g. the registered CDM PDD /3/, the revised monitoring plan /4/, the VCS monitoring report (VCS-MR) /1/, the emission reduction calculation spreadsheet /2/, supporting documents available to the verifier and information collected through performing interviews and during the on-site assessment, VERRA's requirements publicly available, relevant rules, including the host country legislation, etc.) to be independently reviewed, the project geographical locations to be visited on-site, the related project local stakeholders to be interviewed with, and processes that are necessary to acquire objective evidence for the evaluation of the project compliance to the VCS requirements and associated interpretations.

The above verification activities are conducted according to the VERRA's requirements. In doing so, the principles of accuracy and completeness, relevance, reliability and credibility were followed.

The verification is not meant to provide any consulting service towards the PPs. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project.

1.3 Level of Assurance

CCSC has undertaken a reasonable assurance engagement in accordance with VCS Standard (version 4.3) /11/. It requires a reasonable level of assurance in verification that GHG assertions are free of material errors, omissions and misrepresentations. The verification conclusion is based on the registered CDM PDD /3/, VCS-MR /1/, and supporting evidences made available to the verifier and information collected through performing interviews and during the on-site inspection.

1.4 Summary Description of the Project

Gansu Yumen Sanshilijingzi Wind Power Project, developed by Gansu Jieyuan Wind Power Co., Ltd., is located in Yumen Town with 13km to its southeast, Gansu Province of China. The site of the project is trapezium. Its five geographical vertex coordinates are (E:96°54'45", N:40°08'13"), (E:96°58'54", N:40°10'03"), (E:96°58'54", N:40°13'44") , (E:96°58'41", N:40°13'44") ,and (E:96°54'45", N:40°09'00"). Its altitude is about 1560m. The project is to utilize wind resources for electricity generation through the construction of a wind power plant. The project includes 58 Gamesa58-850KW wind turbines with a unit capacity of 850 kW, providing a total capacity of 49.3MW.

The project began to construct on 26-July-2007 and the commissioning of the first wind turbine was in December 2007, and all wind turbines were fully operational on 01-June-2008 which is the start date of the project based on the information in the monitoring report and verification report for the 1st VCS monitoring period. The estimated annual average GHG emission reduction from the project is 107,872 tCO_2e. During the monitoring period from *30-March-2012 to 29-March-2018*, total net electricity supplied to the grid is 292,377.492 MWh. The total verified carbon units (VCUs) achieved in the monitoring period are 273,926 tCO_2e, which has been verified by on-site inspection, and checking the related documentations, interview with the project implementer.

The project generates electricity by wind to the grid and replacing equivalent electricity generated by fossil fuel fired power plants connected into Northwest China Power Grid (NWPG) thus the project generates GHG emission reductions and produces financial, social and environmental benefits. The project has resulted in the local sustainable development as described in Section 4.1 of this Verification Report. The project is a registered CDM project with reference No. 2193. After conduct the project validation under VCS program, the project was allocated with VCS ID 124 and the emission reductions have been certified as verified carbon units (VCUs) for this monitoring period.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The overall verification, from Document Review to Verification Report & Opinion, was conducted using CCSC internal procedures.

CCSC verified the project against the requirements set in VCS/11//13//14//15/, and other relevant VCS requirements.

The following sections outline each step in more detail.

2.2 Document Review

A desk review of the registered CDM PDD /3/, the registered validation report /5/, the revised monitoring plan /4/, the previous verification reports /7//8//9//10//28/, the applied monitoring methodology /12/, the VCS monitoring report (VCS-MR) /1/and supporting documents was conducted by the verification team. The aim of the desk review of the documentation was to verify the completeness of the data and the information presented, to carry out the compliance check of the VCS-MR /1/ with respect to the revised monitoring plan /4/ and the applied methodology /12/. Particular attention was given to the quality of the metering

equipment including calibration requirements /18//19/, the monitored data and its evidence, and the emission reduction calculation. The evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions was also conducted.

Appendix B of this report contains a complete list of all documents and proofs reviewed by the verification team.

2.3 Interviews

On 11-July-2022, CCSC performed an on-site assessment at the physical site of the project.

The verification team verified that the actual implementation of the project was as described in the registered CDM PDD /3/, the revised monitoring plan /4/ and VCS-MR /1/. This included the review of the project operation based on the evidence of on-site observation and presented documents.

During the on-site assessment, the verification team has interviewed with key personnel from the project owner (the project proponent) and local stakeholders.

The assessment content and topics/the persons interviewed at the on-site assessment were provided in the below table.

Date: 11-July-2022	
Interview topics	**Interviewed Organizations and persons**
--The status of VCS project implementation. -- Any changes of the VCS project. -- The project on-site inspection -- The evidences of construction status and operation of key equipment, parameters monitoring and data processing activities, monitor equipment and calibration. -- Monitoring data. -- Quality Management; organizational structure, responsibilities and competencies; Internal QA/QC Management procedures and document control. -- Compliance with National Laws and Regulations.	Gansu Jieyuan Wind Power Co., Ltd. Li Xuewen, Department Director Yu Jianjun, Security Officer Su Zhenglong, Operator Wang Liyan, Operator

Date: 11-July-2022	
Interview topics	**Interviewed Organizations and persons**
-- The impact of the project activity. -- The complaint by local stakeholders. -- The stakeholder consultation during the operation of the project activity.	**Jiuquan City Ecology and Environment Protection Bureau** Yu Lijun **Local residents** Hu Xiaolong Zhang Caixia
-- Preparation of Monitoring Report. -- Compliance of the monitoring plan with the monitoring methodology. -- Compliance of monitoring with the monitoring plan -- Assessment of data and calculation of GHG emission reductions.	Gansu Jieyuan Wind Power Co., Ltd. Li Xuewen, Department Director Yu Jianjun, Security Officer Su Zhenglong, Operator Wang Liyan, Operator

2.4 Site Inspections

The on-site assessment involved following activities,

An assessment of the implementation and operation of the project as per the registered CDM PDD /3/;

A review of information flows for generating, aggregating and reporting the monitoring parameters;

Interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the approved revised monitoring plan /4/;

A cross-check between information provided in the monitoring report /1/ and data from other sources such as operational records or similar data sources;

A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the registered CDM PDD /3/ and the selected methodology /12/;

A review of calculations and assumptions made in determining the GHG data and emission reductions;

An identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

2.5 Resolution of Findings

During the verification of a project activity, to identify issues that need to be further elaborated upon, researched or added to in order to confirm that the project activity meets the VERRA's requirements and can achieve credible emission reductions, the verification team will issue a Corrective Action Request (CAR), a Clarification Request (CL) or a Forward Action Request (FAR) depending on different situations.

The objective of this phase of the verification is to resolve issues related to the monitoring, implementation and operations of the registered project activity that could impair the capacity of the registered project activity to achieve emission reductions or influence the monitoring and reporting of emission reductions prior to CCSC's positive conclusion on the GHG emission reduction calculation.

Findings established during the verification can either be seen as a non-fulfilment of criteria ensuring the proper implementation of a project or where a risk to deliver high quality emission reductions is identified.

A Corrective Action Request (CAR) will be raised if one of the following occurs:

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 registered 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.

A Clarification Request (CL) will be raised if information is insufficient or not clear enough to determine whether the applicable VCS requirements have been met.

A Forward Action Request (FAR) will be raised, for actions if the monitoring and reporting require attention and/or adjustment for the next verification period.

There are 2 CLs that have been raised during the current verification.

2.5.1 Forward Action Requests

No Forward Action Requests were raised during the current verification.

2.6 Eligibility for Validation Activities

The VVB of "China Classification Society Certification Co., Ltd." commissioned by Longyuan (Beijing) Carbon Asset Management Technology Co., Ltd. is one of eligible VVBs listed on the VERRA website (https://verra.org/project/vcs-program/validation-verification/), and it holds the accreditation for validation/verification for the sectoral scope: "1. Energy (renewable/non-renewable)", to which the project belongs. Therefore, CCSC is eligible for the validation/verification of the project.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project has not been registered or is seeking registration under any other GHG programs which has been checked during the validation process.

The project started operation on 01-June-2008 and has been registered as a CDM project under the UNFCCC with Ref. 2193. After conduct the project validation under VCS program, the project was allocated with VCS ID 124.

The project period under VCS started on 01-June-2008 and expired on 31-May-2018.

The project has sought the registration with the VCS Program and validation was conducted by VVB and has been successfully registered in VCS Program and via checking the VCS dedicated website of the project.

The verification team also checked the Gold Standard Registry and the Climate Action Reserve to determine if the project is producing other environmental credits. It was confirmed that the project is not listed on these registries and therefore there is no other environmental credit (for example renewable energy certificate) which has or will be produced by or obtained for the project.

Via on-site interview with the project implementer and checking the UNFCCC website of the project (Ref. 2193). It is verified that the implementation of the project is consistent with the description in the CDM PDD /3/ and the monitoring system is fully functional to generate

Verified Carbon Units (VCUs) without any double counting for this monitoring period from 30-March-2012 to 29-March-2018.

3.2 Methodology Deviations

No deviation from the methodology is needed to be submitted.

3.3 Project Description Deviations

3.3.1 Crediting period

Through the site visit interview with project owner, it is confirmed that the wind turbines of the project started operation on 01-June-2008 which is the project start date according to the requirement of VCS. A deviation was identified for the crediting period of the Project. Considering the availability of monitoring data on site, the VCS crediting period was determined as from 01-June-2008 to 07-January-2009. The same has been confirmed through checking the previous VCS Verification Report. The project is registered as VCS project under VCS 2007 and completed validation before 19-March-2020. As per VCS requirement, it remains eligible to apply the crediting period requirements under VCS Version 3 which shall be a maximum of ten years and may be renewed at most twice. Therefore, the first renewable crediting period of the Project under VCS is updated to 01-June-2008 ~ 31-May-2018, which lasts for 10 years. As a CDM project with a 7*3 renewable project crediting period, the VCS issuance is not eligible for beyond the end of those 21 years.

According to the paragraph 3.8.8 and 3.8.9 in VCS Standard (Version 4.3), the project shall be validated against the (current) scope of the VCS. Such validation report shall be issued after the end of the (previous) project crediting period but within two years after the end of the (previous) project crediting period. Where projects fail to renew the project crediting period, the project crediting period shall end and the project shall be ineligible for further crediting.

The project did not renew the project crediting period within the requested period, so the project crediting period is from 01-June-2008 to 31-May-2018.

3.3.2 Monitoring plan

(1) Registered CDM PDD

There is no backup line for importing electricity from the grid in the registered CDM PDD. Three meters with accuracy of 0.2s are installed for the measurement of net electricity delivered to the grid. The key meter will be owned, operated and maintained by the Power Grid, and the check meters will be owned, operated and maintained by the project owner

company. When the key meter is out of order, the readings from the check meters will be used for reference. All meters measure bi-directionally.

For ensuring the meters accuracy, yearly meter check and site yearly calibration should be implemented according to the national power industry regulations, standards

(2) Revised Monitoring Plan

In the revised monitoring plan, the electricity imported from the grid by the project through the main line and through the backup line. The total electricity delivered to the grid is metered by the project owner at the project site. For the project, the main meter with accuracy of 0.2s is installed at the project site for the direct measurement of total electricity delivered to the grid. The main meter is owned, operated and maintained by the project owner. The meter is bidirectional and it can also monitor the electricity imported from the grid through the main line. There is a backup meter installed for backup usage. When the main meter is out of order, the readings from the backup meter will be used for reference. In addition, there is a backup line through which electricity may be imported from grid for emergency. There is a meter with the accuracy of 0.5s installed in the backup line. The electricity imported through the backup line can be monitored by the backup line meter which is owned, operated and controlled by the local electric power bureau. The meter readings of the main meter and backup line meter are used for calculation of emission reduction of the project.

The net electricity delivered to the grid is the total electricity delivered to the grid by the project minus the electricity imported from grid by the project through the main line and the backup line.

For ensuring the meters' accuracy, the meters installed at the project site are calibrated yearly and backup line meter is calibrated as per industry standard by qualified third party.

$BE_y=EG_y \times EF_y$

$EG_y=EG_{ex}-E_{im\_main\ line}-E_{im\_backup\ line}$

Where:

EG_{ex} is the total electricity delivered to the grid by the project (MWh);

$E_{im\_main\ line}$ is the electricity imported from the grid by the project through main line (MWh);

$E_{im\_backup\ line}$ is the electricity imported from the grid by the project through backup line (MWh).

The emission factor adopted is 0.9369 tCO_2/MWh. It is the same as the one used in the PDD for the GSC and it is also validated in the validation report in which it was stated that the emission factor 0.9369 tCO_2/MWh may be accepted as it is more conservative.

The revised monitoring plan has been approved by CDM EB on 18-December-2009.

During document review, the verification team identified the deviations for crediting period and the revised monitoring plan based on relevant documentation and the previous verification reports. But in the Monitoring Report version 01, the deviations for crediting period and the revised monitoring plan were not described clearly, so CL-1 was raised. In the updated MR, the deviation for crediting period has been describe clearly and the deviation for revised monitoring plan has been added. Thus, CL-1 was closed successfully.

Conclusion

According to the information collected during on-site visit and the relevant evidence provided by project owner, CCSC can confirm that these deviations do not impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario, and the project remains in compliance with the applied methodology, the deviations have been appropriately described and justified in the monitoring report and will be described in all subsequent monitoring reports, and the project remains in compliance with the VCS Program rules

3.4 Grouped Project

The project is not a grouped project; hence this clause is not applicable.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

4.1.1 Project Implementation in accordance with the CDM PDD

Through the onsite visit, interviewing the project developer and reviewing the project operation, CCSC confirmed that the project was implemented to generate electricity by wind to the grid consists of 58 sets of Gamesa58-850KW in Yumen Town, Yumen City, Gansu province, China, which is consistent with that in registered CDM PDD /3/. The project achieved 273,926 tCO_2e emission reduction by replacing electricity generated by fossil fuel fired power plants connected into NWPG during this monitoring period.

The project can reduce GHG emissions by generate electricity by wind to the grid and replacing equivalent electricity generated by fossil fuel fired power plants connected into NWPG. During this monitoring period, the project has generated the total net electricity supply of 292,377.492 MWh. The total verified carbon units (VCUs) achieved in the

monitoring period are 273,926 tCO_2e, which has been verified by on-site inspection, and checking the related documentations, interview with the project implementer.

Via checking the MR/1/ and by site inspection, CCSC verified that there are no changes on the key equipment and technology since the validation of the project.

The project began to construct 26-July-2007. The wind turbines started fully operation on 01-June-2008.

This verification covers the period from 30-March-2012 to 29-March-2018.

As part of the site visit the verification team was able to confirm that the project implementation is in accordance with the project description contained in the registered CDM PDD/3/. There are no any material discrepancies between project implementation and the project description.

Through the on-site visit, the power generating technology, installed capacity, technical specifications of wind turbine and generator, and power delivering systems indicated in the registered CDM PDD are in place and the project has been operated as per the registered CDM PDD /3/. The verification team confirms the project has been implemented as per the registered CDM PDD /3/. During this monitoring period, the monitoring of this project activity was in compliance with the registered CDM PDD. The major technical specifications of the project have been verified during the site visit and listed in the table below and the verification team confirmed they are consistent with the registered CDM PDD /3/.

Table 4-1 Technical Characteristics of Wind Turbines

Manufacturer	Gamesa Wind(Tianjin) Co.,Ltd.
Diameter	58m
Speed of rotor	14.6-30.8rpm
Cut-in wind speed	3m/s
Cut-out wind speed	21m/s
Swept area	2124m^2
Hub heights	55m
Rotor Orientation	Upwind
Lifetime	20y

The project been registered as a CDM project under the UNFCCC with Ref. 2193, which is verified by checking the dedicated UNFCCC website (https://cdm.unfccc.int/Projects/DB/TUEV-SUED1218655051.51/view). After conduct the project validation under VCS program, the project was allocated with VCS ID 124 (https://registry.verra.org/app/projectDetail/VCS/124). The first monitoring period under VCS program is from 01-June-2008 to 07-January-2009. The emission reductions of 48,436 tCO_2e achieved during the monitoring period have been issued as VCUs under VCS program. The first monitoring period under CDM program is from 08-January-2009 to 29-December-2009, with 77,674 tCO_2e of CERs successfully issued. During the second CDM monitoring period from 30-December-2009 to 28-June-2010, 46,961 tCO_2e of CERs were successfully issued. The third CDM monitoring period is from 29-June-2010 to 28-June-2011, and 74,627 tCO_2e of CERs were issued successfully. The fourth CDM monitoring period is from 29-June-2011 to 29-March-2012, and 29,272 tCO_2e of CERs were issued successfully. These issued credits have been verified.

Monitoring Period		GHG Emission Reduction (tCO_2e)	Credit	Program
Start Date	End Date			
01-June-2008	07-January-2009	48,436	VCU	VCS
08-January-2009	29-December-2009	77,674	CER	CDM
30-December-2009	28-June-2010	46,961	CER	CDM
29-June-2010	28-June-2011	74,627	CER	CDM
29-June-2011	29-March-2012	29,272	CER	CDM

By checking UNFCCC website (https://cdm.unfccc.int/Projects/DB/TUEV-SUED1218655051.51/view), there are no CDM issuance during this monitoring period from 30-March-2012 to 29-March-2018. Furthermore, CCSC checked public information from the REC Mechanism database of China, IREC Mechanism database, JI database, Chinese Emission Trading System, Gold Standard Registry and interviewed with project owner during site visit, it is confirmed that except CDM and VCS scheme, the project has not been participated or been rejected under any other GHG programs since validation or previous verification.

Besides, based on VVB's local expertise, as per "Notice on Strengthening Enterprise Greenhouse Gas Emission Report Management" /20/ issued by Ministry of Ecology and Environment of P.R.China, China has a national emissions trading scheme only cover the

high-emission industries, including thermal power generation, petrochemical, chemical, building materials, iron and steel, non-ferrous, paper, aviation and other key emission industries that emitted at least 26,000 tons of CO_2e/year （https://www.mee.gov.cn/xxgk2018/xxgk/xxgk02/202101/t20210105_816131.html）. By checking “List of key emissions in the national carbon emissions transaction quota management in 2019-2020” （https://www.mee.gov.cn/xxgk2018/xxgk/xxgk03/202012/t20201230_815546.html） /21/ issued by Ministry of Ecology and Environment of P.R.China, the project owner is not included in the mandatory emission control scheme and thus no emission cap was enforced for the project activity. Hence, it is confirmed that the emission reductions will not be double counted.

Therefore, the verification team confirmed that the project only applies CERs and VCUs under CDM and VCS, and no rejection from CDM and VCS occurs, there are no other forms of environmental credits applied or issued for the project activity, the emission reduction resulted from the project during this monitoring period would only apply for VCUs.

By checking China’s National Plan on Implementation of the 2030 Agenda for Sustainable Development/16/ and 17 SDGs defined by UNDP, and interviewing with stakeholders during site visit, CCSC confirmed that the project would contribute to sustainable development in as below:

- SDG 7: Providing clean and renewable energy source and displacing the power generation of fossil fuel power plants, reducing pollution emissions caused by coal burning significantly, thus mitigating the air pollution and its adverse impacts on human health, promoting sustainable economic development in local area. During this monitoring period, the renewable energy supplied to NWPG was 292,377.492 MWh. By checking UNFCCC website (https://cdm.unfccc.int/Projects/DB/TUEV-SUED1218655051.51/view) and VERRA website (https://registry.verra.org/app/projectDetail/VCS/124), it is confirmed that the cumulative Contributions Over Project Lifetime was 292,377.492 MWh renewable energy supplied to NWPG.

- SDG 8: Providing direct and indirect employment opportunities during construction and operation period, which promotes sustained, inclusive and sustainable economic growth, full and productive employment and decent work for local residents. By checking staff roaster /23/ provided by project proponent, it is confirmed that since operation of the project activity, 4 long term working opportunities are provided (2 for men and 2 for women).

- SDG 13: Reducing greenhouse gas emissions compared to a business-as-usual scenario. During this monitoring period, the emission reductions achieved were 273,926 tCO_2e. By checking UNFCCC website (https://cdm.unfccc.int/Projects/DB/TUEV-SUED1218655051.51/view) and VERRA website

(https://registry.verra.org/app/projectDetail/VCS/124), it is confirmed that the cumulative Contributions Over Project Lifetime were 273,926 tCO_2e achieved emission reductions.

As per Instructions for Completing the Monitoring Report (Version 4.1), the evidence of the project's SD contributions shall be provided as appendices to this report based on Instructions for Completing the Monitoring Report (Version 4.1). In the Monitoring report version 01, the evidence for SDG 8 was missed and it was also not provided to VVB as a separate document, so CL-2 was raised. The evidence for SDG 8 that a statement from PP about number of employee and salary during the operation period has been provided to VVB as a separate supporting document because of project proponent's confidentiality requirement. The statement from PP about the number of employee and salary during the operation period is consistent with the information in MR, so CL-2 was closed.

In conclusion, according to the information collected during on-site visit and the relevant evidence provided by project owner, CCSC can confirm that:

a) The monitoring period from *30-March-2012 to 29-March-2018* is in compliance with the crediting period and continued with previous monitoring period, which complies with the requirement of the VCS Standard Version 4.3 /11/;

b) No project design change occurred during this monitoring period and the project was implemented in accordance the registered CDM PDD /3/;

c) The monitoring plan is implemented completely and monitoring system (i.e., process and schedule for obtaining, recording, compiling and analyzing the monitored data and parameters) is appropriate.

d) The project has contributed to sustainable development during this monitoring period and over project lifetime;

e) The GHG emission reductions or removals generated by the project have not included in an emissions trading program or any other mechanism that includes GHG allowance trading;

f) The project has not sought or received another form of GHG-related environmental credit, including renewable energy certificates, during this monitoring period. None of the credits will be claimed in the same period;

g) The GHG emission reductions generated by the project during this monitoring period (*30-March-2012 to 29-March-2018*) will be only claimed under VCS program as VCUs for the project to avoid double counting.

4.1.2 Compliance of monitoring with the monitoring plan

The verification team has assessed the implementation of monitoring by the project owner against the revised monitoring plan. A short summary on the verification of every parameter listed in the revised monitoring plan and used for emission reduction calculation is provided below:

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in the monitoring plan of PD):	EG_{ex} Total electricity delivered to the grid by the project (MWh)
Measuring frequency:	Continuously measured
Reporting frequency:	Daily recorded and monthly aggregated
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Type of monitoring equipment:	Electricity meter
Is accuracy of the monitoring equipment as stated in the PD? If the PD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	Accuracy level of monitoring meters is as described in the revised monitoring plan /4/. For details see Table 4-2.
Calibration frequency /interval:	Annually as per relevant sectoral standards in China
Is the calibration interval in line with the monitoring plan of the PD? If the PD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	Yes.
Company performing the calibration:	Yes. See Table 4-2
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	Yes.

Is(are) calibration(s) valid for the whole reporting period?	Yes. For details see Table 4-2
If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data has been cross-checked with Electricity Sales and Purchase Receipts in line with the revised monitoring plan /4/.
How were the values in the monitoring report verified?	The verification details have been reported in Section 4.4 of this report.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	Not applicable.

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in the monitoring plan of PD):	$E_{im\ main\ line}$ Electricity imported from the grid by the project through the main line (MWh)
Measuring frequency:	Continuously measured
Reporting frequency:	Daily recorded and monthly aggregated
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Type of monitoring equipment:	Electricity meter

Is accuracy of the monitoring equipment as stated in the PD? If the PD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	Accuracy level of monitoring meters is as described in the revised monitoring plan /4/. For details see Table 4-2.
Calibration frequency /interval:	Annually as per relevant sectoral standards in China
Is the calibration interval in line with the monitoring plan of the PD? If the PD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	Yes.
Company performing the calibration:	Yes. See Table 4-2
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	Yes.
Is(are) calibration(s) valid for the whole reporting period?	Yes. For details see Table 4-2
If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data has been cross-checked with Electricity Sales and Purchase Receipts in line with the revised monitoring plan /4/.
How were the values in the monitoring report verified?	The verification details have been reported in Section 4.4 of this report.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	Not applicable.

Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in the monitoring plan of PD):	$E_{im\ backup\ line}$ Electricity imported from the grid by the project through the backup line (MWh)
Measuring frequency:	Continuously measured
Reporting frequency:	Daily recorded and monthly aggregated
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Type of monitoring equipment:	Electricity meter
Is accuracy of the monitoring equipment as stated in the PD? If the PD does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	Accuracy level of monitoring meters is as described in the revised monitoring plan /4/. For details see Table 4-2.
Calibration frequency /interval:	Annually as per relevant sectoral standards in China
Is the calibration interval in line with the monitoring plan of the PD? If the PD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	Yes.
Company performing the calibration:	Yes. See Table 4-2
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	Yes.
Is(are) calibration(s) valid for the whole reporting period?	Yes. For details see Table 4-2
If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data has been cross-checked with Electricity Sales and Purchase Receipts in line with the revised monitoring plan /4/.

How were the values in the monitoring report verified?	The verification details have been reported in Section 4.4 of this report.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	Not applicable.

According to the applied methodology ACM0002 (version 06) "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", the net electricity supplied to the grid by the project EG_y, which is used for the calculation of baseline emission. Net electricity supplied by the project to the grid is the difference between the electricity exported and the electricity imported (through main line and backup line).

Furthermore, the verification team has verified that the accuracy of measure of the monitoring equipment was set according to the requirements and all calibration procedures were carried out according to the monitoring plan and manufacturer specifications. The calibration information of the monitoring meters in this monitoring period has been listed in Table 4-2 below.

The monitoring equipment has been installed in the project in line with the revised monitoring plan /4/. The metering system includes main meter M1, backup meter M1' and backup line meter M2. The main meter with accuracy of 0.2s is installed at the project site for the direct measurement of total electricity delivered to the grid. There is a backup meter installed for backup usage. When the main meter is out of order, the readings from the backup meter will be used for reference. In addition, there is a meter with the accuracy of 0.5s installed in the backup line. During this monitoring period, the meters worked well.

In summary, the verification team is able to verify that the accuracy the monitoring equipment was set according to the revised monitoring plan /4/ and relevant sectoral standard of China.

Table 4-2 Verified calibration information of monitoring meters

Meter	Type	Accuracy	Serial number	Frequency	Calibration date	Valid until	Calibration Entity
Main meter	SL7000	0.2S	36088335	Annually	09-Dec-2011 02-Dec-2012 28-Nov-2013 22-Nov-2014 18-Nov-2015 12-Nov-2016 08-Nov-2017	08-Dec-2012 01-Dec-2013 27-Nov-2014 21-Nov-2015 17-Nov-2016 11-Nov-2017 07-Nov-2018	Electric Energy Measurement Centre of State Grid Gansu Electric Power Corporation
Backup meter	SL7000	0.2S	53043097	Annually	09-Dec-2011 02-Dec-2012 28-Nov-2013 22-Nov-2014 18-Nov-2015 12-Nov-2016 08-Nov-2017	08-Dec-2012 01-Dec-2013 27-Nov-2014 21-Nov-2015 17-Nov-2016 11-Nov-2017 07-Nov-2018	Electric Energy Measurement Centre of State Grid Gansu Electric Power Corporation
Backup line meter	DTSD341	0.5S	03395785	Once per four years	25-Mar-2009	24-Mar-2013	Electric Energy Metrological Center of Yumen Power Bureau

The verification team confirmed that there is no proposed or actual change to the revised monitoring plan /4/ during this monitoring period. All required equipment 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 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 CDM PDD, it is confirmed that the project is a clean renewable energy project and did not result in any negative environmental or social economic impacts during this monitoring period. 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

As per the VCS requirements, it is necessary to invite the relevant stakeholders, prior of the validation process. The verification team checked the relevance of the dates during the validation on-site inspection.

Local stakeholder consultation was conducted through holding a stakeholder meeting on 01-July-2007 and distributing questionnaires to local stakeholders by the project owner. Totally 9 stakeholder representatives participated the meeting, respectively from the local Government, local Environmental Protection Bureau, local Development and Reform Bureau, local Agricultural Power Bureau, and Chijinbao Village in Yumen City. Every stakeholder representative expressed their comments on the proposed project. No opposing comment was received. Moreover, a stakeholder survey was conducted through distributing and collecting responses of questionnaires. The questionnaire was reasonably designed to assess the project impacts on the local environment and social economic development. In total 30 questionnaires were returned with a 100% response rate. The respondents are representative in terms of age, occupation and education, so their attitude towards the impacts of the project can therefore be seen as a comprehensive reflection of the attitudes of the residents possibly affected by the project.

The survey showed that the local people supported and agreed with the construction of the project. The survey shows that the proposed project receives strong support from local people. 100% of the informants support and welcome the proposed project, no negative comments were received. 100% of the informants know about the proposed project. 100% of the informants live or work far away from the proposed project. 97% of the informants believe that the proposed project will have positive impacts on economy and social in local region. 93% of the informants believe that the implementation of the proposed project will improve the life quality of local residents, by providing more employment opportunities for local residents, increasing incomes of the local residents, etc.

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 on-site assessment and check registered CDM PDD.

4.3 AFOLU-Specific Safeguards

The project is not AFOLU project, and thus this section is not applicable for the project.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

4.4.1 Parameters and information flow

The parameters required by the monitoring plan and the way CCSC has verified the information flow (from data generation, aggregation, to recording, calculation and reporting for these parameters including the values) in the monitoring report are described below:

$BE_y=EG_y \times EF_y$

$EG_y=EG_{ex}-E_{im\_main\ line}-E_{im\_backup\ line}$

Where:

EG_{ex} is the total electricity delivered to the grid by the project (MWh);

$E_{im\_main\ line}$ is the electricity imported from the grid by the project through main line (MWh);

$E_{im\_backup\ line}$ is the electricity imported from the grid by the project through backup line (MWh).

According to the VCS-MR /1/ of the project and the revised monitoring plan /4/, The electricity exported to the grid and imported from the grid are both continuously monitored through the meter. The monthly monitoring records of the project have been verified during onsite assessment.

The verification team has cross-checked electricity figures in the emission reductions calculation spreadsheet /2/ with the Electricity Sales and Purchase Receipts/25/ of the project from the grid company. By the onsite assessment, the values in emission reductions calculation spreadsheet /2/ is in line with the Electricity Sales and Purchase Receipts/25/ during this period.

Parameter determined ex-ante:

EF_y: the combined emission factor of the project grid system.

According to the registered CDM PDD and validation report /3//5/, the $EF_{grid,CM,y}$ is ex-ante determined as 0.9369 tCO_2/MWh for NWPG over the first crediting period. The emission factors used in this monitoring report have been verified against the registered CDM PDD and validation report /3//5/, and the verification team found them to be consistent.

4.4.2 Assessment Data and Calculation

It was verified that the project is a renewable energy project. Therefore, the project emission of the project is zero under ACM0002 (version 06) /12/ (PE_y=0).

The project is a new renewable energy project. Therefore, no leakage needs to be considered for the project according to the methodology /12/. (LE_y=0).

Since the project emission and the leakage emission has been justified as zero under ACM0002 (version 06) /12/, the calculation of the emission reductions simply involves the calculation of the baseline emissions.

$ER_y = BE_y - 0 - 0 = EG_y \times EF_y$

$EG_y = EG_{ex} - E_{im\_main\ line} - E_{im\_backup\ line}$

Where:

ER_y: Emission reductions in year y (tCO_2/yr)

BE_y: Baseline emissions in year y (tCO_2e)

EG_y: Net electricity delivered to the grid by the project in the year y (MWh)

EF_y: Baseline emission factor: the combined emission factor of the project grid system. (tCO_2e/MWh)

Following the approach described in section 4.4.1 above, electricity figures were verified as below:

Table 4-3 The verified electricity exports of the project (Unit: MWh)

Period	Electricity exported to the grid (EG_{ex}) (MWh)

	Values from meter readings (main meter M1)	Values from Sales receipts	Conservative Value
	A	B	C=Min (A, B)
30/03/2012-28/04/2012	4,610.760	4,610.760	4,610.760
29/04/2012-29/05/2012	3,121.866	3,121.866	3,121.866
30/05/2012-28/06/2012	4,203.870	4,203.870	4,203.870
29/06/2012-29/07/2012	4,773.846	4,773.846	4,773.846
30/07/2012-29/08/2012	3,073.884	3,073.884	3,073.884
30/08/2012-28/09/2012	4,601.058	4,601.058	4,601.058
29/09/2012-29/10/2012	5,029.318	5,029.318	5,029.318
30/10/2012-28/11/2012	6,348.474	6,348.474	6,348.474
29/11/2012-29/12/2012	8,677.944	8,677.944	8,677.944
30/12/2012-31/12/2012	848.628	848.628	848.628
Subtotal -2012	**45,289.648**	**45,289.648**	**45,289.648**
01/01/2013-29/01/2013	4,023.756	4,023.756	4,023.756
30/01/2013-26/02/2013	4,815.426	4,815.426	4,815.426
27/02/2013-29/03/2013	6,067.578	6,067.578	6,067.578
30/03/2013-28/04/2013	3,405.798	3,405.798	3,405.798
29/04/2013-29/05/2013	4,291.254	4,291.254	4,291.254
30/05/2013-28/06/2013	4,685.076	4,685.076	4,685.076
29/06/2013-29/07/2013	3,451.866	3,451.866	3,451.866
30/07/2013-29/08/2013	4,151.400	4,151.400	4,151.400
30/08/2013-28/09/2013	5,163.840	5,163.840	5,163.840
29/09/2013-29/10/2013	5,337.684	5,337.684	5,337.684
30/10/2013-28/11/2013	6,561.720	6,561.720	6,561.720
29/11/2013-29/12/2013	4,129.752	4,129.752	4,129.752
30/12/2013-31/12/2013	985.18	985.18	985.182
Subtotal -2013	**57,070.332**	**57,070.332**	**57,070.332**
01/01/2014-29/01/2014	4,877.730	4,877.730	4,877.730
30/01/2014-26/02/2014	4,106.454	4,106.454	4,106.454
27/02/2014-29/03/2014	3,572.250	3,572.250	3,572.250
30/03/2014-28/04/2014	4,179.978	4,179.978	4,179.978
29/04/2014-29/05/2014	5,883.636	5,883.636	5,883.636

30/05/2014-28/06/2014	5,233.140	5,233.140	5,233.140
29/06/2014-29/07/2014	3,254.790	3,254.790	3,254.790
30/07/2014-29/08/2014	5,388.768	5,388.768	5,388.768
30/08/2014-28/09/2014	2,728.638	2,728.638	2,728.638
29/09/2014-29/10/2014	3,436.686	3,436.686	3,436.686
30/10/2014-28/11/2014	2,114.970	2,114.970	2,114.970
29/11/2014-29/12/2014	5,598.450	5,598.450	5,598.450
30/12/2014-31/12/2014	458.77	458.77	458.766
Subtotal -2014	**50,834.256**	**50,834.256**	**50,834.256**
01/01/2015-29/01/2015	3,328.446	3,328.446	3,328.446
30/01/2015-26/02/2015	3,820.542	3,820.542	3,820.542
27/02/2015-29/03/2015	4,473.810	4,473.810	4,473.810
30/03/2015-28/04/2015	3,764.772	3,764.772	3,764.772
29/04/2015-29/05/2015	3,276.108	3,276.108	3,276.108
30/05/2015-28/06/2015	5,041.344	5,041.344	5,041.344
29/06/2015-29/07/2015	2,934.624	2,934.624	2,934.624
30/07/2015-29/08/2015	3,859.548	3,859.548	3,859.548
30/08/2015-28/09/2015	2,537.106	2,537.106	2,537.106
29/09/2015-29/10/2015	2,774.970	2,774.970	2,774.970
30/10/2015-28/11/2015	2,050.554	2,050.554	2,050.554
29/11/2015-29/12/2015	2,728.110	2,728.110	2,728.110
30/12/2015-31/12/2015	165.660	165.660	165.660
Subtotal -2015	**40,755.594**	**40,755.594**	**40,755.594**
01/01/2016-29/01/2016	3,876.972	3,876.972	3,876.972
30/01/2016-27/02/2016	3,145.824	3,145.824	3,145.824
28/02/2016-29/03/2016	3,648.810	3,648.810	3,648.810
30/03/2016-28/04/2016	3,791.502	3,791.502	3,791.502
29/04/2016-29/05/2016	4,111.536	4,111.536	4,111.536
30/05/2016-28/06/2016	4,182.024	4,182.024	4,182.024
29/06/2016-29/07/2016	2,649.306	2,649.306	2,649.306
30/07/2016-29/08/2016	2,476.518	2,476.518	2,476.518
30/08/2016-28/09/2016	2,148.498	2,148.498	2,148.498
29/09/2016-29/10/2016	3,065.040	3,065.040	3,065.040

30/10/2016-28/11/2016	2,253.900	2,253.900	2,253.900
29/11/2016-29/12/2016	3,933.548	3,933.548	3,933.548
30/12/2016-31/12/2016	102.696	102.696	102.696
Subtotal -2016	**39,386.174**	**39,386.174**	**39,386.174**
01/01/2017-29/01/2017	3,589.608	3,589.608	3,589.608
30/01/2017-26/02/2017	1,788.204	1,788.204	1,788.204
27/02/2017-29/03/2017	3,393.984	3,393.984	3,393.984
30/03/2017-28/04/2017	3,393.984	3,393.984	3,393.984
29/04/2017-29/05/2017	5,006.166	5,006.166	5,006.166
30/05/2017-28/06/2017	3,313.926	3,313.926	3,313.926
29/06/2017-29/07/2017	2,612.412	2,612.412	2,612.412
30/07/2017-29/08/2017	3,900.006	3,900.006	3,900.006
30/08/2017-28/09/2017	3,443.484	3,443.484	3,443.484
29/09/2017-29/10/2017	4,859.316	4,859.316	4,859.316
30/10/2017-28/11/2017	4,248.420	4,248.420	4,248.420
29/11/2017-29/12/2017	4,946.832	4,946.832	4,946.832
30/12/2017-31/12/2017	360.426	360.426	360.426
Subtotal -2017	**44,856.768**	**44,856.768**	**44,856.768**
01/01/2018-29/01/2018	6,893.304	6,893.304	6,893.304
30/01/2018-26/02/2018	5,449.554	5,449.554	5,449.554
27/02/2018-29/03/2018	6,855.684	6,855.684	6,855.684
Subtotal -2018	19,198.542	19,198.542	19,198.542
Total	297,391.314	297,391.314	297,391.314

Table 4-4 The verified electricity imports of the project through main line (Unit: MWh)

Period	**Electricity imported from the grid ($E_{im\_main\ line}$) (MWh)**		
	Values from meter readings (main meter M1)	**Values from Sales receipts**	**Conservative Value**
	D	**E**	**F=Max (D,E)**
30/03/2012-20/04/2012	51.348	51.348	51.348
21/04/2012-20/05/2012	53.658	53.658	53.658
21/05/2012-20/06/2012	89.760	89.760	89.760

21/06/2012-20/07/2012	56.760	56.760	56.760
21/07/2012-20/08/2012	62.700	62.700	62.700
21/08/2012-20/09/2012	60.984	60.984	60.984
21/09/2012-20/10/2012	74.778	74.778	74.778
21/10/2012-20/11/2012	83.754	83.754	83.754
21/11/2012-20/12/2012	81.642	81.642	81.642
21/12/2012-31/12/2012	19.206	19.206	19.206
Subtotal -2012	**634.590**	**634.590**	**634.590**
01/01/2013-20/01/2013	136.554	136.554	136.554
21/01/2013-20/02/2013	67.980	67.980	67.980
21/02/2013-20/03/2013	77.220	77.220	77.220
21/03/2013-20/04/2013	64.680	64.680	64.680
21/04/2013-20/05/2013	126.060	126.060	126.060
21/05/2013-20/06/2013	21.120	21.120	21.120
21/06/2013-20/07/2013	76.560	76.560	76.560
21/07/2013-20/08/2013	62.700	62.700	62.700
21/08/2013-20/09/2013	71.940	71.940	71.940
21/09/2013-20/10/2013	58.740	58.740	58.740
21/10/2013-20/11/2013	69.300	69.300	69.300
21/11/2013-20/12/2013	108.240	108.240	108.240
21/12/2013-31/12/2013	18.546	18.546	18.546
Subtotal -2013	**959.640**	**959.640**	**959.640**
01/01/2014-20/01/2014	30.954	30.954	30.954
21/01/2014-20/02/2014	120.120	120.120	120.120
21/02/2014-20/03/2014	128.040	128.040	128.040
21/03/2014-20/04/2014	99.000	99.000	99.000
21/04/2014-20/05/2014	45.540	45.540	45.540
21/05/2014-20/06/2014	54.120	54.120	54.120
21/06/2014-20/07/2014	40.920	40.920	40.920
21/07/2014-20/08/2014	45.540	45.540	45.540
21/08/2014-20/09/2014	44.880	44.880	44.880
21/09/2014-20/10/2014	78.540	78.540	78.540
21/10/2014-20/11/2014	79.860	79.860	79.860

21/11/2014-20/12/2014	112.200	112.200	112.200
21/12/2014-31/12/2014	7.986	7.986	7.986
Subtotal -2014	**887.700**	**887.700**	**887.700**
01/01/2015-20/01/2015	64.614	64.614	64.614
21/01/2015-20/02/2015	99.000	99.000	99.000
21/02/2015-20/03/2015	52.800	52.800	52.800
21/03/2015-20/04/2015	52.800	52.800	52.800
21/04/2015-20/05/2015	59.400	59.400	59.400
21/05/2015-20/06/2015	19.800	19.800	19.800
21/06/2015-20/07/2015	34.980	34.980	34.980
21/07/2015-20/08/2015	26.400	26.400	26.400
21/08/2015-20/09/2015	59.400	59.400	59.400
21/09/2015-20/10/2015	59.400	59.400	59.400
21/10/2015-20/11/2015	105.600	105.600	105.600
21/11/2015-20/12/2015	99.000	99.000	99.000
21/12/2015-31/12/2015	11.682	11.682	11.682
Subtotal -2015	**744.876**	**744.876**	**744.876**
01/01/2016-20/01/2016	64.416	64.416	64.416
21/01/2016-20/02/2016	99.000	99.000	99.000
21/02/2016-20/03/2016	39.600	39.600	39.600
21/03/2016-20/04/2016	52.800	52.800	52.800
21/04/2016-20/05/2016	59.400	59.400	59.400
21/05/2016-20/06/2016	59.400	59.400	59.400
21/06/2016-20/07/2016	33.000	33.000	33.000
21/07/2016-20/08/2016	72.600	72.600	72.600
21/08/2016-20/09/2016	66.000	66.000	66.000
21/09/2016-20/10/2016	59.400	59.400	59.400
21/10/2016-20/11/2016	85.800	85.800	85.800
21/11/2016-20/12/2016	92.400	92.400	92.400
21/12/2016-31/12/2016	26.070	26.070	26.070
Subtotal -2016	**809.886**	**809.886**	**809.886**
01/01/2017-20/01/2017	105.930	105.930	105.930
21/01/2017-20/02/2017	79.200	79.200	79.200

21/02/2017-20/03/2017	66.000	66.000	66.000
21/03/2017-20/04/2017	66.000	66.000	66.000
21/04/2017-20/05/2017	46.200	46.200	46.200
21/05/2017-20/06/2017	39.600	39.600	39.600
21/06/2017-20/07/2017	66.000	66.000	66.000
21/07/2017-20/08/2017	52.800	52.800	52.800
21/08/2017-20/09/2017	46.200	46.200	46.200
21/09/2017-20/10/2017	52.800	52.800	52.800
21/10/2017-20/11/2017	92.400	92.400	92.400
21/11/2017-20/12/2017	66.000	66.000	66.000
21/12/2017-31/12/2017	8.184	8.184	8.184
Subtotal -2017	**787.314**	**787.314**	**787.314**
01/01/2018-20/01/2018	38.016	38.016	38.016
21/01/2018-20/02/2018	46.200	46.200	46.200
21/02/2018-20/03/2018	66.000	66.000	66.000
21/03/2018-29/03/2018	39.600	39.600	39.600
Subtotal -2018	189.816	189.816	189.816
Total	5,013.822	5,013.822	5,013.822

Table 4-5 The verified electricity imports of the project through backup line (Unit: MWh)

Period	**Electricity imported from the grid ($E_{im\_backup\ line}$) (MWh)**		
	Values from meter readings (backup line meter M2)	**Values from Sales receipts**	**Conservative Value**
	G	**H**	**I=Max (G,H)**
30/03/2012-14/04/2012	0.000	0.000	0.000
15/04/2012-14/05/2012	0.000	0.000	0.000
15/05/2012-14/06/2012	0.000	0.000	0.000
15/06/2012-14/07/2012	0.000	0.000	0.000
15/07/2012-14/08/2012	0.000	0.000	0.000
15/08/2012-14/09/2012	0.000	0.000	0.000
15/09/2012-14/10/2012	0.000	0.000	0.000

15/10/2012-14/11/2012	0.000	0.000	0.000
15/11/2012-14/12/2012	0.000	0.000	0.000
15/12/2012-31/12/2012	0.000	0.000	0.000
Subtotal -2012	0.000	0.000	0.000
Total	0.000	0.000	0.000

The backup line of the project has not been used since 01-January-2013.

Therefore, the net electricity supply (EGy) of the project is calculated as:

Table 4-6 The verified EGy of the project

Monitoring Period		**Electricity exported to the grid (MWh)** EG_{ex}	**Electricity imported from the grid through main line(MWh)** $E_{im\_main\ line}$	**Electricity imported from the grid through backup line(MWh)** $E_{im\_backup\ line}$	**Net electricity supplied to the grid EG_y (MWh)** EG_y
From	**To**	**C**	**F**	**I**	**J=C-F-I**
30/03/2012	31/12/2012	45,289.648	634.590	0.000	44,655.058
01/01/2013	31/12/2013	57,070.332	959.640	/	56,110.692
01/01/2014	31/12/2014	50,834.256	887.700	/	49,946.556
01/01/2015	31/12/2015	40,755.594	744.876	/	40,010.718
01/01/2016	31/12/2016	39,386.174	809.886	/	38,576.288
01/01/2017	31/12/2017	44,856.768	787.314	/	44,069.454
01/01/2018	29/03/2018	19,198.542	189.816	/	19,008.726
Total		297,391.314	5,013.822	0.000	292,377.492

The verification team has confirmed the emission reductions of the project have been conservatively calculated in line with above mentioned formulas in the emission reduction calculation spreadsheet /2/. The verification team has checked and confirmed the emission reduction is to be correctly accounted. The total emission reduction is as follow:

Table 4-7 Verified Emission Reductions during this monitoring period

Period			**EG_y (MWh)**	**EF_y (tCO_2/ MWh)**	**BE_y (tCO_2e)**	**PE_y (tCO_2 e)**	**LE_y (tCO_2e)**	**ER_y (tCO_2e)**
Year	From	To	J	K	L=K*J	M	N	O=L-M-N
2012	30/03/2012	31/12/2012	44,655.058	0.9369	41,837	0	0	41,837
2013	01/01/2013	31/12/2013	56,110.692	0.9369	52,570	0	0	52,570
2014	01/01/2014	31/12/2014	49,946.556	0.9369	46,794	0	0	46,794
2015	01/01/2015	31/12/2015	40,010.718	0.9369	37,486	0	0	37,486
2016	01/01/2016	31/12/2016	38,576.288	0.9369	36,142	0	0	36,142
2017	01/01/2017	31/12/2017	44,069.454	0.9369	41,288	0	0	41,288
2018	01/01/2018	29/03/2018	19,008.726	0.9369	17,809	0	0	17,809
Total			292,377.492	/	**273,926**	0	0	**273,926**

4.4.3 Comparison of ERs

Based on the above assessment, CCSC can conclude that the emission reduction during the monitoring period from 30-March-2012 to 29-March-2018 have been quantified correctly in accordance with the project description and applied methodology /12/, and the emission reduction during this monitoring period is verified as 273,926 tCO_2e. Compared with the estimated emission reductions under the same days of 2191 from 30-March-2012 to 29-March-2018 in the registered CDM-PDD /3/, 639,628 (equals to 106,556*2191/365) tCO_2e, the verified emission reduction is 57.17% less than the estimated value. CCSC considers the value of verified emission reduction is conservative.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

The evidences used to determine the GHG emission reductions are assessed as follows:

Assessment of the Evidence Quality

Parameters monitored	EG_y
Monitoring method	Onsite measurement of main meter M1
Measuring/Reading /Recording frequency	The parameters are continuously measured and monthly recorded.
Calibration frequency/ interval	See Table 4-2 Verified calibration information of monitoring meter. Through on-site observation and checking the calibration records of meters, the team confirmed that all the monitoring meters meet the rated accuracy level and the calibration frequency fulfills the requirement as described in the monitoring plan.
Calibration cover the monitoring period	The verification team confirms that the validity period of all conducted calibrations covers this monitoring period from 30-March-2012 to 29-March-2018.
Data reported	Through cross checking with the Electricity Sales and Purchase Receipts /25/, the monitored data can be confirmed as acceptable to calculate emission reductions.

In conclusion, all necessary documentation is collected, referenced and is easily accessible in hard-copy or electronic format. The data pertaining to the monitored parameters are maintained in the identified internal records and consistent with the values stated in the Monitoring Report /1/ and ER calculation spreadsheet /2/. Monitoring data have been cross-checked with the Electricity Sales and Purchase Receipts /25/.

4.6 Non-Permanence Risk Analysis

The project is not AFOLU project, and thus non-permanence risk analysis is not applicable for the project.

5 VERIFICATION CONCLUSION

CCSC has carried out the verification of the project "Gansu Yumen Sanshilijingzi Wind Power Project". The verification was performed based on the requirements set by VCS Version 4 /11//13//14//15/, as well as criteria given to provide for consistent project operations, monitoring and reporting. This verification covers the period from 30-March-2012 to 29-March-2018 inclusive.

In the course of the verification 2 Clarification Requests (CLs), no Corrective Action Request (CAR) and no forward request (FAR) was raised. The verification is based on the VCS-MR /1/, the CDM PDD /3/, ER calculation spread sheet /2/ and supporting documents available to CCSC.

As the result of the verification, CCSC confirms that:

- The project has been implemented and operated as per the registered CDM PDD /3/ and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- The VCS-MR /1/ and other supporting documents provided are complete in accordance with the latest applicable version of the VCS Registration & Issuance Process /15/ and in accordance with the additional requirements stated by the VERRA;
- The actual monitoring systems and procedures comply with the monitoring systems and procedures described in the revised monitoring plan and the approved methodology i.e. ACM0002 (version 06) /12/;
- The GHG emission reductions are calculated without material misstatements and in a conservative and appropriate manner.

Based on the evidence and information that are considered necessary to guarantee that GHG emission reductions are appropriately calculated, CCSC confirms the following statement:

Verification period: from 30-March-2012 to 29-March-2018

Verified GHG emission reductions and removals in the above verification 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)
30-Mar-2012~31-Dec-2012	41,837	0	0	41,837
01-Jan-2013~31-Dec-2013	52,570	0	0	52,570
01-Jan-2014~31-Dec-2014	46,794	0	0	46,794
01-Jan-2015~31-Dec-2015	37,486	0	0	37,486
01-Jan-2016~31-Dec-2016	36,142	0	0	36,142
01-Jan-2017~31-Dec-2017	41,288	0	0	41,288
01-Jan-2018~29-Mar-2018	17,809	0	0	17,809
Total	**273,926**			**273,926**

APPENDIX A: ABBREVIATIONS

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction(s)
CL	Clarification request
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CCSC	China Classification Society Certification Co., Ltd. (CCSC)
DOE	Designated Operational Entity
DNA	Designated National Authority
EF	Emission Factor
EIA	Environmental Impact Assessment
ER	Emission Reduction
ETN	Electricity Transaction Note
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
MR	Monitoring Report
NWPG	Northwest China Power Grid
PD	Project Description
PDD	Project Design Document
PP	Project Proponent
UNFCCC	United Nations Framework Convention on Climate Change
VVB	Validation/Verification Body
VCS	Verified Carbon Standard
VCU	Verified Carbon Unit

APPENDIX B: REFERENCE

Documents provided by the project Participant and relevant background documents have been reviewed or referenced for the periodic verification conclusions.

Ref no.	Reference Document
/1/	Longyuan (Beijing) Carbon Asset Management Technology Co., Ltd., VCS Monitoring report version 01 dated 05/07/2022, version 02 dated 27/07/2022
/2/	Longyuan (Beijing) Carbon Asset Management Technology Co., Ltd., ER calculation spreadsheet version 01 dated 05/07/2022, version 02 dated 27/07/2022
/3/	EB website: The registered CDM PDD version 3.0 dated 29/04/2008
/4/	EB website: The revised monitoring plan dated 05/01/2010
/5/	TÜV SÜD Industrie Service GmbH: Registered Validation Report No. 1159769 dated 12/08/2008
/6/	SGS: validation report of revised monitoring plan, dated 05/01/2010
/7/	SGS: Verification Report Report, dated 13/05/2010, MP (08/01/2009 to 29/12/2009) (1st CDM monitoring period)
/8/	SGS: Verification Report Report, dated 20/11/2010, MP (30/12/2009 to 28/06/2010) (2nd CDM monitoring period)
/9/	SGS: Verification Report Report, dated 07/09/2011, MP (29/06/2010 to 28/06/2011) (3rd CDM monitoring period)
/10/	SGS: Verification Report Report, dated 07/09/2012, MP (29/06/2011 to 29/03/2012) (4th CDM monitoring period)
/11/	VERRA, VCS Standard, version 4.3
/12/	CDM Executive Board, ACM0002 (Version 06)
/13/	VERRA, Monitoring Report Template Form version 4.1
/14/	VERRA, VCS Program Guide version 4.2
/15/	VERRA, Registration & Issuance Process version 4.2

/16/	China's National Plan on Implementation of the 2030 Agenda for Sustainable Development
/17/	Chinese DNA, 2007 China Regional Grid Baseline Emission Factors
/18/	China National Economic Trading Commission, Technical Administrative Code of Electric Energy Metering, DL/T 448-2016
/19/	The State Bureau of Quality and Technical Supervision, Technical Norm of the Calibration of AC Watthour Meters at place of installation, JJG 1055-1997
/20/	"Notice on Strengthening Enterprise Greenhouse Gas Emission Report Management" issued by Ministry of Ecology and Environment of P.R.China
/21/	"List of key emissions in the national carbon emissions transaction quota management in 2019-2020" issued by Ministry of Ecology and Environment of P.R.China
/22/	Qualification certificate of the meter calibration entity (Electric Energy Measurement Centre of State Grid Gansu Electric Power Corporation), issued by Gansu quality supervision and Administration Bureau
/23/	Statement from PP about number of employee and salary during the operation period of the project activity
/24/	Staff training records
/25/	Electricity Sales and Purchase Receipts issued by the grid company for this monitoring period
/26/	Questionnaire survey
/27/	Calibration reports of the meters
/28/	SGS: Verification Report Report, dated 26/06/2009, MP (01/06/2008 to 07/01/2009) (1st VCS monitoring period)

APPENDIX C: RESOLUTION OF CLARIFICATION REQUESTS AND CORRECTIVE ACTION REQUESTS AND FORWARD ACTION REQUESTS

Table 1. CL from this verification

CL ID	CL-1	**Section no.**	3.2.2	**Date:** 26/07/2022
Description of CL				
As per Instructions for Completing the Monitoring Report (Version 4.1), please clarify the deviations for crediting period and the revised monitoring plan.				
Project proponent response				**Date:** 27/07/2022
In the updated MR, the deviation for crediting period has been describe clearly and the deviation for revised monitoring plan has been added.				
Documentation provided by project proponent				
Updated MR				
VVB assessment				**Date:** 29/07/2022
In the updated MR, the deviations for crediting period and the revised monitoring plan have been updated which is in line with Instructions for Completing the Monitoring Report (Version 4.1). Therefore, CL-1 was closed.				

CL ID	CL-2	**Section no.**	APPENDIX1	**Date:** 26/07/2022
Description of CL				
As per Instructions for Completing the Monitoring Report (Version 4.1), the evidence for SDG 8 shall be provided.				
Project proponent response				**Date:** 27/07/2022

The evidence for SDG 8 that a statement from PP about number of employee and salary during the operation period has been provided to VVB as a separate supporting document because of project proponent's confidentiality requirement.
Documentation provided by project proponent
Evidence for SDG 8

VVB assessment	**Date:** 29/07/2022
The statement from PP about number of employee and salary during the operation period is consistent with the information in MR, so CL-2 was closed.	

Table 2. CAR from this verification

CAR ID	N/A	**Section no.**	N/A	**Date:** N/A
Description of CAR				
N/A				
Project proponent response				**Date:** N/A
N/A				
Documentation provided by project proponent				
N/A				
VVB assessment				**Date:** N/A
N/A				

Table 3. FAR from this verification

FAR ID	N/A	**Section No.**	N/A	**Date:** N/A
Description of FAR				
N/A				
Project proponent response				**Date:** N/A
N/A				

Documentation provided by project proponent	
N/A	
VVB assessment	**Date:** N/A
N/A	