# XINJIANG JIMUNAI CGN PHASE I WIND FARM PROJECT

Document Prepared By China Classification Society Certification Company

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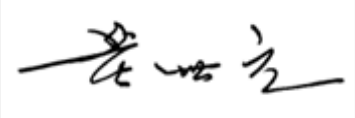
| Approved By | Mr. HUANG Shiyuan, General Manager<br>  |
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Summary:

China Classification Society Certification Company (CCSC), commissioned by Climate Bridge (Shanghai) Ltd., has performed the fifth periodic verification of Xinjiang Jimunai CGN Phase I Wind Farm Project (hereafter referred to as “the project”) covering the monitoring period from 01/01/2017-31/12/2020, on the basis of requirements of Verified Carbon Standard (VCS) Version 4.0.

The project involves the construction and operation of 49.5 MW wind farm project in Jimunai County, Xinjiang Uygur Autonomous Region, P.R. China., consist of 33 wind turbines with capacities of 1,500 kW each. The project is expected to supply 117,315 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 has been registered as a VCS project (VCS Project ID: 1183) under Verified Carbon Standard (VCS) Version 3.4 using approved CDM methodology ACM0002 (version 12.1.0) “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”, with the first renewable crediting period from 19/03/2011 to 18/03/2021. The VCS monitoring report of this monitoring period has been reviewed against the relevant criteria and

decisions by the VERRA Board, including the approved baseline and monitoring methodology ACM0002 (version 12.1.0).

The verification process includes three phases:

1) Desk review of documents;

2) On-site visit and follow-up interviews;

3) Issuance of the final verification report and opinion.

CCSC appointed a qualified verification team in accordance with internal procedures to perform the verification. During the verification, 2 Corrective Action Requests (CAR), 1 Clarification Request (CL) and no forward action request (FAR) were raised.

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 Project Description;

-The registered monitoring plan is in accordance with the applied approved CDM methodology, i.e., ACM0002 (version 12.1.0) " Consolidated baseline methodology for grid-connected electricity generation from renewable sources".

-The implementation of monitoring follows the registered monitoring plan.

-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 2.0 dated 18/03/2021).

In conclusion, it is CCSC's opinion that the project activity "Xinjiang Jimunai CGN Phase I Wind Farm Project", as described in the Monitoring Report (version 2.0 dated 18/03/2021), 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 01/01/2017 to 31/12/2020 amount to 340,692 tCO2e and requests issuance of the equivalent VCUs.

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# 1 INTRODUCTION

## 1.1 Objective

Climate Bridge (Shanghai) Ltd., has commissioned CCSC to verify and provide a verification statement of the emission reductions of the Xinjiang Jimunai CGN Phase I Wind Farm Project (hereafter referred to as “the project”), which is located in Jimunai County, Xinjiang Uygur Autonomous Region, P.R. China for the monitoring period from 01/01/2017 to 31/12/2020 following the 4$^{th}$ monitoring period from 01/01/2013 to 31/12/2016, based on requirement of VCS Standard (version 4.0)/13/ 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 activity has been implemented and operated as per the VCS project description (VCS-PD) /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 /17/ 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 monitoring plan and the approved methodology /14/;

Evaluate the data recorded and stored as per the monitoring methodology /14/.

## 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 VCS-PD /3/, the monitoring plan, the VCS monitoring report (VCS-MR) /1//6/, the emission reduction calculation spreadsheet /2//7/, 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 4.0) /13/. 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 VCS-PD /3/, VCS-MR /6/, 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

The project developed by Xinjiang Jimunai CGN Wind Power Co., Ltd. is located at the southwest of Jimunai County, Xinjiang Uygur Autonomous Region, P. R. China. The geographical coordinates of the project are 86.0054°- 86.8443°east longitude and 47.5454°-47.5796° north latitude. The project is to utilize wind resources for electricity generation through the construction of a wind farm with the installation of 33 wind turbines with capacities of 1,500 kW each, which amount to a total installed capacity of 49.5 MW. The project started construction on 25/07/2010, and the first wind turbine was put into operation on 19/03/2011, and all wind turbines were put into operation on 23/03/2011. The expected operation period of the project is 20 years.

The electricity generated from the project will be supplied to the Northwest China Power Grid (NWPG), where geographic and system boundaries can be clearly identified and information on the grid and calculation of baseline emissions is published and public available according to China DNA's Guidance on China Grid Baseline Emission Factors dated on 20th December 2010/19/.

The NWPG is dominated by thermal power plants as per the China Electrical Power Yearbook 2005~2009 /18/. By exporting expected annual electricity of 117,315 MWh, the project achieves greenhouse gas (GHG) emissions reductions by displacing equivalent electricity from fossil fuel-based power plants connected to the grid.

The project has been registered as CDM project (Ref. 5289) on 28/10/2011, and renewing 2nd crediting period (28/10/2018 - 27/10/2025) on 02/05/2019, and CERs of 431,578$tCO_2e$ have been issued for the 3 monitoring periods from 28/10/2011 to 31/12/2016.

According to the VERRA website, the project has been registered as a VCS project (VCS Project ID: 1183) on 27/12/2013 and VCUs of 61,417$tCO_2e$ have been issued for the 1st monitoring period from 19/03/2011 to 27/10/2011. The current verification has been finalized for the monitoring period from 01/01/2017 to 31/12/2020.

During the monitoring period from 01/01/2017 to 31/12/2020, the total GHG emission reductions generated by the project are 340,692 $tCO_2e$.

# 2 VERIFICATION PROCESS

## 2.1 Method and Criteria

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

CCSC verified the project against the requirements set in VCS/13//15//16//17/, and other relevant VCS requirements.

The following sections outline each step in more detail.

## 2.2 Document Review

A desk review of the registered VCS-PD /3/, the registered validation report /5/, the previous verification report /21//22/, the applied monitoring methodology /14/, the VCS monitoring report (VCS-MR) /6/ 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 /6/ with respect to the monitoring plan and the applied methodology /14/. Particular attention was given to the quality of the metering equipment including calibration requirements/20/, 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 16/03/2021, 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 VCS-PD /3/ and VCS-MR /6/. 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 participant) and the consultancy.

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

| **Date: 16/03/2021** | |
|---|---|
| **Interview topics** | **Interviewed Organizations and persons** |
| --The status of VCS project implementation.<br>-- Any changes of the VCS project.<br>-- The project on-site inspection<br>-- The evidences of construction status and operation of key equipment, parameters monitoring and data processing activities, monitor equipment and calibration.<br>-- Monitoring data.<br>-- Quality Management; organizational structure, responsibilities and competencies; Internal QA/QC Management procedures and document control.<br>-- Compliance with National Laws and Regulations. | Xinjiang Jimunai CGN Wind Power Co., Ltd.<br>He Fulin, Plant manager<br>Su Yong, Electrical engineering<br>Yan Chaohui, Electrical engineering |
| -- Preparation of Monitoring Report.<br>-- Compliance of the monitoring plan with the monitoring methodology<br>-- Compliance of monitoring with the monitoring plan<br>-- Assessment of data and calculation of GHG emission reductions | Climate Bridge (Shanghai) Ltd.,<br>Leng Yu, Project manager |

## 2.4 Site Inspections

The on-site assessment involved following activities,

An assessment of the implementation and operation of the project activity as per the VCS-PD /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 monitoring plan;

A cross-check between information provided in the monitoring report /6/ 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 VCS-PD /3/ and the selected methodology /14/;

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 CARs and 1 CL that have been raised during the current verification.

## 2.6 Forward Action Requests

No Forward Action Requests were raised during the current verification.

## 2.7 Eligibility for Validation Activities

The VVB of “China Classification Society Certification Company” commissioned by the project participant 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 activity belongs. Therefore, CCSC is eligible for the validation/verification of the project activity.

# 3 VALIDATION FINDINGS

## 3.1 Participation under Other GHG Programs

The project was validated by TÜV Rheinland Japan Ltd. on 14/09/2011 under CDM scheme for registration /5/ and the renewal of 2nd crediting period was validated by China Building Material Test & Certification Group Co., Ltd. on 05/01/2019 under CDM scheme. CCSC only performed verification activities on the proposed monitoring period for the project according to the VCS Program Guide.

## 3.2 Methodology Deviations

No deviation from the methodology is needed to be submitted.

## 3.3 Project Description Deviations

In the registered PD, the crediting period is described as from 19/03/2011 to 27/10/2011. A deviation is requested for the crediting period in the registered PD. The project is registered under VCS Standard Version 3.4 and completed validation before 19/03/2020. thus, it remains eligible to apply the crediting period requirements under VCS Standard Version 3.4 which shall be a maximum of ten years and may be renewed at most twice, so the first renewable crediting period of the project should be deviated from 19/03/2011- 27/10/2011 to 19/03/2011-18/03/2021. Therefore, the project crediting period is ten years, twice renewable for a total of 30 years. However, as the project is also registered as a CDM project with a seven year twice renewable project crediting period and furthermore, the project has the lifetime of 20 years, it is not eligible for VCU issuance beyond 18/03/2031.

According to the information collected during on-site visit and the relevant evidence provided by project owner, CCSC can confirm that the deviation does 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 deviation has 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

Not applicable as the project activity is not grouped project.

# 4 VERIFICATION FINDINGS

## 4.1 Project Implementation Status

### 4.1.1 Project Implementation in accordance with the VCS PD

The project has been registered as VCS project activity with the Project ID 1183 (https://registry.verra.org/app/projectDetail/VCS/1183). The crediting period is proposed for 10 years (with two renewals) starting on 19/03/2011. This is the 1st monitoring period from 19/03/2011 to 18/03/2021, which is compliance with previous monitoring period and the crediting period. This monitoring period is verified in accordance with the VCS Standard Version 4.0 /13/. The project started construction on 25/07/2010, and the first wind turbine was put into operation on 19/03/2011, and all wind turbines were put into operation on 23/03/2011, and the start date of the project is 19/03/2011.

The project is to utilize wind resources for electricity generation through the construction of a wind farm with the installation of 33 wind turbines with capacities of 1,500 kW each, which amount to a total installed capacity of 49.5 MW in Jimunai County, Xinjiang Uygur Autonomous Region, P.R. China. The electricity generated from the project is sold to Xinjiang Uygur Power Grid, an integral part of the Northwest China Power Grid (NWPG).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 VCS PD are in place and the project has been operated as per the VCS PD/3/. The verification team confirms the project has been implemented as per the registered VCS PD/3/.

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 PD /3/.

Table 4-1 The main technical parameters of wind turbine and generator

| **Item** | Unit | Index |
|---|---|---|
| **Wind Turbine** | | |
| **Model** | - | 77/1500 |
| **Rated capacity** | kW | 1500 |
| **Number of blades** | - | 3 |
| **Rotor diameter** | m | 77 |
| **Swept area** | m2 | 4656 |
| **Rotor speed** | m/s | 36.28/69.75 |
| **Cut-in speed** | m/s | 3.0 |

| | | |
|---|---|---|
| **Rated wind speed** | m/s | 11.5 |
| **Cut-out speed** | m/s | 22 |
| **Height of hub** | m | 65 |
| **Generator** | | |
| **Rated voltage** | V | 620 |
| **Rated power** | kW | 1580 |
| **Rated current** | A | 660 |
| **Lifetime** | years | 20 |

According to the registered PD /3/ and the emission reductions calculation spreadsheet /7/, the total net electricity export to the Northwest China Power Grid (NWPG) is 371,125.480 MWh during this monitoring period (01/01/2017~31/12/2020, and total 1,461 days), which is less than the estimated value of 469,581MWh (117,315MWh*1,461/365=469,581MWh). All the data and the calculated process in the emission reductions calculation spreadsheet /7/ have been checked by the verification team and it is correctly and in accordance with both the monthly reading records/8/, the sale receipts/9/ and Grid company's statement/10/. Therefore, the verification team confirmed there are no changes of the project from the validated PD /3/ that cause increase of emission reductions.

According to the information collected during on-site visit and the relevant evidence provided by project owner, CCSC can confirm that no project design change occurred during this monitoring period and the project was implemented in accordance the registered VCS-PD /3/.

### 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 registered monitoring plan. A short summary on the verification of every parameter listed in the monitoring plan and used for emission reduction calculation is provided below:

| Monitoring Parameter Requirement | Assessment/ Observation by the VVB |
|---|---|
| Data / Parameter:<br>(as in the monitoring plan of PD): | $EG_{export,y}$<br>Electricity supplied to the grid by the project in year y. |

| | |
|---|---|
| Measuring frequency: | Continuously measurement |
| Reporting frequency: | Monthly recorded |
| Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No) | Yes |
| Type of monitoring equipment: | Bidirectional 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? | Yes. Accuracy level of monitoring meters is 0.2S as described in the registered PD /3/.<br><br>For details see Table 4-2. |
| Calibration frequency /interval: | Periodically 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: | 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 the receipts of electricity sales in line with the registered VCS-PD /3/. |
| 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:<br>(as in monitoring plan of PD): | $EG_{import,y}$<br>Electricity purchased from the grid by the project in year y. |
| Measuring frequency: | Continuously measurement |
| Reporting frequency: | Monthly recorded |
| Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No) | Yes |
| Type of monitoring equipment: | Bidirectional 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? | Yes. Accuracy level of monitoring meters is 0.2S as described in the registered PD /3/.<br>For details see Table 4-2. |
| Calibration frequency /interval: | Periodically 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: | 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 the receipts of electricity sales in line with the registered VCS-PD /3/. |
| 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:<br>(as in monitoring plan of PD): | $EG_{im\text{-}backup,y}$<br>Electricity imported from the grid by the project through the backup power line in the year y. |
| Measuring frequency: | Continuously measurement |
| Reporting frequency: | Monthly recorded |
| Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No) | Yes |
| Type of monitoring equipment: | Bidirectional meter |
| Is accuracy of the monitoring equipment as stated in the PD? If the PD does not specify the accuracy of the monitoring equipment, | Yes. Accuracy level of monitoring meter is 0.5S as described in the registered PD /3/.<br>For details see Table 4-2. |

| | |
|---|---|
| does the monitoring equipment represent good monitoring practise? | |
| Calibration frequency /interval: | The Calibration doesn't cover the monitoring period. Based on the statement issued by the grid company and the information collected during on-site visit, CCSC confirms that during this monitoring period from 01/01/2017-31/12/2020, no electricity was imported via the 35KV backup line, and the meter calibration arrangement is controlled by the grid company. Thus, it is reasonable that the calibration of the meter M3 is not available since there is no electricity via the 35KV backup line, and it doesn't impact the project's implementation or emission reduction |
| 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? | |
| Company performing the calibration: | |
| Did calibration confirm proper functioning of monitoring equipment? (Yes / No): | |
| Is(are) calibration(s) valid for the whole reporting period? | |
| If applicable, has the reported data been cross-checked with other available data? | Not applicable. More details have been reported in Section 4.4 of this report. |
| 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 12.1.0) “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”, the net electricity supplied to the grid by the project $EG_{Facility,y}$ is calculated as $EG_{Facility,y}= EG_{export,y}-EG_{import,y}-EG_{im-backup,y}$, which is used for the calculation of baseline emission.

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/12/ 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 registered monitoring plan. The main meter (M1, SN:4200415011003274797) and backup meter (M2, SN: 4200415011003274798) which are equipped at the high-pressure site (110kV) of the 110kV on-site substation are replaced by new M1 (SN:800000287822) and M2 (SN: 800000287824) on 07/06/2017. And the qualification certificate of the meter calibration entity/24/ was issued by Xinjiang Autonomous Region Bureau of quality and technical supervision on 01/04/2013 and 10/04/2018, and is valid until 09/04/2023.

In summary, the verification team is able to verify that the accuracy the monitoring equipment was set according to the registered monitoring plan/3/ 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 |
|---|---|---|---|---|---|---|---|
| M1 | DTSD718 | 0.2S | 420041501100327 4797 | Annually | 15/10/2016 | 14/10/2017 | State Grid Xinjiang Electric Power Co., Ltd. Electric Power Research Institute |
| | | | 800000287822 | Annually | 07/06/2017<br>01/06/2018<br>30/05/2019<br>30/05/2020 | 06/06/2018<br>31/05/2019<br>29/05/2020<br>29/05/2021 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| M2 | DTSD718 | 0.2S | 420041501100327479 8 | Annually | 15/10/2016 | 14/10/2017 | |
| | | | 800000287824 | Annually | 07/06/2017<br>01/06/2018<br>30/05/2019<br>30/05/2020 | 06/06/2018<br>31/05/2019<br>29/05/2020<br>29/05/2021 | |
| M3 | DSZ188 | 0.5S | 010000022176 76 | Annually | The Calibration doesn't cover the monitoring period. Based on the statement issued by the grid company and the information collected during on-site visit, CCSC confirmed that during this monitoring period from 01/01/2017-31/12/2020, no electricity was imported via the 35KV backup line, and the meter calibration arrangement is controlled by the grid company. Thus, it is reasonable that the calibration of the meter M3 is not available since there is no electricity via the 35KV backup line, and it doesn't impact the project's implementation or emission reduction | | |

## 4.2 Safeguards

### 4.2.1 No Net Harm

By checking the EIA summary and conclusion provided in the registered CDM PDD and registered VCS PD, it is confirmed that wind power is green power and the impact caused by wind power on the surrounding ecosystem and residents, wastewater, solid waste 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

As per the registered CDM PDD (version 3, 19/08/2011), the local stakeholder's consultation was done through distributing a one-page questionnaire, which was designed to be easily filled in. 40 copies of questionnaire were distributed, and 38 pieces of reply were received. Among the interviewees, there were 35 farmers, 2 government official and1student. 15 of them have educational level of middle school or below middle school, 22 of high school and 1 of college.

The survey showed that the interviewees considered that local social, economic and environmental development would be beneficial from the project. The response was overall supportive to the project implementation.

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 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:

Parameters monitored ex-post:

1) $EG_{export,y}$: Electricity supplied to the grid by the project in year y;

2) $EG_{import,y}$: Electricity purchased from the grid by the project in year y;

3) $EG_{im\text{-}backup,y}$: Electricity imported from the grid by the project through the backup power line in the year y;

4) $EG_{Facility,y}$: Quantity of net electricity generation supplied to the grid by the project to the Grid in year y, which is calculated as $EG_{Facility,y}= EG_{export,y}-EG_{import,y}-EG_{im\text{-}backup,y}$.

According to the VCS-MR /6/ of the project and the registered VCS-PD /3/, The electricity exported ($EG_{export,y}$) and imported ($EG_{import,y}$ and $EG_{im\text{-}backup,y}$) are both continuously monitored through the bidirectional meter which is both agreed by the grid company and the project owner. The net electricity is the difference of the electricity export and the electricity import, i.e. $EG_{Facility,y}= EG_{export,y}-EG_{import,y}-EG_{im\text{-}backup,y}$. The daily and monthly monitoring records of the project have been verified during onsite assessment.

The verification team has cross-checked $EG_{export,y}$ and $EG_{import,y}$ in the emission reductions calculation spreadsheet /7/ with the electricity sales receipts/9/ of the project from the grid company. The electricity sales receipts/9/ have been the basis for the grid company and project owner to issue the electricity invoices to each other. By the onsite assessment, the values in emission reductions calculation spreadsheet /7/ is in line with the electricity sales receipts/9/ during this period.

For the value of $EG_{im\text{-}backup,y}$, according to the statement issued by the grid company, the verification team confirms that during this monitoring period from 01/01/2017-31/12/2020, no electricity was imported via the 35KV backup line, so the value of $EG_{im\text{-}backup,y}$ is 0. The values in emission reductions calculation spreadsheet is in line with the grid company's statement/10/ during this period.

Parameter determined ex-ante:

$EF_{grid,CM,y}$: Combined margin emission factor for grid connected power generation in year y, i.e. NWPG.

According to the registered PD /3/, the $EF_{grid,CM,y}$ is ex-ante determined as 0.9180 $tCO_2$/MWh for NWPG over the first crediting period. The emission factors used in this monitoring report have been verified against the registered VCS-PD /3/ and found them to be consistent.

### 4.4.2 Assessment Data and Calculation

It was verified that the project is a new wind power plant. Therefore, the project emission of the project is zero under ACM0002 (version 12.1.0) /14/ (PEy=0).

The project is a new wind power plant. Therefore, no leakage needs to be considered for the project activity according to the methodology /14/. (LEy=0).

Since the project emission and the leakage emission has been justified as zero under ACM0002 (version 12.1.0) /14/, the calculation of the emission reductions simply involves the calculation of the baseline emissions.

Formula 1: $ERy = BEy\text{-}0\text{-}0 = EG_{Facility,y} \times EF_{grid,CM,y}$ (1)

Where:

ERy: Emission reductions in year y ($tCO_2$/yr)

BEy: The baseline emissions ($tCO_2$/yr)

$EG_{Facility,y}$ : Quantity of net electricity generation supplied to the grid by the project to the Grid in year y (MWh/yr)

$EF_{grid,CM,y}$: Combined margin emission factor for grid connected power generation in year y.

The net electricity delivered to the grid ($EG_{Facility,y}$) is the difference between the electricity exported to the grid exported ($EG_{export,y}$) and the electricity imported from the grid ($EG_{import,y}$ and $EG_{im\text{-}backup,y}$), as follow:

Formula 2: $EG_{Facility,y} = EG_{export,y} - EG_{import,y} - EG_{im\text{-}backup,y}$ (2)

Following the approach described in section 4.4.1 above, $EG_{Facility,y}$, $EG_{export,y}$, $EG_{import,y}$ and $EG_{im\text{-}backup,y}$ were verified as below:

Table 4-3 The verified on-grid electricity exported to the NWPG of the project (Unit: MWh)

| **Period** | | **$EG_{export,y}$ (MWh)** | | |
|---|---|---|---|---|
| | | **Data monitored** | **Data on the sales receipts** | **Conservative value** |
| 01/01/2017 | 31/01/2017 | 1,827,647.776 | 5,570.400 | 5,570.400 |
| 01/02/2017 | 28/02/2017 | 1,830,170.998 | 5,469.200 | 5,469.200 |
| 01/03/2017 | 31/03/2017 | 1,832,695.875 | 5,899.520 | 5,899.520 |
| 01/04/2017 | 30/04/2017 | 1,835,308.230 | 7,028.120 | 7,028.120 |
| 01/05/2017 | 31/05/2017 | 1,837,922.416 | 8,143.960 | 8,143.960 |
| 01/06/2017 | 06/06/2017 | 1,839,509.204 | 7,788.000 | 7,788.000 |
| 07/06/2017 | 30/06/2017 | 1,840,795.988 | | |
| 01/07/2017 | 31/07/2017 | 1,843,156.399 | 6,837.600 | 6,837.600 |

| | | | | |
|---|---|---|---|---|
| 01/08/2017 | 31/08/2017 | 1,845,819.144 | 8,065.200 | 8,065.200 |
| 01/09/2017 | 30/09/2017 | 1,848,440.832 | 6,041.200 | 6,041.200 |
| 01/10/2017 | 31/10/2017 | 1,851,064.351 | 7,150.000 | 7,150.000 |
| 01/11/2017 | 30/11/2017 | 1,853,689.760 | 7,801.200 | 7,801.200 |
| 01/12/2017 | 31/12/2017 | 1,856,317.000 | 5,346.000 | 5,346.000 |
| **Subtotal (2017)** | | **23,942,537.973** | **81,140.400** | **81,140.400** |
| 01/01/2018 | 31/01/2018 | 1,858,989.231 | 3,577.200 | 3,577.200 |
| 01/02/2018 | 28/02/2018 | 1,861,533.988 | 5,192.000 | 5,192.000 |
| 01/03/2018 | 31/03/2018 | 1,864,080.400 | 7,158.800 | 7,158.800 |
| 01/04/2018 | 30/04/2018 | 1,866,715.020 | 6,217.200 | 6,217.200 |
| 01/05/2018 | 31/05/2018 | 1,869,351.471 | 5,640.800 | 5,640.800 |
| 01/06/2018 | 30/06/2018 | 1,871,989.812 | 4,347.200 | 4,347.200 |
| 01/07/2018 | 31/07/2018 | 1,874,629.984 | 10,709.600 | 10,709.600 |
| 01/08/2018 | 31/08/2018 | 1,877,315.359 | 6,001.600 | 6,001.600 |
| 01/09/2018 | 30/09/2018 | 1,879,959.312 | 6,375.600 | 6,375.600 |
| 01/10/2018 | 31/10/2018 | 1,882,605.096 | 8,940.800 | 8,940.800 |
| 01/11/2018 | 30/11/2018 | 1,885,252.770 | 6,160.000 | 6,160.000 |
| 01/12/2018 | 31/12/2018 | 1,887,902.275 | 9,693.200 | 9,693.200 |
| **Subtotal (2018)** | | **22,480,324.718** | **80,014.000** | **80,014.000** |
| 01/01/2019 | 31/01/2019 | 1,890,597.136 | 9,847.200 | 9,847.200 |
| 01/02/2019 | 28/02/2019 | 1,893,163.428 | 10,546.800 | 10,546.800 |
| 01/03/2019 | 31/03/2019 | 1,895,731.375 | 7,497.600 | 7,497.600 |
| 01/04/2019 | 30/04/2019 | 1,898,388.260 | 9,033.200 | 9,033.200 |
| 01/05/2019 | 31/05/2019 | 1,901,046.976 | 10,155.200 | 10,155.200 |

| | | | | |
|---|---|---|---|---|
| 01/06/2019 | 30/06/2019 | 1,903,707.582 | 6,358.000 | 6,358.000 |
| 01/07/2019 | 31/07/2019 | 1,906,370.019 | 8,034.400 | 8,034.400 |
| 01/08/2019 | 31/08/2019 | 1,909,078.024 | 8,487.600 | 8,487.600 |
| 01/09/2019 | 30/09/2019 | 1,911,744.242 | 6,371.200 | 6,371.200 |
| 01/10/2019 | 31/10/2019 | 1,914,412.291 | 8,932.000 | 8,932.000 |
| 01/11/2019 | 30/11/2019 | 1,917,082.230 | 8,232.400 | 8,232.400 |
| 01/12/2019 | 31/12/2019 | 1,919,754.000 | 12,540.000 | 12,540.000 |
| **Subtotal (2019)** | | **22,861,075.563** | **106,035.600** | **106,035.600** |
| 01/01/2020 | 31/01/2020 | 1,922,471.491 | 9,996.800 | 9,996.800 |
| 01/02/2020 | 29/02/2020 | 1,925,103.180 | 10,753.600 | 10,753.600 |
| 01/03/2020 | 31/03/2020 | 1,927,736.611 | 10,661.200 | 10,661.200 |
| 01/04/2020 | 30/04/2020 | 1,930,415.822 | 8,241.200 | 8,241.200 |
| 01/05/2020 | 31/05/2020 | 1,933,096.864 | 10,133.200 | 10,133.200 |
| 01/06/2020 | 30/06/2020 | 1,935,779.796 | 8,329.200 | 8,329.200 |
| 01/07/2020 | 31/07/2020 | 1,938,464.559 | 6,784.800 | 6,784.800 |
| 01/08/2020 | 31/08/2020 | 1,941,195.256 | 7,361.200 | 7,361.200 |
| 01/09/2020 | 30/09/2020 | 1,943,883.800 | 7,466.800 | 7,466.800 |
| 01/10/2020 | 31/10/2020 | 1,946,574.175 | 8,954.000 | 8,954.000 |
| 01/11/2020 | 30/11/2020 | 1,949,266.440 | 6,767.200 | 6,767.200 |
| 01/12/2020 | 31/12/2020 | 1,951,960.536 | 9,433.600 | 9,433.600 |
| **Subtotal (2020)** | | **23,245,948.530** | **104,882.800** | **104,882.800** |
| **Total (01/01/2017-31/12/2020)** | | **92,529,886.784** | **372,072.800** | **372,072.800** |

Table 4-4 The verified on-grid electricity import from the NWPG of the project (Unit: MWh)

| Period | | $EG_{import,y}$ (MWh) | | | $EG_{im-spare,y}$ (MWh) |
|---|---|---|---|---|---|
| | | Data monitored | Data on the sales receipts | Conservative value | value |
| 01/01/2017 | 31/01/2017 | 16.720 | 16.720 | 16.720 | 0.000 |
| 01/02/2017 | 28/02/2017 | 22.880 | 22.880 | 22.880 | 0.000 |
| 01/03/2017 | 31/03/2017 | 24.640 | 24.640 | 24.640 | 0.000 |
| 01/04/2017 | 30/04/2017 | 24.640 | 24.640 | 24.640 | 0.000 |
| 01/05/2017 | 31/05/2017 | 30.360 | 30.360 | 30.360 | 0.000 |
| 01/06/2017 | 06/06/2017 | 34.320 | 34.320 | 34.320 | 0.000 |
| 07/06/2017 | 30/06/2017 | 14.960 | 14.960 | 14.960 | 0.000 |
| 01/07/2017 | 31/07/2017 | 16.720 | 16.720 | 16.720 | 0.000 |
| 01/08/2017 | 31/08/2017 | 12.760 | 12.760 | 12.760 | 0.000 |
| 01/09/2017 | 30/09/2017 | 25.080 | 25.080 | 25.080 | 0.000 |
| 01/10/2017 | 31/10/2017 | 12.320 | 12.320 | 12.320 | 0.000 |
| 01/11/2017 | 30/11/2017 | 24.640 | 24.640 | 24.640 | 0.000 |
| 01/12/2017 | 31/12/2017 | 18.480 | 18.480 | 18.480 | 0.000 |
| **Subtotal (2017)** | | **278.520** | **278.520** | **278.520** | **0.000** |
| 01/01/2018 | 31/01/2018 | 10.120 | 10.120 | 10.120 | 0.000 |
| 01/02/2018 | 28/02/2018 | 28.600 | 28.600 | 28.600 | 0.000 |
| 01/03/2018 | 31/03/2018 | 12.320 | 12.320 | 12.320 | 0.000 |
| 01/04/2018 | 30/04/2018 | 28.160 | 28.160 | 28.160 | 0.000 |
| 01/05/2018 | 31/05/2018 | 14.520 | 14.520 | 14.520 | 0.000 |
| 01/06/2018 | 30/06/2018 | 38.720 | 38.720 | 38.720 | 0.000 |

| | | | | | |
|---|---|---|---|---|---|
| 01/07/2018 | 31/07/2018 | 12.760 | 12.760 | 12.760 | 0.000 |
| 01/08/2018 | 31/08/2018 | 31.680 | 31.680 | 31.680 | 0.000 |
| 01/09/2018 | 30/09/2018 | 11.880 | 11.880 | 11.880 | 0.000 |
| 01/10/2018 | 31/10/2018 | 32.120 | 32.120 | 32.120 | 0.000 |
| 01/11/2018 | 30/11/2018 | 26.840 | 26.840 | 26.840 | 0.000 |
| 01/12/2018 | 31/12/2018 | 11.880 | 11.880 | 11.880 | 0.000 |
| **Subtotal (2018)** | | **259.600** | **259.600** | **259.600** | **0.000** |
| 01/01/2019 | 31/01/2019 | 24.640 | 24.640 | 24.640 | 0.000 |
| 01/02/2019 | 28/02/2019 | 19.360 | 19.360 | 19.360 | 0.000 |
| 01/03/2019 | 31/03/2019 | 19.800 | 19.800 | 19.800 | 0.000 |
| 01/04/2019 | 30/04/2019 | 30.800 | 30.800 | 30.800 | 0.000 |
| 01/05/2019 | 31/05/2019 | 13.640 | 13.640 | 13.640 | 0.000 |
| 01/06/2019 | 30/06/2019 | 25.080 | 25.080 | 25.080 | 0.000 |
| 01/07/2019 | 31/07/2019 | 9.240 | 9.240 | 9.240 | 0.000 |
| 01/08/2019 | 31/08/2019 | 19.360 | 19.360 | 19.360 | 0.000 |
| 01/09/2019 | 30/09/2019 | 18.040 | 18.040 | 18.040 | 0.000 |
| 01/10/2019 | 31/10/2019 | 11.000 | 11.000 | 11.000 | 0.000 |
| 01/11/2019 | 30/11/2019 | 24.640 | 24.640 | 24.640 | 0.000 |
| 01/12/2019 | 31/12/2019 | 6.160 | 6.160 | 6.160 | 0.000 |
| **Subtotal (2019)** | | **221.760** | **221.760** | **221.760** | **0.000** |
| 01/01/2020 | 31/01/2020 | 9.680 | 9.680 | 9.680 | 0.000 |
| 01/02/2020 | 29/02/2020 | 34.320 | 34.320 | 34.320 | 0.000 |
| 01/03/2020 | 31/03/2020 | 13.200 | 13.200 | 13.200 | 0.000 |
| 01/04/2020 | 30/04/2020 | 25.960 | 25.960 | 25.960 | 0.000 |

| | | | | | |
|---|---|---|---|---|---|
| 01/05/2020 | 31/05/2020 | 9.240 | 9.240 | 9.240 | 0.000 |
| 01/06/2020 | 30/06/2020 | 17.600 | 17.600 | 17.600 | 0.000 |
| 01/07/2020 | 31/07/2020 | 12.760 | 12.760 | 12.760 | 0.000 |
| 01/08/2020 | 31/08/2020 | 13.640 | 13.640 | 13.640 | 0.000 |
| 01/09/2020 | 30/09/2020 | 13.640 | 13.640 | 13.640 | 0.000 |
| 01/10/2020 | 31/10/2020 | 16.720 | 16.720 | 16.720 | 0.000 |
| 01/11/2020 | 30/11/2020 | 12.760 | 12.760 | 12.760 | 0.000 |
| 01/12/2020 | 31/12/2020 | 7.920 | 7.920 | 7.920 | 0.000 |
| **Subtotal (2020)** | | **187.440** | **187.440** | **187.440** | **0.000** |
| **Total (01/01/2017-31/12/2020)** | | **947.320** | **947.320** | **947.320** | **0.000** |

Therefore, the net electricity supply ($EG_{facility, y}$) is calculated as:

Table 4-5 The verified $EG_{facility, y}$ of the Project (Unit: MWh)

| **Period** | | **$EG_{export,y}$ (MWh)** | **$EG_{import,y}$ (MWh)** | **$EG_{im-spare,y}$ (MWh)** | **$EG_{facility, y}$(MWh)** |
|---|---|---|---|---|---|
| | | **a** | **b** | **c** | **d=a-b-c** |
| 01/01/2017 | 31/01/2017 | 5,570.400 | 16.720 | 0.000 | 5,553.680 |
| 01/02/2017 | 28/02/2017 | 5,469.200 | 22.880 | 0.000 | 5,446.320 |
| 01/03/2017 | 31/03/2017 | 5,899.520 | 24.640 | 0.000 | 5,874.880 |
| 01/04/2017 | 30/04/2017 | 7,028.120 | 24.640 | 0.000 | 7,003.480 |
| 01/05/2017 | 31/05/2017 | 8,143.960 | 30.360 | 0.000 | 8,113.600 |
| 01/06/2017 | 06/06/2017 | 7,788.000 | 34.320 | 0.000 | 7,738.720 |
| 07/06/2017 | 30/06/2017 | | 14.960 | 0.000 | |
| 01/07/2017 | 31/07/2017 | 6,837.600 | 16.720 | 0.000 | 6,820.880 |
| 01/08/2017 | 31/08/2017 | 8,065.200 | 12.760 | 0.000 | 8,052.440 |

| | | | | | |
|---|---|---|---|---|---|
| 01/09/2017 | 30/09/2017 | 6,041.200 | 25.080 | 0.000 | 6,016.120 |
| 01/10/2017 | 31/10/2017 | 7,150.000 | 12.320 | 0.000 | 7,137.680 |
| 01/11/2017 | 30/11/2017 | 7,801.200 | 24.640 | 0.000 | 7,776.560 |
| 01/12/2017 | 31/12/2017 | 5,346.000 | 18.480 | 0.000 | 5,327.520 |
| **Subtotal (2017)** | | **81,140.400** | **278.520** | **0.000** | **80,861.880** |
| 01/01/2018 | 31/01/2018 | 3,577.200 | 10.120 | 0.000 | 3,567.080 |
| 01/02/2018 | 28/02/2018 | 5,192.000 | 28.600 | 0.000 | 5,163.400 |
| 01/03/2018 | 31/03/2018 | 7,158.800 | 12.320 | 0.000 | 7,146.480 |
| 01/04/2018 | 30/04/2018 | 6,217.200 | 28.160 | 0.000 | 6,189.040 |
| 01/05/2018 | 31/05/2018 | 5,640.800 | 14.520 | 0.000 | 5,626.280 |
| 01/06/2018 | 30/06/2018 | 4,347.200 | 38.720 | 0.000 | 4,308.480 |
| 01/07/2018 | 31/07/2018 | 10,709.600 | 12.760 | 0.000 | 10,696.840 |
| 01/08/2018 | 31/08/2018 | 6,001.600 | 31.680 | 0.000 | 5,969.920 |
| 01/09/2018 | 30/09/2018 | 6,375.600 | 11.880 | 0.000 | 6,363.720 |
| 01/10/2018 | 31/10/2018 | 8,940.800 | 32.120 | 0.000 | 8,908.680 |
| 01/11/2018 | 30/11/2018 | 6,160.000 | 26.840 | 0.000 | 6,133.160 |
| 01/12/2018 | 31/12/2018 | 9,693.200 | 11.880 | 0.000 | 9,681.320 |
| **Subtotal (2018)** | | **80,014.000** | **259.600** | **0.000** | **79,754.400** |
| 01/01/2019 | 31/01/2019 | 9,847.200 | 24.640 | 0.000 | 9,822.560 |
| 01/02/2019 | 28/02/2019 | 10,546.800 | 19.360 | 0.000 | 10,527.440 |
| 01/03/2019 | 31/03/2019 | 7,497.600 | 19.800 | 0.000 | 7,477.800 |
| 01/04/2019 | 30/04/2019 | 9,033.200 | 30.800 | 0.000 | 9,002.400 |
| 01/05/2019 | 31/05/2019 | 10,155.200 | 13.640 | 0.000 | 10,141.560 |
| 01/06/2019 | 30/06/2019 | 6,358.000 | 25.080 | 0.000 | 6,332.920 |

| | | | | | |
|---|---|---|---|---|---|
| 01/07/2019 | 31/07/2019 | 8,034.400 | 9.240 | 0.000 | 8,025.160 |
| 01/08/2019 | 31/08/2019 | 8,487.600 | 19.360 | 0.000 | 8,468.240 |
| 01/09/2019 | 30/09/2019 | 6,371.200 | 18.040 | 0.000 | 6,353.160 |
| 01/10/2019 | 31/10/2019 | 8,932.000 | 11.000 | 0.000 | 8,921.000 |
| 01/11/2019 | 30/11/2019 | 8,232.400 | 24.640 | 0.000 | 8,207.760 |
| 01/12/2019 | 31/12/2019 | 12,540.000 | 6.160 | 0.000 | 12,533.840 |
| **Subtotal (2019)** | | **106,035.600** | **221.760** | **0.000** | **105,813.840** |
| 01/01/2020 | 31/01/2020 | 9,996.800 | 9.680 | 0.000 | 9,987.120 |
| 01/02/2020 | 29/02/2020 | 10,753.600 | 34.320 | 0.000 | 10,719.280 |
| 01/03/2020 | 31/03/2020 | 10,661.200 | 13.200 | 0.000 | 10,648.000 |
| 01/04/2020 | 30/04/2020 | 8,241.200 | 25.960 | 0.000 | 8,215.240 |
| 01/05/2020 | 31/05/2020 | 10,133.200 | 9.240 | 0.000 | 10,123.960 |
| 01/06/2020 | 30/06/2020 | 8,329.200 | 17.600 | 0.000 | 8,311.600 |
| 01/07/2020 | 31/07/2020 | 6,784.800 | 12.760 | 0.000 | 6,772.040 |
| 01/08/2020 | 31/08/2020 | 7,361.200 | 13.640 | 0.000 | 7,347.560 |
| 01/09/2020 | 30/09/2020 | 7,466.800 | 13.640 | 0.000 | 7,453.160 |
| 01/10/2020 | 31/10/2020 | 8,954.000 | 16.720 | 0.000 | 8,937.280 |
| 01/11/2020 | 30/11/2020 | 6,767.200 | 12.760 | 0.000 | 6,754.440 |
| 01/12/2020 | 31/12/2020 | 9,433.600 | 7.920 | 0.000 | 9,425.680 |
| **Subtotal (2020)** | | **104,882.800** | **187.440** | **0.000** | **104,695.360** |
| **Total (01/01/2017-31/12/2020)** | | **372,072.800** | **947.320** | **0.000** | **371,125.480** |

The verification team has confirmed the emission reductions of the project have been conservatively calculated in line with above mentioned Formula 1&2 in the emission reduction calculation spreadsheet /7/. The verification team has checked and confirmed the emission reduction is to be correctly accounted. The total emission reduction is as follow:

Table 4-6 Verified Emission Reductions during this monitoring period

| Period | | | $EG_{Facility,y}$ (MWh) | EF ($tCO_2$/MWh) | BEy ($tCO_2e$) | PEy ($tCO_2e$) | LEy ($tCO_2e$) | ERy ($tCO_2e$) |
|---|---|---|---|---|---|---|---|---|
| Year | From | To | A | B | C=A*B | D | E | F=C-D-E |
| 2017 | 01/01/2017 | 31/12/2017 | 80,861.880 | 0.9180 | 74,231 | 0.00 | 0.00 | 74,231 |
| 2018 | 01/01/2018 | 31/12/2018 | 79,754.400 | 0.9180 | 73,214 | 0.00 | 0.00 | 73,214 |
| 2019 | 01/01/2019 | 31/12/2019 | 105,813.840 | 0.9180 | 97,137 | 0.00 | 0.00 | 97,137 |
| 2020 | 01/01/2020 | 31/12/2020 | 104,695.360 | 0.9180 | 96,110 | 0.00 | 0.00 | 96,110 |
| **Total** | | | **371,125.480** | **/** | **340,692** | 0 | 0 | **340,692** |

Comparison of ERs

Based on the above assessment, CCSC can conclude that the emission reduction during the monitoring period from 01/01/2017 to 31/12/2020 have been quantified correctly in accordance with the project description and applied methodology /14/, and the emission reduction during this monitoring period is verified as 340,692 tCO2e. Compared with the estimated emission reductions under the same days of 1,461 from 01/01/2017 to 31/12/2020 in the registered VCS-PD /3/, 431,075(=107,695*1,461/365) $tCO_2e$, the verified emission reduction is 20.97% less than the estimated value. CCSC considers the value of verified emission reduction is reasonable.

## 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 | 1) $EG_{export,y}$<br>2) $EG_{import,y}$<br>3) $EG_{im\text{-}backup,y}$ |
| Monitoring method | The quantity of electricity exported to the gird ($EG_{export,y}$) and electricity imported from the grid ($EG_{import,y}$ and $EG_{im\text{-}backup,y}$) by the project are measured by bi-direction meter. |
| 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 fulfils 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 01/01/2017 to 31/12/2020. |
| Data reported | Through cross checking with the electricity sale receipts/9/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 /6/ and ER calculation spreadsheet /7/. Monitoring data have been cross-checked with external sources electricity sale receipts.

## 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 "Xinjiang Jimunai CGN Phase I Wind Farm Project". The verification was performed based on the requirements set by Voluntary Carbon Standard (VCS) Version 4.0 /13/, as well as criteria given to provide for consistent project operations, monitoring and reporting. This verification covers the period from 01/01/2017 to 31/12/2020 inclusive.

In the course of the verification 2 Corrective Action Requests (CAR), 1 Clarification Request (CL) and no forward requests (FAR) was raised. The verification is based on the VCS-MR /6/, the VCS-PD /3/, ER calculation spread sheet /7/ 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 VCS-PD /3/ and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;
- The VCS-MR /6/ and other supporting documents provided are complete in accordance with the latest applicable version of the VCS Registration & Issuance Process /17/ 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 monitoring plan and the approved methodology i.e. ACM0002 (version 12.1.0) /14/;
- 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 01/01/2017 to 31/12/2020

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 ($tCO_2e$) |
|---|---|---|---|---|
| 01/01/2017-31/12/2017 | 74,231 | 0 | 0 | 74,231 |
| 01/01/2018-31/12/2018 | 73,214 | 0 | 0 | 73,214 |
| 01/01/2019-31/12/2019 | 97,137 | 0 | 0 | 97,137 |
| 01/01/2020-31/12/2020 | 96,110 | 0 | 0 | 96,110 |
| Total | **340,692** | **0** | **0** | **340,692** |

# APPENDIX A: ABBREVIATIONS

| | |
|---|---|
| CAR | Corrective Action Request |
| CCSC | China Classification Society Certification Company |
| 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 Company |
| 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/ | Climate Bridge (Shanghai) Ltd., VCS Monitoring report Version 1.0 dated 26/02/2021 |
| /2/ | Climate Bridge (Shanghai) Ltd., ER calculation spreadsheet Version 1.0 dated 26/02/2021 |
| /3/ | CGN Carbon Asset Management (Beijing) Co., Ltd. The registered VCS-PD dated 20/11/2013 |
| /4/ | Easy Carbon Consultancy Co. Ltd. The registered CDM PDD Version 3 dated 13/08/2011 |
| /5/ | TÜV Rheinland Japan Ltd. Registered Validation Report No. 019979105063112 dated 14/09/2011 |
| /6/ | Climate Bridge (Shanghai) Ltd., VCS Monitoring report Version 2.0 dated 18/03/2021 |
| /7/ | Climate Bridge (Shanghai) Ltd., ER calculation spreadsheet Version 2.0 dated 18/03/2021 |
| /8/ | Monthly reading records of the electricity measured by meter during this monitoring period |
| /9/ | Sales receipts issued by the grid company during this monitoring period |
| /10/ | Grid company’s statement about backup line |
| /11/ | Meter replacement record |
| /12/ | Calibration reports of the meters(SN: 4200415011003274797, SN: 4200415011003274798, SN: 800000287822, SN: 800000287824 and SN: 01000002217676) |
| /13/ | VERRA, VCS Standard, version 4.0 |

| | |
|---|---|
| /14/ | CDM Executive Board, ACM0002 (version 12.1.0) |
| /15/ | VERRA, Monitoring Report Template Form Version 4.0 |
| /16/ | VERRA, VCS Program Guide Version 4.0 |
| /17/ | VERRA, Registration & Issuance Process Version 4.0 |
| /18/ | China Electrical Power Yearbook 2005~2009 |
| /19/ | Chinese DNA, 2010 Baseline Emission Factors for Regional Power Grids in China |
| /20/ | China National Economic Trading Commission, Technical Administrative Code of Electric Energy Metering, DL/T 448-2016 |
| /21/ | Shenzhen CTI International Certification Co., Ltd, Verification Report for 3rd CER issuing Version 01.0 dated 03/09/2017 |
| /22/ | Shenzhen CTI International Certification Co., Ltd, Verification Report for 1st VCU issuing Version 01.0 dated 20/12/2013 |
| /23/ | CGN Carbon Asset Management (Beijing) Co., Ltd. The registered CDM PDD for 2nd crediting period Version 04 dated 02/01/2019 |
| /24/ | Qualification certificate of the meter calibration entity, issued on 01/04/2013 and 10/04/2018, and the Valid until 09/04/2023. |

# 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.** | 1.6 | **Date:** 16/03/2021 |
|---|---|---|---|---|
| **Description of CL** | | | | |
| Please clarify why the project crediting period in Section 1.6 is not in compliance with the registered PDD. | | | | |
| **Project participant response** | | | | **Date:** 18/03/2021 |
| In the registered PD, the crediting period is described as from 19/03/2011 to 27/10/2011. A deviation is requested for the crediting period. The project is registered under VCS Standard Version 3.4 and completed validation before 19/03/2020. thus, it remains eligible to apply the crediting period requirements under VCS Standard Version 3.4 which shall be a maximum of ten years and may be renewed at most twice, so the first renewable crediting period of the project should be updated from 19/03/2011- 27/10/2011 to 19/03/2011-18/03/2021.<br><br>Therefore, the project crediting period is ten years, twice renewable for a total of 30 years. However, as the project is also registered as a CDM project with a seven year twice renewable project crediting period and furthermore, the project has the lifetime of 20 years, it is not eligible for VCU issuance beyond 18/03/2031.<br><br>The above information has been added in Section 3.2.2. | | | | |
| **Documentation provided by project participant** | | | | |
| VCS Monitoring report (version 2.0, 18/03/2021) | | | | |
| **DOE assessment** | | | | **Date:** 20/03/2021 |
| According to the information collected during on-site visit and the relevant evidence provided by project owner, CCSC can confirm that the deviation does 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 deviation has 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. Therefore, the CL-1 is closed. | | | | |

| CL ID | CL-2 | Section no. | 4 | Date: 16/03/2021 |
|---|---|---|---|---|
| **Description of CL** | | | | |
| Please provide more information about $EG_{im\text{-}backup,y}$ from 01/01/2017-31/12/2020,e.g. calibration of the meter and the value. | | | | |
| **Project participant response** | | | | **Date:** 18/03/2021 |
| Based on the statement issued by the grid company, it is confirmed that during this monitoring period from 01/01/2017-31/12/2020, no electricity was imported via the 35KV backup line, thus the value of $EG_{im\text{-}backup,y}$ is 0. The calibration of the meter M3 is not available since there is no electricity via the 35KV backup line and the meter calibration arrangement is controlled by the grid company. | | | | |
| **Documentation provided by project participant** | | | | |
| Grid company's statement about backup line, VCS Monitoring report (version 2.0, 18/03/2021) | | | | |
| **DOE assessment** | | | | **Date:** 20/03/2021 |
| The Grid company's statement about backup line has been supplemented. The information about $EG_{im\text{-}backup,y}$ has been verified by Grid company's statement and on-site assessment. Thus, CL-2 is closed out. | | | | |

**Table 2. CAR from this verification**

| CAR ID | CAR-1 | Section no. | N/A | Date: 16/03/2021 |
|---|---|---|---|---|
| **Description of CAR** | | | | |
| For the ER spreadsheet, the data on the sales receipts of $EG_{import,y}$ is not in line with the Receipt in 01/2017,03/2017,06/2017,05/2019,07/2019,10/2019,12/2019,01/2020,05/2020,06/2020,07/2020,09/2020, 10/2020, 11/2020, 12/2020 | | | | |
| **Project participant response** | | | | **Date:** 18/03/2021 |
| The above transcription errors have been corrected. | | | | |
| **Documentation provided by project participant** | | | | |
| ER calculation spreadsheet (version 2.0, 18/03/2021) | | | | |
| **DOE assessment** | | | | **Date:** 20/03/2021 |
| The verification team has checked the ER calculation spreadsheet Version 2.0 supplied by PP, and confirmed that it is corrected in the ER calculation spreadsheet Version 2.0, consistenting with the relevant evidence. Therefore, CAR-1 is closed out. | | | | |

**Table 3. FAR from this verification**

| **FAR ID** | N/A | **Section No.** | N/A | **Date:** N/A |
|---|---|---|---|---|
| **Description of FAR** | | | | |
| N/A | | | | |
| **Project participant response** | | | | **Date:** N/A |
| N/A | | | | |
| **Documentation provided by project participant** | | | | |
| N/A | | | | |
| **DOE assessment** | | | | **Date:** N/A |
| N/A | | | | |