



JILIN DA'AN DAGANGZI WIND POWER PROJECT PHASE II



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Prepared By	China Classification Society Certification Company (CCSC)
Contact	40, Dong Huang Cheng Gen Nan Jie, Beijing, 100006, P.R. China, Tel: + 86 10 5631 3492 Email: ccsbj_yf@c.ccs.org.cn www.ccs-c.com.cn
Approved By	Mr. HUANG Shiyuan, General Manager 
Work Carried Out By	Team Leader: Ma Zhiwei Technical Reviewer: Liu Peitao, Xie Fengjun

Summary:

China Classification Society Certification Company (CCSC), commissioned by Climate Bridge (Shanghai) Ltd., has performed the second periodic verification of Jilin Da' an Dagangzi Wind Power Project Phase II (hereafter referred to as "the project") covering the monitoring period from 25/12/2016-31/12/2018, on the basis of requirements of Verified Carbon Standard (VCS) Version 4.

The project involves the construction and operation of 49.5 MW wind farm project in Da'an city, Jilin Province, in the People's Republic of China, consisting of 33 wind turbines with capacities of 1,500 kW each. The project is expected to supply 103,130 MWh of electricity per year to the Northeast China Power Grid (NECPG) 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: 548) under VCS Standard Version 3.3 using approved CDM methodology ACM0002 (version 07.0) "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", with the first renewable crediting period from 01/01/2009 to 31/12/2018. 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 07.0).

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, 1 Corrective Action Request (CAR), no 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 approved revised monitoring plan is in accordance with the applied approved CDM methodology, i.e., ACM0002 (version 07.0) “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”.
- The implementation of monitoring follows the approved revised 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 1.1 dated 16/06/2021).

In conclusion, it is CCSC's opinion that the project activity “Jilin Da’ an Dagangzi Wind Power Project Phase II”, as described in the MR (version 1.1 dated 16/06/2021), 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 25/12/2016 to 31/12/2018 amount to 177,467 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 Jilin Da' an Dagangzi Wind Power Project Phase II (hereafter referred to as "the project"), which is located near the village of Shuanggang, Dagangzi County, Da'an City, Jilin Province, People's Republic of China (P. R. China) for the monitoring period from 25/12/2016 to 31/12/2018, based on requirement of VCS Standard (version 4.1)/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 activity has been implemented and operated as per the VCS project description (VCS-PD) /3/ or approved revised monitoring plan, 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 approved revised monitoring plan and the approved methodology /12/;

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 VCS-PD /3/, the approved revised monitoring plan, the VCS monitoring report (VCS-MR) /1//6/, 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 4.1) /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 VCS-PD /3/, approved revised monitoring plan, 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 Jilin CGN Wind Power Co., Ltd. is located near the village of Shuanggang, Dagangzi County, Da'an City, Jilin Province, People's Republic of China (P. R. China). The exact location of the project is defined using geographic coordinates obtained with a Global Positioning System (GPS) receiver: E 123° 35' 26" ~ 123° 38' 58" Longitude, N 44° 18' 23" ~ 45° 18' 46" Latitude for the whole area of the wind farm. 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 10/03/2008, and the operation started on 16/12/2008. The expected operation period of the project is 20 years.

The electricity generated from the project is supplied to the Northeast China Power Grid (NECPG), 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 in August of 2007/17/.

The NECPG is dominated by thermal power plants as per the China Electrical Power Yearbook 2000~2006 /16/. By exporting expected annual electricity of 103,130 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 get registered as a CDM project on 09/03/2010 (UNFCCC registration reference number of 2586). The CDM second crediting period from 09/03/2017 to 08/03/2024 has been renewed on 29/03/2019. Total GHG emission reductions of 561,051 tCO₂ generated from 09/03/2010 to 24/12/2016 (both first and last days included) by the project has been issued as CER under CDM program.

According to the VERRA website, the project also has registered as a VCS project on 10/12/2010 (VCS ID 548), issued 128,377 tCO₂e during the first monitoring period from 01/01/2009 to 08/03/2010. The current verification has been finalized for the monitoring period from 25/12/2016 to 31/12/2018.

During the monitoring period from 25/12/2016 to 31/12/2018, the total GHG emission reductions generated by the project are 177,467 tCO₂e.

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/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 VCS-PD /3/, approved revised monitoring plan, the registered validation report /5/, the previous verification report /20//21/, the applied monitoring

methodology /12/, 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 approved revised monitoring plan and the applied methodology /12/. Particular attention was given to the quality of the metering equipment including calibration requirements/18/, 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 05/06/2021, 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 approved revised monitoring plan 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: 05/06/2021	
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.	Jilin CGN Wind Power Co., Ltd. Wang Jinlong, Head of Wind Farm Shi Hongfei, O&M Manager Chen Jiaxu, Security Specialist Engineer CGN Carbon Asset Management (Beijing) Co., Ltd. Liu Yang, Research Manager Da'an City Ecology and Environment Bureau Ge Yongheng, Clerk

Date: 05/06/2021	
Interview topics	Interviewed Organizations and persons
-- Preparation of Monitoring Report. -- Compliance of the approved revised monitoring plan with the monitoring methodology -- Compliance of monitoring with the approved revised monitoring plan -- Assessment of data and calculation of GHG emission reductions	Climate Bridge (Shanghai) Ltd., Wu Siran, 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/or approved revised monitoring plan;

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;

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 approved revised monitoring plan 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 approved revised 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 is 1 CAR that has 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

Through reviewing the registered PDD /3/, validation report /5/ and previous verification report /20/, it was validated that the project has been registered as a CDM project on 09/03/2010 (UNFCCC Ref. 2586) which is available at <https://cdm.unfccc.int/Projects/DB/TUEV-SUED1242408811.21/view>. The CDM second crediting period from 09/03/2017 to 08/03/2024 has been renewed on 29/03/2019. And the project has been registered as VCS project which is available at <https://registry.verra.org/app/projectDetail/VCS/548>. The project does not participate in the other emissions trading program by checking public information on Internet, and interviewing with project owner.

During the period from 01/01/2009 to 31/12/2018 as the first VCS crediting period, the project would claim only for VCUs or CERs. But both VCS and CERs will not be claimed in the same period. The project has applied for the issuance of VCUs during the first monitoring period from 01/01/2009 to 03/08/2010), and CERs during the following monitoring period from 09/03/2010 to 24/12/2016 (both days included). All emission reductions from 25/12/2016 to 31/12/2018 will be claimed under VCS program as VCUs for the project to avoid double counting.

Therefore, CCSC confirmed the project is eligible to participate under the VCS Program as there is no double counting for the emission reduction during any period.

3.2 Methodology Deviations

No deviation from the methodology is needed to be submitted.

3.3 Project Description Deviations

Considering the actual situation, the Project Participants realized that the monitoring plan described in the registered VCS-PD does not reflect the actual monitoring activity of the Project. The monitoring of five wind farms by separate meters and electricity imported from 10kV spare line should be integrated into the monitoring activity of the Project. The monitoring plan has to be improved accordingly during the VCS first monitoring period. And the monitoring plan has been verified to be effective and reliable by Bureau Veritas Certification Holding SAS.

In the registered VCS-PD, the crediting period is described as from 01/01/2009 to 08/03/2010. A deviation is requested for the crediting period in the registered VCS-PD. The project is registered under VCS standard Version 3 and completed validation before 19/03/2020. thus, it remains eligible to apply the crediting period requirements under VCS Standard Version 3 which shall be a maximum of ten years and may be renewed at most twice, so the crediting period of the project deviates from 01/01/2009~08/03/2010 to 01/01/2009~31/12/2018 (twice renewable for a total of 30 years).

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 548. The crediting period is proposed for 10 years (with two renewals) starting on 01/01/2009. This monitoring period is from 25/12/2016 to 31/12/2018, which is compliance with previous monitoring period and the crediting period. This monitoring period is verified in accordance with the VCS Standard Version 4.1 /11/. The project started construction on 10/03/2008, and the operation started on 16/12/2008, and the start date of crediting period is 01/01/2009.

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 near the village of Shuanggang, Dagangzi County, Da'an City, Jilin Province, People's Republic of China (P. R. China). The electricity generated from the project is sold to the Northeast China Power Grid (NECPG). Through the on-site visit, the power generating technology, installed capacity, technical specifications of wind turbine and generator, power delivering systems and monitoring plan are in place and the project has been operated as per the approved revised monitoring plan. The old main meter (serial No. 94348627) was changed on 23/06/2014 and the new meter serial No. is 96628173, the old meter of m1 (serial No. 20070865050028) was changed on 20/01/2016 and the new meter serial No. is 1210139747000006, the meter of m13 (serial No. 09080131710194) was changed on 21/06/2012 and the new meter serial No. is 1110089576000011, and the accuracy is not changed. The verification team confirms the project has been implemented as per the approved revised monitoring plan, and no special event which would affect the monitoring of the project has been observed during the monitoring period.

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
Type	-	FD77B
Number of blades	-	3
Rated Power	kW	1,500
Diameter of wheels	m	77
Cut-in speed	m/s	4
Cut-out speed	m/s	25
Rated wind speed	m/s	16
Height of hub	m	61.5
Lifetime	years	20

According to the registered PD /3/ and the emission reductions calculation spreadsheet /2/, the total net electricity supplied to the Northeast China Power Grid (NECPG) is 154,845.602 MWh during this monitoring period (25/12/2016~31/12/2018, and total 737 days). All the data and the calculated process in the emission reductions calculation spreadsheet /2/ have been checked by the verification team and it is correctly and in accordance with both the monthly reading records/7/ and sale receipts/8/. 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:

- a) No project design change occurred during this monitoring period and the project was implemented in accordance the approved revised monitoring plan;
- b) The approved revised 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.
- c) The project contributes to sustainable development including: (1) Achieving GHG emission reductions by displacing part of the electricity generated by coal-fired power plants, (2) Increasing employment opportunities in the project area, (3) Enhancing the local investment environment and improving the local economy, (4) Diversifying the sources of electricity generation, (5) Making greater use of renewable wind resources.;
- d) 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;
- e) 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;
- f) The GHG emission reductions generated by the project during this monitoring period (25/12/2016~31/12/2018) 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 approved revised monitoring plan. A short summary on the verification of every parameter listed in the approved 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 approved revised monitoring plan):	EG _y The net electricity supplied to the grid by the project (MWh)
Measuring frequency:	Continuously measurement
Reporting frequency:	Monthly recorded
Is measuring and reporting frequency in accordance with the approved revised monitoring plan and monitoring methodology? (Yes / No)	Yes
Type of monitoring equipment:	Electricity meter
Is accuracy of the monitoring equipment as stated in the approved revised monitoring plan? If the approved revised monitoring plan does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	Yes. Accuracy level of monitoring meters is as described in the approved revised monitoring plan. 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 approved revised monitoring plan? If the approved revised monitoring plan 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 Sale receipts/records in line with the approved revised monitoring plan.
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 approved revised 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 approved revised monitoring plan):	$M_{main,export,y}$ Quantity of the electricity supplied to the grid and measured by the meter M_{main} (or M_{backup}) during the monitoring period y (MWh)
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:	Electricity meter
Is accuracy of the monitoring equipment as stated in the approved revised monitoring plan? If the approved revised monitoring plan does not specify the accuracy of the monitoring equipment, does the monitoring	Yes. Accuracy level of monitoring meters is 0.2S as described in the approved revised monitoring plan. For details see Table 4-2.

equipment represent good monitoring practise?	
Calibration frequency /interval:	Periodically as per relevant sectoral standards in China
Is the calibration interval in line with the approved revised monitoring plan? If the approved revised monitoring plan 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?	Not applicable.
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 approved revised 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 approved revised monitoring plan):	$M_{main,import,y}$

	Quantity of the electricity imported from the grid and measured by the meter M_{main} (or M_{backup}) during the monitoring period y (MWh)
Measuring frequency:	Continuously measurement
Reporting frequency:	Monthly recorded
Is measuring and reporting frequency in accordance with the approved revised monitoring plan and monitoring methodology? (Yes / No)	Yes
Type of monitoring equipment:	Electricity meter
Is accuracy of the monitoring equipment as stated in the approved revised monitoring plan? If the approved revised monitoring plan does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	Yes. Accuracy level of monitoring meter is 0.2S as described in the approved revised monitoring plan. 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 approved revised monitoring plan? If the approved revised monitoring plan 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 Sale receipts in line with the approved revised monitoring plan.

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 approved revised 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 approved revised monitoring plan):	$m_{i,export,y}$ Quantity of the electricity supplied to the grid and measured by the meters m_i during the monitoring period y (MWh)
Measuring frequency:	Continuously measurement
Reporting frequency:	Monthly recorded
Is measuring and reporting frequency in accordance with the approved revised monitoring plan and monitoring methodology? (Yes / No)	Yes
Type of monitoring equipment:	Electricity meter
Is accuracy of the monitoring equipment as stated in the approved revised monitoring plan? If the approved revised monitoring plan does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	Yes. Accuracy level of monitoring meter is as described in the approved revised monitoring plan. For details see Table 4-2.

Calibration frequency /interval:	Periodically as per relevant sectoral standards in China
Is the calibration interval in line with approved revised monitoring plan? If the approved revised monitoring plan 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?	Not applicable.
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 approved revised 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 approved revised monitoring plan):	$M_{10kv,import, y}$ Quantity of the electricity imported from the grid and measured by the meter M_{10kv} during the monitoring period y (MWh)

Measuring frequency:	Continuously measurement
Reporting frequency:	Monthly recorded
Is measuring and reporting frequency in accordance with the approved revised monitoring plan and monitoring methodology? (Yes / No)	Yes
Type of monitoring equipment:	Electricity meter
Is accuracy of the monitoring equipment as stated in the approved revised monitoring plan? If the approved revised monitoring plan does not specify the accuracy of the monitoring equipment, does the monitoring equipment represent good monitoring practise?	Yes. Accuracy level of monitoring meter is 1.0 as described in the approved revised monitoring plan. For details see Table 4-2.
Calibration frequency /interval:	Periodically as per relevant sectoral standards in China
Is the calibration interval in line with approved revised monitoring plan? If the approved revised monitoring plan 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 Sale receipts in line with the approved revised monitoring plan.
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	Yes.

calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the approved revised 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 07.0) “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. The net electricity supplied to the grid by the Project (EG_y) is calculated as follows:

$$EG_y = M_{main,export,y} \times \frac{\sum_{i=4}^6 m_{i,export,y}}{\sum_{i=1}^{14} m_{i,export,y}} - M_{main,import,y} - M_{10kv,import,y}$$

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 approved revised monitoring plan and manufacturer specifications. The calibration information of the monitoring meters/10/ 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 approved revised monitoring plan. 17 meters were installed to monitor the net electricity supplied by the project. There are totally 17 meters involved: M_{main} , M_{backup} , M_{10kv} , $m1$, $m2$, $m3$, $m4$, $m5$, $m6$, $m7$, $m8$, $m9$, $m10$, $m11$, $m12$, $m13$ and $m14$. The old main meter (serial No. 94348627) was changed on 23/06/2014 and the new meter serial No. is 96628173, the old meter of $m1$ (serial No. 20070865050028) was changed on 20/01/2016 and the new meter serial No. is 1210139747000006, the meter of $m13$ (serial No. 09080131710194) was changed on 21/06/2012 and the new meter serial No. is 1110089576000011, and the accuracy is not changed. The qualification certificates of the meter calibration entities/22/ were issued by Jilin Province Quality and Technology Supervision Bureau on 31/12/2013 and 31/12/2017, and is valid until 30/12/2021. Meter’s list is as below:

Meter	Owner	Monitor	Site
M _{main}	Power company	The total electricity of the all five projects exported to the grid (M _{main,export,y}) and imported from the grid (M _{main,import,y})	At 220kV high voltage side of the 35kV-to-220kV transformer
M _{backup}	Power company	The total electricity of the all five projects exported to the grid (M _{main,export,y}) and imported from the grid (M _{main,import,y}), only when the main meter has a breakdown, the readings of back up meter will be adopted.	At 220kV high voltage side of the 35kV-to-220kV transformer
M _{10kv}	Project Owner	The total electricity of all the five projects imported from grid through the 10kV spare line.	At enter of the spare 10kV line where the grid is connected
m1, m2, m3	Project Owner	The total electricity supplied to the grid by the phase I project	At the Phase I project's onsite 35kV low voltage side of the 35kV-to-220kV transformer
m4, m5, m6	Project Owner	The total electricity supplied to the grid by the Project	At the Phase II project's onsite 35kV low voltage side of the 35kV-to-220kV transformer
m7, m8, m9	Project Owner	The total electricity supplied to the grid by the phase III project	At the phase III project's onsite 35kV low voltage side of the 35kV-to-220kV transformer
m10, m11, m12	Project Owner	The total electricity supplied to the grid by the phase IV project	At the phase IV project's onsite 35kV low voltage side of the 35kV-to-220kV transformer
m13, m14	Project Owner	The total electricity supplied to the grid by the phase V project	At the phase V project's onsite 35kV low voltage side of the 35kV-to-220kV transformer

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

Table 4-2 Verified calibration information of monitoring meters

Meter	Type	Accur acy	Serial number	Frequ ncy	Calibration date	Valid until	Calibrati on Entity
M _{main}	ZMD40 2CT44	0.2S	9662817 3	Annually	20-Feb- 2016	19-Feb- 2017	Jilin Electric Power Research Institute Co., Ltd.
					15-Feb- 2017	14-Feb- 2018	
					12-Feb- 2018	11-Feb- 2019	
M _{backup}	ZMD40 2CT44	0.2S	9434862 6	Annually	20-Feb- 2016	19-Feb- 2017	
					15-Feb- 2017	14-Feb- 2018	
					12-Feb- 2018	11-Feb- 2019	
m1	DTSD3 41	0.5S	1210139 7470000 06	Annually	20-Feb- 2016	19-Feb- 2017	
					15-Feb- 2017	14-Feb- 2018	
					12-Feb- 2018	11-Feb- 2019	
m2	DTSD3 41	0.5S	2007086 5050026	Annually	20-Feb- 2016	19-Feb- 2017	
					15-Feb- 2017	14-Feb- 2018	
					12-Feb- 2018	11-Feb- 2019	

m3	DTSD3 41	0.5S	2007086 5050027	Annually	20-Feb- 2016 15-Feb- 2017 12-Feb- 2018	19-Feb- 2017 14-Feb- 2018 11-Feb- 2019
m4	DTSD3 41	0.2S	2007071 2010071	Annually	20-Feb- 2016 15-Feb- 2017 12-Feb- 2018	19-Feb- 2017 14-Feb- 2018 11-Feb- 2019
m5	DTSD3 41	0.5S	2007086 5050025	Annually	20-Feb- 2016 15-Feb- 2017 12-Feb- 2018	19-Feb- 2017 14-Feb- 2018 11-Feb- 2019
m6	DTSD3 41	0.5S	2007086 5050021	Annually	20-Feb- 2016 15-Feb- 2017 12-Feb- 2018	19-Feb- 2017 14-Feb- 2018 11-Feb- 2019
m7	DTSD3 41	0.5S	2008084 6040146	Annually	20-Feb- 2016 15-Feb- 2017 12-Feb- 2018	19-Feb- 2017 14-Feb- 2018 11-Feb- 2019

m8	DTSD3 41	0.5S	2008084 6040145	Annually	20-Feb- 2016 15-Feb- 2017 12-Feb- 2018	19-Feb- 2017 14-Feb- 2018 11-Feb- 2019
m9	DTSD3 41	0.5S	2008084 6040142	Annually	20-Feb- 2016 15-Feb- 2017 12-Feb- 2018	19-Feb- 2017 14-Feb- 2018 11-Feb- 2019
m10	DTSD3 41	0.5S	2008084 6040141	Annually	20-Feb- 2016 15-Feb- 2017 12-Feb- 2018	19-Feb- 2017 14-Feb- 2018 11-Feb- 2019
m11	DTSD3 41	0.5S	2008084 6040151	Annually	20-Feb- 2016 15-Feb- 2017 12-Feb- 2018	19-Feb- 2017 14-Feb- 2018 11-Feb- 2019
m12	DTSD3 41	0.5S	2008084 6040143	Annually	20-Feb- 2016 15-Feb- 2017 12-Feb- 2018	19-Feb- 2017 14-Feb- 2018 11-Feb- 2019

m13	DTSD341	0.5S	1110089576000011	Annually	20-Feb-2016 15-Feb-2017 12-Feb-2018	19-Feb-2017 14-Feb-2018 11-Feb-2019	Da'an Agricultural and Electrical Co., Ltd.
m14	DTSD341	0.5S	20080846040150	Annually	20-Feb-2016 15-Feb-2017 12-Feb-2018	19-Feb-2017 14-Feb-2018 11-Feb-2019	
M _{10kv}	DTSD318	1.0	60014972	Annually	20-Feb-2016 15-Feb-2017 12-Feb-2018	19-Feb-2017 14-Feb-2018 11-Feb-2019	

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 air, noise, Electromagnetic, solid waste, vegetation and Biological 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 5.0, 18/02/2010), the local stakeholder's consultation was done through distributing a one-page questionnaire, which was designed to be easily filled in. 30 copies of questionnaire were distributed, and 30 pieces of reply were received.

The survey showed the stakeholders believe that the project activity would have positive impacts on the local ecological, environmental, employment and social life. All stakeholders expressed their support to the project.

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 approved revised 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:

$$EG_y = M_{main,export,y} \times \frac{\sum_{i=1}^{14} m_{i,export,y}}{\sum_{i=1}^{14} m_{i,export,y}} - M_{main,import,y} - M_{10kv,import,y}$$

Where:

EG _y	The net electricity supplied to the grid by the project
m _{i,export,y}	Quantity of the electricity supplied to the grid and measured by the meters m _i during the monitoring period y;
M _{main,export,y}	Quantity of the electricity supplied to the grid and measured by the meter M _{main} (or M _{backup}) during the monitoring period y;
M _{main,import,y}	Quantity of the electricity imported from the grid and measured by the meter M _{main} (or M _{backup}) during the monitoring period y
M _{10kv,import, y}	Quantity of the electricity imported from the grid and measured by the meter M _{10kv} during the monitoring period y
i	The number of the meters m _i which installed at its onsite 35kV low voltage side of the 35kV-to-220kV transformer. i =1~14.

According to the VCS-MR /6/ of the project and the approved revised monitoring plan, The electricity exported (m_{i,export,y} and M_{main,export,y}) and imported (M_{main,import,y} and M_{10kv,import, y}) are both continuously monitored through the meter which is both agreed by the grid company and the project owner. The daily and 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 sale receipts/8/ of the project from the grid company. By the onsite assessment, the values in emission reductions calculation spreadsheet /2/ is in line with the sale receipts/8/ 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. NECPG.

According to the registered PD /3/, the EF_{grid,CM,y} is ex-ante determined as 1.1461 tCO₂/MWh for NECPG 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 07.0) /12/ (PE_y=0).

The project is a new wind power plant. Therefore, no leakage needs to be considered for the project activity according to the methodology /12/. (LEy=0).

Since the project emission and the leakage emission has been justified as zero under ACM0002 (version 07.0) /12/, the calculation of the emission reductions simply involves the calculation of the baseline emissions.

$$\text{Formula 1: } ER_y = BE_y - 0 - 0 = EG_y \times EF_{\text{grid,CM},y} \quad (1)$$

Where:

ER_y: Emission reductions in year y (tCO₂/yr)

BE_y: The baseline emissions (tCO₂/yr)

EG_y: The net electricity supplied to the grid by the project (MWh)

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

The net electricity delivered to the grid (EG_y) is the difference between the electricity exported to the grid exported and the electricity imported from the grid, as follow:

$$\text{Formula 2: } EG_y = M_{\text{main,export},y} \times \frac{\sum_{i=4}^6 m_{i,\text{export},y}}{\sum_{i=1}^{14} m_{i,\text{export},y}} - M_{\text{main,import},y} - M_{10kv,\text{import},y} \quad (2)$$

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

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

Period		Phase I	Phase II	Phase III	Phase IV	Phase V	m _{1,export,y} +...+ m _{14,export,y}	M _{main,export,y}
		m _{1,export,y} + m _{2,export,y} + m _{3,export,y}	m _{4,export,y} + m _{5,export,y} + m _{6,export,y}	m _{7,export,y} + m _{8,export,y} + m _{9,export,y}	m _{10,export,y} + m _{11,export,y} + m _{12,export,y}	m _{13,export,y} + m _{14,export,y}		
		MWh	MWh	MWh	MWh	MWh		
		A1	A2	A3	A4	A5		
							A	B
25-Dec-2016	31-Dec-2016	356.973	329.137	278.161	294.379	285.085	1,543.735	1,503.835
01-Jan-2017	24-Jan-2017	1,223.907	1,128.473	953.699	1,009.301	977.435	5,292.815	5,156.005
25-Jan-2017	24-Feb-2017	2,064.930	2,075.010	2,166.150	2,166.150	2,682.400	11,154.640	11,020.064
25-Feb-2017	24-Mar-2017	5,180.490	5,950.980	6,103.020	5,859.840	5,210.800	28,305.130	27,919.936
25-Mar-2017	24-Apr-2017	8,128.050	9,231.180	7,530.810	6,589.380	6,913.200	38,392.620	37,930.112
25-Apr-2017	24-May-2017	10,486.560	10,867.920	9,924.600	9,192.120	14,610.960	55,082.160	54,890.176
25-May-2017	24-Jun-2017	6,980.820	7,323.943	5,215.560	4,892.580	11,127.200	35,540.103	35,229.920
25-Jun-2017	24-Jul-2017	4,254.390	4,491.270	4,532.430	4,511.850	4,223.520	22,013.460	21,369.920
25-Jul-2017	24-Aug-2017	3,527.580	3,010.350	3,610.320	3,631.110	3,465.560	17,244.920	16,670.016
25-Aug-2017	24-Sep-2017	9,534.210	7,213.710	8,989.260	8,676.570	7,586.880	42,000.630	41,629.984
25-Sep-2017	24-Oct-2017	9,237.900	7,723.380	8,339.310	8,056.650	7,521.640	40,878.880	40,489.856
25-Oct-2017	24-Nov-2017	7,937.160	7,593.390	10,252.620	10,131.240	2,264.920	38,179.330	37,760.096
25-Nov-2017	24-Dec-2017	4,201.050	3,881.010	4,366.110	4,748.100	1,899.240	19,095.510	18,500.064
25-Dec-2017	31-Dec-2017	1,083.722	1,151.294	971.860	1,123.317	424.182	4,754.375	4,606.488

01-Jan-2018	24-Jan-2018	3,715.618	3,947.296	3,332.090	3,851.373	1,454.338	16,300.715	15,793.672
01-Jan-2018	24-Feb-2018	6,084.330	6,074.040	5,538.750	5,075.490	2,964.920	25,737.530	25,000.096
25-Feb-2018	24-Mar-2018	8,247.120	8,962.800	8,388.240	8,287.440	4,708.200	38,593.800	38,280.000
25-Mar-2018	24-Apr-2018	11,122.860	10,125.360	9,994.320	9,903.810	5,188.680	46,335.030	45,989.856
25-Apr-2018	24-May-2018	10,167.780	10,097.220	9,804.900	9,411.990	5,078.920	44,560.810	44,220.000
25-May-2018	24-Jun-2018	5,922.000	6,468.630	6,164.970	6,762.210	3,188.640	28,506.450	28,160.000
25-Jun-2018	24-Jul-2018	6,389.460	7,137.690	6,884.850	7,724.010	3,275.720	31,411.730	31,069.984
25-Jul-2018	24-Aug-2018	2,160.690	2,922.150	3,097.080	2,808.960	4,033.400	15,022.280	14,599.904
25-Aug-2018	24-Sep-2018	5,698.770	7,642.110	6,366.780	6,903.120	8,755.600	35,366.380	34,939.872
25-Sep-2018	24-Oct-2018	4,981.410	6,135.780	5,953.500	6,125.700	8,981.000	32,177.390	31,779.968
25-Oct-2018	24-Nov-2018	9,317.700	5,558.280	6,437.550	5,851.440	10,055.360	37,220.330	36,830.112
25-Nov-2018	24-Dec-2018	17,463.390	10,992.450	8,490.510	8,550.780	6,089.160	51,586.290	51,339.904
25-Dec-2018	31-Dec-2018	1,269.030	1,382.640	1,310.400	1,320.690	1,062.880	6,345.640	6,150.144
Total		166,737.900	159,417.493	154,997.850	153,459.600	134,029.840	768,642.683	758,829.984

Table 4-4 The verified electricity imported from the grid measured by meter M_{main} (Unit: MWh)

Period		Electricity imported from grid by meter M _{main} reading M _{main,import,y}	Electricity imported from grid by receipts M _{main,import,y}	Electricity imported from grid used for ERs calculation M _{main,import,y}
		MWh	MWh	MWh
		D	E	F=MAX(D,E)
25-Dec-2016	31-Dec-2016	59.613	59.613	59.613
01-Jan-2017	24-Jan-2017	204.387	204.387	204.387
25-Jan-2017	24-Feb-2017	93.632	93.632	93.632

25-Feb-2017	24-Mar-2017	152.416	152.416	152.416
25-Mar-2017	24-Apr-2017	54.208	54.208	54.208
25-Apr-2017	24-May-2017	33.088	33.088	33.088
25-May-2017	24-Jun-2017	90.112	90.112	90.112
25-Jun-2017	24-Jul-2017	99.264	99.264	99.264
25-Jul-2017	24-Aug-2017	117.920	117.920	117.920
25-Aug-2017	24-Sep-2017	58.784	58.784	58.784
25-Sep-2017	24-Oct-2017	83.776	83.776	83.776
25-Oct-2017	24-Nov-2017	68.288	68.288	68.288
25-Nov-2017	24-Dec-2017	146.080	146.080	146.080
25-Dec-2017	31-Dec-2017	32.429	32.429	32.429
01-Jan-2018	24-Jan-2018	111.187	111.187	111.187
01-Jan-2018	24-Feb-2018	113.344	113.344	113.344
25-Feb-2018	24-Mar-2018	121.440	121.440	121.440
25-Mar-2018	24-Apr-2018	41.184	41.184	41.184
25-Apr-2018	24-May-2018	86.592	86.592	86.592
25-May-2018	24-Jun-2018	91.872	91.872	91.872
25-Jun-2018	24-Jul-2018	119.328	119.328	119.328
25-Jul-2018	24-Aug-2018	103.488	103.488	103.488
25-Aug-2018	24-Sep-2018	103.488	103.488	103.488
25-Sep-2018	24-Oct-2018	80.256	80.256	80.256
25-Oct-2018	24-Nov-2018	111.584	111.584	111.584

25-Nov-2018	24-Dec-2018	114.752	114.752	114.752
25-Dec-2018	31-Dec-2018	29.216	29.216	29.216
Total		2,521.728	2,521.728	2,521.728

A spare 10kV line was used for supplying electricity in emergency case that the project fails to generate power in the approved revised monitoring plan. The electricity from the spare 10kV line was monitored by the meter M10kv. But according to the actual situation, the spare 10 kV line was only used for the construction purpose of the projects; when the Dagangzi Wind Power Project Phase I (the first project of the Dagangzi Wind Power Project Phase I-V) starting operation in December 2007, the spare 10 kV line was cut off but the spare 10kV line is still at the project site, Once the project meet the emergency case, the spare 10kV line will be connected again, therefore, the project owner still recorded the electricity import by the spare 10kV line monthly and calibrated the meter according to the MP. In this monitoring period, the electricity imported from the grid and measured by the meter M10kv is 0MWh. By checking the explanation document on 10kV line from Da'an Agricultural and Electrical Co., Ltd./9/, CCSC confirmed that the spare 10 kV line was cut off from 26/12/2007 till now, therefore, the electricity imported from the grid and measured by the meter M10kV is 0MWh.

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

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

Period	Electricity supplied to the grid by calculation meter readings	Electricity supplied to the grid by receipts	Electricity supplied to the grid used for ERs calculation	The electricity imported by the project from the grid via the main line	Electricity imported from the grid via the 10kV line by the meter M10kV	Net electricity supplied to the grid by the project
	MWh	MWh	MWh	MWh	MWh	MWh

		$G=A2/A*B$	H	$I=MIN(G:H)$	F	C	$J=I-F-C$
25-Dec-2016	31-Dec-2016	320.630	320.000	320.000	59.613	0.000	260.387
01-Jan-2017	24-Jan-2017	1,099.304	1,100.000	1,099.304	204.387	0.000	894.917
25-Jan-2017	24-Feb-2017	2,049.976	2,050.000	2,049.976	93.632	0.000	1,956.344
25-Feb-2017	24-Mar-2017	5,869.995	5,870.000	5,869.995	152.416	0.000	5,717.579
25-Mar-2017	24-Apr-2017	9,119.974	9,120.000	9,119.974	54.208	0.000	9,065.766
25-Apr-2017	24-May-2017	10,830.041	10,830.000	10,830.000	33.088	0.000	10,796.912
25-May-2017	24-Jun-2017	7,260.022	7,260.000	7,260.000	90.112	0.000	7,169.888
25-Jun-2017	24-Jul-2017	4,359.973	4,360.000	4,359.973	99.264	0.000	4,260.709
25-Jul-2017	24-Aug-2017	2,909.992	2,910.000	2,909.992	117.920	0.000	2,792.072
25-Aug-2017	24-Sep-2017	7,150.051	7,150.000	7,150.000	58.784	0.000	7,091.216
25-Sep-2017	24-Oct-2017	7,649.880	7,650.000	7,649.880	83.776	0.000	7,566.104
25-Oct-2017	24-Nov-2017	7,510.010	7,510.000	7,510.000	68.288	0.000	7,441.712

25-Nov-2017	24-Dec-2017	3,759.990	3,760.000	3,759.990	146.080	0.000	3,613.910
25-Dec-2017	31-Dec-2017	1,115.482	1,115.000	1,115.000	32.429	0.000	1,082.571
01-Jan-2018	24-Jan-2018	3,824.513	3,825.000	3,824.513	111.187	0.000	3,713.326
01-Jan-2018	24-Feb-2018	5,900.006	5,900.000	5,900.000	113.344	0.000	5,786.656
25-Feb-2018	24-Mar-2018	8,889.925	8,890.000	8,889.925	121.440	0.000	8,768.485
25-Mar-2018	24-Apr-2018	10,049.931	10,050.000	10,049.931	41.184	0.000	10,008.747
25-Apr-2018	24-May-2018	10,019.994	10,020.000	10,019.994	86.592	0.000	9,933.402
25-May-2018	24-Jun-2018	6,390.014	6,390.000	6,390.000	91.872	0.000	6,298.128
25-Jun-2018	24-Jul-2018	7,060.035	7,060.000	7,060.000	119.328	0.000	6,940.672
25-Jul-2018	24-Aug-2018	2,839.989	2,840.000	2,839.989	103.488	0.000	2,736.501
25-Aug-2018	24-Sep-2018	7,549.948	7,550.000	7,549.948	103.488	0.000	7,446.460
25-Sep-2018	24-Oct-2018	6,059.997	6,060.000	6,059.997	80.256	0.000	5,979.741
25-Oct-2018	24-Nov-2018	5,500.007	5,500.000	5,500.000	111.584	0.000	5,388.416
25-Nov-2018	24-Dec-2018	10,939.948	10,940.000	10,939.948	114.752	0.000	10,825.196

25-Dec-2018	31-Dec-2018	1,340.044	1,339.000	1,339.000	29.216	0.000	1,309.784
Total		157,369.672	157,369.000	157,367.330	2,521.728	0.000	154,845.602

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 /2/. The verification team has checked and confirmed the emission reduction is to be correctly accounted. The total emission reduction is as follow:

Table 4-6 Verified Emission Reductions during this monitoring period

Period			EG _{facility,y} (MWh)	EF (tCO ₂ /MWh)	BE _y (tCO ₂ e)	PE _y (tCO ₂ e)	LE _y (tCO ₂ e)	ER _y (tCO ₂ e)
Year	From	To	A	B	C=A*B	D	E	F=C-D-E
2016	25/12/2016	31/12/2016	260.387	1.1461	298	0	0	298
2017	01/01/2017	31/12/2017	69,449.701	1.1461	79,596	0	0	79,596
2018	01/01/2018	31/12/2018	85,135.515	1.1461	97,573	0	0	97,573
Total			154,845.602	/	177,467	0	0	177,467

Comparison of ERs

Based on the above assessment, CCSC can conclude that the emission reduction during the monitoring period from 25/12/2016 to 31/12/2018 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 177,467 tCO₂e. Compared with the estimated emission reductions under the same days of 737 from 25/12/2016 to 31/12/2018 in the registered VCS-PD /3/, 238,660 (=118,197*737/365) tCO₂e, the verified emission reduction is 25.64% 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	1) $M_{main,export,y}$ 2) $M_{main,import,y}$ 3) $m_{i,export,y}$ 4) $M_{10kv,import,y}$
Monitoring method	The quantity of electricity exported to the grid ($M_{main,export,y}$ and $m_{i,export,y}$) and electricity imported from the grid ($M_{main,import,y}$ and $M_{10kv,import,y}$) by the project are measured by meters.
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 approved revised monitoring plan.
Calibration cover the monitoring period	The verification team confirms that the validity period of all conducted calibrations covers this monitoring period from 25/12/2016 to 31/12/2018.
Data reported	Through cross checking with the sale receipts/8/, 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 /2/. Monitoring data have been cross-checked with the 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 “Jilin Da’ an Dagangzi Wind Power Project Phase II”. The verification was performed based on the requirements set by Verified Carbon Standard (VCS) Version 4, as well as criteria given to provide for consistent project operations, monitoring and reporting. This verification covers the period from 25/12/2016 to 31/12/2018 inclusive.

In the course of the verification 1 Corrective Action Request (CAR), no Clarification Request (CL) and no forward request (FAR) was raised. The verification is based on the VCS-MR /6/, the VCS-PD /3/, approved revised monitoring plan, 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 approved revised monitoring plan 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 /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 approved revised monitoring plan and the approved methodology i.e. ACM0002 (version 07.0) /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 25/12/2016 to 31/12/2018

Verified GHG emission reductions and removals in the above verification period:

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
25/12/2016~31/12/2016	298	0	0	298
01/01/2017~31/12/2017	79,596	0	0	79,596
01/01/2018~31/12/2018	97,573	0	0	97,573
Total	177,467	0	0	177,467

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 ₂ e	Carbon Dioxide Equivalent
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
NECPG	Northeast 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 28/05/2021
/2/	Climate Bridge (Shanghai) Ltd., ER calculation spreadsheet Version 1.0 dated 28/05/2021
/3/	Jilin CGN Wind Power Co., Ltd., The registered VCS-PD dated 28/09/2010
/4/	EcoSecurities Group PLC, The registered CDM PDD Version 5.0 dated 18/02/2010
/5/	TÜV SÜD INDUSTRIE SERVICE GMBH Registered Validation Report No. 1113897 dated 25/02/2010
/6/	Climate Bridge (Shanghai) Ltd., VCS Monitoring report Version 1.1 dated 16/06/2021
/7/	Monthly reading records of the electricity measured by meter during this monitoring period
/8/	Sale receipts issued by the grid company during this monitoring period
/9/	The explanation document on 10kV line
/10/	Calibration reports of the meters
/11/	VERRA, VCS Standard, version 4.1
/12/	CDM Executive Board, ACM0002 (version 07.0)
/13/	VERRA, Monitoring Report Template Form Version 4.0
/14/	VERRA, VCS Program Guide Version 4.0
/15/	VERRA, Registration & Issuance Process Version 4.0

/16/	China Electrical Power Yearbook 2000~2006
/17/	Chinese DNA, 2007 Baseline Emission Factors for Regional Power Grids in China
/18/	China National Economic Trading Commission, Technical Administrative Code of Electric Energy Metering
/19/	Questionnaire survey
/20/	Shenzhen CTI International Certification Co., Ltd, Verification Report for 5 th CER issuing Version 01 dated 28/08/2017
/21/	Bureau Veritas Certification Holding SAS, Verification Report for 1 st VCU issuing Report No: BVC/China-VCS7027 dated 29/11/2010
/22/	Qualification certificate of the meter calibration entity, issued on 31/12/2013 and 31/12/2017, and is valid until 30/12/2021.

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

Table 1. CL from this verification

CL ID	N/A	Section no.	N/A	Date: N/A
Description of CL				
N/A				
Project participant response				Date: N/A
N/A				
Documentation provided by project participant				
N/A				
DOE assessment				Date: N/A
N/A				

Table 2. CAR from this verification

CAR ID	CAR-1	Section no.	5.1	Date: 09/06/2021
Description of CAR				
There are no receipts to prove the quantity of electricity supplied to the grid during the monitoring period (25/12/2016-31/12/2016, 01/01/2017-24/01/2017, 25/12/2017-31/12/2017, 01/01/2018-24/01/2018 and 25/12/2018-31/12/2018).				
Project participant response				Date: 09/06/2021
The electricity from 25th in December to 24th in January of each year is divided into two periods (period from 25th to 31st in December and the other period from 1st to 24th in January), and the electricity from 25th to 31st in December of each year is from daily meter recordings and then added into December. These electricity data is approved by the local grid company, and the evidence has been provided.				

Documentation provided by project participant	
The receipts of the monitoring period (25/12/2016-31/12/2016, 01/01/2017-24/01/2017, 25/12/2017-31/12/2017, 01/01/2018-24/01/2018 and 25/12/2018-31/12/2018)	
DOE assessment	Date: 25/06/2021
The verification team has checked the VCS Monitoring report Version 1.1 dated 16/06/2021 with Sale receipts. CCSC confirms the data is consistent. Therefore, CAR-1 is closed successfully.	

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				