



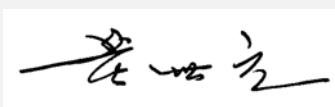
JILIN DA'AN DAGANGZI WIND POWER PROJECT PHASE II



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(CCSC)

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Prepared By	China Classification Society Certification Co., Ltd. (CCSC)
Contact	40, Dong Huang Cheng Gen Nan Jie, Beijing, 100006, P.R. China, Tel: + 86 10 5631 3595 Email: ccscbj_yf@c.ccs.org.cn www.ccs-c.com.cn
Approved By	Mr. HUANG Shiyuan, Chairman of the Board 
Work Carried Out By	Team Leader: Sun Chunlin Team Member: Chen Wenxuan, Li Qiang, Ding Yang, Wang Guan Technical Reviewer: Liu Ruyun, Xie Fengjun

Summary:

China Classification Society Certification Co., Ltd. (CCSC), commissioned by Jilin CGN Wind Power Co., Ltd., has performed the periodic verification of Jilin Da'an Dagangzi Wind Power Project Phase II (hereafter referred to as "the project") covering the monitoring period from 01-January-2021 to 31-December-2021 (first and last days included) corresponding to the second crediting period from 01-January-2019 to 31-December-2028, 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 start date of electricity generation is 16-December-2008 and registered as a CDM project on 09-March-2010 with reference No. 2586 (<https://cdm.unfccc.int/Projects/DB/TUEV-SUED1242408811.21/view?cp=1> <https://cdm.unfccc.int/Projects/DB/TUEV-SUED1242408811.21/view>). After conduct the project validation under VCS Standard Version 2007.1, the project was allocated with VCS ID 548 (<https://registry.terra.org/app/projectDetail/VCS/548>). The project's first crediting period under VCS is from 01-January-2009 to 31-December-2018. (first and last days included) and the second crediting period is from 01-January-2019 to 31-December-2028 (first and last days included), with

CDM methodology ACM0002 (Version 20.0) “Grid-connected electricity generation from renewable sources”.

Before the verification for this monitoring period, several periodic verifications of the project were completed and corresponding CERs or VCUs were issued successfully. The project has applied for the issuance of CERs during the monitoring period 09-March-2010~24-February-2011, 25-February-2011~24-April-2012, 25-April-2012~24-September-2012, 25-September-2012~31-December-2012, 01-January-2013~24-December-2016, and VCUs during the monitoring period 01-January-2009~08-March-2010, 25-December-2016~31-December-2018, 01-January-2019~31-December-2020. 561,051 tCO₂ and 492,616 tCO₂ were issued as CERs and VCUs respectively. These issued credits have been verified.

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

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

There are no restrictions of uncertainty with the verification.

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

- All operations of the project are implemented and installed as planned and described in the validated Project Description.
- The monitoring plan is in accordance with the applied approved CDM methodology, i.e., ACM0002 (Version 20.0) “Grid-connected electricity generation from renewable sources”.
- The implementation of monitoring follows the 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 02 dated 09-August-2022).

In conclusion, it is CCSC’s opinion that the project “Jilin Da’an Dagangzi Wind Power Project Phase II”, as described in the MR (version 02 dated 09-August-2022), meets all relevant requirements for VCS and all relevant host Party criteria. Hence, CCSC is able to certify that the emission reductions from the project during the monitoring period from 01-January-2021 to 31-December-2021 amount to 88,818 tCO₂e and requests issuance of the equivalent VCUs.

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1 INTRODUCTION

1.1 Objective

Jilin CGN Wind Power Co., 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 01-January-2021 to 31-December-2021 (first and last days included), based on the requirement of VCS Standard (version 4.3)/11/ as well as criteria to provide for consistent project operations, monitoring and reporting.

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

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

- a) Ensure that the project activity has been implemented and operated as per the approved 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 /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 monitoring plan and the approved methodology /12/;
- d) Evaluate the data recorded and stored as per the monitoring methodology /12/.

1.2 Scope and Criteria

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

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

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

1.3 Level of Assurance

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

1.4 Summary Description of the Project

Jilin Da'an Dagangzi Wind Power Project Phase II 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-March-2008. The first turbine was commissioned on 16-December-2008, and all wind turbines of this project were put into operation on 15-February-2009. The expected operation period of the project is 20 years.

The estimated annual average GHG emission reduction from the project is 94,250 tCO₂e. During the monitoring period from 01-January-2021 to 31-December-2021, total net electricity supplied to the grid is 97,186.738 MWh. The total verified carbon units (VCUs) achieved in the monitoring period are 88,818 tCO₂e, which has been verified by on-site inspection, and checking the related documentations, interview with the project implementer.

The project generates electricity by wind to the grid and replacing equivalent electricity generated by fossil fuel fired power plants connected into Northeast China Power Grid (NECPG) thus the project generates GHG emission reductions and produces financial, social and environmental benefits. The project has resulted in the local sustainable development as described in Section 4.1 of this Verification Report. The project is a registered CDM project with reference No. 2586. After conduct the project validation under VCS program, the project was allocated with VCS ID 548 and the emission reductions have been certified as verified carbon units (VCUs) for this monitoring period.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The overall verification, from 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 approved VCS-PD /3/, the validation report /5/, the previous verification reports, the applied monitoring methodology /12/, the VCS monitoring report (VCS-MR) /1/ and supporting documents was conducted by the verification team. The aim of the desk review of the documentation is to verify the completeness of the data and the information presented, to carry out the compliance check of the VCS-MR /1/ with respect to the monitoring plan and the applied methodology /12/. Particular attention was given to the quality of the metering equipment including calibration requirements /18//19/, the monitored data and its evidence, and the emission reduction calculation. The evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions was also conducted.

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

2.3 Interviews

On 20-July-2022, CCSC performed an on-site assessment with PP 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 /1/. This included the review of the project operation based on the evidence of on-site assessment and presented documents.

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

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

Date: 20-July-2022	
Interview topics	Interviewed Organizations and persons
--The status of VCS project implementation. -- Any changes of the VCS project. -- The project on-site inspection -- The evidences of construction status and operation of key equipment, parameters monitoring and data processing activities, monitor equipment and calibration. -- Monitoring data. -- Quality Management; organizational structure, responsibilities and competencies; Internal QA/QC Management procedures and document control. -- Compliance with National Laws and Regulations.	Jilin Da'an Dagangzi Wind Farm Shi Hongfei, Technical Supervisor CGN Carbon Asset Management (Beijing) Co., Ltd. Liu Yang, VCS Project Manager
-- The impact of the project activity. -- The complaint by local stakeholders. -- The stakeholder consultation during the operation of the project activity.	Da'an City Ecology and Environment Bureau Ge Yongheng Local Stakeholders

Date: 20-July-2022	
Interview topics	Interviewed Organizations and persons
	Wang Xiaobo Zhang Li
-- Preparation of Monitoring Report. -- Compliance of the monitoring plan with the monitoring methodology. -- Compliance of monitoring with the monitoring plan -- Assessment of data and calculation of GHG emission reductions.	CGN Carbon Asset Management (Beijing) Co., Ltd. Liu Yang, VCS 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 approved 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 monitoring plan;

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

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

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

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

2.5 Resolution of Findings

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

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

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

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

- a) Non-compliance with the monitoring plan or methodology are found in monitoring and reporting and has not been sufficiently documented by the project proponents, 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 proponents;
- 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 proponents.

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 CL that have been raised during the current verification.

2.5.1 Forward Action Requests

No Forward Action Requests were raised during the current verification.

2.6 Eligibility for Validation Activities

The VVB that "China Classification Society Certification Co., Ltd. (CCSC)" commissioned by Jilin CGN Wind Power Co., Ltd. is one of eligible VVBs listed on the VERRA website (<https://verra.org/project/vcs-program/validation-verification/>), and it holds the accreditation for validation/verification for the sectoral scope: "1. Energy (renewable/non-renewable)", to which the project 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 has not been registered or is seeking registration under any other GHG programs which has been checked during the validation process.

The project started operation on 16-December-2008 and has been registered as a CDM project under the UNFCCC with Ref. 2586. After conduct the project validation under VCS program, the project was allocated with VCS ID 548.

The project's first crediting period under VCS is from 01-January-2009 to 31-December-2018. The validation report of the renewal of crediting period has been issued after the end of the previous project crediting period and within two years after the end of the previous project crediting period, so the renewal of crediting period of this project has been completed successfully. The second crediting period is from 01-January-2019 to 31-December-2028, which is corresponding to this monitoring period.

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

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

Via on-site interview with the project implementer, It is verified that the implementation of the project is consistent with the description in the VCS PD /3/. Through checking the UNFCCC website of the project (Ref. 2586), it is confirmed that no GHG emission reductions have

been issued or requested for issuance under the CDM program during this monitoring period from 01-January-2021 to 31-December-2021. and the monitoring system is fully functional to generate Verified Carbon Units (VCUs) without any double counting for this monitoring period from 01-January-2021 to 31-December-2021.

3.2 Methodology Deviations

There is no methodology deviation applied to this monitoring period.

3.3 Project Description Deviations

There is a deviation for crediting period. The end date of project crediting period was updated from 08-March-2010 to 31-December-2018 and it was approved by VERRA. Thus, the project first crediting period under VCS was updated to from 01-January-2009 to 31-December-2018 (both days included).

Through the site visit interview with project owner, it is confirmed that the start date of electricity generation is 16-December-2008, which is the project start date according to the requirement of VCS. The VCS crediting period was determined as from 01-January-2009 to 08-March-2010, which has been confirmed based on the registered PD, validation report of this project and previous VCS Verification Report. VCS Standard (version 4.3) requires that *registered projects and projects that complete validation on or before 19 March 2020 remain eligible to apply the crediting period requirements under VCS Version 3*. Moreover, the latest version 3.7 of VCS Version 3 /33/ requires that the project crediting period shall be a maximum of ten years which may be renewed at most twice.

As the project was also registered as a CDM project with a seven-year twice renewable project crediting period, it is not eligible for VCU issuance beyond the end of those 21 years (08-March-2031).

According to the VCS PD for the 2nd crediting period and the validation report of this project, the validation report of the renewal of crediting period has been issued after the end of the previous project crediting period and within two years after the end of the previous project crediting period, so the renewal of crediting period of this project has been completed successfully. Therefore, the first VCS crediting period of the project is from 01-January-2009 to 31-December-2018. The second VCS crediting period from 01-January-2019 to 31-December-2028, which is corresponding to this monitoring period.

Conclusion

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

Through the onsite visit, interviewing the project developer and reviewing the project operation, CCSC confirmed that the project was implemented to generate electricity by wind to the grid consists of 33 wind turbines with unit capacity of 1500 kW, 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), which is consistent with that in VCS PD /3/. The project achieved 88,818 tCO₂e emission reduction by replacing electricity generated by fossil fuel fired power plants connected into NECPG during this monitoring period.

The project can reduce GHG emissions by generate electricity by wind to the grid and replacing equivalent electricity generated by fossil fuel fired power plants connected into NECPG. During this monitoring period, the project has generated the total net electricity supply of 97,186.738 MWh. The total verified carbon units (VCUs) achieved in the monitoring period are 88,818 tCO₂e, which has been verified by on-site inspection, and checking the related documentations, interview with the project implementer.

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

The project began to construct on 10-March-2008. The Project began generating electricity on 16-December-2008.

This verification covers the period from 01-January-2021 to 31-December-2021.

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

Through the on-site visit, the power generating technology, installed capacity, technical specifications of wind turbine and generator, and power delivering systems indicated in the 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 VCS PD /3/. During this monitoring period, the monitoring of this project activity was in compliance with the VCS PD. 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 VCS 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 wheel	m	61.5
Lifetime	Years	20

The project been registered as a CDM project under the UNFCCC with Ref. 2586, which is verified by checking the dedicated UNFCCC website (<https://cdm.unfccc.int/Projects/DB/TUEV-SUED1242408811.21/view?cp=1> <https://cdm.unfccc.int/Projects/DB/TUEV-SUED1242408811.21/view>). After conduct the project validation under VCS program, the project was allocated with VCS ID 548 (<https://registry.terra.org/app/projectDetail/VCS/548>). The project has applied for the issuance of CERs during the monitoring period 09-March-2010~24-February-2011, 25-February-2011~24-April-2012, 25-April-2012~24-September-2012, 25-September-2012~31-December-2012, 01-January-2013~24-December-2016, and VCU during the monitoring period 01-January-2009~08-March-2010, 25-December-2016~31-December-2018, 01-January-2019~31-December-2020. 561,051 tCO₂ and 492,616 tCO₂ were issued as CERs and VCUs respectively. These issued credits have been verified.

By checking UNFCCC website (<https://cdm.unfccc.int/Projects/DB/TUEV-SUED1242408811.21/view?cp=1>), there are no CDM issuance during this monitoring period from 01-January-2021 to 31-December-2021. Furthermore, CCSC checked public information from the REC Mechanism database of China, IREC Mechanism database, JI database, Chinese Emission Trading System, Gold Standard Registry and interviewed with project owner during site visit, it is confirmed that except CDM and VCS scheme, the project has not been participated or been rejected under any other GHG programs since validation or previous verification.

Besides, based on VVB's local expertise, as per "Notice on Strengthening Enterprise Greenhouse Gas Emission Report Management" /20/ issued by Ministry of Ecology and Environment of P.R.China, China has a national emissions trading scheme only cover the high-emission industries, including thermal power generation, petrochemical, chemical, building materials, iron and steel, non-ferrous, paper, aviation and other key emission industries that emitted at least 26,000 tons of CO₂e/year (https://www.mee.gov.cn/xxgk2018/xxgk/xxgk02/202101/t20210105_816131.html) . By checking "List of key emissions in the national carbon emissions transaction quota management in 2019-2020" (https://www.mee.gov.cn/xxgk2018/xxgk/xxgk03/202012/t20201230_815546.html) /21/ issued by Ministry of Ecology and Environment of P.R.China, the project owner is not included in the mandatory emission control scheme and thus no emission cap was enforced for the project activity. Hence, it is confirmed that the emission reductions will not be double counted.

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

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

- SDG 7: Providing clean and renewable energy source and displacing the power generation of fossil fuel power plants, reducing pollution emissions caused by coal burning significantly, thus mitigating the air pollution and its adverse impacts on human health, promoting sustainable economic development in local area. During this monitoring period, the renewable energy supplied to NECPG was 97,186.738 MWh. By checking UNFCCC website (<https://cdm.unfccc.int/Projects/DB/TUEV-SUED1242408811.21/view?cp=1>), there are no CDM issuance during this monitoring period from 01-January-2021 to 31-December-2021. Furthermore, CCSC checked public information from the REC Mechanism database of China, IREC Mechanism database, JI database, Chinese Emission Trading System, Gold Standard Registry and interviewed with project owner during site visit, it is confirmed that except CDM and VCS scheme, the project has not been participated or been rejected under any other GHG programs since validation or previous verification.

(<https://registry.verra.org/app/projectDetail/VCS/548>), it is confirmed that since operation of the project activity, the cumulative renewable energy supplied to NECPG was 97,186.738 MWh. *(The cumulative impact is calculated by summing the current project contributions with all impacts included in previously approved VCS monitoring reports or Sustainable Development Contribution Reports, so it is the same as that in current monitoring period from 01-January-2021 to 31-December-2021).*

- SDG 8: Providing direct and indirect employment opportunities during construction and operation period, which promotes sustained, inclusive and sustainable economic growth, full and productive employment and decent work for local residents. By checking staff roaster provided by project proponent, it is confirmed that since operation of the project activity, 12 long term working opportunities are provided to 9 men and 3 women.

- SDG 13: Reducing greenhouse gas emissions compared to a business-as-usual scenario. During this monitoring period, the emission reductions achieved were 88,818 tCO₂e. By checking UNFCCC website (<https://cdm.unfccc.int/Projects/DB/TUEV-SUED1242408811.21/view?cp=1>) and VERRA website (<https://registry.verra.org/app/projectDetail/VCS/548>), it is confirmed that since operation of the project activity, the cumulative emission reductions achieved are 88,818 tCO₂e. *(The cumulative impact is calculated by summing the current project contributions with all impacts included in previously approved VCS monitoring reports or Sustainable Development Contribution Reports, so it is the same as that in current monitoring period from 01-January-2021 to 31-December-2021).*

In the Monitoring Report (version 01) of this VCS monitoring period, SD contributions of this project was not detailed described and the relevant evidence also was not provided to VVB. Therefore, CL-1 was raised. Afterwards, the monitoring report was updated, in which detailed SDG targets and contributions were supplemented by PP and verified to be consistent with the relevant evidences. The evidence for SDG 8 that a statement from PP about number of employee and salary during the operation period has been provided to VVB as a separate supporting document because of project proponent's confidentiality requirement. The statement from PP about the number of employee and salary during the operation period is consistent with the information in MR. Thus, CL-1 was closed successfully.

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

- a) The monitoring period from 01-January-2021 to 31-December-2021 is in compliance with the second VCS crediting period and continued with previous monitoring period, which complies with the requirement of the VCS Standard Version 4.3 /11/;

- b) No project design change occurred during this monitoring period and the project was implemented in accordance the VCS PD /3/;
- c) The monitoring plan is implemented completely and monitoring system (i.e., process and schedule for obtaining, recording, compiling and analyzing the monitored data and parameters) is appropriate.
- d) The project has contributed to sustainable development during this monitoring period and over project lifetime;
- e) The GHG emission reductions or removals generated by the project have not included in an emissions trading program or any other mechanism that includes GHG allowance trading;
- f) The project has not sought or received another form of GHG-related environmental credit, including renewable energy certificates, during this monitoring period. None of the credits will be claimed in the same period;
- g) The GHG emission reductions generated by the project during this monitoring period (01-January-2021 to 31-December-2021) 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 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: (as in the monitoring plan of PD):	EG _{facility,y} The net electricity supplied to the grid by the project in monitoring period y (MWh/year)
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 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 as described in the approved monitoring plan. For details see Table 4-2.
Calibration frequency /interval:	Annually as per relevant sectoral standards in China
Is the calibration interval in line with the monitoring plan of the PD? If the PD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	Yes.
Company performing the calibration:	See Table 4-2
Did calibration confirm proper functioning of monitoring equipment? (Yes / No):	Yes.
Is(are) calibration(s) valid for the whole reporting period?	Yes. For details see Table 4-2.
If applicable, has the reported data been cross-checked with other available data?	Yes, the reported data has been cross-checked with Electricity Sales and Purchase Receipts in line with approved 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 registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	Not applicable.
Monitoring Parameter Requirement	Assessment/ Observation by the VVB

Data / Parameter: (as in monitoring plan of PD):	$M_{main,export,y}$ Quantity of the electricity supplied to the grid and measured by the meter M_{main} (or M_{backup}) during the monitoring period y (MWh/year)
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 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 approved monitoring plan. For details see Table 4-2.
Calibration frequency /interval:	Annually as per relevant sectoral standards in China
Is the calibration interval in line with the monitoring plan of the PD? If the PD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	Yes.
Company performing the calibration:	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 registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	Not applicable.
Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in monitoring plan of PD):	$M_{main,import,y}$ Quantity of the electricity supplied to the grid and measured by the meter M_{main} (or M_{backup}) during the monitoring period y (MWh/year)
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 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 approved monitoring plan. For details see Table 4-2.
Calibration frequency /interval:	Annually as per relevant sectoral standards in China
Is the calibration interval in line with the monitoring plan of the PD? If the PD does not specify the frequency of calibration, does the selected	Yes.

frequency represent good monitoring practise?	
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 Electricity Sales and Purchase Receipts in line with the approved 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 registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	Not applicable.
Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in monitoring plan of PD):	$m_{i,export,y}$ Quantity of the electricity supplied to the grid and measured by the meters m_i during the monitoring period y (MWh/year) i is the number of the meters which installed at its on-site 35kV low voltage side of the 35kV-to-220kV transformer. $i=1\sim14$
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 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 meter is no lower than 0.5S as described in the approved monitoring plan. For details see Table 4-2.
Calibration frequency /interval:	Annually as per relevant sectoral standards in China
Is the calibration interval in line with the monitoring plan of the PD? If the PD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	Yes.
Company performing the calibration:	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 registered	Not applicable.

monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	
Monitoring Parameter Requirement	Assessment/ Observation by the VVB
Data / Parameter: (as in the monitoring plan of PD):	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/year)
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 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 meter is 1.0 as described in the approved monitoring plan. For details see Table 4-2.
Calibration frequency /interval:	Annually as per relevant sectoral standards in China
Is the calibration interval in line with the monitoring plan of the PD? If the PD does not specify the frequency of calibration, does the selected frequency represent good monitoring practise?	Yes.
Company performing the calibration:	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 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 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 “Grid connected electricity generation from renewable sources” (Version 20.0), the net electricity supplied to NECPG by the project is $EG_{\text{facility},y}$, which is used for the calculation of baseline emission. Net electricity supplied by the project to the grid is the difference between the electricity exported and the electricity imported, 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 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 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} , m_1 , m_2 , m_3 , m_4 , m_5 , m_6 , m_7 , m_8 , m_9 , m_{10} , m_{11} , m_{12} , m_{13} and m_{14} . The qualification certificates of the meter calibration entities were issued by Jilin Quality and Technology Supervision Bureau on 31-December-2017 and 31-December-2021, and is valid until 30-December-2025.

Meters list is as below:

Meter	Owner	Monitor	Site
M_{main}	Power company	The total electricity of the all five projects exported to the	At 220kV high voltage side of the 35kV-to-220kV

		grid ($M_{main,export,y}$) and imported from the grid ($M_{main,import,y}$).	transformer
M_{backup}	Power company	All the electricity 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 electricity imported of all five projects from grid through the 10kV spare line.	At enter of the spare 10kV line connect the grid
m_1	Project owner	Phase I project	At power plant 35kV low voltage side of the 35kV-to-220kV transformer
m_2	Project owner	Phase I project	At power plant 35kV low voltage side of the 35kV-to-220kV transformer
m_3	Project owner	Phase I project	At power plant 35kV low voltage side of the 35kV-to-220kV transformer
m_4	Project owner	The Project	At power plant 35kV low voltage side of the 35kV-to-220kV transformer
m_5	Project owner	The Project	At power plant 35kV low voltage side of the 35kV-to-220kV transformer
m_6	Project owner	The Project	At power plant 35kV low voltage side of the 35kV-to-220kV transformer
m_7	Project owner	Phase III project	At power plant 35kV low voltage side of the 35kV-to-220kV transformer
m_8	Project owner	Phase III project	At power plant 35kV low voltage side of the 35kV-to-220kV transformer
m_9	Project owner	Phase III project	At power plant 35kV low voltage side of the 35kV-to-220kV transformer
m_{10}	Project owner	Phase IV project	At power plant 35kV low voltage side of the 35kV-to-220kV transformer
m_{11}	Project owner	Phase IV project	At power plant 35kV low voltage side of the 35kV-to-220kV transformer
m_{12}	Project owner	Phase IV project	At power plant 35kV low voltage side of the 35kV-to-220kV transformer
m_{13}	Project owner	Phase V project	At power plant 35kV low voltage side of the 35kV-to-220kV transformer

m ₁₄	Project owner	Phase V project	At power plant 35kV low voltage side of the 35kV-to-220kV transformer
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In summary, the verification team is able to verify that the accuracy the monitoring equipment was set according to the monitoring plan and relevant sectoral standard of China.

Table 4-2 Verified calibration information of monitoring meters

Meters	Type	Accuracy	Serial number	Frequency	Calibration date	Validity date	Calibration Entity
M _{main}	ZMD40 2CT44	0.2S	96628173	Annually	10-02-2020	09-02-2021	Jilin Electric Power Research Institute Co., Ltd.
					09-02-2021	08-02-2022	
M _{backup}	ZMD40 2CT44	0.2S	94348626	Annually	10-02-2020	09-02-2021	
					09-02-2021	08-02-2022	
m ₁	DTSD3 41	0.5S	12101397 47000006	Annually	10-02-2020	09-02-2021	
					09-02-2021	08-02-2022	
m ₂	DTSD3 41	0.5S	20070865 050026	Annually	10-02-2020	09-02-2021	
					09-02-2021	08-02-2022	
m ₃	DTSD3 41	0.5S	20070865 050027	Annually	10-02-2020	09-02-2021	
					09-02-2021	08-02-2022	
m ₄	DTSD3 41	0.2S	20070712 010071	Annually	10-02-2020	09-02-2021	
					09-02-2021	08-02-2022	
m ₅	DTSD3 41	0.5S	20070865 050025	Annually	10-02-2020	09-02-2021	
					09-02-2021	08-02-2022	
m ₆	DTSD3 41	0.5S	20070865 050021	Annually	10-02-2020	09-02-2021	

					09-02-2021	08-02-2022	
m ₇	DTSD3 41	0.5S	20080846 040146	Annually	10-02-2020	09-02-2021	
					09-02-2021	08-02-2022	
m ₈	DTSD3 41	0.5S	20080846 040145	Annually	10-02-2020	09-02-2021	
					09-02-2021	08-02-2022	
m ₉	DTSD3 41	0.5S	20080846 040142	Annually	10-02-2020	09-02-2021	
					09-02-2021	08-02-2022	
m ₁₀	DTSD3 41	0.5S	20080846 040141	Annually	10-02-2020	09-02-2021	
					09-02-2021	08-02-2022	
m ₁₁	DTSD3 41	0.5S	20080846 040151	Annually	10-02-2020	09-02-2021	
					09-02-2021	08-02-2022	
m ₁₂	DTSD3 41	0.5S	20080846 040143	Annually	10-02-2020	09-02-2021	
					09-02-2021	08-02-2022	
m ₁₃	DTSD3 41	0.5S	11100895 76000011	Annually	10-02-2020	09-02-2021	
					09-02-2021	08-02-2022	
m ₁₄	DTSD3 41	0.5S	20080846 040150	Annually	10-02-2020	09-02-2021	
					09-02-2021	08-02-2022	
M _{10kV}	DTSD3 18	1.0	60014972	Annually	10-02-2020	09-02-2021	Da'an Agricultural and Electrical Co., Ltd.
					09-02-2021	08-02-2022	

The verification team confirmed that there is no proposed or actual change to the monitoring plan in the approved VCS PD during this monitoring period. All required equipment and

procedures are available and implemented in an appropriate manner. All necessary monitoring instruments are installed. All required instruments including standby and operating procedures for the same have been implemented in an appropriate manner. The project is completely operational and the same has been confirmed on-site. Neither mistakes nor malfunction on meters have been observed during this monitoring period.

4.2 Safeguards

4.2.1 No Net Harm

By checking the EIA summary and conclusion provided in the registered CDM PDD 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, so 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 on-site assessment. The project is renewable energy project and thus no net harm observed in air or water quality on-site.

4.2.2 Local Stakeholder Consultation

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

According to the registered VCS PD and the approved VCS PD for the second crediting period, the local stakeholder's consultation was done in February 2008 through distributing a questionnaire, which was designed to be easily filled in. 30 copies of questionnaire were distributed, and 30 pieces of reply were received.

All stakeholders gave a positive opinion to the project, and supported the construction of the project. The results of the questionnaires are as follows:

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 on-site assessment and check the registered VCS PD and the approved VCS PD for the second crediting period.

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:

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

Where:

- $EG_{\text{facility},y}$ = The net electricity supplied to the grid by the project in year y;
- $m_{i,\text{export},y}$ = Quantity of the electricity supplied to the grid and measured by the meters m_i during the monitoring period y;
- $M_{\text{main},\text{export},y}$ = Quantity of the electricity supplied to the grid and measured by the meter M_{main} (or M_{backup}) during the monitoring period y;
- $M_{\text{main},\text{import},y}$ = Quantity of the electricity imported from the grid and measured by the meter M_{main} (or M_{backup}) during the monitoring period y
- $M_{10\text{kv},\text{import},y}$ = Quantity of the electricity imported from the grid and measured by the meter $M_{10\text{kv}}$ 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. $i = 1 \sim 14$.

According to the VCS-MR /1/ of the project and the approved monitoring plan, The electricity exported ($m_{i,\text{export},y}$ and $M_{\text{main},\text{export},y}$) and imported ($M_{\text{main},\text{import},y}$ and $M_{10\text{kv},\text{import},y}$) are both continuously monitored through the meter which is both agreed by the grid company and the project owner. The monthly monitoring records of the project have been verified during on-site assessment.

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

Parameter determined ex-ante:

$EF_{grid,CM,y}$: Combined margin baseline emission factor of the NECPG (tCO₂e/MWh)

According to the VCS PD /3/, the $EF_{grid,CM,y}$ is ex-ante determined as 0.9139 tCO₂/MWh for NECPG over the second crediting period. The emission factors used in this monitoring report have been verified against the approved VCS PD /3/ and found them to be consistent.

4.4.2 Assessment Data and Calculation

It was verified that the project is a renewable energy project. Therefore, the project emission of the project is zero under ACM0002 (version 20.0) /12/ (PE_y=0).

The project is a new renewable energy project. Therefore, no leakage needs to be considered for the project according to the methodology ACM0002 (version 20.0) /12/. (LE_y=0).

Since the project emission and the leakage emission has been justified as zero under ACM0002 (version 20.0) /12/, the calculation of the emission reductions simply involves the calculation of the baseline emissions.

Formula 1:

$$ER_y = BE_y - 0 - 0 = EG_{facility,y} \times EF_{grid,CM,y} \quad (1)$$

Where:

ER_y : emission reductions in year y (tCO₂)

BE_y : the baseline emissions (tCO₂)

$EG_{facility,y}$: the electricity supplied by the project activity to the grid (MWh)

$EF_{grid,CM,y}$: baseline emissions factor (tCO₂e/MWh)

Formula 2:

$$EG_{facility,y} = M_{main,export,y} \times \frac{\sum_{i=1}^{14} m_{i,export,y}}{\sum_{i=1}^6 m_{i,export,y}} - M_{main,import,y} - M_{10kv,import,y} \quad (2)$$

Following the approach described above, electricity data were verified as below:

Table 4-3 The verified electricity exported to the grid measured by meters M_{main} and m_i
(Unit: MWh)

Period	Electricity supplied by phase I project monitored by m_1 , m_2 and m_3	Electricity supplied by phase II project monitored by m_4 , m_5 and	Electricity supplied by phase III project monitored by m_7 , m_8 and m_9	Electricity supplied by phase IV project monitored by m_{10} , m_{11} and	Electricity supplied by phase V project monitored by m_{13} and m_{14}	Total electricity supplied to the grid monitored by the meters installed on	Electricity supplied to the grid monitored by the main meter
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	(m _{1,export,y} +m _{2,export,y} +m _{3,export,y})	m ₆ (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 ₁₂ (m _{10,export,y} +m _{11,export,y} +m _{12,export,y})	(m _{13,export,y} +m _{14,export,y})	the 35kV lines (m _{1,export,y} +...+m _{14,export,y})	(M _{main,export,y})
	MWh	MWh	MWh	MWh	MWh	MWh	MWh
	A1	A2	A3	A4	A5	A	B
01-01-2021 to 24-01-2021	4808.58	5009.34	5220.39	4879.77	4564.56	24482.64	24119.744
25-01-2021 to 24-02-2021	8559.18	8958.60	9312.66	8846.88	7680.12	43357.44	42590.240
25-02-2021 to 24-03-2021	9433.83	10396.05	10653.72	10540.74	8949.08	49973.42	49629.888
25-03-2021 to 24-04-2021	11469.78	12251.61	11518.71	11235.00	9927.96	56403.06	55129.888
25-04-2021 to 24-05-2021	10762.08	11481.12	10605.42	10480.05	9793.56	53122.23	52230.112
25-05-2021 to 24-06-2021	6954.57	7242.06	6831.09	6593.79	5991.72	33613.23	33399.872
25-06-2021 to 24-07-2021	4954.11	5264.28	4708.62	5169.15	4607.68	24703.84	24230.272
25-07-2021 to 24-08-2021	4786.53	5087.46	4813.83	5369.91	4364.36	24422.09	24069.760
25-08-2021 to 24-09-2021	5131.14	5290.74	5347.86	5521.32	4380.60	25671.66	25340.128
25-09-2021 to 24-10-2021	8156.82	8721.09	8417.64	9060.45	7363.72	41719.72	41280.096
25-10-2021 to 24-11-2021	8579.76	9494.10	8693.58	9304.26	6730.36	42802.06	41800.000
25-11-2021 to 24-12-2021	6080.55	9801.54	10934.91	10110.87	7627.20	44555.07	43659.968
25-12-2021 to 31-12-2021	1354.71	1395.66	1406.79	1431.78	1142.40	6731.34	6635.552
Total	91031.64	100393.65	98465.22	98543.97	83123.32	471557.80	464115.520

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

Period	Electricity imported from the grid monitored by the main meter (M _{main,import,y})		
	Monitoring value	Value on receipts	Conservative value
	MWh	MWh	MWh
	D	E	F=MAX(D,E)
01-01-2021 to 24-01-2021	92.224	92.224	92.224

25-01-2021 to 24-02-2021	100.320	100.320	100.320
25-02-2021 to 24-03-2021	98.208	98.208	98.208
25-03-2021 to 24-04-2021	89.056	89.056	89.056
25-04-2021 to 24-05-2021	61.248	61.248	61.248
25-05-2021 to 24-06-2021	106.304	106.304	106.304
25-06-2021 to 24-07-2021	230.912	230.912	230.912
25-07-2021 to 24-08-2021	156.992	156.992	156.992
25-08-2021 to 24-09-2021	171.424	171.424	171.424
25-09-2021 to 24-10-2021	122.496	122.496	122.496
25-10-2021 to 24-11-2021	149.248	149.248	149.248
25-11-2021 to 24-12-2021	166.496	166.496	166.496
25-12-2021 to 31-12-2021	47.872	47.872	47.872
Total	1592.800	1592.800	1592.800

A spare 10kV line was used for supplying electricity in emergency case that the project fails to generate power in the monitoring plan in VCS PD. The electricity from the spare 10kV line was monitored by the meter M_{10kV}. Currently four other wind power project shares the same substation 220kV transmission line, the spare 10kV line, and all the involved meters. The separate meters have already been installed in the project site presented as the following meter diagram so that the electricity generation can be monitored respectively to calculate the share of this wind power project of the net electricity delivered to the grid at 220kV transformer. By checking the explanation document on 10kV line from Da'an Agricultural and Electrical Co., Ltd./32/, CCSC confirmed that the spare 10 kV line was cut off from 26-December-2007 till now. Therefore, the electricity imported from the grid and measured by the meter M_{10kV} is 0MWh.

Table 4-5 The electricity exported to the grid by the Project (Unit: MWh)

Period	Electricity supplied to the grid by the Project used for ERs calculation		
	Calculated value	Value on receipts	Conservative value
	MWh	MWh	MWh
	$G=B \times A2/A$	H	$I=\min(G:H)$
01-01-2021 to 24-01-2021	4935.089	4940.000	4935.089
25-01-2021 to 24-02-2021	8800.080	8800.000	8800.000
25-02-2021 to 24-03-2021	10324.584	10320.000	10320.000
25-03-2021 to 24-04-2021	11975.058	11980.000	11975.058

25-04-2021 to 24-05-2021	11288.310	11290.000	11288.310
25-05-2021 to 24-06-2021	7196.091	7200.000	7196.091
25-06-2021 to 24-07-2021	5163.365	5160.000	5160.000
25-07-2021 to 24-08-2021	5014.065	5010.000	5010.000
25-08-2021 to 24-09-2021	5222.414	5220.000	5220.000
25-09-2021 to 24-10-2021	8629.191	8630.000	8629.191
25-10-2021 to 24-11-2021	9271.829	9270.000	9270.000
25-11-2021 to 24-12-2021	9604.629	9600.000	9600.000
25-12-2021 to 31-12-2021	1375.800	1380.000	1375.800
Total	98800.503	98800.000	98779.538

Table 4-6 The verified net electricity supplied to the grid by the Project

Period	Net electricity supplied to the grid by the project ($EG_{\text{facility},y}$)			
	Electricity supplied to the grid by the Project used for ERs calculation	Electricity imported from the grid monitored by the main meter ($M_{\text{main},\text{import},y}$)	Electricity imported from the grid via the 10kV line by the meter M10kV ($M_{10\text{kV},\text{import},y}$)	Net electricity supplied to the grid by the project ($EG_{\text{facility},y}$)
	MWh	MWh	MWh	MWh
	I	F	C	J=I-F-C
01-01-2021 to 24-01-2021	4935.089	92.224	0.000	4842.865
25-01-2021 to 24-02-2021	8800.000	100.320	0.000	8699.680
25-02-2021 to 24-03-2021	10320.000	98.208	0.000	10221.792
25-03-2021 to 24-04-2021	11975.058	89.056	0.000	11886.002
25-04-2021 to 24-05-2021	11288.310	61.248	0.000	11227.062
25-05-2021 to 24-06-2021	7196.091	106.304	0.000	7089.787
25-06-2021 to 24-07-2021	5160.000	230.912	0.000	4929.088
25-07-2021 to 24-08-2021	5010.000	156.992	0.000	4853.008
25-08-2021 to 24-09-2021	5220.000	171.424	0.000	5048.576
25-09-2021 to 24-10-2021	8629.191	122.496	0.000	8506.695
25-10-2021 to 24-11-2021	9270.000	149.248	0.000	9120.752
25-11-2021 to 24-12-2021	9600.000	166.496	0.000	9433.504
25-12-2021 to 31-12-2021	1375.800	47.872	0.000	1327.928
Total	98779.538	1592.800	0.000	97186.738

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 4-7 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
2021	01-01-2021	31-12-2021	97186.738	0.9139	88,818	0	0	88,818
Total			97186.738	/	88,818	0	0	88,818

4.4.3 Comparison of ERs

Based on the above assessment, CCSC can conclude that the emission reduction during the monitoring period from 01-January-2021 to 31-December-2021 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 88,818 tCO₂e. Compared with the estimated emission reductions under the same days of 365 from 01-January-2021 to 31-December-2021 in the VCS PD /3/, 94,250 (=94,250*365/365) tCO₂e, the verified emission reduction is 5.76% lower 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 assessment and checking the calibration records of meters, the team confirms that all the monitoring meters meet the rated accuracy level and the calibration frequency meets 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-January-2021 to 31-December-2021.
Data reported	Through cross-checking with the Electricity Sales and Purchase Receipts /25/, the monitoring data can be confirmed as acceptable to calculate emission reductions.

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

4.6 Non-Permanence Risk Analysis

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

5 VERIFICATION CONCLUSION

CCSC has carried out the verification of the project “Jilin Da’an Dagangzi Wind Power Project Phase II”. The verification was performed based on the requirements set by VCS Version 4 /11//13//14//15/, as well as criteria given to provide for consistent project operations, monitoring and reporting. This verification covers the period from 01-January-2021 to 31-December-2021 inclusive.

In the course of the verification 1 Clarification Requests (CL), no Corrective Action Request (CAR) and no forward request (FAR) was raised. The verification is based on the VCS-MR /1/, the VCS PD /3/, ER calculation spreadsheet /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 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 /1/ and other supporting documents provided are complete in accordance with the latest applicable version of the VCS Registration & Issuance Process /15/ and in accordance with the additional requirements stated by VERRA;
- The actual monitoring systems and procedures comply with the monitoring systems and procedures described in the approved monitoring plan and the approved methodology i.e., ACM0002 (version 20.0) /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 01-January-2021 to 31-December-2021

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)
01- January- 2021 to 31- December- 2021	88,818	0	0	88,818
Total	88,818	0	0	88,818

APPENDIX A: ABBREVIATIONS

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction(s)
CL	Clarification request
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
CCSC	China Classification Society Certification Co., Ltd.
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 proponent and relevant background documents have been reviewed or referenced for the periodic verification conclusions.

Ref no.	Reference Document
/1/	CGN Carbon Asset Management (Beijing) Co., Ltd., VCS Monitoring Report version 01 dated 09/03/2022, version 02 dated 09/08/2022
/2/	CGN Carbon Asset Management (Beijing) Co., Ltd., ER calculation spreadsheet version 01 dated 09/03/2022
/3/	VERRA: The VCS PD version 07 dated 21/10/2020
/4/	CTI: Validation report Report number CTI/NB-2020-0928, dated 22/10/2020
/5/	EB website: The registered CDM PDD version 5.0 dated 18/02/2010
/6/	VERRA: The registered VCS PD version 5.0 dated 18/02/2010
/7/	BUREAU VERITAS CERTIFICATION: Verification Report Report No. BVC/CHINA-VR/8209/2010, dated 29/09/2011, MP (09/03/2010 to 24/02/2011) (1st CDM monitoring period)
/8/	BUREAU VERITAS CERTIFICATION: Verification Report Report No. BVC/CHINA-VR/8484/2012, dated 18/07/2012, MP (25/02/2011 to 24/04/2012) (2nd CDM monitoring period)
/9/	BUREAU VERITAS CERTIFICATION: Verification Report Report No. BVC/CHINA-VR/8709/2012, dated 12/11/2012, MP (25/04/2012 to 24/09/2012) (3rd CDM monitoring period)
/10/	CTI: Verification Report, dated 28/08/2017, MP (01/01/2013-24/12/2016) (4th CDM monitoring period)
/11/	VERRA, VCS Standard, version 4.3
/12/	CDM Executive Board, ACM0002 (Version 20.0)
/13/	VERRA, Monitoring Report Template Form version 4.1
/14/	VERRA, VCS Program Guide version 4.2

/15/	VERRA, Registration & Issuance Process version 4.2
/16/	China's National Plan on Implementation of the 2030 Agenda for Sustainable Development
/17/	Chinese DNA, 2007 China Regional Grid Baseline Emission Factors
/18/	China National Economic Trading Commission, Technical Administrative Code of Electric Energy Metering, DL/T 448-2016
/19/	The State Bureau of Quality and Technical Supervision, Technical Norm of the Calibration of AC Watthour Meters at place of installation, JJG 1055-1997
/20/	"Notice on Strengthening Enterprise Greenhouse Gas Emission Report Management" issued by Ministry of Ecology and Environment of P.R.China
/21/	"List of key emissions in the national carbon emissions transaction quota management in 2019-2020" issued by Ministry of Ecology and Environment of P.R.China
/22/	Qualification certificate of the meter calibration entity (Jilin Electric Power Research Institute Co., Ltd. And Da'an Agricultural and Electrical Co., Ltd.), issued by Jilin quality supervision and Administration Bureau
/23/	Statement from PP about number of employee and salary during the operation period of the project activity
/24/	Monthly reading records of the electricity measured by meter during this monitoring period
/25/	Electricity Sales and Purchase Receipts issued by the grid company for this monitoring period
/26/	Photos of electricity meters
/27/	Calibration reports of the meters
/28/	Local stakeholders meeting announcement and communication record with local stakeholders
/29/	Bureau Veritas Certification: Verification Report Report No. VC/China-VR7027, dated 19/11/2010, MP (01/01/2009 to 08/03/2010) (1st VCS monitoring period)
/30/	CCSC: Verification Report Report No. EC10(B)2021004, dated 10/09/2021, MP (25/12/2016-31/12/2018) (2nd VCS monitoring period)
/31/	CTI: Verification Report Report No. CTI/NB-2020-0609, dated 20/01/2022, MP (01/01/2019-31/12/2020) (3rd VCS monitoring period)

/32/	The explanation document on 10kV line
/33/	VERRA, VCS Standard, version 3.7

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.	1.11	Date: 25/07/2022
Description of CL				
As per Instructions for Completing the Monitoring Report (Version 4.1), section 1.11 Sustainable Development Contributions shall be described more detailed and the relevant evidence shall be provided.				
Project proponent response				Date: 09/08/2022
The project meets three SDG Targets, namely, Renewable energy supplied to the power grid (SDG Target 7.2), Numbers of job opportunities provided by implementation of the project (SDG Target 8.5) and Tonnes of greenhouse gas emissions avoided or removed (SDG Target 13.0). The detailed description has been added in Section 1.11.				
Documentation provided by project proponent				
Updated MR and evidence				
VVB assessment				Date: 12/08/2022
In the updated MR, detailed information and relevant evidence have been added, so CL-1 was closed.				

Table 2. CAR from this verification

CAR ID	N/A	Section no.	N/A	Date: N/A
Description of CAR				
N/A				
Project proponent response				Date: N/A

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

Table 3. FAR from this verification

FAR ID	N/A	Section No.	N/A	Date: N/A
Description of FAR				
N/A				
Project proponent response				Date: N/A
N/A				
Documentation provided by project proponent				
N/A				
VVB assessment				Date: N/A
N/A				