



## VCS VERIFICATION REPORT

# HEBEI YUXIAN KONGZHONGCAOYUAN 49.5MW WIND FARM PROJECT

(VCS PROJECT ID: 413)



Document Prepared By

Shenzhen CTI International Certification Co., Ltd

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## Summary:

Shenzhen CTI International Certification Co., Ltd (CTI) has performed the verification of the emission reductions reported for the project activity "Hebei Yuxian Kongzhongcaoyuan 49.5MW Wind Farm Project" (VCS Project ID:413) for the monitoring period 23/02/2016-31/12/2016 within the 1<sup>st</sup> VCS crediting period 17/07/2008-16/07/2018, to review and determine the monitored reductions in GHG emissions that have occurred as a result of the project activity. These emission reductions are claimed as Verified Carbon Units (VCU) under the VCS Standard Version 4.2.

The verification was performed on the basis of VCS Standard Version 4.2 for the VCS projects, as well as criteria given to provide for consistent project operations, monitoring and reporting. The verification was conducted by means of document review, follow-up interviews and site inspections, and the resolution of outstanding issues. The verification team identified one CL, one CAR and no FAR is raised in this monitoring period.

In CTI's opinion, the GHG emission reductions reported for the project in the monitoring report

(version 03 dated 11/05/2022) are fairly stated. The GHG emission reductions of the period from 23/02/2016-31/12/2016 within the 1st VCS crediting period were calculated correctly on the basis of approved methodology ACM0002 “Grid-connected electricity generation from renewable sources” (version 6.0), the monitoring plan contained in the registered VCS PD (i.e registered CDM PDD (version 04, dated 05/08/2008) for the 1<sup>st</sup> VCS crediting period 17/07/2008-16/07/2018 and the approved updated PDD (version 06, dated 02/09/2016) for the 2<sup>nd</sup> CDM crediting period 23/02/2016-22/02/2023.

CTI does not assume any responsibility towards the issuance and utilization of the VCU's hereby verified and certified. Request for issuance of VCU's shall be made by the project proponent to an approved VCS Program Registry based on the requirements set out under the most recent version of the VCS Program Guidelines clause on VCS Registration.

The verification of reported emission reductions is based on the information made available to CTI and the engagement conditions detailed in this report. CTI cannot be held liable by any party for decisions made or not made based on this report.

Hence, CTI is able to certify that the emission reductions from the “Hebei Yuxian Kongzhongcaoyuan 49.5MW Wind Farm Project” during this monitoring period from 23/02/2016-31/12/2016 amount to 108,086 tCO<sub>2</sub>e.

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# 1 INTRODUCTION

Demeter Venture UK Limited has commissioned Shenzhen CTI International Certification Co., Ltd (CTI) to carry out the verification and certification of emission reductions reported for the “Hebei Yuxian Kongzhongcaoyuan 49.5MW Wind Farm Project” (the Project) for the monitoring period 23/02/2016-31/12/2016. This report contains the findings from the verification and includes a verification statement for the verified carbon units.

## 1.1 Objective

Verification is the periodic independent review and ex-post determination by an accredited verification body of the monitored reductions in GHG emissions that have occurred as a result of the registered VCS project activity during a defined verification period.

A verification statement is the written assurance by a verification body that, during a specific period in time, a project activity achieved the emission reductions as verified.

The objective of this verification was to verify and provide a verification statement of emission reductions reported for the “Hebei Yuxian Kongzhongcaoyuan 49.5MW Wind Farm Project” for the period 23/02/2016-31/12/2016.

## 1.2 Scope and Criteria

The scope of the verification is:

- To verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan;
- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emissions reduction data is free from material misstatement;
- To verify that reported GHG emissions data is sufficiently supported by evidence.

The criteria of the verification are:

- VCS Program Guide (version 4.1)/39/
- VCS Standard (version 4.2)/38/ and other relevant requirements defined by Verra;
- The approved methodology ACM0002 (version 6.0)/42/ applied by the project.

The verification shall ensure that reported emission reductions are complete and accurate in order to be verified.

### 1.3 Level of Assurance

The verification report expresses a conclusion with a reasonable level of assurance about whether the reported GHG emissions reduction data is free from material misstatement. As per the para 3.9.1 of the VCS Standard Version 4.2, the project size categorization belongs to 'Project' as the expected annual emission reductions is 118,735tCO<sub>2</sub>e lower than 300,000 tCO<sub>2</sub>e. Therefore, according to the requirement of para 4.1.8 (4) of VCS standard Version 4.2 "The threshold for materiality with respect to the aggregate of errors, omissions and misrepresentations relative to the total reported GHG emission reductions and/or removals shall be five percent for projects and one percent for large projects.", CTI applied a materiality threshold of 5% with respect to omission or misstatements concerning reported quantities of the project activity.

### 1.4 Summary Description of the Project

#### **Sectoral Scope and Project Type**

According to the VCS Program Guide (version 4.1)/39/ and Annex A of the Kyoto Protocol, the project is applicable under the following activity categories:

- Sectoral Scope: 1. Energy (Renewable/non-renewable)
- Project Type: wind power project

#### **Project Background**

The project is located at Xiagongcun Village of Yuxian County, Zhangjiakou City, Hebei Province, P.R.China. The site location's approximate coordinates are East Longitude of 114°30'45"-114°32'25" and North Latitude of 39°36'32"-39°33'58.6". The project activity was registered as a CDM project with Ref.2088 on 23/02/2009 and the 1st CDM crediting period is from 23/02/2009-22/02/2016, which has been renewed on 29/03/2017 with the 2nd CDM crediting period from 23/02/2016-22/02/2023. The project has been registered as VCS project with Ref. VCS 413 under VCS Standard Version 2007.1 with the start date 17/07/2008 when the commencement of operations activities started as confirmed by checking the daily operation records/7/, the VCS monitoring report and verification report for the period of 17/07/2008-22/02/2009 /27//28/.

The amount of 43,499 tCO<sub>2</sub>e VCU have been issued for the monitoring period 17/07/2008-22/02/2009 within the 1st VCS crediting period. GHG emission reductions have been applied for CDM for CERs within the 1st CDM crediting period, total 368,563 tCO<sub>2</sub>e CERs have been issued for the monitoring periods 23/02/2009-24/06/2009, 25/06/2009-24/06/2010, 25/06/2010-24/06/2011, 25/06/2011-24/06/2012, 25/06/2012-24/09/2012 and 25/09/2012-24/10/2012. The credit during 25/10/2012 to 22/02/2016 is waiting issuance request under the CDM.

The installed capacity of the project is 49.5MW equipped with 33 sets of wind generator in type of FD70B, with unit capacity of 1500kW, manufactured by Dongfang Turbine Co., Ltd.. The electricity generated by the project activity is supplied to the North China Power Grid (hereafter referred to as “NCPG”), and the project is estimated to deliver 118,735 tCO<sub>2</sub>e emission reduction annually.

## 2 VERIFICATION PROCESS

### 2.1 Method and Criteria

The verification was performed through means of the following three phases in accordance with the requirement of the registered VCS PD (i.e. registered CDM PDD version 04 dated 05/08/2008) and monitoring plan contained in the registered VCS PD, the applied methodology, and the VCS Standard (version 4.2) and other relevant VCS requirements:

- A desk review of the monitoring report and all support documents;
- Follow-up interviews with project stakeholders and site inspection;
- The resolution of outstanding issues and the issuance of the verification report and statement.

The following sections outline each step in more detail.

The verification of the emission reductions has assessed all factors and issues that constitute the basis for emission reductions from the project. These include:

- The emission reduction calculations and the relevant data records;
- The calibration and maintenance records for the monitoring instruments;
- The management systems to support the project operation and monitoring.

### 2.2 Document Review

Based on the requirements of competency, experience and qualified sectoral scopes, CTI appointed a verification team in accordance with CTI’s internal procedures.

| Function           | Name          | Technical competence | Task Performance*                                                                                                                                |
|--------------------|---------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Team Leader        | Zhang Lei     | 1.1,1.2, 4.1,13.1    | <input checked="" type="checkbox"/> DR <input checked="" type="checkbox"/> SV <input checked="" type="checkbox"/> RP <input type="checkbox"/> TR |
| Team Member        | Zhang Wenting | 1.2                  | <input checked="" type="checkbox"/> DR <input checked="" type="checkbox"/> SV <input checked="" type="checkbox"/> RP <input type="checkbox"/> TR |
| Technical Reviewer | Lin Shunrong  | 1.2, 14.1, 15.1      | <input checked="" type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RP <input checked="" type="checkbox"/> TR            |

\*DR=Document review; SV=Site visit; RP=Reporting; TR=Technical review

In addition to the VER/VCU monitoring report/1/, the registered VCS PD /13/, emission reduction calculation spreadsheet/2/, the following documents also were assessed as a part of the verification audit:

- The VCS validation report /26/;
- The previous VER/VCU monitoring report/27/ and verification report/28/, and previous CDM/CER monitoring reports /29/and verification reports/30/;
- Baseline and monitoring methodology ACM0002 (version 6.0) applied by the project/42/;
- Renewal PDD for the 2<sup>nd</sup> CDM crediting period 23/02/2016-22/02/2023 /35/;
- Relevant decisions, clarifications and guidance from the Verra/38/-/41/; and
- Other information and references relevant to the project activity.

During the desk review, CTI has applied standard auditing techniques to assess the quality of information provided. The following activities were performed:

- A review of the data and information presented to verify their completeness;
- A review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures; and

An 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.

## 2.3 Interviews

On 15/03/2022, CTI visited the project proponent Hebei Construction Investment Yuzhou Wind Energy Co., Ltd. to perform on-site assessment. The key personnel of the project were interviewed or assisted the verification team /42/. Main topics of the interview cover implementation of the project construction, applicability of selected methodology, implementation of project monitoring, emission reduction calculation, etc.

The key personnel interviewed /43/ are summarized in the table below:

| Interviewed personnel | Role            | Organization                                               | Subject                                                                                                                                                                                                                                                                                                                                               |
|-----------------------|-----------------|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mr. Zhao Jianshou     | Duty Director   | Hebei Construction Investment Yuzhou Wind Energy Co., Ltd. | Operation of the project activity; Implementation of the monitor plan of the project activity; Data collection and data achievement; Calibration of meters and equipment maintenance; The complaint by local stakeholders; The stakeholder consultation during the operation of the project activity. Project's sustainable development contributions |
| Ms. Li Jia            | O&M Staff       | Hebei Construction Investment Yuzhou Wind Energy Co., Ltd. |                                                                                                                                                                                                                                                                                                                                                       |
| Mr. Xu Liming         | O&M Staff       | Hebei Construction Investment Yuzhou Wind Energy Co., Ltd. |                                                                                                                                                                                                                                                                                                                                                       |
| Mr. Zhao Gang         | O&M Staff       | Hebei Construction Investment Yuzhou Wind Energy Co., Ltd. |                                                                                                                                                                                                                                                                                                                                                       |
| Ms. Liu Min           | Financial Staff | Hebei Construction Investment Yuzhou Wind Energy Co., Ltd. |                                                                                                                                                                                                                                                                                                                                                       |
| Mr. Li Qiang          | Local resident  | Local Village                                              | The impact of the project activity; The complaint by local stakeholders; The stakeholder consultation during the operation of the project activity; Project's sustainable development contributions.                                                                                                                                                  |
| Mr. Zhao Zhiyuan      |                 |                                                            |                                                                                                                                                                                                                                                                                                                                                       |
| Mr. Liu Fei           |                 |                                                            |                                                                                                                                                                                                                                                                                                                                                       |
| Mr. Yan Yulong        | Staff           | Local Environment Protection Bureau                        |                                                                                                                                                                                                                                                                                                                                                       |
| Mr. Cao Wanpeng       | Project Manager | Hebei Construction Investment Yuzhou Wind Energy Co., Ltd  | Data collection and ER calculation.                                                                                                                                                                                                                                                                                                                   |

## 2.4 Site Inspections

During the on-site assessment, CTI has applied standard auditing techniques to assess the quality of information provided. The following aspects of the project activity have been verified:

- An assessment of the implementation and operation of the registered project activity is as per the registered VCS PD of the project activity and the renewal PDD for the 2<sup>nd</sup> CDM crediting period;
- A review of information flows for generating, aggregating and reporting the monitoring parameters; and
- Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan;
- A cross-check between information provided in the monitoring report and data from other sources such as plant logbooks and the electricity receipts;

- A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the registered VCS PD, renewal PDD for the 2<sup>nd</sup> CDM crediting period and the selected methodology;
- A review of calculations and assumptions made in determining the GHG data and emission reductions; and
- An identification that quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

In addition, all parameters required by the monitoring methodology ACM0002 (version 6.0), and the management system were assessed during the site visit.

## 2.5 Resolution of Findings

A corrective action request (CAR) shall be raised, where:

- i. Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;
- ii. Mistakes have been made in applying assumptions, data or calculations of emission reductions which will impair the estimate of emission reductions;
- iii. Issues identified in a FAR during validation to be verified during verification have not been resolved by the project proponents.

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

The verification team identified 1 CL and 1 CAR in this monitoring period. The CL and CAR were satisfactorily addressed by the project proponents in the updated monitoring report version 03 dated 11/05/2022 (refer to Appendix A for further details).

### 2.5.1 Forward Action Requests

A forward action request (FAR) is issued for actions if the monitoring and reporting require attention and/or adjustment for the next monitoring period.

CTI confirmed that there was no FAR identified in previous verification/28/, and no FAR was raised during this verification.

## 2.6 Eligibility for Validation Activities

The project has been validated by TÜV SÜD Industrie Service GmbH under the CDM rules and registered as CDM project on 23/02/2009, and was registered as VCS project under VCS standard version 2007.1. It has eight monitoring periods during the first CDM crediting period. The emission reduction of the first six monitoring periods has been issued, and the last two are awaiting issuance. By checking the UNFCCC website and the previous verification reports/28/, it is

confirmed that these monitoring periods are all before this monitoring period (23/02/2016-31/12/2016) and the verifications are not done by the CTI.

This monitoring period is the second monitoring period in the first VCS crediting period, but the validation of VCS registration PD is completed by LGAI Technological Center, S.A. (Applus + Certification), and the verification of the first monitoring period (17/07/2008-22/02/2009) is completed by Bureau Veritas Certification Holding SAS. By checking the UNFCCC website, the VCS pipeline and the previous verification reports/30/, it is confirmed that there is no further verification of the next monitoring period after completing the validation and verification at the same time.

CTI was accredited in Sectoral Scope 1 on validation and verification and thus is eligible for verification activities on the proposed project. The verification for the monitoring period 01/01/2017-30/11/2021 has just been completed by CTI. In combination of this monitoring period 23/02/2016-31/12/2016, the verification undertaken by CTI for the total reporting period 23/02/2016-30/11/2021 is no more than consecutive 6 years., thus in compliance with the requirement for VVB stipulated in Section 4.1.20 of VCS standard version 4.2.

## 3 VALIDATION FINDINGS

### 3.1 Participation under Other GHG Programs

The project has been registered as a CDM project on 23/02/2009 under the UNFCCC with Ref. 2088. The 1<sup>st</sup> CDM crediting period is 23/02/2009-22/02/2016 and the 2<sup>nd</sup> CDM crediting period is renewed as 23/02/2016-22/02/2023 approved on 29/03/2017. By checking the UNFCCC website (<https://cdm.unfccc.int/Projects/DB/TUEV-SUED1218534453.07/view?cp=1>), it is confirmed that total 368,563tCO<sub>2</sub>e of CERs have been issued for the monitoring periods 23/02/2009-24/06/2009, 25/06/2009-24/06/2010, 25/06/2010-24/06/2011, 25/06/2011-24/06/2012, 25/06/2012-24/09/2012 and 25/09/2012-24/10/2012 within the 1<sup>st</sup> CDM crediting period. The credits from 25/10/2012 to 22/02/2016 are waiting for issuance under CDM. Furthermore, by checking the UNFCCC website (<https://cdm.unfccc.int/Projects/DB/TUEV-SUED1218534453.07/view>) it is also confirmed that no GHG emission reductions has been issued or requested for issuance under the CDM program during the current 2<sup>nd</sup> CDM crediting period.

### 3.2 Methodology Deviations

The validation process /18/ has assessed all factors and issues that constitute the basis for emission reductions from the project according to the applicable CDM methodology ACM0002 (version 6.0) /42/. There was not any methodology deviation applied to this project. Details refer to section 4.1.

### 3.3 Project Description Deviations

The project activity is registered as CDM project activity under the UNFCCC on 23/02/2009 with the Registration Ref. No. 2088. The CDM crediting period of the project starts on 23/02/2009 with a renewable crediting period of 3\*7 years. The project is registered as VCS project under VCS 2007.1, and the emission reductions from 17/07/2008-22/02/2009 prior to the CDM crediting period had been claimed as Voluntary Carbon Units (VCUs).

By checking the registered VCS PD, the previous VCS monitoring report with the monitoring period 17/07/2008-22/02/2009, the previous CDM verification reports with the monitoring period 23/02/2009 to 24/10/2012, and the construction completion report of the Project /36/, and through the site visit interview with project owner, it is confirmed that the project started operation on 17/07/2008 which is the project start date according to the requirement of VCS. A deviation was identified for the crediting period of the Project. The project is registered as VCS project under VCS version 2007.1 and completed validation before 19/03/2020. As per VCS requirement, it remains eligible to apply the crediting period requirements under VCS Version 3 which shall be a maximum of ten years and may be renewed at most twice. Therefore, the first renewable crediting period of the Project under VCS is updated from 17/07/2008-22/02/2009 to 17/07/2008-16/07/2018, which lasts for 10 years.

As per the VCS Standard Version 4.2, as a registered CDM project with 7\*3 CDM renewable crediting period, the VCU issuance is not eligible for beyond the end of those 21 years. Furthermore, considering the 20-year lifetime of the project activity, the VCS crediting period of the project activity will end on 16/07/2028.

CTI confirms that the project is fully implemented in accordance with the project description, and no any project description deviations. Details refer to section 4.1.

### 3.4 Grouped Project

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

## 4 VERIFICATION FINDINGS

This section summarizes the findings from the verification of the emission reductions reported for the “Hebei Yuxian Kongzhongcaoyuan 49.5MW Wind Farm Project” for the monitoring period 23/02/2016-31/12/2016.

## 4.1 Project Implementation Status

### **Project Implementation in accordance with the registered project design document**

The project is a wind power grid-connected plant and locates Xiagongcun Village of Yuxian County, Zhangjiakou City, Hebei Province, P.R.China. The geographical coordinates are verified by GPS system as East Longitude of 114°30'45"-114°32'25" and North Latitude of 39°36'32"-39°33'58.6". The total installed capacity is 49.5MW equipped with 33 sets of wind generator in type of FD70B, with unit capacity of 1500kW. It was confirmed by checking the operation logs/7/, the previous VCS/CDM monitoring reports and verification reports /27/-/30/ the first turbine was put into operation on 17/07/2008, and the project was put into full commercial operation on 27/09/2008. The actual implementation of the project during this verification period was verified in terms of nameplates of wind turbines /31/ and the equipment purchase contract /37/. The details of the turbines with respect to their installation and capacity have been verified to be consistent with description indicated in the registered VCS PD.

The electricity generated by the project activity is supplied to the NCPG, which can be confirmed by the Power purchase agreement (PPA) signed between Hebei Construction Investment Yuzhou Wind Energy Co., Ltd. and State Grid Hebei Electric Power Company/3/. All the monitoring system in operation period is consistent with the description in monitoring plan contained in the registered VCS PD. The control system at the power plant is automated and assures continuous operation, including monitoring on malfunction of equipment. By checking the daily operation and maintenance records/7/ and via on-site visit, CTI can confirm that no serious malfunction happened and the plant was under a normal operation as expected in this monitoring period.

On-site training for the related procedures including, recording and reporting was verified to be in place/6/ and their implementation was confirmed by interview with the key operators/43/ and observing the operation.

CTI confirms that the project implementation is in accordance with the project description contained in registered VCS PD. Furthermore, through visual inspection and document review, it is confirmed that all physical features of the project activity including data collection systems and storage systems have been implemented in accordance with the monitoring plan.

*CL 01 was raised for clarifying the lifetime of the project, which has been successfully closed, Refer to Appendix C for details.*

### **Compliance of monitoring plan with monitoring methodology**

CTI is able to confirm that the monitoring plan contained in the VCS PD is in accordance with the approved methodology applied by the project activity, i.e. ACM0002 (version 6.0).

### **Compliance of monitoring with the monitoring plan**

The monitoring has been carried out in accordance with the monitoring plan contained in the VCS PD/13/, CTI confirms that all parameters stated in the monitoring plan are monitored and reported appropriately. All parameters required to be monitored by the monitoring plan as per the

monitoring methodology ACM0002 (version 6.0) and the management system were assessed during the site visit. The monitoring report lists each parameter required by the monitoring plan and the information flow (i.e. from data generation, recording, aggregation, calculation and reporting) for these parameters is provided. The information flow for each parameter is further verified in the following sections.

### Parameters fixed ex ante

“Data and parameters fixed ex ante” in the MR are checked against the registered VCS PD. The parameter  $EF_{CM,y}$  is the combined emission factor of the grid, which was determined ex-ante at the validation stage and has been fixed during the first crediting period. CTI verified and confirms that the emission factor used in the monitoring report is in compliance with the VCS PD.

### Parameters monitored

CTI conducted document review and performed on-site assessment with project stakeholders to:

- A review of information flows for generating, aggregating and reporting the monitoring parameters;
- Determine whether the operational and data collection procedures are implemented in accordance with the registered monitoring plan;
- A cross-check between information provided in the monitoring report and data from other sources such as plant logbooks and electricity receipts;
- An identification that quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

According to the monitoring plan, the parameters to be monitored is as below:

|                     |                                                                               |
|---------------------|-------------------------------------------------------------------------------|
| $EG_{s,y}$          | Electricity supplied to the grid by the project                               |
| $EG_{c,y}$          | Electricity consumed from the grid by the project through the main power line |
| $EG_{backuptime,y}$ | Electricity consumed from the grid the project through the backup line        |

### Monitored parameters $EG_{s,y}$ and $EG_{c,y}$

By site inspection and checking the monitoring plan contained in the registered VCS PD and previous verification reports, CTI confirmed  $EG_{s,y}$  and  $EG_{c,y}$  are continuously measured by main meter M1 and backup meter M2. Both meters are bi-directional and located at the high-voltage side of the on-site 35kV/110kV transformer station. The meter readings of electricity

exports and imports were daily recorded, monthly aggregated and archived electronically. When main meter M1 is not working well, readings from backup meter M2 will serve as reference for calculation of emission reductions.

The verification team had on-site checked the location of the meters against the diagram of power connection system /4/ and found them to be consistent and installed in accordance with the approved monitoring plan. All the monitoring facilities and system have been verified by CTI during on-site visit.

By checking operation log /7/ and via on-site visit, it is confirmed that both meters were working well during this monitoring period. Via the on-site interview and by checking the daily operation and maintenance records/7/, monthly and daily reading records and electricity receipts/9/ issued by grid company, it is confirmed by the verification team that the electricity is continuously measured by M1 and backup meter M2, daily recorded and monthly aggregated by trained staff of the project as agreed with the grid company at 24:00 on the aggregating, the last day of each month /8/. The electricity receipts/9/ issued by the grid company have been used for verifying the records of  $EG_{s,y}$  and  $EG_{c,y}$  measured by main meter M1.

#### Monitored parameter $EG_{backupline,y}$

By site interview and checking the monitoring plan contained in the registered VCS PD and previous verification reports, CTI confirmed  $EG_{backupline,y}$  is continuously measured by meter M3, which is installed on the 10kv backup line on site. The meter reading was daily recorded, monthly aggregated and archived electronically. By checking operation log /7/ monthly and daily reading records /8/ and via on-site visit, it is confirmed that in this monitoring period no electricity was consumed by the project through the backup line.

As described above, the meters have been installed in accordance with VCS Program rules and meet all appropriate rules and requirements of VCS standard. CTI has on-site checked the location of the meters against the diagram of power connection system and found them to be consistent.

Data in the monthly reading records were used to the report, through a cross check with Electricity Receipts. The conservative values were used for the monitoring report and ERs calculation spreadsheet, which has been verified by the verification team. Supporting references and data required to determine the quantity of net electricity generation supplied by the project is found to be complete and transparent.

CAR 01 was raised because of a non-conformity of the monitored parameter with the monitoring plan, i.e. the  $EG_{facility,y}$  parameter presented in Section 4.2 of MR ( V01 dated 01/03/2022) was not included in the monitoring plan in the registered PD. The monitored parameter was corrected to be consistent with the monitoring plan, thus CAR 01 was subsequently successfully closed. Refer to Appendix C for details.

## Monitoring equipment and calibration

The documents review was carried out. Particular attention was paid to the frequency of measurements, the quality of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the registered VCS PD and the methodology ACM0002(version 6.0) and corresponding tool(s), and the quality assurance and quality control procedures.

All monitoring meters have been calibrated annually as per the monitoring plan covering this monitoring period. The relevant information of the calibration is listed as below:

| Meters | Type    | SN             | Accuracy class | Calibration Date         | Validity                 | Calibration Entity                                                 |
|--------|---------|----------------|----------------|--------------------------|--------------------------|--------------------------------------------------------------------|
| M1     | ZMD402  | 94827518       | 0.2S           | 22/12/2015<br>22/12/2016 | 21/12/2016<br>21/12/2017 | State Grid Jibei<br>Electric Power Co.,<br>Ltd. Metering<br>Center |
| M2     | ZMD402  | 95411208       | 0.2S           | 22/12/2015<br>22/12/2016 | 21/12/2016<br>21/12/2017 |                                                                    |
| M3     | DSSD331 | 20070130030114 | 0.5S           | 11/04/2015<br>11/04/2016 | 10/04/2016<br>10/04/2017 |                                                                    |

Calibration records and accreditation certificates/14//15/have been verified by the verification team. The actual accuracy of meters M1 and M2 is verified to be 0.2S, the actual accuracy of the meter M3 is verified to be 0.5S, which is consistent with the requirement in the monitoring plan contained in the registered VCS PDD and in compliance with the Technical administrative code of electric energy metering /17/. The calibration frequency of meters is annual, which is consistent with the monitoring plan. Based on the site visit and by checking the calibration reports, CTI confirms that:

- All meters have been installed in accordance with the monitoring plan;
- The meters' accuracy is in line with the requirement of the monitoring plan;
- The calibration frequency of the meters is annual, which is in line with the monitoring plan.

And the calibrations are verified to be valid for the whole reporting period.

## Data management and control

Hebei Construction Investment Yuzhou Wind Energy Co., Ltd. is responsible for operation and routine maintenance of power plant under the project activity. The quality assurance and quality control procedures have been addressed in the project management and monitoring manual/5/, including the organization structure with the responsibilities, personnel competencies, monitoring procedures and monitoring management. By interview with the staff/43/ and check records /7//8/ during on-site visit, it can be confirmed that the monitoring management system is implemented following the project management and monitoring manual.

All monitoring devices have been calibrated and maintained periodically to ensure the accuracy of measurement. Calibration records of instruments used in measurements were made available during the verification visit and found to be valid for the entire period of the verification. Competence and training records of in-plant personnel engaged in measurement of plant parameters were presented during verification and found to be in order.

As the above and document review, verification team considers that the project activity operated properly in the way complying with the implementation plan and monitoring plan contained in the VCS PD and the monitoring was performed in a transparent and comprehensive manner during this monitoring period.

By checking the UNFCCC website (<https://cdm.unfccc.int/Projects/DB/TUEV-SUED1218534453.07/view?cp=1>), it is confirmed that emission reductions within the monitoring periods 23/02/2009-24/06/2009, 25/06/2009-24/06/2010, 25/06/2010-24/06/2011, 25/06/2011-24/06/2012, 25/06/2012-24/09/2012 and 25/09/2012-24/10/2012 have been issued as CERs and the credits from 25/10/2012 to 22/02/2016 are waiting for issuance request under CDM within the 1<sup>st</sup> CDM crediting period 23/02/2009-22/02/2016. Furthermore, by checking the UNFCCC website (<https://cdm.unfccc.int/Projects/DB/TUEV-SUED1218534453.07/view>) it is confirmed that no GHG emission reductions has been issued or requested for issuance under the CDM program during the current 2<sup>nd</sup> CDM crediting period 23/02/2016-22/02/2023.

Therefore, it is concluded no double counting issuance has occurred for this verified monitoring period 23/02/2016-31/12/2016 under both VCS and CDM programmes. Via the on-site interview, the project proponent confirmed the emission reductions for this verified period are only requested for VCU's issuance.

The verification team has also checked other GHGs programs and forms of credit such as exchange platform of Chinese Certified Emission Reduction (CCER) projects, Gold Standard, EU ETS, IREC, China ETS and based on the interview with the project proponent, during this monitoring period, it is confirmed that except CDM and VCS scheme:

- No evidence showing that the project has participated or been rejected under any other GHG programs since validation or previous verification
- There is no observation that the project has received or sought any other emission trading program and form of environmental credit, or has become eligible to do so since validation or previous verification

The project is completely voluntary CDM and VCS project, not included in an emissions trading program or any other mechanism that includes GHG allowance trading. Although the national emission trading scheme has been launched since 16/07/2021, it only covers the high-emission and energy intensive industries that emit at least 26,000 tons of CO<sub>2</sub>e/year as per the regulation/21/ including thermal power generation, petrochemical, chemical, building materials, iron and steel, etc. By checking the business license/16/of the project proponent, it is confirmed that the PP is qualified

in business scope of renewable energy investment, thus is not included the mandatory emission control scheme and there is no emission cap enforced for the PP by further checking the enforced company list under China ETS in public information/22/. Moreover, it is confirmed by CTI the project is not registered as a CCER project in China, the emission reductions generated by the project activity are not eligible for transaction under China ETS as per the regulation/21/. Hence, it is confirmed that the emission reductions will not be double counted.

Via the on-site inspection, and through the interviews with the project proponent, local villagers and official from local environment bureau, and by checking the evidences provided by the project proponent, the verification team agrees on the following points regarding to the promotion of sustainability development by the project activity:

- SDG 1, Indicator 1.2.1 Proportion of population living below the national poverty line, by sex and age.

It is verified by interviewing with project proponent, staff and local villagers and checking the staff roster and monthly payroll/23/, the Explanation of the employment offered by the project /24/ and national poverty standard/25/, that the project activity provides 300 temporary work positions during the construction phase and 35 permanent job opportunities for local residents including 12 positions for women, and provides higher salary from 18,000 RMB/year in 2008 to 36,000 RMB/year in 2016 above the national poverty line of 1,196 RMB/year in 2008 and 2,952RMB/year in 2016. Hence, the contribution to this SDG has been confirmed and the provisions for monitoring and reporting this goal is verified as reasonable;

The project located at Xiagongcun Village of Yuxian County, Zhangjiakou City, Hebei Province, P.R.China, involves to employ 300 temporary employment during the construction phase and 35 permanent employment including 12 female during the operation phase, and operate 49.5 MW(33\*1500kW) wind turbine units to generate power from clean renewable wind power in Hebei Province.

- SDG 7, Indicator 7.2.1 Renewable energy share in the total final energy consumption.

The project provides clean and renewable energy through making use of wind power, displacing fossil fuel power in the grid NCPG. During this monitoring period, 100,499.089 MWh of net electricity generated by wind energy was delivered to the NCPG. It is verified by checking the daily and monthly reading records/8/ and via on-site inspection. Meanwhile, by checking the approved VCS and CDM monitoring reports for the previous monitoring, it is confirmed 483,636.805 MWh of cumulative renewal electricity verified has been supplied to the NCPG since the project operation until the end of this monitoring period.

- SDG 13, Indicator Tonnes of greenhouse gas emissions avoided or removed.

As verified by on-site inspection, and via checking the emission reduction calculation sheet/2/ and the daily and monthly reading records/8/, 108,086tCO<sub>2</sub>e GHG emission reductions are generated by the project activity during this monitoring period. And by checking the VCS and CDM monitoring and verification reports for the previous monitoring periods/29//30/, it is confirmed the cumulative emission reductions are 520,148 tCO<sub>2</sub>e since operation of the project activity. This contributes to achieve one of China's stated sustainable development

priorities “Actively adapt to climate change and strengthen resistance capacity to climate risks in agriculture, forestry, water resources and other key fields, as well as cities, coastal regions and ecologically vulnerable areas”.

In conclusion, Verification Team was able to confirm that the project implementation is in accordance with the project description contained in the VCS PD. All required equipments and procedures are available and implemented in an appropriate manner. All necessary monitoring instruments are installed and operated. The project is completely operational and the same has been confirmed on-site. Neither mistakes nor malfunction on main meters have been observed during this monitoring period.

## 4.2 Safeguards

### 4.2.1 No Net Harm

Via on-site inspection and checking the EIA summary and conclusion provided in the approved VCS PD, it is confirmed that the impact caused by the project activity on the surrounding ecosystem and residents, wastewater, noise, solid waste and atmosphere etc. is very little, there would be no net harm caused due to the project activity. Appropriate mitigation measures have been undertaken by the project proponent to avoid the potential impacts during the construction and operation. The EIA of the project are approved by the government.

Also, no potential environment or social economic matter was found during the site visit. It is verified by interviewing with project proponent, staff and local villagers and checking the staff roster and monthly payroll/23/, the Explanation of the employment offered by the project /24/ and national poverty standard/25/, that the project has contributed to the local employment and improved income levels by providing job opportunities and offering permanent employees wages well above poverty income levels. As stated by the plant staff during the on-site interviews, they have gained knowledge and skills in the regular training organised by the project proponent, so it can be judged that the project has, to some extent, improved the marketability of the employees as well as the possibility of lifelong learning for them.

### 4.2.2 Local Stakeholder Consultation

The local stakeholder’s meeting was held in Yuxian County on June 2007. 40 participants attended the meeting including local residents, builders and members of the local authorities. The project owner introduced the proposed project, and then a survey was arranged through a one-page questionnaire, which was designed to be easily filled in. The opinions expressed by the stakeholders were recorded and are available on request.

The stakeholder meeting and the survey showed that the proposed project receives strong support from the local community. They all believe the proposed project will promote local economic development and agree with the project development and construction.

For continuous communication with local stakeholders, the project owner public its office telephone to local people and put a grievance book /34/ in the office of the company. Via checking the grievance book, it is confirmed by the verification team that no comments were received. Through interviewing with staff from local environmental protection bureau and local residents during the site visit, it is confirmed by the verification team that during the implementation stage of this monitoring period, local authority has conducted spot checks on the implementation of the project periodically as per the request from the local governments' regulations, no negative comments and issues from the local stakeholders during this monitoring period were identified and the project passed all the periodic spot checks by local government.

All such conclusion has been verified through site visit and checking VCS PD.

### 4.3 AFOLU-Specific Safeguards

For non-AFOLU projects, this section is not required.

### 4.4 Accuracy of GHG Emission Reduction and Removal Calculations

CTI confirms that appropriate methods and formulae for calculating baseline emissions, project emissions and leakage have been followed, and the assumptions, emission factors and default values that are applied in the calculation have been justified.

According to the applied methodology, the emission reductions are determined as the difference between the baseline emissions, project emissions and leakage:

$$ER_y = BE_y - PE_y - L_y$$

#### Baseline emissions

Baseline emissions are determined as multiplying quantity of net electricity supplied to the grid by the project during year y ( $EG_y$ ) by the validated ex-ante fixed grid emission factor ( $EF_{CM,y}$ ).

$$BE_y = EG_y \times EF_{CM,y}$$

#### Grid emission factor ( $EF_{CM,y}$ )

$EF_{CM,y}$  is the grid emission factor of the which has been verified ex-ante in the validation stage in the VCS PD as 1.0755 tCO<sub>2</sub>e/MWh.

#### The net electricity supplied to the grid by the project ( $EG_y$ )

As per the Section 4.1 above,  $EG_y$  is determined as:

The verification team has checked the daily and monthly reading records, electricity receipts, Confirmation letter for electricity readings issued by the grid company and emission reduction calculation sheet, and confirmed the data and calculation applied are correct, complete and transparent. The reading records and  $EG_y$  calculation are summarized in Table 1 as follow:

**Table 1 The net electricity supplied to the grid by the Project (EG<sub>y</sub>)**

| Period                    | EG <sub>s,y</sub><br>(MWh)                |                               |                                | EG <sub>c,y</sub><br>(MWh)             |                               |                                | EG <sub>backupline,y</sub><br>(MWh)   | EG <sub>y</sub><br>(MWh) |
|---------------------------|-------------------------------------------|-------------------------------|--------------------------------|----------------------------------------|-------------------------------|--------------------------------|---------------------------------------|--------------------------|
|                           | Monthly Meter<br>reading records<br>(MWh) | Electricity receipts<br>(MWh) | Conservative<br>value<br>(MWh) | Monthly Meter reading<br>records (MWh) | Electricity receipts<br>(MWh) | Conservative<br>value<br>(MWh) | Values for ER<br>calculation<br>(MWh) | Calculated               |
|                           | A                                         | B                             | C=Min(A,B)                     | D                                      | E                             | F=Max(D,E)                     | G                                     | H=C-F-G                  |
| 23/02/2016-<br>29/02/2016 | 3,283.766                                 | 3,283.766                     | 3,283.766                      | 3.407                                  | 3.407                         | 3.407                          | 0.000                                 | 3,280.359                |
| 01/03/2016-<br>31/03/2016 | 11,024.280                                | 11,024.280                    | 11,024.280                     | 13.720                                 | 13.720                        | 13.720                         | 0.000                                 | 11,010.560               |
| 01/04/2016-<br>30/04/2016 | 10,103.620                                | 10,103.620                    | 10,103.620                     | 10.860                                 | 10.860                        | 10.860                         | 0.000                                 | 10,092.760               |
| 01/05/2016-<br>31/05/2016 | 8,239.070                                 | 8,239.070                     | 8,239.070                      | 5.730                                  | 5.730                         | 5.730                          | 0.000                                 | 8,233.340                |
| 01/06/2016-<br>30/06/2016 | 7,953.770                                 | 7,953.770                     | 7,953.770                      | 15.220                                 | 15.220                        | 15.220                         | 0.000                                 | 7,938.550                |
| 01/07/2016-<br>31/07/2016 | 8,954.380                                 | 8,954.380                     | 8,954.380                      | 10.140                                 | 10.140                        | 10.140                         | 0.000                                 | 8,944.240                |
| 01/08/2016-<br>31/08/2016 | 9,630.250                                 | 9,630.250                     | 9,630.250                      | 13.280                                 | 13.280                        | 13.280                         | 0.000                                 | 9,616.970                |
| 01/09/2016-<br>30/09/2016 | 9,362.110                                 | 9,362.110                     | 9,362.110                      | 15.630                                 | 15.630                        | 15.630                         | 0.000                                 | 9,346.480                |
| 01/10/2016-<br>31/10/2016 | 9,247.890                                 | 9,247.890                     | 9,247.890                      | 10.590                                 | 10.590                        | 10.590                         | 0.000                                 | 9,237.300                |

|                       |                    |                    |                    |                |                |                |              |                    |
|-----------------------|--------------------|--------------------|--------------------|----------------|----------------|----------------|--------------|--------------------|
| 01/11/2016-30/11/2016 | 10,893.670         | 10,893.670         | 10,893.670         | 10.350         | 10.350         | 10.350         | 0.000        | 10,883.320         |
| 01/12/2016-31/12/2016 | 11,923.730         | 11,923.730         | 11,923.730         | 8.520          | 8.520          | 8.520          | 0.000        | 11,915.210         |
| <b>Total</b>          | <b>100,616.536</b> | <b>100,616.536</b> | <b>100,616.536</b> | <b>117.447</b> | <b>117.447</b> | <b>117.447</b> | <b>0.000</b> | <b>100,499.089</b> |

\*Note:

1. All electricity data measured by M1, and M2 were daily recorded by project owner and monthly reported. During this monitoring period, the value of  $EG_{s,y}$  and  $EG_{c,y}$  measured by main meter M1 was at 24:00 on the last day of each month, and electricity receipts were issued by grid company for the cross check.
2. Readings of M1 for the period 23/02/2016-29/02/2016 was sourced from the daily records and verified with the confirmation letter issued by the grid company/9/. The verification team accepted this approach for ERs calculation since it is reasonable.
3. By checking operation log /7/ monthly and daily reading records /8/ and via on-site visit, it is confirmed that in this monitoring period no electricity was consumed by the project through the backup line.

The corresponding baseline emission reductions during this monitoring period is calculated as:

| Period                | EG <sub>y</sub>    | EF <sub>grid,CM,y</sub>  | BE <sub>y</sub>      |
|-----------------------|--------------------|--------------------------|----------------------|
|                       | (MWh)              | (tCO <sub>2</sub> e/MWh) | (tCO <sub>2</sub> e) |
|                       | I                  | J                        | K = I* J             |
| 23/02/2016-31/12/2016 | 100,499.089        | 1.0755                   | 108,086              |
| Total                 | <b>100,499.089</b> | 1.0755                   | 108,086              |

### Project emissions

As statement in the registered VCS PD, for the wind power activities, the project emissions from the project is zero. Hence, PE<sub>y</sub> during the monitoring period from Hebei Yuxian Kongzhongcaoyuan 49.5MW Wind Farm Project is zero.

### Leakages

Leakage does not need to be accounted for this project as per the monitoring methodology ACM0002 (version 6.0).

### Emission reductions

The emission reductions for this monitoring period were calculated as:

| Monitoring period                      | GHG emission reductions or removals (tCO <sub>2</sub> e) |
|----------------------------------------|----------------------------------------------------------|
| 23/02/2016-31/12/2016                  | 108,086                                                  |
| <b>Total ERs claimed (in 313 days)</b> | 108,086                                                  |

### Comparison of actual emission reductions or net anthropogenic GHG removals by sinks with estimates in registered CDM-PDD

The emission reductions claimed are 108,086 tCO<sub>2</sub>e in this monitoring period (i.e. 313 days). Compared with expected emission reductions 101,819 tCO<sub>2</sub>e (calculated as 118,735/365d\*313d), the reported emission reductions in this monitoring period are 6.15% higher than the expected. By checking the VCS PD/13/, it is confirmed that only if the electricity increased by 12.2% during the lifetime of the project activity can the IRR reach the benchmark. Therefore, the increased amount of electricity during this monitoring period cannot affect the additionality of the project. As verified via the on-site inspection, the increase of the electricity generation was primarily due to the larger wind flow in this monitoring period than the designing value in the FSR, the improved management skills of the plant and the increased wind power accommodation capacity of the grid, it is considered to be reasonable by the verification team.

Therefore, CTI is able to confirm that the actual power supply and also emission reductions reported in this monitoring period are reasonable and appropriate. CTI verified the input data for

calculating emission reductions and the calculating process, and confirmed the result were complete and transparent.

#### 4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

All necessary documentations are collected, referenced and aggregated, which is easily accessible in hard-copy or electronic format. Measurements are performed by calibrated equipment, and the key data can also be cross-checked via other sources, such as records, receipts and inventory data. No assumptions are used that have any material influence on reported emission reductions.

CTI concludes that during this monitoring period, the evidences for determination of emission reductions are sufficient and reasonable, and the calculation of emission reductions is reliable.

#### 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

Shenzhen CTI International Certification Co., Ltd (CTI) has performed the verification of the emission reductions that have been reported for the project activity “Hebei Yuxian Kongzhongcaoyuan 49.5MW Wind Farm Project” in China (VCS Project ID: 413) for the period 23/02/2016-31/12/2016.

The verification is based on the baseline and monitoring methodology ACM0002 (version 6.0), the VCS PD. The verification consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification and certification report.

The project proponents are responsible for the collection, calculation and determination of the GHG data in accordance with the monitoring plan and the reporting of GHG emission reductions on the basis set out within the project monitoring report.

Our verification approach was based on the requirements as defined under the applicable VCS Standard Version 4.2 and relevant UNFCCC requirements. Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. The verification can confirm that:

- the project is implemented and operated as per the registered VCS PD ;
- the monitoring plan is as per the applied methodology;
- the monitoring complies with the monitoring plan;
- the monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable VCS Standard Version 4.2 and CDM requirements;
- the installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately;
- the monitoring system is in place and generates GHG emission reductions data;
- the GHG emission reductions are calculated without material misstatements.

It is CTI's responsibility to provide an independent verification statement on the reported GHG emission reductions for the project. Based on an understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these, CTI planned and performed our work to obtain the information and explanations that we considered necessary to provide reasonable assurance that reported GHG emission reductions are fairly stated.

CTI does not assume any responsibility towards the issuance and utilization of the VCU's hereby verified and certified. Request for issuance of VCU's shall be made by the project proponent to an

approved VCS Program Registry based on the requirements set out under the most recent version of the VCS Program Guidelines clause on VCS Registration.

The verification of reported emission reductions is based on the information made available to CTI and the engagement conditions detailed in this report. CTI cannot be held liable by any party for decisions made or not made based on this report.

In CTI's opinion the GHG emissions reductions of the "Hebei Yuxian Kongzhongcaoyuan 49.5MW Wind Farm Project" for the period 23/02/2016-31/12/2016 are fairly stated in the monitoring report (version 03 dated 11/05/2022). The GHG emission reductions were calculated correctly on the basis of the approved methodology ACM0002 (version 6.0) and the monitoring plan contained in the registered VCS PD.

CTI can confirm that the GHG emission reductions are calculated without material misstatements. Based on the evidence and information that are considered necessary to guarantee that GHG emission reductions are appropriately calculated, CTI confirms the following statement:

Reporting period: 23/02/2016-31/12/2016

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

| Year                  | Baseline emissions or removals (tCO <sub>2</sub> e) | Project emissions or removals (tCO <sub>2</sub> e) | Leakage emissions (tCO <sub>2</sub> e) | Net GHG emission reductions or removals (tCO <sub>2</sub> e) |
|-----------------------|-----------------------------------------------------|----------------------------------------------------|----------------------------------------|--------------------------------------------------------------|
| 23/02/2016-31/12/2016 | 108,086                                             | 0                                                  | 0                                      | 108,086                                                      |
| <b>Total</b>          | 108,086                                             | 0                                                  | 0                                      | 108,086                                                      |

Zhang Lei

Mr.Zhang Lei

Technical Leader

11/05/2022

Shunrong Lin

Ms. Lin Shunrong

Team Reviewer

11/05/2022

## APPENDIX A: ABBREVIATIONS

|                   |                                                   |
|-------------------|---------------------------------------------------|
| CAR               | Corrective Action Request                         |
| CCER              | Chinese Certified Emission Reduction              |
| CER               | Certified Emission Reduction(s)                   |
| CL                | Clarification request                             |
| CO <sub>2</sub>   | Carbon Dioxide                                    |
| CO <sub>2</sub> e | Carbon Dioxide Equivalent                         |
| CTI               | Shenzhen CTI International Certification Co., Ltd |
| DOE               | Designated Operational Entity                     |
| EF                | Emission Factor                                   |
| EIA               |                                                   |
| ER                | Emission Reduction                                |
| EU ETS            | EU Emissions Trading Scheme                       |
| FAR               | Forward Action Request                            |
| FSR               | Feasibility Study Report                          |
| GHG               | Greenhouse Gas(es)                                |
| IREC              | International Renewable Energy Certificates       |
| MP                | MONITORING REPORT                                 |
| MR                | Monitoring Report                                 |
| NCPG              | North China Power Grid                            |
| PD                | Project Description                               |
| PP                | Project Proponent                                 |
| SN                | Serial Number                                     |
| VCS               | Verified Carbon Standard                          |
| VCU               | Verified Carbon Unit                              |

## APPENDIX B: REFERENCES

Documentation used to verify the information provided by the project proponents

|      |                                                                                                                                                                                                              |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| /1/  | Demeter Venture UK Limited: VER/VCU Monitoring Report for Hebei Yuxian Kongzhongcaoyuan 49.5MW Wind Farm Project, V01 dated 01/03/2022, version 02 dated 31/03/2022, version 03 dated 11/05/2022             |
| /2/  | Demeter Venture UK Limited: Emission reduction calculation spreadsheet for Hebei Yuxian Kongzhongcaoyuan 49.5MW Wind Farm Project, version 1.0 dated 01/03/2022                                              |
| /3/  | Hebei Construction Investment Yuzhou Wind Energy Co., Ltd. and State Grid Hebei Electric Power Company: Power Purchase Agreement for Hebei Yuxian Kongzhongcaoyuan 49.5MW Wind Farm Project                  |
| /4/  | Hebei Construction Investment Yuzhou Wind Energy Co., Ltd.: Diagram of power connection system                                                                                                               |
| /5/  | Hebei Construction Investment Yuzhou Wind Energy Co., Ltd.: VER monitoring manual and management procedure.                                                                                                  |
| /6/  | Hebei Construction Investment Yuzhou Wind Energy Co., Ltd.: Records of training for on-site staff.                                                                                                           |
| /7/  | Hebei Construction Investment Yuzhou Wind Energy Co., Ltd.: Daily operation and maintenance records.                                                                                                         |
| /8/  | Hebei Construction Investment Yuzhou Wind Energy Co., Ltd.: Monthly and daily reading records of Hebei Yuxian Kongzhongcaoyuan 49.5MW Wind Farm Project from 23/02/2016-31/12/2016                           |
| /9/  | State Grid Hebei Electric Power Company.: Monthly electricity receipts from 23/02/2016-31/12/2016 & Confirmation letter for electricity readings the period 23/02/2016-29/02/2016 issued by the grid company |
| /10/ | Comment records                                                                                                                                                                                              |
| /11/ | Contact information of PP posted on the bulletin board of village committee                                                                                                                                  |
| /12/ | Yearly questionnaires for local stakeholders                                                                                                                                                                 |
| /13/ | Hebei Construction Investment Yuzhou Wind Energy Co., Ltd.: Registered CDM PDD (version 04 dated 05/08/2008)                                                                                                 |

|      |                                                                                                                                                                                                                                                                       |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| /14/ | Hebei Provincial Market Supervision Administration: Accreditation certificate of State Grid Hebei Electric Power Company, issued on 30/11/2014, valid up to 29/11/2017                                                                                                |
| /15/ | State Grid Hebei Electric Power Company: Calibration certificates for meters M1,M2 and M3 covering this monitoring period                                                                                                                                             |
| /16/ | Business license of Hebei Construction Investment Yuzhou Wind Energy Co., Ltd.                                                                                                                                                                                        |
| /17/ | State Economic and Trade Commission: Technical administrative code of electric energy metering (DL/T 448-2000)                                                                                                                                                        |
| /18/ | UNFCCC, <a href="http://cdm.unfccc.int">http://cdm.unfccc.int</a>                                                                                                                                                                                                     |
| /19/ | Gold Standard, <a href="http://www.goldstandard.org/">http://www.goldstandard.org/</a>                                                                                                                                                                                |
| /20/ | China CCER Exchange Info-platform, <a href="http://cdm.ccchina.org.cn/ccer.aspx">http://cdm.ccchina.org.cn/ccer.aspx</a>                                                                                                                                              |
| /21/ | Measures for the Administration of Carbon Emission Trading, issued by Ministry of Ecology and Environment of China, dated 31/12/2020                                                                                                                                  |
| /22/ | Enforced company list in China cap & trade scheme, issued by Ministry of Ecology and Environment of China                                                                                                                                                             |
| /23/ | Hebei Construction Investment Yuzhou Wind Energy Co., Ltd.: Staff roster and payroll in 2008 and 2016                                                                                                                                                                 |
| /24/ | Hebei Construction Investment Yuzhou Wind Energy Co., Ltd.: the Explanation of the employment offered by the project.                                                                                                                                                 |
| /25/ | National poverty standard in 2008 and 2016<br><a href="https://www.gpbctv.com/jrrd/202104/159842.html?btwaf=54204711">https://www.gpbctv.com/jrrd/202104/159842.html?btwaf=54204711</a>                                                                               |
| /26/ | TÜV SÜD Industrie Service GmbH: VCS Validation Report, version 02, dated 28/07/2007                                                                                                                                                                                   |
| /27/ | VER/VCU Monitoring Report for Hebei Yuxian Kongzhongcaoyuan 49.5MW Wind Farm Project of previous monitoring period 17/07/2008-22/02/2009, version 2.0 dated 30/03/2009                                                                                                |
| /28/ | Bureau Veritas Certification Holding SAS: VCS Verification Report for Hebei Yuxian Kongzhongcaoyuan 49.5MW Wind Farm Project of previous monitoring period 17/07/2008-22/02/2009, Report No: 1086107, dated 03/03/ 2010                                               |
| /29/ | CDM/CER Monitoring Reports for Hebei Yuxian Kongzhongcaoyuan 49.5MW Wind Farm Project of previous CDM monitoring periods 23/02/2009-24/06/2009, 25/06/2009-24/06/2010, 25/06/2010-24/06/2011 , 25/06/2011-24/06/2012, 25/06/2012-24/09/2012 and 25/09/2012-24/10/2012 |
| /30/ | CDM Verification Reports for Hebei Yuxian Kongzhongcaoyuan 49.5MW Wind Farm Project of previous monitoring period 23/02/2009-24/06/2009, 25/06/2009-24/06/2010, 25/06/2010-24/06/2011 , 25/06/2011-24/06/2012, 25/06/2012-                                            |

|      |                                                                                                                                                                |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | 24/09/2012 and 25/09/2012-24/10/2012                                                                                                                           |
| /31/ | Dongfang Turbine Co., Ltd.: Nameplates of the equipment                                                                                                        |
| /32/ | Stakeholder Consultation Opinion Response policy of Hebei Yuxian Kongzhongcaoyuan 49.5MW Wind Farm Project                                                     |
| /33/ | Feasibility Study Report of Hebei Yuxian Kongzhongcaoyuan 49.5MW Wind Farm Project                                                                             |
| /34/ | Photo of grievance book to collect comments about project implementation from local stakeholders                                                               |
| /35/ | Renewal PDD for the 2 <sup>nd</sup> CDM crediting period 23/02/2016-22/02/2023, version 06, dated 02/09/2016                                                   |
| /36/ | Hebei Construction Investment Yuzhou Wind Energy Co., Ltd.: Construction completion report of the Project                                                      |
| /37/ | Co-signed by the Dongfang Turbine Co., Ltd. and Hebei Construction Investment Yuzhou Wind Energy Co., Ltd.: Wind Turbines Purchase Agreement, dated 31/03/2007 |

#### Methodologies, tools and other guidance

|      |                                                                                                                    |
|------|--------------------------------------------------------------------------------------------------------------------|
| /38/ | Verified Carbon Standard: VCS Standard, version 4.2                                                                |
| /39/ | Verified Carbon Standard: VCS Program Guide, version 4.1                                                           |
| /40/ | Verified Carbon Standard: VCS Sectoral Scopes<br><a href="http://v-c-s.org/node/448">http://v-c-s.org/node/448</a> |
| /41/ | Verified Carbon Standard: Registration and Issuance Process, version 4.1                                           |
| /42/ | UNFCCC EB: Approved methodology, ACM0002 , version 6.0                                                             |

#### Persons interviewed

|      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| /43/ | Mr. Zhao Jianshou, Duty Director, Hebei Construction Investment Yuzhou Wind Energy Co., Ltd.<br>Ms. Li Jia, O&M Staff, Hebei Construction Investment Yuzhou Wind Energy Co., Ltd.<br>Mr. Xu Liming, O&M Staff, Hebei Construction Investment Yuzhou Wind Energy Co., Ltd.<br>Mr. Zhao Gang, O&M Staff, Hebei Construction Investment Yuzhou Wind Energy Co., Ltd.<br>Mr. Xu Qiang, O&M Staff, Hebei Construction Investment Yuzhou Wind Energy Co., Ltd.<br>Ms. Liu Min, Financial Staff, Hebei Construction Investment Yuzhou Wind Energy Co., Ltd. |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|  |                                                                                             |
|--|---------------------------------------------------------------------------------------------|
|  | Mr. Li Qiang, local resident, Local Village                                                 |
|  | Mr. Zhao Zhiyuan, local resident, Local Village                                             |
|  | Mr. Liu Fei, local resident, Local Village                                                  |
|  | Mr. Yan Yulong, Staff, Local Environment Protection Bureau                                  |
|  | Mr. Cao Wanpeng, Project Manager, Hebei Construction Investment Yuzhou Wind Energy Co., Ltd |

## APPENDIX C: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWERS

### Mr. Lei ZHANG

Satisfies the requirements of competence management system of CTI Certification, and is hereby appointed as:

| Qualification |             |           |          |             |                    |                  |
|---------------|-------------|-----------|----------|-------------|--------------------|------------------|
| Status        | GHG Auditor | Validator | Verifier | Team Leader | Technical Reviewer | Technical Expert |
| Date          | √           | √         | √        | √           | √                  | √                |

| Scope                                                     | Technical Area                                          |
|-----------------------------------------------------------|---------------------------------------------------------|
| SS 1: Energy industries (renewable/non-renewable sources) | TA 1.1: Thermal energy generation                       |
|                                                           | TA 1.2: Energy generation from renewable energy sources |
| SS 4: Manufacturing industries                            | TA 4.1: Cement and lime production                      |
| SS 13: Waste handling and disposal                        | TA 13.1: Solid waste and wastewater                     |

This appointment is valid for 3 years from its date of approval below and is bound by internal requirements of management system of the Certification Body of CTI.

Approved by:

*Wu Lin*

Wu LIN

Technical Competent Manager

Shenzhen, 01/01/2021

## Ms. Wenting ZHANG

Satisfies the requirements of competence management system of CTI Certification, and is hereby appointed as:

| Qualification |           |          |             |                    |                  |
|---------------|-----------|----------|-------------|--------------------|------------------|
| GHG Auditor   | Validator | Verifier | Team Leader | Technical Reviewer | Technical Expert |
| √             | -         | -        | -           | -                  | -                |

| Scope                                                     | Technical Area                                          |
|-----------------------------------------------------------|---------------------------------------------------------|
| SS 1: Energy industries (renewable/non-renewable sources) | TA 1.2: Energy generation from renewable energy sources |

This appointment is valid for 3 years from its date of approval below and is bound by internal requirements of management system of the Certification Body of CTI.

Approved by:

Wu LIN

*Wu Lin*

Technical Competent Manager

Shenzhen, 01/03/2022

## Ms. Shunrong LIN

Satisfies the requirements of competence management system of CTI Certification, and is hereby appointed as:

| Qualification |             |           |          |             |                    |                  |
|---------------|-------------|-----------|----------|-------------|--------------------|------------------|
| Status        | GHG Auditor | Validator | Verifier | Team Leader | Technical Reviewer | Technical Expert |
| Date          | √           | √         | √        | √           | √                  | √                |

| Scope                                                     | Technical Area                                          |
|-----------------------------------------------------------|---------------------------------------------------------|
| SS 1: Energy industries (renewable/non-renewable sources) | TA 1.2: Energy generation from renewable energy sources |
| SS 14: Afforestation and reforestation                    | TA 14.1: Afforestation and reforestation                |
| SS 15: Agriculture                                        | TA 15.1: Agriculture                                    |

This appointment is valid for 3 years from its date of approval below and is bound by internal requirements of management system of the Certification Body of CTI.

Approved by:

*Wu Lin*

Wu LIN

Technical Competent Manager

Shenzhen, 01/01/2021

## APPENDIX D: CORRECTIVE ACTION REQUESTS, CLARIFICATION REQUESTS AND FORWARD ACTION REQUESTS

Table 1: Corrective Action Requests

| CAR ID | Corrective Action Request                                                                                               | Response by Project Proponent                                          | Verification Team Assessment                                                                            |
|--------|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| CAR 01 | As per the registered PDD, the monitored parameters of EG <sub>facility,y</sub> is not included in the monitoring plan. | The information about monitored parameters had been updated in the MR. | OK.<br><br>It has been revised and verified by CTI by checking updated MR. Therefore, CAR 01 is closed. |

Table 2: Clarification Requests

| CL ID | Clarification Request                                    | Response by Project Proponent                                                   | Verification Team Assessment                                                                           |
|-------|----------------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| CL 01 | It is requested to clarify the lifetime of this project. | The information of lifetime of the project activity had been updated in the MR. | OK.<br><br>It has been revised and verified by CTI by checking updated MR. Therefore, CL 01 is closed. |

Table 3: Forward Action Requests

| FAR ID | Forward Action Request | Response by Project Proponent | Verification Team Assessment |
|--------|------------------------|-------------------------------|------------------------------|
| NA     | NA                     | NA                            | NA                           |