



**Verified Carbon  
Standard**

## VALIDATION REPORT

# INNER MONGOLIA YIHEWUSU PHASE II 49.5 MW WIND POWER PROJECT



Document Prepared by China Classification Society Certification  
Company (CCSC)

|                      |                                                                    |
|----------------------|--------------------------------------------------------------------|
| <b>Project Title</b> | <i>Inner Mongolia Yihewusu Phase II 49.5 MW Wind Power Project</i> |
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| <b>Report Title</b> | <i>VCS Validation Report for Inner Mongolia Yihewusu Phase II 49.5 MW Wind Power Project</i> |
| <b>Client</b>       | <i>China Carbon N.V</i>                                                                      |

|                            |                                                                                                                                                   |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
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## Summary:

China Classification Society Certification Company (CCSC), commissioned by China Carbon N.V, has performed the validation of the Inner Mongolia Yihewusu Phase II 49.5 MW Wind Power Project (hereafter referred to as "the Project") on the basis of requirements of Verified Carbon Standard (VCS) Version 4.1, VCS Validation and Verification Manual, and the approved Clean Development Mechanism (CDM) methodology ACM0002 (Version 20.0), as well as criteria given to provide for consistent project operations, monitoring and reporting. The validation report and the validation protocol are summarizing the findings of the validation.

The validation scope is defined as an independent and objective review and ex-ante determination of the estimated GHG emission reductions, and 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 validation report and opinion. The overall validation, from Contract Review to Validation Report & Opinion, was conducted using CCSC's internal procedures.

The Project is a wind farm project located at Hangjin County, Ordos City, Inner Mongolia, People's Republic of China which uses wind resource for electricity generation. The installed capacity of the project activity is 49.5 MW, consisting of 66 sets of wind turbines with unit capacity of 750 kW. The average annual power delivered to the grid by the project is expected to be 101,689 MWh. The annual emission reductions in the crediting period is 84,086tCO<sub>2</sub>.

The first output of the validation process is a list of 1 Clarification Request, 1 Corrective Action Request and 0 Forward Action Request (CL, CAR and FAR), presented in APPENDIX D. Taking into account this output, the project proponent revised its project document.

In summary, it is CCSC's opinion that the Project correctly applies the VCS approved CDM methodologies ACM0002 (Version 20.0) and meets the relevant VCS Standard v4.1 requirements and the relevant host country criteria.

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# 1 INTRODUCTION

## 1.1 Objective

*China Carbon N.V (hereafter referred to as “the PP”) has commissioned CCSC to conduct the validation of the “Inner Mongolia Yihewusu Phase II 49.5 MW Wind Power Project” (here after referred as the Project), which is located at Hangjin County, Ordos City, Inner Mongolia, People’s Republic of China.*

*CCSC as the validation/verification body (VVB) of the Project has been accredited as a DOE by UNFCCC and also meets the competence requirements as set out in ISO 14065:2013.*

*The validation serves as project design verification and is a requirement of all projects. The validation is an independent third-party assessment of the project baseline. In particular, the project's baseline and the monitoring plan (MP) are validated in order to confirm that the project baseline, as documented, is sound and reasonable, and meet the stated requirements and identified criteria. Assessment of validation is a requirement for all VCS projects seeking registration and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of Voluntary Carbon Units (VCUs).*

## 1.2 Scope and Criteria

*The validation scope is defined as an independent and objective review of the VCS project description (VCS-PD), the project’s baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against VCS Version 4.1 requirements, UNFCCC rules and associated interpretations.*

*The validation is not meant to provide any consulting towards the client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.*

## 1.3 Level of Assurance

*CCSC has undertaken a reasonable assurance engagement in accordance with VCS Version 4.1 /8/. It requires a reasonable level of assurance in validation that GHG assertions are free of material errors, omissions and misrepresentations. The validation conclusion is based on the VCS Project Description (VCS-PD) /2/, supporting evidences made available to the verifier and information collected through performing interviews.*

## 1.4 Summary Description of the Project

*The Project is to use wind resource for electricity generation. It would reduce emissions by*

*replacing equivalent mainly fossil fuel dominated grid connected electricity generation in the North China Power Grid (NCPG).*

*The installed capacity of the project activity is 49.5 MW, consisting of 66 sets of wind turbines with unit capacity of 750 kW. The average annual power delivered to the grid by the project is expected to be 101,689 MWh.*

## 2 VALIDATION PROCESS

### 2.1 Method and Criteria

*The overall validation, from Contract Review to Validation Report & Opinion, was performed using CCSC internal procedures.*

*CCSC validated the Project against the requirements set in VCS standard Version 4.1.*

### 2.2 Document Review

*The VCS-PD was submitted by China Carbon N.V and additional background documents related to the project design and baseline were reviewed.*

*Furthermore, cross checks were made between information provided in the VCS-PD and information from sources other than those used.*

*The validation conclusions presented in this report relate to the Project as described in the VCS-PD version 01 dated 30/04/2021 /1/. To address CCSC's corrective action and clarification requests, the VCS-PD was revised to version 02 /2/ and resubmitted on 01/06/2021.*

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

### 2.3 Interviews

*The follow-up interview was conducted during the site visit on 28/05/2021 by Mr. LI Xingtong from CCSC, which is focused on the issues identified during the desk review. The main topics of the interviews are summarized in Table 1.*

### 2.4 Site Inspections

*A site visit and interviews with project stakeholders was conducted by CCSC on 28/05/2021 to confirm selected information and to resolve issues identified in the document review. The main topics of the interviews are summarized in Table 1.*

**Table 1 Interview topics**

| Interviewed Organization                   | Interview Topics                                                                                                                                                                                                                                                             |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| China Carbon N.V                           | <ul style="list-style-type: none"> <li>↳ Status of the project and any modifications with respect to the registered VCS-PD.</li> </ul>                                                                                                                                       |
| Inner Mongolia Xinjin Wind Power Co., Ltd. | <ul style="list-style-type: none"> <li>↳ Applicability of selected methodology.</li> <li>↳ National policies and changes</li> <li>↳ Baseline of the project and its updates</li> <li>↳ Emission Factors and their updates</li> <li>↳ Monitoring plan and changes.</li> </ul> |

## 2.5 Resolution of Findings

*The objective of this phase of the validation is to resolve issues that require further elaboration, research or expansion prior to CCSC's positive conclusion on the project design.*

*A Corrective Action Request (CAR) is raised, if one of the following situations occurs:*

- a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable, verifiable and additional emission reductions;*
- b) The applicable VCS requirements have not been met;*
- c) There is a risk that emission reductions cannot be monitored or calculated.*

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

*A Forward Action Request (FAR) may also be raised during validation, to identify issues related to project implementation that require review during the first validation of the project activity.*

*To guarantee the transparency of the validation process, the issues raised, the responses provided by the project participants, the means of validation of such responses and references to any resulting changes in the VCS-PD or supporting annexes are documented in the Appendix D.*

### 2.5.1 Forward Action Requests

*No Forward Action Requests were raised during this validation.*

## 3 VALIDATION FINDINGS

### 3.1 Project Details

The relevant information is listed below, which is consistent with the VCS-PD for the 1<sup>st</sup> crediting period:

Table 2 The Project information

|                       |                                                                                                                                                                                                    |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Project Title:        | Inner Mongolia Yihewusu Phase II 49.5 MW Wind Power Project                                                                                                                                        |
| Sectoral Scope:       | 01, "Energy Industries (renewable- /non-renewable resources)"                                                                                                                                      |
| Methodologies Used    | ACM0002 Version 20.0                                                                                                                                                                               |
| Project Start Date:   | 15/09/2008                                                                                                                                                                                         |
| Project Participants: | China Carbon N.V (P.R. China)<br><br>Inner Mongolia Xinjin Wind Power Co., Ltd. (P.R. China, Host Party)                                                                                           |
| Project Location:     | The project is located at Hangjin County, Ordos City, Inner Mongolia, People's Republic of China. The coordinates of the project location are longitude of 107°31'42"E and latitude of 40°07'02"N. |
| Annual ERs            | 84,086 tCO <sub>2</sub> e                                                                                                                                                                          |

CCSC also confirmed the location, technical information etc. of the project provided in the revised VCS-PD is same with the VCS-PD for the 1<sup>st</sup> crediting period.

Table 2 The Project technical specifications

| Wind Turbines Technical Parameters |                 |
|------------------------------------|-----------------|
| Parameter                          | Value           |
| Type                               | Jinfeng S50/750 |
| No. of Vane                        | 3               |
| Rated Power(kW)                    | 750             |
| Rotor Diameter(m)                  | 50              |
| Cut-in speed (m/s)                 | 3.5             |

|                    |                                                  |
|--------------------|--------------------------------------------------|
| Cut-in speed (m/s) | 25                                               |
| Rated speeds (m/s) | 14-15                                            |
| Hub height (m)     | 60                                               |
| Manufacturer       | Xinjiang Goldwind Science & Technology Co., Ltd. |

### **Project crediting period**

Renewable crediting period has been chosen by the Project, the 2<sup>nd</sup> 10 years crediting period is 24/06/2019 to 24/06/2029 which is in compliance with the VCS Standard ver 4.1.

### **Project scale and estimated GHG emission reductions or removals**

According to VCS standard, Projects are categorized by size according to their estimated average annual GHG emission reductions or removals:

- 1) Projects: Less than or equal to 300,000 tonnes of CO<sub>2e</sub> per year.
- 2) Large projects: Greater than 300,000 tonnes of CO<sub>2e</sub> per year.

The estimated annual average GHG emission reductions of the Project are 84,086tCO<sub>2e</sub>. CCSC confirmed that the Project is a project.

### **Conditions prior to project initiation**

Prior to the initiation of the Project, Electricity delivered to the grid by the Project would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid. This is also the baseline scenario.

### **Project compliance with applicable laws, statutes and other regulatory frameworks**

As described in the validation report of the registered VCS-PD, the Project complies with relevant laws and regulations. CCSC also confirmed the Project is compliance with applicable laws, statutes and other regulatory frameworks.

### **Participation under other GHG programs**

- Projects registered (or seeking registration) under other GHG program(s)

The Project was registered as CDM project activity with the UNFCCC Reference No.3490.

CERs for the first monitoring period of 21/01/2013-20/12/2015 were issued on 12/10/2016, and VCUs from the monitoring period 21/12/2015 to 24/06/2019 were issued on 23/01/2020.

And the PP has provided a declaration for no double counting issues will be involved with the project.

- Rejection by other GHG programs

*The Project has not been rejected by other GHG programs as confirmed through the GS, VCS and CDM project data base.*

**Other forms of credit:**

- *Emissions trading programs and other binding limits*

*Net GHG emission reductions or removals generated by the Project will not be used for compliance with an emissions trading program or for meeting binding limits on GHG emissions.*

- *Other forms of environmental credit sought or received and eligible to be sought or received*

*The Project has not created another form of Environmental Credit.*

**Additional information relevant to the project, including:**

- *Leakage management for AFOLU projects*

*N.A. for it's non-AFOLU project.*

- *Commercially sensitive information*

*N.A.*

- *Sustainable development contributions*

*The validation team confirms the implementation of the Project will contribute to sustainable development of the local community, the host country and the world by means of*

- *Diversifies the sources of electricity generation;*
- *Enhances the local investment environment, and therefore improves the local economy;*
- *Makes use of renewable wind power resources;*
- *Creating employment opportunities during the project construction and operation period.*

**Project ownership**

*The ownership of the emission reductions will belong to the project owner as confirmed through the FSR Approval, EIA Approval and Business licence.*

## 3.2 Safeguards

### 3.2.1 No Net Harm

*According to the VCS-PD, there is no potential negative environmental and socio-economic impact of the Project. CCSC confirmed it by verifying the registered VCS-PD and the relevant validation report and the follow-up interview.*

### 3.2.2 Local Stakeholder Consultation

*According to the VCS-PD, local stakeholders were invited to provide comments in May 2009. The processes by which comments from local stakeholders have been invited and compiled, has been described within the VCS-PD. Furthermore, representatives from the local community were interviewed, the relevant evidences were presented to CCSC for assessment. In general, the interviewees show adequate understanding of the nature of the Project and agreed that the Project would benefit the environment, society and economic development. The response is overall supportive.*

### 3.2.3 Environmental Impact

*The environmental impacts of the Project were sufficiently assessed by means of an Environmental Impact Assessment (EIA) Study. The Project have implemented the EIA and obtained the approval from local government before VCS registration.*

*Hence, the validation team is able to confirm that the EIA has been conducted in accordance with the relevant Chinese Environmental Regulations and the environmental impact of the Project is insignificant.*

### 3.2.4 Public Comments

*No public comment was received.*

### 3.2.5 AFOLU-Specific Safeguards

*The project is not an AFOLU-Specific project.*

## 3.3 Application of Methodology

### 3.3.1 Title and Reference

*The VCS-approved methodology applied to the Project is the approved consolidated CDM baseline and monitoring methodology ACM0002 Version 20.0 “Grid-connected electricity generation from renewable sources” /6/.*

*The methodology also refers to:*

- “Tool to calculate the emission factor for an electricity system” (Version 07.0),
- “Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period” (Version 03.0.1).

*More information concerning the above methodology and tools can be referred to:*

*<https://cdm.unfccc.int/methodologies/PAmethodologies/approved>.*

### 3.3.2 Applicability

CCSC has checked the definitions of ACM0002 Version 20.0 of the applicability of this methodology, and confirmed the comparison in the following table, which explains the reason why the methodology applies to the Project:

Table 3 the project applicability

| ACM0002 Version 20.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Explanation                                                                                                                                                                    | Validation Opinion                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>This methodology is applicable to grid-connected renewable energy power generation project activities that:</p> <p>(a) Install a Greenfield power plant;</p> <p>(b) Involve a capacity addition to (an) existing plant(s);</p> <p>(c) Involve a retrofit of (an) existing operating plants/units;</p> <p>(d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or</p> <p>(e) Involve a replacement of (an) existing plant(s)/unit(s).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>The proposed project is a greenfield grid-connected zero-emission renewable power generation activity from wind source.</p>                                                 | <p>By site visit and checking FSR and project approval, it is able to confirm the Project involves in (a) Greenfield project.</p>                                                                                           |
| <p>The methodology is applicable under the following conditions:</p> <p>(a) The project activity may include renewable energy power plant/unit of one of the following types: hydro power plant/unit with or without reservoir, wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit;</p> <p>(b) In the case of capacity additions, retrofits, rehabilitations or replacements (except for wind, solar, wave or tidal power capacity addition projects) the existing plant/unit started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion, retrofit, or rehabilitation of the plant/unit has been undertaken between the start of this minimum historical reference period and the implementation of the project activity.</p> | <p>The proposed project is a greenfield grid-connected zero-emission renewable power generation activity from wind source.</p>                                                 | <p>By site visit and checking FSR and project approval, it is able to confirm the Project is a greenfield grid-connected zero-emission renewable power generation.</p>                                                      |
| <p>The methodology is not applicable to:</p> <p>(a) Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site;</p> <p>(b) Biomass fired power plants/units.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>The proposed project is not an activity that involves switching from fossil fuels to renewable energy at the proposed project site or biomass fired power plants/units.</p> | <p>By site visit and checking FSR, it is able to confirm the Project is not an activity that involves switching from fossil fuels to renewable energy at the proposed project site or biomass fired power plants/units.</p> |
| <p>In the case of retrofits, rehabilitations, replacements,</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p>N/A</p>                                                                                                                                                                     | <p>N/A</p>                                                                                                                                                                                                                  |

|                                                                                                                                                                                                                                                                                                                                                                                             |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| <p>or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is “the continuation of the current situation, that is to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance”.</p> |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|

Also, the applicable of tools used for the project activity are justified in the PD, validation team find the correctness of the applicable.

It can be concluded from the above analysis that the Project complies with the applicability requirement of the methodology ACM0002 Version 20.0.

### 3.3.3 Project Boundary

According to ACM0002 Version 20.0, spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the VCS project power plant is connected with.

Overall, the project proponents provided an accurate description of the project boundary.

### 3.3.4 Baseline Scenario

The validation team confirms that according to the methodology, the baseline scenario is provision of the equivalent amount of electricity generated by NCPG connected power plants and the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the “Tool to calculate the emission factor for an electricity system”.

### 3.3.5 Additionality

According to the Verified Carbon Standard (VCS) Version 4.1 a reassessment of additionality is not required when renewing the project crediting period.

### 3.3.6 Quantification of GHG Emission Reductions and Removals

As per baseline methodology ACM0002 Version 20.0, the emission reductions are the difference between baseline emissions and project emissions and leakage.

#### **Baseline Emissions**

The calculation of the baseline emissions followed the procedures described in the methodology ACM0002 Version 20.0. Baseline emissions are the product of the grid emission factor ( $EF_{grid, CM, y}$  in  $tCO_2/MWh$ ) times the net electricity supplied by the proposed project to the grid ( $EG_{facility, y}$  in  $MWh$ ).

The grid emission factor is determined as Combined Margin (CM), combination of the

Operating Margin (OM) and Build Margin (BM), which is for the second crediting period following the “Tool to calculate the emission factor for an electricity system”.

**Operating Margin (OM).** Ex-ante option was selected. Simple OM method was chosen and this is justified since the low cost/must run resources constitute less than 50% of total grid generation in the average of the five recent years. The Simple OM emission factor is “calculated as the generation-weighted average CO<sub>2</sub> emissions per unit net electricity generation (tCO<sub>2</sub>/MWh) of all generating power plants serving the system, not including low-cost/must-run power plants/units”, as per “Tool to calculate the emission factor for an electricity system”.

Because (1) the net electricity generation and a CO<sub>2</sub> emission factor of each power unit are not available in China, and (2) the nuclear and renewable power generations are considered as low-cost/must-run power sources and the quantity of electricity supplied to the grid by these sources is known in China, at the same time, (3) off-grid power plants are not included in the calculation. The “Option B - Calculation based on total fuel consumption and electricity generation of the system” is adopted for Simple OM calculation, which is “based on the total net electricity generation of all power plants serving the system and the fuel types and total fuel consumption of the project electricity system”.

Net calorific values of each fuel type were obtained from the China Energy Statistical Yearbook. IPCC 2006 default values were used for the CO<sub>2</sub> emission factors of each type of fossil fuel. The values used and the calculation of the simple OM is considered to be reasonable, and is in line with official data published by the Government of China.

The OM emission factor is calculated as the weighted average of the three years. The  $EF_{grid, OM, y}$  is calculated to be 0.9419 tCO<sub>2</sub>/MWh, which is in line with the 2019 Baseline Emission Factors for Regional Power Grids in China. The sources and calculation have been verified by CCSC.

**Build Margin (BM).** BM emission factor was calculated with Option 1 of “Tool to calculate the emission factor for an electricity system” with ex-ante approach. Because plant specific fuel consumption and electricity generation data are not publicly available in China, the guidance given by the CDM Executive Board for a deviation from methodology AM0005 has been applied for calculation of the BM emission factor for the proposed project, which suggests to “use the efficiency level of the best technology commercially available in the provincial/regional or national grid of China, as a conservative proxy, for each fuel type in estimating the fuel consumption to estimate the build margin (BM)”.

In accordance with this guidance, the build margin consists of the set of power capacity additions in the electricity system that comprises 20% of the generation capacity (in MW) of the system, that have been built most recently, based on the aggregate incrementally installed capacity of all generation sources in year y. The emissions factor of fossil fuel fired power generation in China Northwest Power Grid is calculated using the proportions of GHG emissions from solid, liquid and gaseous fuels in the total GHG emissions related to power generation as the weights, and the emission factors of the most advanced commercial generation technologies available in the host country (as published by the DNA).

Finally, based on data in the China Electric Power Yearbook 2016-2018,  $EF_{grid, BM, y}$  is calculated to be 0.4819 tCO<sub>2</sub>/MWh, which is in line with the 2019 Baseline Emission Factors for Regional Power Grids in China. The sources and calculation have been verified by CCSC.

**Combined Margin (CM).** CM emission factor is calculated following “weighted average CM method (option A)” of “Tool to calculate the emission factor for an electricity system”. The weighting is set to be 0.75 and 0.25 for OM and BM emission factors respectively for wind power generation. For this project, the combined baseline emission factor will remain fixed during the second crediting period, via  $EF_{grid, CM, y} = EF_{grid, OM, y} \times \omega_{OM} + EF_{grid, BM, y} \times \omega_{BM} = 0.9419 \times 0.75 + 0.4819 \times 0.25 = 0.8269 \text{ tCO}_2/\text{MWh}$ .

As validated above, the CM emission factor of the project is 0.8269 tCO<sub>2</sub>/MWh. The estimated annual electricity supplied to the NCPG by the project is 101,689 MWh. Thus, according to the methodology the annual baseline emissions in the second crediting period are calculated as:

$$BE_y = EF_{grid, CM, y} \times EG_y = 0.8269 \times 101,689 = 84,086 \text{ tCO}_2\text{e}.$$

The adoption of impart in CER calculation spreadsheet results in the emission reduction of 84,086 tCO<sub>2</sub>e above, which is conservative.

### Project Emissions

As a wind power plant, there are no project emissions according to the methodology. The validation team regards this consideration is correct and in line with methodology.

### Leakage

The project does not need to consider leakage. The validation team regards this consideration is correct and in line with methodology.

### Emission Reductions

According to the methodology, emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y$$

Where:

|        |                                                       |
|--------|-------------------------------------------------------|
| $ER_y$ | Emission reductions in year y (tCO <sub>2</sub> e/yr) |
| $BE_y$ | Baseline emissions in year y (tCO <sub>2</sub> e/yr)  |
| $PE_y$ | Project emissions in year y (tCO <sub>2</sub> e/yr)   |

Hence, for this project, the estimated average annual emission reductions of 84,086 tCO<sub>2</sub>e, resulting in estimated amount of GHG emission reductions ( $ER_y$ ) is 840,860 tCO<sub>2</sub>e during the 2<sup>nd</sup> crediting period (25/06/2019-24/06/2029).

CCSC has checked the Emission Reduction calculation sheet and found correct and transparent and confirmed,

- All assumptions and data used by the project participants are listed in the PD, including their references and sources;
- All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PD;
- All values used in the PD are considered reasonable in the context of the proposed project activity;
- The baseline methodology ACM0002 and “Tool to calculate the emission factor for an electricity system” has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;

All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PD.

### 3.3.7 Methodology Deviations

N/A.

### 3.3.8 Monitoring Plan

The VCS PD applies the approved consolidated monitoring methodology ACM0002 Version 20.0. CCSC confirmed that the selected monitoring methodology is applicable to the Project and is materially the same as the PD for the 1<sup>st</sup> crediting period.

#### **Data and Parameters Monitored**

- $EG_{\text{facility},y}$ , Net electricity supplied by the project activity to the grid in year y

Both the electricity exported to the grid by the proposed project and the power imported from the grid will be monitored continuously through the two-way metering equipment (Key meter) at the onsite substation. The meter(s) measuring electricity supply will maintain accuracy within 0.5%. The electricity generated and consumed by the facility is collected and recorded at 24:00 on the 24th every month, meanwhile the net electricity exported onto the net is calculated automatically by the computer.

CCSC confirms that the monitoring plan contains all necessary parameters, and they are clearly described, and the monitoring plan complies with the requirements of the methodology.

#### **Implementation of the Monitoring Plan**

The quality assurance and quality control procedure has been clearly described in the revised

VCS-PD. This includes description of the responsibilities, monitoring data, meters precision, meters calibration frequency, data management system, QA/QC procedure, training and emergency procedures. And it is same with the one in the registered VCS-PD.

The validation team considers that the means of implementation of the monitoring plan, including the data management and quality assurance and quality control procedures, are sufficient to ensure that the emission reductions achieved by/resulting from the Project can be reported ex post and verified.

CCSC hereby confirms that the monitoring plan complies with the requirements of the methodology including applicable tool(s), the monitoring arrangements described in the monitoring plan are feasible within the initial seven instances design and the project owners are able to implement the described monitoring plan.

### 3.4 Non-Permanence Risk Analysis

As the Project is not an AFOLU project, the project activity does not require a non-permanence risk analysis.

## 4 VALIDATION CONCLUSION

CCSC has performed the validation of “Inner Mongolia Yihewusu Phase II 49.5 MW Wind Power Project”, which applied the methodology ACM0002 Version 20.0. The validation was performed on the basis of VCS Standard Version 4.1 and host country criteria and also on the criteria given to provide for consistent Project operations, monitoring and reporting.

The validation consisted of the following three phases: i) a desk review of the project design and the baseline and monitoring plan; ii) follow-up interview with project stakeholders; iii) the resolution of outstanding issues and the issuance of the final validation report and opinion.

Through detailed analysis of the Project, it is concluded that the Project is likely to result in reductions of GHG emissions. The “Combined tool to identify the baseline scenario and demonstrate additionality” has been applied to identify the Project’s baseline scenario and demonstrate the additionality. Emission reductions attributable to the Project are hence additional to any that would occur in the absence of the Project.

The validation covered all project components and issues that need to be validated as a VCS project. In our opinion, CCSC hereby confirms that the Project correctly applied the baseline and monitoring methodology ACM0002 Version 20.0 and meets the relevant VCS requirements for registration.

CCSC hereby requests the registration of the Project. Provided that the project is implemented and maintained as designed, the Project is expected to achieve annual average emission

*reduction of 84,086tCO<sub>2</sub>e within the crediting period.*

# APPENDIX A: ABBREVIATIONS

| Abbreviations     | Full texts                                                            |
|-------------------|-----------------------------------------------------------------------|
| AFOLU             | Agriculture, Forestry and Other Land Use                              |
| BM                | Build Margin                                                          |
| CAR               | Corrective Action Request                                             |
| CCSC              | China Classification Society Certification Company                    |
| CCER              | China Certified Emission Rrdutions                                    |
| CDM               | Clean Development Mechanism                                           |
| CL                | Clarification Request                                                 |
| CCSC              | China Classification Society Certification Company                    |
| CM                | Combined Margin                                                       |
| CO <sub>2</sub>   | Carbon dioxide                                                        |
| CO <sub>2</sub> e | Carbon dioxide equivalent                                             |
| DOE               | Designated Operation Entity                                           |
| DNA               | Designated National Authority                                         |
| EB                | Executive Board                                                       |
| EF                | Emission Factor                                                       |
| EIA               | Environmental Impact Assessment                                       |
| ERPA              | Emission Reduction Purchase Agreement                                 |
| FAR               | Forward Action Request                                                |
| FSR               | Feasibility Study Report                                              |
| GHG(s)            | Greenhouse gas(es)                                                    |
| GS                | Golden Standard                                                       |
| IPCC              | Intergovernmental Panel on Climate Change                             |
| IRR               | Internal Return Rate                                                  |
| MEE               | Ministry of Ecology and Environment of the People's Republic of China |

|        |                                                       |
|--------|-------------------------------------------------------|
| MP     | Monitoring Plan                                       |
| NDRC   | National Development and Reform Committee             |
| NCPG   | North China Power Grid                                |
| OM     | Operating Margin                                      |
| PD     | Project Description                                   |
| PP     | Project Participant                                   |
| PPA    | Power Purchase Agreement                              |
| NCPG   | North China Power Grid                                |
| UNFCCC | United Nations Framework Convention on Climate Change |
| VCS    | Verified Carbon Standard                              |
| VCU    | Voluntary Carbon Unit                                 |
| VVB    | Validation / Verification Body                        |

# APPENDIX B: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWERS



Appendix 9

## CERTIFICATE OF COMPETENCE

Date of issue: 23/01/2020

Mr. Li Xingtong

Has been qualified in accordance with *CDM Personnel Competence Requirements and Professional Competence Evaluation Instructions (CDMI0301)* as

- CDM validator for Technical Area(s): TA1.1/TA1.2/TA3.1/TA9.2/TA13.1
- CDM verifier for Technical Area(s): TA1.1/TA1.2/TA3.1/TA9.2/TA13.1
- ☐ Technical expert for Technical Area(s): \_\_\_\_\_

Huang ShiYuan  
CCSC General Manager



Appendix 9

## CERTIFICATE OF COMPETENCE

Date of issue: 23/01/2020

Mr. Xu Fangzhou

Has been qualified in accordance with *CDM Personnel Competence Requirements and Professional Competence Evaluation Instructions (CDMI0301)* as

- CDM validator for Technical Area(s): TA1.2/TA3.1
- CDM verifier for Technical Area(s): TA1.2/TA3.1
- ☐ Technical expert for Technical Area(s): \_\_\_\_\_

Huang ShiYuan  
CCSC General Manager



Appendix 9

## CERTIFICATE OF COMPETENCE

Date of issue: 23/01/2020

Mr. Yong Hanlin

Has been qualified in accordance with *CDM Personnel Competence Requirements and Professional Competence Evaluation Instructions (CDMI0301)* as

- CDM validator for Technical Area(s): TA1.1/TA1.2/TA8.1/TA10.1
- CDM verifier for Technical Area(s): TA1.1/TA1.2/TA8.1/TA10.1
- ☐ Technical expert for Technical Area(s): \_\_\_\_\_

Huang ShiYuan  
CCSC General Manager



Appendix 9

## CERTIFICATE OF COMPETENCE

Date of issue: 23/01/2020

Ms. Zheng Ying

Has been qualified in accordance with *CDM Personnel Competence Requirements and Professional Competence Evaluation Instructions (CDMI0301)* as

- CDM validator for Technical Area(s): TA1.2/TA13.1
- CDM verifier for Technical Area(s): TA1.2/TA13.1
- ☐ Technical expert for Technical Area(s): \_\_\_\_\_

Huang ShiYuan  
CCSC General Manager

# APPENDIX C: DOCUMENTS REVISED OR REFERENCED

| No. | Author           | Title                                                                                                                                                      | References to the document                                                                                                                                  | Provider |
|-----|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| /1/ | China Carbon N.V | VCS-PD sent to CCSC for validation                                                                                                                         | Version 01<br>30/04/2021                                                                                                                                    | PP       |
| /2/ | China Carbon N.V | Final VCS-PD to request registration                                                                                                                       | Version 02<br>01/06/2021                                                                                                                                    | PP       |
| /3/ | China Carbon N.V | IRR and Emission Reductions Calculation Spreadsheet                                                                                                        | /                                                                                                                                                           | PP       |
| /4/ | China Government | Business License                                                                                                                                           | /                                                                                                                                                           | PP       |
| /5/ | MEE              | 2019 Baseline Emission Factors for Regional Power Grids in China                                                                                           | <a href="http://www.mee.gov.cn/ywgz/ymqhbh/wsqtzk/202012/t20201229_815386.shtml">http://www.mee.gov.cn/ywgz/ymqhbh/wsqtzk/202012/t20201229_815386.shtml</a> | Others   |
| /6/ | CDM-EB           | Methodology ACM0002                                                                                                                                        | Version 20.0                                                                                                                                                | Others   |
| /7/ | CDM-EB           | Relevant Tools (latest version) involved in the identification of baseline scenario and demonstration of additionality and emission reductions calculation | <a href="https://cdm.unfccc.int/methodologies/PAMethodologies/approved">https://cdm.unfccc.int/methodologies/PAMethodologies/approved</a>                   | Others   |
| /8/ | VCS Board        | VCS standard                                                                                                                                               | Version 4.1<br>Dated<br>19/09/2019                                                                                                                          | Others   |
| /9/ | VCS Board        | VCS Project Description template                                                                                                                           | Version 4.0<br>Dated<br>19/09/2019                                                                                                                          | Others   |

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

| Draft report clarifications and corrective action requests by validation team         | Summary of project participant response                                                                                                                              | Validation team conclusion                                                                                                 |
|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <b>CAR-1:</b> Project scale is incorrect as per the VCS standard.                     | Project scale has been revised to be Project in the revised PD since the emission reductions are less than or equal to 300,000 tonnes of CO <sub>2</sub> e per year. | CCSC has validated the revised PD and can confirm that the error has been corrected.                                       |
| <b>CL-1:</b> The web address of published EF calculation from China DNA is incorrect. | The web address of published EF calculation from China DNA has been revised.                                                                                         | CCSC has validated the revised PD and confirmed web address of published EF calculation from China DNA has been corrected. |