XINJIANG JIMUNAI CGN PHASE I WIND FARM PROJECT

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(CTI)

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Summary:

Shenzhen CTI International Certification Co., Ltd (hereafter referred to as CTI) has been commissioned by CGN Carbon Asset Management (Beijing) Co., Ltd. to perform a validation of the renewal of crediting period of "Xinjiang Jimunai CGN Phase I Wind Farm Project" (Ref. No. 1183) (hereinafter referred to as the project activity) in P. R. China.

The scope of the validation of the renewal of crediting period is defined as an independent and objective review of the updated sections of the PD relating to the baseline, estimated emission reductions and the monitoring plan using the most recent version of baseline and monitoring methodology applicable for the project activity. The validation opinion is finalized based on the assessment of the project description through applying standard auditing techniques including but not limited to document reviews, follow up actions (e.g. site visit, telephone or e-mail interviews) and also the review of the applicable approved methodology and underlying formulae and calculations.

The assessment was performed in accordance with the VCS Standard (version 4.2) and UNFCCC requirements including an assessment of:

(a) The impact of new relevant national and/or sectoral policies and circumstances on the baseline taking into account relevant guidance from the Board with regard to renewal of the crediting period of the registered VCS project at the time of requesting renewal of crediting period of the project activity;

(b) The correctness of the application of the approved methodology and, where applicable, the approved standardized baseline for the determination of the continued validity of the baseline or its update, and the estimation of emission reductions for the applicable crediting period of the registered VCS project.

The project activity was registered as a CDM project activity on 28/10/2011 and renewed on 02/05/2019 which is available at https://cdm.unfccc.int/Projects/DB/TUEV-RHEIN1317203879.14/view?cp=1. After the registration of CDM, the project has been registered as a VCS project which is available at https://registry.verra.org/app/projectDetail/VCS/1183.

The project activity is a wind power project located in Jimunai County, Xinjiang Uygur Autonomous Region, P. R. China, which is to use wind resource for electricity generation. The installed capacity of the

project activity is 49.5 MW, consisting of 33 wind turbines with unit capacity of 1500 kW. The project can reduce GHG emissions by replacing the electricity generated by fossil fuel fired power plants Northwest China Power Grid (NWPG). The project activity is expected to generate 117,315 MWh clean electricity at annual average. For the second crediting period (19/03/2021 - 18/03/2031), the annual average and total emission reductions of the project are estimated to be 91,423 tCO_2e and 914,230 tCO_2e respectively. As a grid-connected renewable energy project, the project activity contributes to sustainable development of the local community, the host country and the world.

The validation is not meant to provide any consulting towards the project participants. However, stated requests for corrective actions (CAR) and/or clarifications (CL) may have provided input for improvement of the project design.

In the course of the validation, 1 Corrective Action Request (CAR) and 3 Clarification Requests (CLs) were raised and successfully closed. The assessment is included in the report.

In summary, it is CTI's opinion that the project activity "Xinjiang Jimunai CGN Phase I Wind Farm Project" (Ref. No. 1183) in P. R. China, as described in the PD (version 02, dated 21/03/2022), meets all relevant VCS and UNFCCC requirements for the renewal of the crediting period.

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1 INTRODUCTION

1.1 Objective

Shenzhen CTI International Certification Co., Ltd (hereafter referred to as CTI) has been commissioned by CGN Carbon Asset Management (Beijing) Co., Ltd. to perform a validation of the renewal of crediting period of "Xinjiang Jimunai CGN Phase I Wind Farm Project" (Ref. No. 1183) (hereinafter referred to as the project activity) in P. R. China.

The objective of validation is an independent assessment by a Third Party of a proposed project activity against all defined criteria set for validation of renewal crediting period under the VCS and UNFCCC. In order to confirm that the project activity, as documented, is sound reasonable and meets the identified criteria, the validation involves the assessment on the project's compliance with VCS standards and the applied methodology, the project's baseline, monitoring plan, any deviation existed when implemented, and emission reductions. Validation for renewal crediting period is a requirement and is seen as necessary to provide assurance to stakeholders of the quality of project and its intended generation of VCUs.

1.2 Scope and Criteria

The PD is reviewed against the criteria stated in VCS Standard Version 4.2, Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords and the relevant decisions by the CDM Executive Board, including the CDM approved baseline and monitoring methodology ACM0002 (version 20.0). The validation was based on the requirements of VCS Standards Version 4.2, VCS Validation, Verification Manual Version 3.2, VCS Program Guide Version 4.1 and CDM Validation and Verification Standard for Project Activities Version 03.0 to apply auditing techniques.

The validation is not meant to provide any consulting towards the client. However, stated requests for forward actions and/or corrective actions may provide input for improvement of the Project monitoring towards reductions in the GHG emissions.

1.3 Level of Assurance

The project is expected to generated average of 91,423 VCUs per year, and therefore categorized as a project as per the VCS rules, in regards to its scale, subject to a materiality threshold of 5% with respect to omission or misstatements concerning reported quantities of the project activity.

The assessment was conducted to provide a reasonable level of assurance of compliance against the defined audit criteria and materiality threshold within the audit scope. Based on the audit findings, the validation statement reasonably assures that the GHG assertion is materially correct and is a fair representation of the GHG data and information.

1.4 Summary Description of the Project

The project activity is a wind power project implemented by Xinjiang Jimunai CGN Wind Power Co., Ltd., which is to use wind power to generate renewable and clean electricity delivered to the Northwest China Power Grid (NWPG). The location of the project is in Jimunai County, Xinjiang Uygur Autonomous Region, P. R. China, and the geographical coordinate of the project is 86.0054°- 86.8443° east longitude and 47.5454°- 47.5796° north latitude. The total installed capacity of the project activity is 49.5 MW, consisting of 33 wind turbines with unit capacity of 1500 kW and lifetime of 20 years, and the expected average annual net electricity generation is 117,315 MWh. The project was put into operation on 19/03/2011.

The project activity achieves greenhouse gases (GHGs) emission reductions by avoiding CO_2 emissions from the business-as-usual scenario electricity generation of those fossil fuel-fired power plants connected to the NWPG, generates social and environment benefits and contributes to sustainable development of the local community, the host country and the world, which has been verified by on-site inspection, and checking the related documentations, interview with the project implementer. The project is expected to achieve GHG emission reductions of 91,423 tCO_2e annually and 914,230 tCO_2e in total in the second crediting period.

The project activity was registered as a CDM project activity (CDM Ref. No. 5289) on 28/10/2011 and renewed on 02/05/2019 which is available at https://cdm.unfccc.int/Projects/DB/TUEV-RHEIN1317203879.14/view?cp=1. After the registration of CDM, the project has been registered as a VCS project (VCS ID 1183) which is available at https://registry.verra.org/app/projectDetail/VCS/1183.

2 VALIDATION PROCESS

2.1 Method and Criteria

Validation was conducted using CTI's procedures in line with the requirements specified in the VCS Standard (version 4.2), CDM M&P, the latest version of the CDM Validation and Verification Standard, and relevant UNFCCC requirements and applying standard auditing techniques. No sampling was utilized during the site visit as well as validation for project activity.

CTI completed a strategic review and risk assessment of the projects activities and processes in order to gain a full understanding of (if applicable):

1. Project Details;
2. Application of Methodology;
3. Estimated GHG Emission Reduction and Removals;
4. Monitoring;
5. Safeguards etc.

CTI validates that the reported information in the Project Description are complete and accurate. This involved a site visit and a desk review of the Project Description. This Validation Report describes the findings of this assessment.

2.2 Document Review

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

Function	Name	Technical competence	Task Performance*
Team Leader	Zhang Lei	1.2	☒DR ☒SV ☒RP ☐TR
Team Member	Chen Yujie	1.2	☒DR ☒SV ☒RP ☐TR
Technical Reviewer	Lin Shunrong	1.2	☒DR ☐SV ☐RP ☒TR

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

The renewed VCS PD (version 01, dated 07/12/2021) /2/ and PD (version 02, dated 21/03/2022) /3/ were assessed as part of the validation. In addition, the registered VCS PD (version 3.0 dated 20/11/2013) /1/, registered CDM PDD (version 3.0, dated 19/08/2011) /5/, approved renewal CDM PDD (Version 10.1, dated 02/01/2019) /6/, and the corresponding CDM validation reports/7//8/ as well as relevant documents, were reviewed. A detailed documents reviewed are listed in Appendix 2 of the report.

2.3 Interviews

The objective of the interview process was to solicit important information from personnel related to project and relevant to the validation process. An on-site inspection and information discussions were conducted on 14/03/2022 with project owner, local stakeholders and the consultant, and a list of the main interviewees is shown below:

Interviewed personnel	Role	Organization	Subject	Team Member
He Fulin	Wind farm manager	Xinjiang Jimunai CGN Wind Power Co., Ltd.	- Project design and operation of the project activity; - Project proponent and ownership; - Project start date, lifetime, and crediting period; - Project location; - Baseline Scenario; - Any modifications with respect to the registered PD; - Applicability to the latest methodology; - Applicable laws, statutes and other regulatory frameworks and any change; - Monitoring plan; - Participation under other GHG programs/emissions trading programs and other binding limits/other forms of environmental credit; - Sustainable development contributions; - The process and participation of the stakeholder consultation; - Additional information relevant to the project	Zhang Lei Chen Yujie
Yuan Jie	Technical supervisor			
Su Yong	Sales manager			
Yang Weiming	Jimunai government official	Jimunai Development and Reform Commission	- Participation in the stakeholder consultation; - The impact of the project activity; - Sustainable development contributions; - Any complaints by local stakeholders and the implementation of the mitigation measures.	Zhang Lei Chen Yujie
Zhang Chao	Local villager	Local Residents		
Li Jian	Local villager			

Interviewed personnel	Role	Organization	Subject	Team Member
Xing Hao	VCS Manager	CGN Carbon Asset Management (Beijing) Co., Ltd.	- Preparation of VCS PD; - Applicability to the latest methodology; - Baseline updating and monitoring plan - Project's compliance with the VCS program; - Data and calculation of GHG emission reductions	Zhang Lei Chen Yujie

2.4 Site Inspections

Via the assessment in course of the on-site inspection on 14/03/2022, a ground inspection of the project was conducted during the site visit and the validation team interviewed personnel with related objective listed in the above table. The information presented in the project description were assessed by reviewing the detailed project documentation, interviewing as well as by on-site inspection. This has enabled the validation team to assess the accuracy and completeness of reported information, and to verify the project's compliance with the requirement of VCS renewal of crediting period validation.

2.5 Resolution of Findings

As an outcome of the validation process, the team can raise different types of findings.

The validation team shall raise a Corrective Action Request (CAR) where reported information is not in line with the applicable CDM/VCS requirements.

The validation team shall raise a Clarification Request (CL) if information is insufficient or not clear enough to determine whether the applicable CDM/VCS requirements have been met.

There are 1 CAR and 3 CLs raised for the project and all CAR and CLs are successfully closed. Refer to Appendix 3 for detailed assessment.

2.5.1 Forward Action Requests

There were no FARs raised in the previous validation and verification process.

There are no FARs raised in this validation process.

3 VALIDATION FINDINGS

3.1 Project Details

The following description of the project as per PD was verified during the on-site visit and documents review:

Description of the Project Activity

▪ *Type*

Through the onsite visit, interviewing the project owner and documents review, it is verified by CTI the project activity is a newly-built grid-connected wind power project, which is to use wind power resource for electricity generation. Therefore, it is confirmed that the project activity falls under "Sectoral Scope 1 Energy industries (renewable - / non-renewable sources)" as per the UNFCCC Standard "Applicability of sectoral scopes version 01.0" /22/.

The validation team also confirms that the project is not a grouped project as it is conducted in one single location and involves only one single installation.

▪ *Technologies and measures implemented*

The information and descriptions reported in section 1.11 of the PD have been checked against the FSR, registered CDM PDD, registered VCS PD and approved renewal CDM PDD as well as via on-site inspection.

The project activity involves installation and operation of 33 sets of 1500 kW wind turbines with lifetime of 20 years, providing a total installed capacity of 49.5 MW, which is confirmed by the validation team via checking the purchase contract of the wind turbines /27/ and the nameplates of the wind turbines /26/. The type of these wind turbines is Model 77/1500 manufactured by Goldwind Co., Ltd.. The project activity is expected to generate 117,315 MWh clean electricity at annual average, and the plant load factor (PLF) of the project is 27.05%.

CTI has further verified the project implementation by onsite inspection and checking the commence order /28/, the operation and maintenance records /30/, and the power purchase agreement (PPA) /31/, as well the main electrical wiring diagram /33/. The construction date of the project activity is confirmed to be 25/07/2010 when the commence order was issued, and commissioning date to be 19/03/2011 when the wind power plant was put into operation. It is also confirmed that electricity generated from the project activity is supplied to Northwest China Power Grid (NWPG) via checking the PPA and main electrical wiring diagram.

In conclusion, it is verified that the description of the project in section 1.11 of the PD is in line with the PD template requirements and all the information required has been provided and verified as correct and consistent with the registered and approved design documents, and reflects the real condition of the project implementation.

▪ *Eligibility of the project activity*

For the renewal of crediting period validation, the PD has described and provided the justification on project's eligibility under the scope of the VCS Program as per VCS Standard (version 4.2) /13/. The assessment is provided as below:

The project activity generates GHG emission reductions including CO_2 which belong to the six Kyoto Protocol greenhouse gases attributed to scope 1 of section 2.1.1 of VCS Standard (version 4.2).

The project activity adopts CDM methodology ACM0002 (version 20.0) /15/ which is approved under a VCS approved GHG program, attributed to scope 4 of section 2.1.1 of VCS Standard (version 4.2)

Via checking the registered CDM PDD, VCS PD and corresponding validation reports of the project, it is verified that the project is implemented to utilize wind power for electricity generation and supply electricity to NWPG. It reduces GHG emissions by the fossil-fuel based power plant of NWPG, and the additionality is verified as actual, thus there is no assumption of having generated GHG emissions primarily for the purpose of their subsequent reduction, removal or destruction for this project.

In conclusion, as a registered VCS project, the project remains eligible under the scope of the VCS Program.

Project Design, including Eligibility Criteria for Grouped Projects

The project is conducted in one single location and involves only one single installation. Therefore, it is not a grouped project.

Project Proponent and Other Entity Involved

Xinjiang Jimunai CGN Wind Power Co., Ltd. is the project proponent as confirmed by checking the Business License /23/, approvals of EIA (Environmental Impact Assessment) /34/ and FSR (Feasibility Survey Report) /35/ of the project. The project proponent information and the contact information provided in section 1.5 of VCS PD has been confirmed to be correct via checking Business License and interviewing with the PP representative during on-site inspection.

CGN Carbon Asset Management (Beijing) Co., Ltd. is the other entity involved in the project, who is appointed by the project proponent as the consultancy for VCS development as verified by interviewing with the representative from the project proponent and the consultancy company. The contact information reported in section 1.6 of PD has been confirmed to be correct via checking the Business License /25/ and interviewing the representative of this company.

Ownership

By checking the Business License /23/, approvals of EIA /34/ and FSR /35/, Purchase Contract of the wind turbines /27/ and Power Purchase Agreement /31/, the validation team confirms that the project proponent Xinjiang Jimunai CGN Wind Power Co., Ltd. has the legal right to control and operate the project activity, and has full legal and beneficial title to all of the GHG reductions generated by the project.

Project Start Date

The project start date is 19/03/2011 on which the project starts commissioning. By checking the registered VCS PD /1/, commissioning report /29/ and by on-site interviewing with project owner, it is confirmed that the start date is correct and in line with the VCS Standard (version 4.2).

Project Crediting Period

A deviation was identified for the crediting period of the project. The project was registered under VCS Version 3.4 and completed validation before 19/03/2020. Thus, 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, so the first renewable crediting period of the project was updated from 19/03/2011 - 27/10/2011 to 19/03/2011 - 18/03/2021, which lasts for 10 years.

By checking the CDM and VCS websites, it is confirmed that VCUs were issued for the periods 19/03/2011 - 27/10/2011 and 01/01/2017 - 31/12/2020, CERs were issued for the periods 28/10/2011 - 27/05/2012 and 01/01/2013 - 31/12/2016, and CERs were awaiting issuance request for monitoring period 28/05/2012 - 31/12/2012. By interviewing with the PP during on-site visit, it is confirmed that monitoring period from 01/01/2021 to 18/03/2021 is in the verification process under VCS scheme. Thus, the validation team confirms that the monitoring periods during the first VCS crediting period (19/03/2011 - 18/03/2021) are contiguous.

The project was registered under CDM scheme on 28/10/2011 with UNFCCC reference number 5289. The first crediting period under CDM scheme is 28/10/2011 - 27/10/2018, which could be renewed twice (the total crediting period is from 28/10/2011 - 27/10/2032). Considering the 20-year lifetime of the project activity and 7*3 CDM renewable crediting period, it is not eligible for VCU issuance beyond 18/03/2031. Therefore, the validation team confirms that the second VCS crediting period of the project is from 19/03/2021 - 18/03/2031, which lasts for 10 years and is in line with the requirement of VCS.

Project Scale and Estimated GHG Emission Reductions or Removals

As the annually estimated emission reductions are lower than 300,000 tCO_2, the project scale falls under project under VCS standard.

Via checking the emission reductions calculation spreadsheet /4/ provided by the PP, it is verified that the total estimated GHG emission reductions for the second crediting period (19/03/2021 - 18/03/2031) are 914,230 tCO2e. The validation team confirms that the estimated GHG emission reductions of the project activity are calculated correctly and conservatively, which are shown as follows:

Year	Estimated GHG emission reductions or removals (tCO_2e)
19/03/2021~18/03/2022	91,423
19/03/2022~18/03/2023	91,423
19/03/2023~18/03/2024	91,423
19/03/2024~18/03/2025	91,423
19/03/2025~18/03/2026	91,423
19/03/2026~18/03/2027	91,423
19/03/2027~18/03/2028	91,423
19/03/2028~18/03/2029	91,423
19/03/2029~18/03/2030	91,423
19/03/2030~18/03/2031	91,423
Total estimated ERs	914,230
Total number of crediting years	10
Average annual ERs	91,423

Project Location

The project is located at the southwest of Jimunai County, Xinjiang Uygur Autonomous Region, P. R. China. Through on-site visiting it is confirmed that the geographical coordinate of the project is 86.0054° - 86.8443° east longitude and 47.5454° - 47.5796° north latitude.

Conditions Prior to Project Initiation

Before the implementation of the project activity, the electricity generated by the project would be supplied by NWPG in the baseline scenario. The baseline scenario is the same as the scenario existing prior to the implementation of the project activity, which is confirmed by on-site inspection and checking the CDM registered PDD /5/, CDM approved renewed PDD /6/ and corresponding validation reports /7//8/. Therefore, the project is confirmed not to be implemented to generate GHG emissions for the purpose of their subsequent reduction, removal or destruction.

Project Compliance with Laws, Statutes and Other Regulatory Frameworks

By checking approvals of EIA and FSR, as well as relevant laws and regulations, including, Renewable Energy Law of the People's Republic of China, Environmental Protection Law of the People's Republic of China, Law of the People's Republic of China on the Prevention and Control of Solid Waste Pollution /43/, it is confirmed by the validation team that the project activity is in compliance with all laws and regulations in China.

Participation under Other GHG Programs

The project has been registered as CDM project with UNFCCC Ref. No. 5289 and registered as VCS project with Ref. No. 1183. Apart from CDM and VCS, the project has neither been registered nor seeking registration under any other GHG programs which has been confirmed via checking the UNFCCC, GS, VCS, China Certified Emission Reduction (CCER) /44/ and other GHG schemes' website. It is also confirmed that the project is not rejected by any other GHG programs.

Other Forms of Credit

- Emissions trading programs and other binding limits

Although the national emission trading scheme has been launched since 16/07/2021, it only covers the high-emission and energy intensive industries as per the regulation /41/. By checking the business license of the project proponent, it is confirmed the PP is qualified in business scope of renewable energy investment, thus is not included in the mandatory emission control scheme and there is no emission cap enforceable for the PP via further checking the compulsory company list under China ETS in public information /42/. Moreover, it is verified by the validation team the project activity has not been registered as a CCER project /44/, the emission reductions generated by the project activity are not eligible to not be used for compliance with emission trading programs or to meet binding limits on GHG emissions as stipulated in the regulation /41/.

Furthermore, the validation team confirms by checking the Statement /24/ submitted by the project proponent that the net GHG emission reductions generated by the project will not be used for compliance with an emissions trading program or to meet binding limits on GHG emissions. Thus, it is concluded that the project activity is not involved on other emissions trading programs and other binding limits.

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

Via interview with the project owner and based on above assessment, it is confirmed that the project has not created any other form of environmental credit.

Sustainable Development Contributions

Via the on-site inspection and by checking the evidence provided, CTI verified that the project contributes the sustainable development through the following aspects:

- SDG7 "Ensure access to affordable, reliable, sustainable and modern energy":

The project reduces the consumption of the fossil fuels of NWPG, which contributes to increasing China's energy security. This contributes to the action that "Promoting coal substitution as well as transformation and upgrading" and "Vigorously developing new energy resources" of of China's "Action Plan for Carbon Dioxide Peaking Before 2030" /40/.

- SDG8 "Promote inclusive and sustainable economic growth, employment and decent work for all":

The implementation of the project offers job opportunities for local people during both the construction and operational period. This contributes to one of the China's actions for promoting sustainable developing, "Increase labor force participation rate through implementation of the classification policy. Vigorously enforce the Law on Promotion of Employment".

- SDG13 "Take urgent action to combat climate change and its impacts":

The project activity will achieve obvious greenhouse gas (GHG) emission reductions by avoiding CO_2 emissions, as grid-connected fossil fuel-fired power dominates in the Northwest China Power Grid. The project is expected to generate an average of 91,423 tCO_2e reductions annually during the second crediting period. This complies with the goal set in the Part 11 of China's "14th Five-Year Plan for National Economic and Social Development and Long-Range Objectives for 2035" /39/: Actively respond to climate change: implement national independent contribution targets for climate change response by 2030 and formulate an action plan to reach peak carbon emissions by 2030"

Additional Information Relevant to the Project

- **Leakage management for AFOLU projects**

As the project is not a grouped project, the eligibility criteria for grouped project is not applicable; No leakage management as not an AFOLU project.

- **Commercially sensitive information**

No commercially sensitive information has been excluded from the public version of the project description. The details are presented transparently to validation team for analysis which lead to positive conclusion for this validation.

Overall, it is confirmed that the PD is accurate, complete, and provides an understanding of the nature of the project.

3.2 Safeguards

3.2.1 No Net Harm

By checking the EIA (Environmental Impact Assessment) /34/ and conclusions provided in the registered PD, it is confirmed that environmental impacts of the project activity has been reduced to the minimum level and is not considered significant. The project achieves greenhouse gas (GHG) emission reductions by avoiding CO_2 emissions. The implementation of the project contributes to local socio-economic development by creating career opportunities and increasing paying taxes. And there is no potential environment or social economic matter identified during on-site visit. The validation team confirms that there is no net harm arising from the project activity.

3.2.2 Local Stakeholder Consultation

During on-site inspection, the validation team has interviewed the project owner as well as local stakeholders including plant manager, government official and local villagers (refer to section 2.3 of this report), and following communication mechanisms between the PP and local stakeholders has been confirmed, as per the PD describes:

Questionnaires were distributed to local villagers, students and government officials for comments on the project activity on 30/06/2010. 40 copies of questionnaire were distributed, and 38 pieces of reply were received, with a recovery rate of 95%. The survey showed that the project received strong support from local communities, who believed that the project would be benefitial to local environment and agreed on the development and construction of the project activity. Futhermore, local stakeholders were invited to a consultation meeting which was held in Jimunai government office on 02/07/2010, where local residents' opinions and concerns were expressed and discussed. No negative opinion was received.

On-going communications with local stakeholders were carried out by the project owner. The status and progress of the project was reported to local residents on the bulletin board of the village committee, and their comments or complains were recorded in the village committee's complaint book. Local stakeholders could also directly communicate with and give feedback to the project proponent at any time through published phone number. During the on-site visit, the validation team checked the contact information published on the bulletin board and the complaint book, and interviewed with the contact person and the local residents, it is confirmed that no negative opinion was received during the first crediting period.

Local government officials were also interviewed by the validation team, and it is confirmed that, during the operational stage of the project activity, local authority has carried out spot checks on the operation of the project periodically as per the request from local government's regulations, and the project has passed all the periodic spot checks conducted by local government, and no negative comments were received for the project.

3.2.3 Environmental Impact

The validation team reviewed the EIA (Environmental Impact Assessment) /34/ of the project. The EIA was carried out by Xinjiang Uygur Environmental Protection Technique Consulting Centre and approved by Xinjiang Uygur Environmental Protection Bureau. Certain measures were taken to neutralize the negative effect of the project activity, for instance, sprinking water to promote deposition of dust during construction and treating the solid wastes properly. For the project activity, the environmental impacts on the birds, ambient air, waters, and other ecosystems were all considered insignificant.

By on-site visiting and checking the EIA summary and conclusion, it is confirmed that the environmental impacts of the Xinjiang Jimunai CGN Phase I Wind Farm Project are not considered significant.

3.2.4 Public Comments

No public comments were received.

3.2.5 AFOLU-Specific Safeguards

Not applicable as non-AFOLU project.

3.3 Application of Methodology

3.3.1 Title and Reference

The approved methodology applied in the project activity is ACM0002 – "Grid-connected electricity generation from renewable sources (version 20.0)" /15/

Related tools are:

"Tool to calculate the emission factor for an electricity system (version 07.0)" /16/

"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)" /17/

3.3.2 Applicability

The criteria and assessment of ACM0002 (version 20.0) are in the following table:

Criteria	Analysis	Assessment team's opinion
This methodology is applicable to grid-connected renewable energy power generation project activities that: (a) Install a Greenfield power plant; (b) Involve a capacity addition to (an) existing plant(s); (c) Involve a retrofit of (an) existing operating plants/units; (d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or (e) Involve a replacement of (an) existing plant(s)/unit(s).	The project is a greenfield grid-connected renewable power generation project.	By site visit and checking FSR, it is confirmed that the project is a Greenfield power plant.
The methodology is applicable under the following conditions: (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; (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	The project is a newly built wind power project.	By site visit and checking FSR, it is confirmed that the project is a Greenfield wind power project.

Criteria	Analysis	Assessment team's opinion
reference period and the implementation of the project activity.		
In case of hydro power plants, one of the following conditions shall apply: (a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or (b) The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density, calculated using equation (7), is greater than 4 W/m^2; or (c) The project activity results in new single or multiple reservoirs and the power density, calculated using equation (7), is greater than 4 W/m^2; or (d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, calculated using equation (7), is lower than or equal to 4 W/m^2, all of the following conditions shall apply: (i) The power density calculated using the total installed capacity of the integrated project, as per equation (8), is greater than 4 W/m^2; (ii) Water flow between reservoirs is not used by any other hydropower unit which is not a part of the project activity; (iii) Installed capacity of the power plant(s) with power density lower than or equal to 4 W/m^2 shall be: a. Lower than or equal to 15 MW; and b. Less than 10 per cent of the total installed capacity of integrated hydro power project.	Not applicable, the project is not a hydro power plant, so this applicability condition does not need to be considered.	By site visit and checking FSR, it is confirmed that the project is a wind power project, this is not applicable.

Criteria	Analysis	Assessment team's opinion
In the case of integrated hydro power projects, project proponent shall: (a) Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro power project; or (b) Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of water balance is to demonstrate the requirement of specific combination of reservoirs constructed under CDM project activity for the optimization of power output. This demonstration has to be carried out in the specific scenario of water availability in different seasons to optimize the water flow at the inlet of power units. Therefore, this water balance will take into account seasonal flows from river, tributaries (if any), and rainfall for minimum of five years prior to the implementation of the CDM project activity.	Not applicable, the project is not a hydro power plant, so this applicability condition does not need to be considered.	By site visit and checking FSR, it is confirmed that the project is a wind power project, this is not applicable.
The methodology is not applicable to: (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; (b) Biomass fired power plants/units.	The project does not involve switching from fossil-fuels to renewable energy sources at the site of the project activity and the project is not a biomass-fired power project.	By site visit and checking FSR, it is confirmed that the project is a Greenfield power plant, does not involved switching from fossil fuel to renewable energy and biomass fired power plant. This is not applicable.
In the case of retrofits, rehabilitations, replacements, 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	Not applicable, the project is a newly built wind power project.	By site visit and checking FSR, it is confirmed that the project is a Greenfield power plant. This is not applicable.

Criteria	Analysis	Assessment team's opinion
already in use prior to the implementation of the project activity and undertaking business as usual maintenance".		

In addition, the criteria and assessment of "Tool to calculate the emission factor for an electricity system (version 07.0)" and "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)" are as follows:

Tool	Criteria	Analysis	Assessment team's opinion
Tool to calculate the emission factor for an electricity system	This tool may be applied to estimate the OM, BM and/or CM when calculating baseline emissions for a project activity that substitutes grid electricity that is where a project activity supplies electricity to a grid or a project activity that results in savings of electricity that would have been provided by the grid (e.g. demand-side energy efficiency projects).	The project is the installation of a wind power plant supplying electricity to the grid.	By site visit and checking FSR, it is confirmed that the project is a greenfield grid-connected renewable power generation project.
	In case of CDM projects the tool is not applicable if the project electricity system is located partially or totally in an Annex I country.	The project electricity system is located in a non-Annex I country.	The validation team confirms that the project electricity system is located in a non-Annex I country.
Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period	This tool provides a stepwise procedure to assess the continued validity of the baseline and to update the baseline at the renewal of a crediting period, as required by paragraph 49 (a) of the modalities and procedures of the clean development mechanism.	The validity of the baseline of the project is assessed by the following two steps: Evaluate whether the current baseline is still valid for the next crediting period;	The validation team confirms that this tool is applicable at the renewal of the crediting period.

Tool	Criteria	Analysis	Assessment team's opinion
	The tool consists of two steps. The first step provides an approach to evaluate whether the current baseline is still valid for the next crediting period. The second step provides an approach to update the baseline in case that the current baseline is not valid anymore for the next crediting period.	Update the baseline in case that the current baseline is not valid anymore for the next crediting period.	

According to the tables above, the validation team confirms the project meets all the applicable criteria of ACM0002 (version 20.0) and related tools: "Tool to calculate the emission factor for an electricity system (version 07.0)" and "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)".

3.3.3 Project Boundary

Project boundary has been ascertained and confirmed during the on-site visit using ACM0002 (version 20.0) – "The spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to".

Via on-site visit and checking the Power Purchase Agreement /31/ and Grid Access Agreement /32/, it is confirmed that the electricity generated by the project activity is supplied to Northwest China Power Grid (NWPG). According to the boundary definitions of the 2019 Baseline Emission Factors for Regional Power Grids /36/, NWPG consists of Shaanxi, Gansu, Qinghai, Ningxia and Xinjiang power grids. Hence the project boundary includes the project site and all power plants physically connected to NWPG.

The sources and types of GHG included in the project boundary are listed below.

Source		Gas	Included?	Justification/Explanation
Baseline	CO_2 emissions from electricity generation in fossil fuel-fired power plants that is displaced due to the project activity.	CO_2	Yes	Main emission source
		CH_4	No	Minor emission source
		N_2O	No	Minor emission source
		Other	No	Minor emission source

Source		Gas	Included?	Justification/Explanation
Project	The Greenfield wind power plant	CO_2	No	No CO_2 emissions are emitted from the project
		CH_4	No	Project activity does not emit CH_4
		N_2O	No	Project activity does not emit N_2O
		Other	No	Project activity does not emit other forms of GHG emissions

3.3.4 Baseline Scenario

The baseline scenario of the project activity is that the electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid. According to the methodology ACM0002 (version 20.0), the baseline emissions are the electricity produced by the project activity multiplied by the emission factor of NWPG.

For the second crediting period, the continued validity of the original baseline has been assessed in the updated PD. CTI confirms that there have been no changes in the relevant national and/or sectoral regulations on building a wind power project for exporting electricity to power grid since the previous crediting period. On the other hand, the baseline scenario for building a wind power project for exporting electricity to power grid is still valid according to methodology ACM0002 (version 20.0).

The information presented in the updated PD has been validated by an initial document review of all data. Further confirmation has been made based on the review of information from similar projects and/or technologies. The sources referenced in the PD have been quoted correctly. The information was verified against 2019 Baseline Emission Factors for Regional Power Grids in China.

The steps from the Methodological Tool "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)" as per VCS standard version 4.2 were applied to assess the continued validity of the baseline and/or to update the baseline at the renewal of a crediting period:

Step 1: Assess the validity of the current baseline for the next crediting period

VCS standard version 4.2 requires assessing the impact of new relevant national and/or sectoral policies and circumstances on the baseline. The validity of the current baseline is assessed using the following Sub-steps:

Step 1.1: Assess compliance of the current baseline with relevant mandatory national and/or sectoral policies

The validation team checked the relevant national and/or sectoral policies since the date of VCS PD registration (version 3.0 dated 20/11/2013) till now, and no new policies were found applicable to the project activity in the electricity generation sector. Although national policies favour the development of renewable energy, electricity generated by fossil fuel based plants still dominates the electricity supply in NWPG, which is confirmed by checking China Electric Power Yearbook 2015-2019. Hence, in the absence of the project activity electricity would still have been generated in the existing fossil fuel power plants or by the addition of new fossil fuel power plants connected to the NWPG.

CTI confirms that the current baseline still complies with all relevant policies.

Step 1.2: Assess the impact of circumstances

As the baseline scenario might be affected by changed circumstances, i.e.market conditions including the availability of new fuels or raw materials and the impact of electricity or fuel prices in the identification of the current practice for the baseline emissions, the PP has checked the baseline against such changes that have occurred since validation. This is of special importance if the baseline scenario is the continuation of the previous crediting period. In the current case no such changes have been identified by the PP. The validation team has independently checked whether there are changes in circumstances which have an impact on the baseline, via checking the China Electric Power Yearbook and China Energy Statistical Yearbook and interview with the PP. It is confirmed no such changes have been identified and fossil fuel based power generation still dominates the electricity supply in NWPG, and thus it is deemed appropriate not to update the baseline as the conditions used to determine the baseline emissions in the previous crediting period are still valid.

Step 1.3: Assess whether the continuation of use of current baseline equipment(s) or an investment is the most likely scenario for the crediting period for which renewal is requested

In the absence of the project activity, similar amount of electricity would have been generated and supplied to the grid by fossil-fuel power in the baseline scenario. As a greenfield project, there is no baseline equipment which is to be exchanged. Thus, there are not any investment needs to be undertaken by the project participants or the third party. Hence, this step is not applicable to the project activity.

Step 1.4: Assessment of the validity of the data and parameters

According to the requirement of the "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period", if any of the data and parameters that were only determined at the start of the crediting period and not monitored during the crediting period and not valid anymore, the current baseline needs to be updated for the subsequent crediting period.

Parameters applied for the second crediting period were examined in accordance to "Tool to calculate the emission factor for an electricity system" (version 07.0). The Designated National Authority (DNA) of China issued the notice "2019 Baseline Emission Factors for Regional Power Grids in China" on 29/12/2020, which was the latest grid data available for the project, and the simple operating margin CO_2 emission factor ($EF_{grid,OMsimple,y}$) and build margin emission factor ($EF_{grid,BM,y}$) of the NWPG which the project activity is connected to have been updated. For wind power project, the values of ω_{OM} and ω_{BM} for the second crediting period are the same as the first crediting period and does not need to be updated. Thus, the combined margin emission factor ($EF_{grid,CM,y}$) and the baseline emissions need to be updated for the second crediting period with the application of the new data available. Refer to section 3.3.6 of this report for details.

Step 2: Update the current baseline and the data and parameters

Step 2.1: Update the current baseline

The baseline emissions have been updated for the second crediting period, without re-assessing the baseline scenario, based on the latest approved version (Version 20.0) of the methodology ACM0002 applicable to the project activity taking into account the sectoral policies and circumstances that are applicable at the time of request for renewal of the crediting period.

Step 2.2: Update the data and parameters

As per the "Tool to calculate the emission factor for an electricity system" (version 07.0), for wind power project, the simple operating margin CO_2 emission factor ($EF_{grid,OMsimple,y}$) and build margin emission factor ($EF_{grid,BM,y}$) need to be updated according to the latest data available, and the values of ω_{OM} and ω_{BM} does not to be updated. The data and parameters have been updated according to the "2019 Baseline Emission Factors for Regional Power Grids in China" published by China DNA. Refer to section 3.3.6 of this report for details. The validation team confirms that all data and paramters have been applied correctly.

Conclusion:

CTI confirms that the current baseline is still valid as per methodology ACM0002 (version 20.0), and the grid emission factors need to be updated for the subsequent crediting period.

3.3.5 Additionality

Not applicable for the renewal of crediting period.

By checking relevant applicable laws and regulations at the time of renewal of crediting period, i.e. Renewable Energy Law of the People's Republic of China /43/ which came into effect on 01/01/2006, Agenda for China's 14th Five-Year Plan (2021-2025) /39/, the validation team confirms the project activity is in compliance with all laws and regulations in China and there are no surplus regulations required compared with the first validation at the time of renewal of crediting period.

3.3.6 Quantification of GHG Emission Reductions and Removals

The calculation of the emissions reductions exactly follows the procedures described in the methodology ACM0002 (version 20.0) and relevant tool, e.g. the "Tool to calculate the emission factor for an electricity system (version 07.0)".

CTI has assessed the calculation of project emissions, baseline emissions, leakage emissions and emission reductions. Corresponding calculations have been carried out based on calculation spreadsheet. The consistency of the parameters and equations presented in PD, as well as calculation spreadsheet etc., has been compared with the information and requirements presented in the methodology and respective tools.

The assumptions and data used to determine the emission reductions are listed in the PD and all the sources have been checked. Based on the information reviewed it is confirmed that the sources used are correctly quoted and interpreted in the PD. The values presented in the PD are considered reasonable based on the documentation and references reviewed and the results of the interviews.

The estimation of the emission reductions is considered correct as the calculations have been reproduced by the validation team with the attainment of the same results.

CTI confirms the methodology ACM0002 (version 20.0) and relevant tool, e.g. the "Tool to calculate the emission factor for an electricity system" (version 07.0) have been correctly applied to calculate baseline emissions, project emissions, leakage and net GHG emission reductions and removals.

Detailed information on the verification of the parameters used in the equations is found below. The algorithms for the determination of the baseline and project are discussed in the following sections.

(1) Baseline emissions

As per the methodology ACM0002 (version 20.0) that the baseline emissions include only CO_2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity. The baseline emissions (BE_y) are calculated by the Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the project activity in year y (MWh) ($EG_{PJ,y}$) multiplied by the Combined margin CO_2 emission factor for grid connected power generation in year y ($EF_{grid,CM,y}$).

Because the project activity is the installation of a new grid-connected renewable power plant/unit at a site where no renewable power plant was operated prior to the implementation of the project activity, the $EG_{PJ,y}$ equals to the quantity of net electricity generation supplied to the grid by the project in year y (MWh) ($EG_{facility,y}$). According to ACM0002 (version 20.0), the quantity of net electricity generation supplied to the grid by the project in year y (MWh) ($EG_{facility,y}$) is determined according to "Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation (version 03.0)".

The Combined margin CO_2 emission factor for grid connected power generation in year y ($EF_{grid,CM,y}$) is calculated in a transparent and conservative manner as a combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the steps prescribed in the "Tool to calculate the emission factor for an electricity system (version 07.0)".

The PD uses the latest data available for calculation of the grid emission factor sourced from China Electric Power Yearbook 2016-2018 /38/, China Energy Statistical Yearbook 2016-2018 /38/ and "2019 Baseline Emission Factors for Regional Power Grids in China" /36/ published by China DNA. The simple operating margin CO_2 emission factor ($EF_{grid,OMsimple,y}$) is calculated to be 0.8922 tCO_2e/MWh, and build margin emission factor ($EF_{grid,BM,y}$) is calculated to be 0.4407 tCO_2e/MWh. Based on the weight ω_{OM} and ω_{BM} of 0.75:0.25 by default for wind power project for the second crediting period, the combined margin emission factor is calculated to be 0.7793 tCO_2e/MWh.

The annual net electricity supplied to the grid is 117,315 MWh which is in line with the original design of the project. It is confirmed that the estimation of the figure is reasonable by checking the registered PD and the VCS monitoring reports during the first crediting period. Thereby, the baseline emissions could be calculated to be 117,315 MWh * 0.7793 tCO_2e/MWh = 91,423 tCO_2e. The validation team confirms that the baseline emission calculation is correct in the PD.

The values of the main parameters for calculating combined emission factor ($EF_{grid,CM,y}$) are crosschecked by the validation team and the data sources are listed in the table below:

Data and Parameters	Description	Data source
$EF_{grid,OM,y}$	CO_2 emission factor of operation margin of NWPG in 2019	2019 Baseline Emission Factors for Regional Power Grids in China
$EF_{grid,BM,y}$	CO_2 emission factor of built margin of NWPG in 2019	2019 Baseline Emission Factors for Regional Power Grids in China

CTI confirms that all data sources and assumptions are appropriate, and calculations are correct and are applicable to the project activity and will result in a conservative estimate of the emission reductions.

(2) Project emissions

The project is a wind power project. Therefore, the project emission is considered as zero based on ACM0002 (version 20,0). Therefore, PE_y = 0 tCO_2e.

(3) Leakage

According to ACM0002 (version 20.0), no leakage is considered for this project.

(4) Emission reductions

Based on the calculations and results presented in the sections above, the implementation of the project activity will result in an average ex-ante estimation of emission reductions of 91,423 tCO_2e per year for the subsequent ten-year crediting period. Total emission reductions during the second crediting period are estimated to be 914,230 tCO_2e.

Conclusion:

CTI confirms methodology ACM0002 (version 20.0) and relevant tool, e.g. the "Tool to calculate the emission factor for an electricity system (version 07.0)", have been correctly applied to calculate baseline emissions, project emissions, leakage and net GHG emission reductions and removals.

3.3.7 Methodology Deviations

There are no methodology deviations for the project.

3.3.8 Monitoring Plan

Based on the on-site visit, it is confirmed that all the electricity meters, including two bidirectional electricity meters main meter (M1) and backup meter (M2), and the backup power line electricity meter (M3), are all installed in consistence with the main electrical wiring diagram /33/ and PPA /31/of the project and they are all operational. M1 and M2 installed at the 35kV/110kV on-site substation are used to continuously measure the total exported electricity to ($EG_{export,y}$) and imported electricity from ($EG_{import,y}$) the grid. In case of M1 out of order, readings from M2 will be applied. M3 is used to continuously measure the total electricity imported from the grid through the backup power line ($EG_{im\text{-}backup,y}$) in the event that the main power line shuts down. The accuracy is 0.2s for M1 and M2 and 0.5s for M3, it was verified during on-site inspection to be in line with the requirement of the monitoring plan i.e. "0.2s for M1 and M2 and not less than 1.0 for M3".

Parameters	Description	Measurement method and QA/QC procedures	Assessment conclusion
$EG_{facility,y}$	Quantity of net electricity generation supplied to the grid by the proposed project to the Grid in year y.	The parameter will be calculated as: $EG_{facility,y} = EG_{export,y} - EG_{import,y} - EG_{im\text{-}backup,\ y}$ Each of the parameters involved in the calculation will be continuously measured and monthly recorded. Data will be archived for 2 years following the end of the last crediting period. Receipts for electricity sales will be kept for further verification.	Consistent with methodology
$EG_{export,y}$	Electricity supplied to the grid by the proposed project in year y.	Both parameters are monitored by main meter M1 and its backup meter M2 installed at the 35kV/110kV on-site substation. The readings of the electricity meters will be continuously measured and monthly recorded. The accurancy of M1 and M2 is 0.2s and both meters will be calibrated once a year according to the rules of Relative Technical Administrative Code of Electric Energy Metering. The project operator is responsible for recording such data. Data will be archived for 2 years following the end of the last crediting period. Receipts for electricity sales will be kept for further verification.	Consistent with methodology
$EG_{import,y}$	Electricity purchased from the grid by the proposed project in year y.		Consistent with methodology
$EG_{im\text{-}backup,y}$	Electricity imported from the grid by the proposed project through the backup power line in the year y.	Monitored by backup power line electricity meter (M3) at the project site. The readings of the electricity meter will be continuously measured and monthly recorded. The accuracy of M3 will be not less than 1.0, and the meter will be calibrated once a year according to relevant national regulatory standard. Data will be archived for 2 years following the end of the last crediting period. Electricity sales receipts will be kept for further verification.	Consistent with methodology

CTI confirms that the monitoring plan contains all necessary parameters which have been clearly described in PD (version 02, dated 21/03/2022) and the means of monitoring described in the plan complies with the requirements of the methodology.

An organizational structure is provided in PD (version 02, dated 21/03/2022). The functions such as data collection, aggregation, verification, calculation, archiving, as well as the maintenance of equipment etc. have been defined. Quality assurance and quality control procedures for recording, maintaining and data archiving etc. will be ensured according to VCS and CDM EB rules. The calibration of the meters will be implemented as per national standard. An emergency treatment process has been defined in the PD when the meter is in malfunction. Data management and quality control system are quoted in the PD. The monitoring staffs will be trained based on the training program described in the PD.

CTI confirms that the monitoring plan in the updated PD (version 02, dated 21/03/2022) is consistent with that in the registered CDM PDD and registered VCS PD, and is in compliance with the requirements of ACM0002 (version 20.0). The monitoring plan will give opportunity for real measurements of achieved emission reductions. CTI considers that the project participants are capable to implement the monitoring plan.

3.4 Non-Permanence Risk Analysis

Not applicable for the present project activity.

4 VALIDATION CONCLUSION

CTI has performed a validation of renewal of crediting period of the "Xinjiang Jimunai CGN Phase I Wind Farm Project" (Ref. No. 1183). The validation was performed on the basis of the updated sections of the PD relating to the baseline, estimated emission reductions and the monitoring plan using the most recent version of baseline and monitoring methodology applicable for the project activity. The final validation opinion was finalized in accordance with VCS standard (version 4.2), CDM validation and verification standard for project activities (version 03.0) and CDM project standard for project activities (version 03.0) including the assessment of:

(a) The impact of new relevant national and/or sectoral policies and circumstances on the baseline taking into account relevant guidance from the Board with regard to renewal of the crediting period of the registered VCS project at the time of requesting renewal of crediting period of the project activity;

(b) The correctness of the application of the approved methodology and, where applicable, the approved standardized baseline for the determination of the continued validity of the baseline or its update, and the estimation of emission reductions for the applicable crediting period of the registered VCS project.

The review of the project design documentation and the subsequent follow-up interviews have provided CTI with sufficient evidence to determine the validity of the original baseline. The project correctly applies the latest baseline and monitoring methodology ACM0002, "Grid-connected electricity generation from renewable sources (version 20.0)". CTI is able to confirm:

(a) The updated PD complies with the valid version of the applicable PD form and instructions therein for filling out the PD;

(b) Information transferred to the later valid version of the PD form is materially the same as that in the registered PD;

(c) The baseline and monitoring methodology was applied in accordance with the applicable requirements in the VCS standard;

(d) The baseline, the estimated GHG emission reductions, and the monitoring plan in the updated PD comply with the applicable requirements in the VCS standard, and the valid version of the methodology that is applicable to the registered VCS project;

(e) The next crediting period of the registered VCS project commences on the day immediately after the expiration of the current crediting period;

(f) The names of project participants in the updated PD are consistent with the names of the project participants in the registered PD.

CTI also confirms that there have been no proposed methodology deviations for the second crediting period when submitting this report.

Given that the project is implemented as designed and the underlying assumptions do not change, the project is likely to achieve the estimated amount of annual emission reductions of 91,423 tCO_2e and a total estimated emission reduction of 914,230 tCO_2e over the second crediting period (19/03/2021 - 18/03/2031) as specified within the final PD.

In summary, it is CTI's opinion that the project activity "Xinjiang Jimunai CGN Phase I Wind Farm Project" (Ref. No. 1183) in P. R. China, as described in the PD (version 02, dated 21/03/2022), meets all relevant VCS and UNFCCC requirements for the renewal of the crediting period.

Mr Zhang Lei
Team Leader
13/05/2022

Ms Lin Shunrong
Technical Reviewer
13/05/2022

APPENDIX 1: ABBREVIATIONS

Abbreviations	Full texts
AFOLU	Agriculture, Forestry, and Other Land Use
BM	Build Margin
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CM	Combined Margin
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DNA	Designated National Authority
EB	Executive Board
GHG	Greenhouse gas(es)
GS	Gold Standard
EIA	Environmental Impact Assessement
ER	Emission Reduction
FAR	Forward Action Request
GHG	Greenhouse gas(es)
IPCC	Intergovernmental Panel on Climate Change
MP	Monitoring Plan
M&P	Modality and Procedure
NWPG	Northwest China Power Grid
PA	Project Activity
PD	Project Description
PDD	Project Design Description
PP	Project Participant
QA/QC	Quality Assurance / Quality Control

UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard
VCS	Verified Carbon Standard
VCU	Verified Carbon Unit
VVB	Validation/Verification Body
UNFCCC	United Nations Framework Convention on Climate Change

APPENDIX 2: REFERENCE LIST

/1/	Registered VCS PD (version 3.0 dated 20/11/2013);
/2/	Renewed VCS PD (version 01, dated 07/12/2021)
/3/	Renewed VCS PD (version 02, dated 21/03/2022)
/4/	Emission reductions calculation spreadsheet
/5/	Registered CDM PDD (version 3.0, dated 19/08/2011)
/6/	Renewed CDM PDD (Version 10.1, dated 02/01/2019)
/7/	CDM validation report for registration (verision 04, dated 14/09/2011)
/8/	CDM validation report for renewal of crediting period (version 02.0, dated 05/01/2019)
/9/	VCS monitoring report (version 02, dated 24/11/2013)
/10/	VCS monitoring report (version 2.0, dated 18/03/2021)
/11/	VCS verification report (version 01, dated 20/11/2013)
/12/	VCS verification report (version 01, dated 20/03/2021)
/13/	VCS standard (version 4.2, dated 20/01/2022)
/14/	VCS program guide (version 4.1, dated 20/01/2022)
/15/	Approved methodology ACM0002 (version 20.0)
/16/	Tool to calculate the emission factor for an electricity system (version 07.0)
/17/	Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation (version 03.0)
/18/	Assessment of the validity of the original/current baseline and to update the baseline at the renewal of a crediting period (version 03.0.1)
/19/	CDM Validation and Verification standard for project activities (version 03.0)
/20/	CDM Project Standard for project activities (version 03.0)
/21/	CDM project cycle procedure for project activities (version 03.0)
/22/	Applicability of sectoral scopes (version 01.0)
/23/	Business License of Xinjiang Jimunai CGN Wind Power Co., Ltd.

/24/	Statement on not be used for compliance with an emissions trading program or to meet binding limits on GHG emissions by project proponent (dated 14/03/2022)
/25/	Business License of CGN Carbon Asset Management (Beijing) Co., Ltd.
/26/	Nameplate of the wind turbines
/27/	Purchase contract of the wind turbines (signed with Xinjiang Goldwind Sci & Tech Co.,Ltd.)
/28/	The Commence Order
/29/	Commissioning Report
/30/	Operation and maintenance record
/31/	Power Purchase Agreement (signed with Xinjiang Electric Power Company)
/32/	Grid Access Agreement (signed with Xinjiang Electric Power Company)
/33/	Main electrical wiring diagram
/34/	Environment Impact Assessment and Approval of EIA (dated 27/10/2009), prepared by: Xinjiang Environmental Protection Technology Consulting Center approved by: Xinjiang Uygur Autonomous Region Environmental Protection Bureau
/35/	Feasibility Survey Report and Approval of FSR (October, 2009) prepared by: Xinjiang Water Resources and Hydropower Survey and Design Institute approved by: Xinjiang Uygur Autonomous Region Environmental Protection Bureau
/36/	2019 Baseline Emission Factors for Regional Power Grids in China
/37/	China Energy Statistical Yearbook 2016-2018
/38/	China Electric Power Yearbook 2015-2019
/39/	14th Five-Year Plan for National Economic and Social Development and Long-Range Objectives for 2035
/40/	Action Plan for Carbon Dioxide Peaking Before 2030
/41/	Measures for the Administration of Carbon Emission Trading, issued by Ministry of Ecology and Environment of China, dated 31/12/2020
/42/	Enforced company list in China cap & trade scheme, issued by Ministry of Ecology and Environment of China
/43/	Renewable Energy Law of the People's Republic of China Environmental Protection Law of the People's Republic of China Law of the People's Republic of China on the Prevention and Control of Solid Waste Pollution

/44/	UN 17 SDGs: https://www.un.org/sustainabledevelopment/sustainable-development-goals/ UNFCCC: http://cdm.unfccc.int VCS: http://verra.org GS: https://www.goldstandard.org/ CCER: http://cdm.ccchina.org.cn/ccer.aspx

APPENDIX 3: RESOLUTION OF FINDINGS

CAR ID	01	Section no.	1.15	Date: 15/03/2022
Description of CAR				
In PD (version 01, dated 07/12/2021) "section 1.15 Participation under Other GHG Programs", some descriptions relating to CDM registration, including the first crediting period and the start date of the crediting period, are inconsistent with the information on the CDM website. PP is requested to explain and revise section 1.15 of PD accordingly.				
Project participant response				**Date:** 21/03/2022
Inconsistency between the PD and the CDM websites are resulted from a clerical error. Corrections have been made in the updated PD.				
Documentation provided by project participant				
Updated PD (version 02, dated 21/03/2022)				
DOE assessment				**Date:** 13/05/2022
By checking section 1.15 of the updated PD (version 02, dated 21/03/2022), the validation team confirms that the descriptions relating to CDM registration have been corrected and are consistent with the information on the CDM website. CAR01 is closed.				

CL ID	01	Section no.	1.6	Date: 15/03/2022
Description of CL				
In PD (version 01, dated 07/12/2021) "section 1.6 Other Entities Involved in the Project", information with regard to the consultant is not provided. PP is requested to supplement the relevant information according to VCS PD Template.				
Project participant response				**Date:** 21/03/2022
Information with regard to the consultant (CGN Carbon Asset Management (Beijing) Co., Ltd.), who is appointed as VCS manager and responsible for VCS processes, has been supplemented in section 1.6 of the updated PD.				
Documentation provided by project participant				
Updated PD (version 02, dated 21/03/2022)				
DOE assessment				**Date:** 13/05/2022

By checking section 1.6 of the updated PD (version 02, dated 21/03/2022), the validation team confirms that the required information with regard to the consultant has been provided. CL01 is closed.

CL ID	02	Section no.	2.2	Date: 15/03/2022
Description of CL				
In PD (version 01, dated 07/12/2021) "section 2.2 Local Stakeholder Consultation", the mechanism for on-going communications with local stakeholders is not illustrated. According to VCS PD Template, PP is requested to supplement the relevant information.				
Project participant response				**Date:** 21/03/2022
Mechanism for regular communication with local stakeholder and their feedbacks have been supplemented in section 2.2 of the updated PD.				
Documentation provided by project participant				
Updated PD (version 02, dated 21/03/2022)				
DOE assessment				**Date:** 13/05/2022
By checking section 2.2 of the updated PD (version 02, dated 21/03/2022), the validation team confirms that the mechanism for on-going communications with local stakeholders meets the requirements of VCS standard. The on-going mechanism and the stakeholders' feedbacks have been confirmed during on-site inspection (14/03/2022). CL02 is closed.				

CL ID	03	Section no.	5.2	Date: 15/03/2022
Description of CL				
In PD (version 02, dated 21/03/2022), "section 5.2 Data and Parameters Monitored", the calculative process of $EG_{facility,y}$ is not illustrated. PP is requested to supplement the calculative formula.				
Project participant response				**Date:** 21/03/2022
The calculative formula of $EG_{facility,y}$ has been given in cell "Calculation Method" of the updated PD, where $EG_{facility,y} = EG_{export,y} - EG_{import,,y} - EG_{im\text{-}backup,y}$				
Documentation provided by project participant				
Updated PD (version 02, dated 21/03/2022)				

DOE assessment	Date: 13/05/2022
By checking section 5.2 of the updated PD (version 02, dated 21/03/2022), the validation team confirms that the calculation method for $EG_{facility,y}$ meets the cretiria of methodology ACM0002. CL03 is closed.	