




## Validation report form for renewal of crediting period for CDM project activities

(Version 02.0)

## VALIDATION REPORT FOR RENEWAL OF CREDITING PERIOD (RCP)

<b>Title and UNFCCC reference number of the project activity</b>	CGN Inner Mongolia Duerbote Wind farm Project (UNFCCC Registration No.:2406)
<b>Number and duration of the next crediting period</b>	The 2 <sup>nd</sup> crediting period From 20/08/2016 to 19/08/2023
<b>Version number of the validation report for RCP</b>	01
<b>Completion date of the validation report for RCP</b>	03/01/2019
<b>Version number of PDD to which this report applies</b>	4.0
<b>Project participant(s)</b>	CGN Wind Power Co., Ltd.(P. R. China) Carbon Resource Management Ltd. (United Kingdom of Great Britain and Northern Ireland) Carbon Resource Management S.A. (Switzerland)
<b>Host Party</b>	People's Republic of China
<b>Applied methodologies and standardized baselines</b>	Sectoral scope(s): 01 Energy industries (renewable/non-renewable sources) ACM0002(Version 19.0), "Grid-connected electricity generation from renewable sources"
<b>Mandatory sectoral scopes linked to the applied methodologies</b>	1
<b>Conditional sectoral scopes linked to the applied methodologies</b>	–
<b>Estimated annual average GHG emission reductions or net anthropogenic GHG removals in the next crediting period</b>	95,903tCO <sub>2</sub> e
<b>Name and UNFCCC reference number of the DOE</b>	Shenzhen CTI International Certification Co., Ltd (CTI) (UNFCCC Registration No.:E-0061)
<b>Name, position and signature of the approver of the validation report for RCP</b>	Zhou Lu, General Manage 

**SECTION A. Executive summary**

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CGN Wind Power Co., Ltd. has commissioned Shenzhen CTI International Certification Co., Ltd (CTI) to validate the renewal of crediting period of the proposed CDM project activity "CGN Inner Mongolia Duerbote Wind farm Project" in P. R. China (UNFCCC Registration No.: 2406). This report summarises the findings of the validation of the project, performed on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM modalities and procedures, and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

The project is a newly built wind farm located in Wulanhua Town, Siziwangqi County, Wulanchabu City, Inner Mongolia Autonomous Region of China. The total installed capacity of the proposed project is 49.5MW, consisting of 33 sets of wind turbines manufactured by Goldwind Science & Technology Ltd. with capacity of 1,500kW for each. The electricity generated by the proposed project will be connected to North China Power Grid. The annual electricity supplied to the grid is 114,110MWh. The objective of the project is to produce electricity with clean and renewable wind sources and to displace part of the electricity from fossil fuel-fired plants connected to North China Power Grid (NCPG). The project activity will generate greenhouse gas (GHG) emission reductions by avoiding CO<sub>2</sub> emissions from electricity generation by connected fossil fuel power plants.

The purpose of the validation of renewal of crediting period is to have an independent third party assess the validity of the project baseline that has opted for a renewal of crediting period. In particular, the project's baseline, monitoring plan, and the project's compliance with relevant UNFCCC criteria are validated in order to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria. The validation of baseline is a requirement for all CDM projects seeking renewal of crediting period and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

The validation scope is defined as an independent and objective review of the project design document (PDD), baseline update, monitoring plan and other relevant documents. The report is based on the assessment of the project design document undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to document reviews, follow-up interviews with project stakeholders, review of the applicable methodology and its underlying formulae and calculations.

In summary, it is CTI's opinion that the project activity "CGN Inner Mongolia Duerbote Wind farm Project" in P. R. China, as described in the PDD, version 4.0 of 02/01/2019, meets all relevant UNFCCC requirements for the renewal of crediting period. Hence, CTI requests the renewal of the crediting period of the project.

**SECTION B. Validation team, technical reviewer and approver****B.1. Validation team member**

No.	Role	Type of resource	Last name	First name	Affiliation	Involvement in			
						Desk review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader	IR	Lin	Shunrong	Shenzhen	√	√	√	√

**B.2. Technical reviewer and approver of the validation report for RCP**

No.	Role	Type of resource	Last name	First name	Affiliation
1.	Technical reviewer	IR	Wang	Guolian	Shenzhen
2	Approver	IR	Zhou	Lu	Shenzhen

**SECTION C. Means of validation****C.1. Desk review**

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The PDD and additional background documents related to the project design and baseline were submitted to the validation team for review. The document review in particular includes applicability of selected methodology, baseline determination, monitoring plan, emission reductions calculation. All documentations that were reviewed during the validation can be found in Appendix 3 of this validation report.

**C.2. On-site inspection**

Duration of on-site inspection				
No.	Activity performed on-site	Site location	Date	Team member
1.	- Inspection of project design - Confirmation of monitoring plan	Project site	17/11/2018	Lin Shunrong

**C.3. Interviews**

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Ji	Huiying	CGN Carbon Asset Management (Beijing) Co.,Ltd.	17/11/2018	1. Status of the project activity 2. Applicability of selected methodology	Lin Shunrong
2	Li	Meng	CGN Wind Power Co., Ltd.	17/11/2018	3. Baseline of the project 4. Emission reductions	Lin Shunrong
3	Yang	Wenji	CGN Wind Power Co., Ltd.	17/11/2018	5. Monitoring plan	Lin Shunrong

**C.4. Sampling approach**

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**C.5. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised**

Area of validation findings	No. of CL	No. of CAR	No. of FAR
Compliance with PDD form	1	0	0
Application of baseline and monitoring methodology and standardized baseline	0	0	0
Validity of original baseline or its update	0	0	0
Estimated GHG emission reductions or net anthropogenic GHG removals	0	0	0
Validity of monitoring plan	0	0	0
Crediting period	0	0	0
Project participants	0	0	0
Others (please specify)	0	0	0
<b>Total</b>	<b>1</b>	<b>0</b>	<b>0</b>

**SECTION D. Validation findings****D.1. Compliance with PDD form**

<b>Means of validation</b>	Document review the PDD against the PDD form.
<b>Findings</b>	By checking the PDD, CTI confirmed that the CDM-PDD-FORM version 10.1 has been applied correctly.

	According to the latest “CDM project standard for project activities” version 02.0, it was found “Section A description of project activity” of the PDD lacks of information of load factor, monitoring equipment and their location in the systems, therefore CL 1 was raised.
<b>Conclusion</b>	The information of monitoring equipment and their location in the systems has been correctly described in the updated PDD (version 4.0), hence CL 1 is closed. CTI considers the project description of the project activity contained in the PDD to be complete and accurate. CTI can confirm that the PDD has been completed in accordance with the latest version of PDD with relevant forms and guidance, and the information transferred to the PDD is materially the same as that in the registered PDD.

## D.2. Application of baseline and monitoring methodology and standardized baseline

<b>Means of validation</b>	The assessment of the project's compliance with the applicability criteria of ACM0002 (Version 19.0)
<b>Findings</b>	<p>(1) The Project is the installation of a wind power plant.</p> <p>(2) The Project is a Greenfield power plant and does not represent a capacity addition to an existing plant.</p> <p>(3) The project is the installation of a new grid-connected wind power plant, which doesn't involve either switching from fossil fuels to renewable energy source at the site of the project activity or biomass fired power generation.</p> <p>(4) The project is connected to the NCPG, and the geographical and system boundaries are clearly identified and information on the characteristics of the grid is available.</p>
<b>Conclusion</b>	The validation team concluded that the project meet all applicability criteria of the methodology ACM0002 (Version 19.0).

## D.3. Validity of original baseline or its update

<b>Means of validation</b>	According to the Clean Development Mechanism Project Standard (CDM PS), the demonstration of the validity of the original baseline or its update does not require a reassessment of the baseline scenario, but rather an assessment of the GHG emission reductions that would have resulted from that scenario. With reference to the methodology tool “Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period”.
<b>Findings</b>	<p><b>Step 1: Assess the validity of the current baseline for the next crediting period</b></p> <p>The CDM PS requires assessing the impact of new relevant national and/or sectoral policies and circumstance on the baseline. The validity of the current baseline is assessed using the following sub-steps.</p> <p><b>Step 1.1: Assess compliance of the current baseline with relevant mandatory national and/or sectoral policies</b></p> <p>The current baseline remains the same as it was in the updated PDD. There has been not significant change in the relevant national and/or sectoral policies since the date of PDD registered till now, although national policies favour the development of renewable energy, electricity generated by fossil fuel based plants dominates the electricity supply. Hence, it can be concluded that the current baseline still complies with all relevant policies.</p> <p><b>Step 1.2: Assess the impact of circumstances</b></p> <p>There are not new national/sectoral policies or circumstances that could affect the baseline scenario during the renewal of the crediting period. The validation team confirmed that the current baseline identified in the registered PDD is still valid for the second crediting period.</p>

	<p><b>Step 1.3: Assess whether the continuation of the use of current baseline equipment(s) or an investment is the most likely scenario for the crediting period for which renewal is requested</b></p> <p>In absence of the project activity, similar amount of electricity would have been generated by the grid and the continuation of the use of current baseline equipment is considered technically possible. Not any investment needs to be undertaken by the project participants or the third party. Hence, this is not applicable to the project activity.</p> <p><b>Step 1.4: Assessment of the validity of the data and parameters</b></p> <p>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.</p> <p>The Designated National Authority (DNA) of China issued the notice "2017 Baseline Emission Factors for Regional Power Grid in China" on 20/12/2018, which was the latest grid data available for the project. The emission factors <math>EF_{grid,OM,y}</math> and <math>EF_{grid,BM,y}</math> of the NCPG the project connected have been updated according to the latest data available on 20/12/2018. For the wind project, the values of <math>W_{OM}</math> and <math>W_{BM}</math> also have been updated for the second crediting period as per the "Tool to calculate the emission factor for an electricity system" version 07.0. The parameters mentioned above were determined at the start of the first crediting period are not valid any more. Thus the baseline emissions need to be updated for the second crediting period with the application of the new data available.</p> <p><b>Step 2: Update the current baseline and the data and parameters</b></p> <p><b>Step 2.1: Update the current baseline</b></p> <p>The baseline emissions have been updated for the second crediting period, without re-assessing the baseline scenario, based on the latest approved version (Version 19.0) 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.</p> <p><b>Step 2.2: Update the data and parameters</b></p> <p>The "2017 Baseline Emission Factors for Regional Power Grid in China" was issued by DNA of China, which was calculated according to the "Tool to calculate the emission factor for an electricity system". The values of <math>W_{OM}</math> and <math>W_{BM}</math> are as per the "Tool to calculate the emission factor for an electricity system", version 07.0. The validation team confirmed that the applied data and parameters are latest available at the time of the project participant requesting renewal of the crediting period and valid for calculation of baseline grid emission factor of the second crediting period.</p>
<b>Conclusion</b>	CTI confirmed that the baseline scenario for the project is continuation for the current practice, namely provision of equivalent amount of annual power output by the grid where the project is connected to.

#### D.4. Estimated GHG emission reductions or net anthropogenic GHG removals

<b>Means of validation</b>	The GHG emission reduction calculations were checked in accordance with the formulae given in the baseline and monitoring methodology ACM0002 (Version 19.0).
<b>Findings</b>	<p>(1) Baseline emissions</p> <p>The baseline is that, in the absence of the project activity, equivalent amount of electricity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources within the NCPG. Therefore, following ACM0002 (Version 19.0), the baseline emissions (<math>BE_y</math>, in</p>

	<p>tCO<sub>2</sub>e) are the product of the baseline emissions factor (<math>EF_{grid,CM,y}</math> in tCO<sub>2</sub>/MWh) times the net power delivered to the grid (<math>EG_{facility,y}</math> in MWh):</p> $BE_y = EG_{facility,y} \times EF_{grid,CM,y}$ <p><b>Determination of <math>EG_{facility,y}</math></b></p> <p>There are two alternatives for determining the <math>EG_{facility,y}</math></p> <p>1) The net electricity delivered to the grid by the project activity is monitored by the main meter and backup meter at the substation of the grid company..</p> $EG_y = EG_{facility,y} = Gen - Cons$ <p>Where:  Gen is the electricity exported to the grid by the project activity  Cons is the electricity imported from the grid by the project activity</p> <p>2) The net electricity delivered to the grid by the project activity is determined by the way of electricity allocation in case of sharing the main meter and backup meter with other projects.</p> $EG_y = EG_{facility,y} = EG_{total} * E_{project} / (E_{project} + E_{others})$ <p>Where:  <math>EG_{total}</math>: is the total net electricity supplied to the grid by all projects;  <math>E_{project}</math>: is the electricity generation from the project activity;  <math>E_{others}</math>: is the electricity generation from other projects</p> <p><b>Determination of <math>EF_{grid,CM,y}</math></b></p> <p>The grid emission factor of (<math>EF_{grid,CM,y}</math>) is determined <i>ex-ante</i> as a combined margin of the operating margin (OM) and build margin (BM) (the weighted average <math>w_{OM} = 0.75</math>: <math>w_{BM} = 0.25</math> for the second crediting period) according to the "Tool to calculate the emission factor for an electricity system".</p> $BE_y = EG_{facility,y} \times EF_{grid,CM,y} = 114,110 \times 0.84045 = 95,903 \text{ tCO}_2\text{e}$ <p>(2) Project emissions  Project emission is zero. Based on document review, the validation team regards this consideration is correct, and in line with methodology ACM0002 (Version 19.0).</p> <p>(3) No leakage is considered under the methodology ACM0002 (Version 19.0).</p>
<b>Conclusion</b>	<p>All assumptions and data used by the project participants are listed in the updated PDD (version 4.0) and/or supporting documents, including their references and sources. All documentation used by the project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the updated PDD. All values used in the updated PDD are considered reasonable in the context of the proposed CDM project activity. The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakages and emission reductions. All estimates of the baseline, project and leakage emissions can be replicated using the data and parameter values provided in the updated PDD.</p>

#### D.5. Validity of monitoring plan

<b>Means of validation</b>	<p>Based on review of the documented procedures, interviews with relevant personnel, CTI evaluated the revised monitoring plan for the proposed project to ensure that it is based on the approved monitoring methodology that has been applied, and assessed:</p> <p>(1) Whether the monitoring plan contains all necessary parameters;  (2) Whether the parameters are clearly described;  (3) Whether the means of monitoring described in the plan complies with the requirements of the methodology;</p>
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	(4) Whether 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 can be reported ex post and verified.																
<b>Findings</b>	<p>The project applies the approved monitoring methodology ACM0002 (Version 19.0).</p> <p>According to the registered PDD (version 3.0) and updated PDD (version 4.0), the monitoring plan designs two alternatives for monitoring.</p> <p>(1) The main meter and backup meter installed at the 220kV substation of the grid company continuously measure the net electricity supplied to the grid by the project (<math>EG_y</math>). Both meters have bidirectional function to record the electricity exports to the grid (Gen) and imports from the grid (Cons); or</p> <p>(2) If other wind farms involved in sharing the transformer facilities including the main meter and backup meter, the net electricity of all projects monitored by the main meter/backup meter (<math>EG_{total}</math>) will be allocated to the project in terms of their electricity generations (<math>E_{project}</math> and <math>E_{others}</math>) monitored by the meters installed on each project site respectively. The accuracy of the meters is no less than 0.5s or more precise than 0.5s.</p> <p>Based on the on-site visit, it is found currently the project does not shares the same transformer, substation and transmission line with other wind farms. The net electricity supplied to the grid is continuously measured by the main meter and backup meter installed at the 220kV substation of the grid company. The accuracy of each meter is no less than 0.5.</p> <p>Through the on-site inspection of installed meters, interviewing with related personnel, and checking the connection diagram and PPA, CTI confirmed that the monitoring plan in the updated PDD (version 4.0) is in line with them registered PDD (version 3.0), complies with the requirements of the methodology and reflects the real situation.</p> <p>The monitoring plan will give opportunity for real measurements of achieved emission reductions. CTI considers the project participants are capable to implement the monitoring plan:</p> <p><b>(1) Parameters determined ex-ante</b> The following parameters are determined <i>ex-ante</i> and will be kept fixed during the second crediting period, which have been verified by CTI.</p> <table border="1"> <thead> <tr> <th>Data and parameter</th><th>Unit</th><th>Ex-ante value</th><th>Data source</th></tr> </thead> <tbody> <tr> <td>Operating margin of NCPG (<math>EF_{Grid,OM,y}</math>)</td><td>tCO<sub>2</sub>/MWh</td><td>0.9680</td><td rowspan="3">The emission factors of operating margin, build margin and combined margin are calculated ex-ante based on the most recent information available at the time of requesting for crediting period renewal</td></tr> <tr> <td>Build margin of NCPG (<math>EF_{Grid,BM,y}</math>)</td><td>tCO<sub>2</sub>/MWh</td><td>0.4578</td></tr> <tr> <td>Combined margin emission factor of NCPG(<math>EF_{Grid,CM,y}</math>)</td><td>tCO<sub>2</sub>/MWh</td><td>0.84045</td></tr> </tbody> </table> <p>Data and parameters indicated in B.6.2 of the PDD are used to calculate the grid emission factor.</p> <p><b>(2) Parameters monitored ex-post</b> According to ACM0002 (Version 19.0), data and parameters monitored for the project are:</p> <table border="1"> <tr> <td><math>EG_y</math></td><td>net electricity supplied to the grid by the Project</td></tr> </table>	Data and parameter	Unit	Ex-ante value	Data source	Operating margin of NCPG ( $EF_{Grid,OM,y}$ )	tCO <sub>2</sub> /MWh	0.9680	The emission factors of operating margin, build margin and combined margin are calculated ex-ante based on the most recent information available at the time of requesting for crediting period renewal	Build margin of NCPG ( $EF_{Grid,BM,y}$ )	tCO <sub>2</sub> /MWh	0.4578	Combined margin emission factor of NCPG( $EF_{Grid,CM,y}$ )	tCO <sub>2</sub> /MWh	0.84045	$EG_y$	net electricity supplied to the grid by the Project
Data and parameter	Unit	Ex-ante value	Data source														
Operating margin of NCPG ( $EF_{Grid,OM,y}$ )	tCO <sub>2</sub> /MWh	0.9680	The emission factors of operating margin, build margin and combined margin are calculated ex-ante based on the most recent information available at the time of requesting for crediting period renewal														
Build margin of NCPG ( $EF_{Grid,BM,y}$ )	tCO <sub>2</sub> /MWh	0.4578															
Combined margin emission factor of NCPG( $EF_{Grid,CM,y}$ )	tCO <sub>2</sub> /MWh	0.84045															
$EG_y$	net electricity supplied to the grid by the Project																

	<p><b>(3) Management system and quality assurance</b></p> <p>Detailed procedures have been elaborated in the updated PDD, including;</p> <ul style="list-style-type: none"> <li>• The monitored data</li> <li>• Installation of meters</li> <li>• Calibration</li> <li>• Quality control</li> <li>• Data management system</li> </ul> <p>These will be maintained and implemented to enable subsequent verification of emission reductions.</p>
<b>Conclusion</b>	CTI confirmed that the project correctly applies the approved monitoring methodology ACM0002 (Version 19.0). The monitoring plan will give opportunity for real measurements of achieved emission reductions. CTI considers the project participants are capable to implement the monitoring plan.

#### D.6. Crediting period

<b>Means of validation</b>	CTI reviewed the PDD, and registration information in the UNFCCC website to confirm the validity of the second crediting period.
<b>Findings</b>	<p>The project was registered on 24/05/2009 as CDM project and the first crediting period has been changed from “24/05/2009 to 23/05/2016” to “20/08/2009 to 19/08/2016”. The renewed second crediting period is from 20/08/2016 to 19/08/2023.</p> <p>As per the Para 272 of the PCP (version 02.0), the renewal request shall be submitted “no earlier than 270 days prior to, but no later than one year after, the expiry of the crediting period”. With regard to this registered project activity, its renewal request is later than one year after the expiry of the crediting period, However, according to Para. 32 of EB’s 100<sup>th</sup> meeting report, “(iv) <i>The grace period for the submission of renewal request for the existing registered project activities whose crediting period has expired but has not been renewed (i.e. overdue for renewal) is to be by 31 December 2019.</i>”. Hence, the project participants commissioned CTI to submit the renewal request within this grace period.</p>
<b>Conclusion</b>	The validation team confirmed that the request for renewal of crediting period of the project meets the requirements of CDM PCP and EB’s decision, therefore the 2 <sup>nd</sup> crediting period is valid.

#### D.7. Project participants

<b>Means of validation</b>	CTI reviewed the PDD, and registration information in the UNFCCC website to confirm the validity of project participants.
<b>Findings</b>	<p>It is confirmed that the project participant from host Party China was still “CGN Wind Power Co., Ltd.”. The DNA from China confirmed that the project assists in achieving sustainable development.</p> <p>“Carbon Resource Management Ltd.” from the United Kingdom of Great Britain and Northern Ireland and “Carbon Resource Management S.A.” from Switzerland are the project participants from the Annex I Party, which are confirmed by the letters of approval (LoA) from United Kingdom of Great Britain and Northern Ireland and Switzerland, respectively.</p>
<b>Conclusion</b>	The validation team confirmed that the project participants indicated in the updated PDD are consistent with names in the UNFCCC website for the project.

#### D.8. Post-registration changes

Type of post-registration changes (PRCs)	Confirmation (Y/N)	Validation report for PRCs	
		Version	Completion date
Temporary deviations from the registered monitoring plan, applied methodologies or applied standardized baselines	NA	NA	NA



Corrections	NA	NA	NA
Change to the start date of the crediting period of the project activity	Y	NA	NA
Inclusion of a monitoring plan	NA	NA	NA
Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other applied standards or tools	NA	NA	NA
Changes to the project design	NA	NA	NA
Changes specific to afforestation and reforestation project activities	NA	NA	NA

## SECTION E. Internal quality control

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The validation report underwent a technical review performed by a technical reviewer qualified in accordance with CTI's qualification scheme for CDM validation and verification.

## SECTION F. Validation opinion

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Shenzhen CTI International Certification Co., Ltd (CTI) has performed a validation of renewal of crediting period of the project activity "CGN Inner Mongolia Duerbote Wind farm Project" in China (UNFCCC Registration No.:2406). The validation was performed on the basis of UNFCCC criteria for the Clean Development Mechanism as well as criteria given to provide for consistent project operations, monitoring and reporting.

The report is based on the assessment of the project design document undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to document reviews, follow-up interviews with project stakeholders, review of the applicable methodology and its underlying formulae and calculations.

The project participant from host Party China were still "CGN Wind Power Co., Ltd.". The project participants from Annex I Party were "Carbon Resource Management Ltd." and "Carbon Resource Management S.A.". The DNA from China confirmed that the project assists in achieving sustainable development.

The project correctly applies the baseline and monitoring methodology ACM0002, Version 19.0, "Grid-connected electricity generation from renewable sources".

The project results in reductions on-term benefits to the mitigation of climate change. The total emission reductions from the project are estimated to be on the average 95,903tCO<sub>2</sub>e per year over the second renewable crediting period. The emission reductions forecast have been checked and it is deemed likely that the stated amount is achieved given that the underlying assumptions do not change.

The monitoring plan provides for the monitoring of the project's emission reductions. The monitoring arrangements described in the monitoring plan are feasible within the project design and it is CTI's opinion that the project participants are able to implement the monitoring plan.

In summary, it is CTI's opinion that the project activity "CGN Inner Mongolia Duerbote Wind farm Project" in China, as described in the PDD (version 4.0 dated 02/01/2019), meets all relevant UNFCCC requirements for the renewal of crediting period. Hence, CTI requests the renewal of the crediting period of the project.

*Shunrong Lin*

Ms. Lin Shunrong  
Team Leader  
03/01/2019

*Wang Guolian*

Ms. Wang Guolian  
Technical Reviewer  
03/01/2019

## Appendix 1. Abbreviations

Abbreviations	Full texts
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM PCP	Clean Development Mechanism Project Cycle Procedure
CDM PS	Clean Development Mechanism Project Standard
CER	Certified Emission Reduction(s)
CL	Clarification request
CM	Combined Margin
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> e	Carbon dioxide equivalent
CTI	Shenzhen CTI International Certification Co., Ltd
DNA	Designated National Authority
NCPG	North China Power Grid
EF	Emission Factor
FAR	Forward Action Request
FSR	Feasibility Study Report
GHG	Greenhouse gas(es)
IPCC	Intergovernmental Panel on Climate Change
LoA	Letter of approval
MEE	Ministry of Ecology and Environment of the People's Republic of China
OM	Operating Margin
PDD	Project Design Document
PPA	Power Purchase Agreement
tCO <sub>2</sub> e	Tonnes of CO <sub>2</sub> equivalents
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Clean Development Mechanism Validation and Verification Standard

## Appendix 2. Competence of team members and technical reviewers

Ms. Lin Shunrong

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

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

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

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

Approved by:

Wu LIN

*Wu Lin*

Technical Competent Manager

Shenzhen, 01/01/2018

Ms. Guolian WANG

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

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

Scope	Technical Area
SS 1: Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources
SS 5: Chemical industry	TA 5.1: Chemical industry
	TA 5.2: Caprolactam, nitric and adipic acid
SS 11: Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride	TA 11.1: Emissions of fluorinated gases
	TA 11.2: Refrigerant gas production
SS 12: Solvents use	TA 12.1: Chemical industry

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

Approved by:

Wu LIN

*Wu Lin*

Technical Competent Manager

Shenzhen, 01/01/2018

### Appendix 3. Documents reviewed or referenced

No	Author	Title	References to the document	Provider
1	PP	Registered CDM-PDD for project activity “CGN Inner Mongolia Duerbote Wind farm Project”, version 3.0	04/12/2008	PP
2	PP	CDM PDD for renewal of crediting period of project activity “CGN Inner Mongolia Duerbote Wind farm Project”, version 4.0	02/01/2019	PP
3	PP	Emission reduction spreadsheet for renewal of crediting period of project activity, version 4.0	02/01/2019	PP
4	PP	CDM Monitoring Manual		PP
5	grid company	Power Purchase Agreement (PPA) with grid company	2017&2018	PP
6	grid company	Commission Completion Report	2009	PP
7	PP	Diagram of power connection system of the Project	-	PP
8	PP	Wind turbines connection diagram	-	PP
9	Goldwind Science & Technology Ltd.	Nameplate of installed equipment of the project	-	PP
10	PP	Daily operational and maintenance records	2017&2018	PP
11	Goldwind Science & Technology Ltd.	Wind turbine purchase contract	03/2008	PP
12	PP	Internal Training Records and Qualification Certificate of Operation Staff	2009	PP
13	Supervision company	Construction start order	01/05/2008	PP
14	DNV Climate Change and Environmental Services	Validation report Version 02	11/02/2009	PP
15	Inner Mongolia Power Exploration & Design Institute:	Feasibility Study Report (FSR)	10/2007	PP
16	SGS	Periodic Verification reports of project activity “CGN Inner Mongolia Duerbote Wind farm Project”	20/09/2010	PP
17	SGS	Periodic Verification reports of project activity “CGN Inner Mongolia Duerbote Wind farm Project”	01/11/2011	PP
18	SGS	Periodic Verification reports of project activity “CGN Inner Mongolia Duerbote Wind farm Project”	26/07/2012	PP
23	China DNA.	LoA for CGN Wind Power Co., Ltd.	19/12/2005	PP
24	UK DNA	LoA for Carbon Resource Management Ltd.	22/10/2008	PP
25	Switzerland DNA	LoA for Carbon Resource Management S.A.	25/02/2011	PP
26	CGN Inner Mongolia Duerbote Wind farm Project	MoC for CGN Inner Mongolia Duerbote Wind farm Project	01/07/2011 15/07/2013 28/06/2011	PP
27	MEE	2017 Baseline Emission Factors for Regional Power Grid in China	20/12/2018	Others
28	China Electric Power Yearbook Committee	China Electric Power Yearbook	2014-2016	Others
29	National Bureau of	China Energy Statistical Yearbook.	2014-2016	Others

	Statistics of China			
30	IPCC	IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2 Energy.	2006	Others
31	CDM Website	Registered information of project activity in the UNFCCC website: <a href="http://cdm.unfccc.int/Projects/DB/BVQI1239166632.16/view">http://cdm.unfccc.int/Projects/DB/BVQI1239166632.16/view</a>	-	Others
32	National People's Congress	China Renewable Energy Law	01/01/2016	Others
33	Industry standard	L/T 448-2000 Technical administrative code of electric energy metering	-	Others
34	Industry standard	Verification Regulation of Electrical Energy Meter with Electronics (JJG 596-2012)	-	Others
35	EB	CDM validation and verification standard for project activities, version 02.0	-	Others
36	EB	CDM project standard for project activities, version 02.0.	-	Others
37	EB	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.	-	Others
38	EB	Baseline and monitoring methodology, ACM0002, Grid-connected electricity generation from renewable sources, Version 19.0	-	Others
39	EB	Tool to calculate the emission factor for an electricity system, version 07.0.	-	Others

## Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1. CL from this validation

<b>CL ID</b>	01	<b>Section no.</b>	D.1	<b>Date:</b> 01/01/2019
<b>Description of CL</b>				
According to the latest “CDM project standard for project activities” version 02.0, “Section A description of project activity” of the PDD lacks of information of load factor and monitoring equipment and their location in the systems, it is required to be clarified.				
<b>Project participant response</b>				<b>Date:</b> 02/01/2019
The required description has been supplemented in the revised PDD.				
<b>Documentation provided by project participant</b>				
Revised PDD (version 4.0)				
<b>DOE assessment</b>				<b>Date:</b>
The information of load factor and monitoring equipment and their location in the systems has been correctly described in the <i>revised</i> PDD (version 4.0), hence CL 1 is closed.				

Table 2. CAR from this validation

<b>CAR ID</b>	NA	<b>Section no.</b>	NA	<b>Date:</b> NA
<b>Description of CAR</b>				
NA				
<b>Project participant response</b>				<b>Date:</b>
NA				
<b>Documentation provided by project participant</b>				
NA				
<b>DOE assessment</b>				<b>Date:</b>
NA				

Table 3. FAR from this validation

<b>FAR ID</b>	NA	<b>Section no.</b>	NA	<b>Date:</b> NA
<b>Description of FAR</b>				
NA				
<b>Project participant response</b>				<b>Date:</b>
NA				
<b>Documentation provided by project participant</b>				
NA				
<b>DOE assessment</b>				<b>Date:</b>
NA				

### Document information

Version	Date	Description
02.0	31 October 2017	Revision to align with the requirements of the “CDM validation and verification standard for project activities” (version 01.0).
01.0	23 March 2015	Initial publication.
Decision Class: Regulatory		
Document Type: Form		
Business Function: Renewal of crediting period		
Keywords: crediting period, project activities, validation report		