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

(Version 03.0)

Complete this form in accordance with the instructions attached at the end of this form.

BASIC INFORMATION	
Title and UNFCCC reference number of the project activity	Bundled Wind Power Project at Rajasthan India UNFCCC ref. No- 9950
Number and duration of the next crediting period	02 07/05/2021 to 06/05/2028
Version number of the validation report	02
Completion date of the validation report	02/05/2022
Version number of PDD to which this report applies	08
Project participants	MITCON Consultancy & Engineering Services Ltd.
Host Party	India
Applied methodologies and standardized baselines	AMS I.D Version 18.0 "Grid connected renewable electricity generation" Selected standardized baseline: N/A
Mandatory sectoral scopes	Sectoral scope : 1- Energy industries (renewable - / non-renewable sources
Conditional sectoral scopes, if applicable	NA
Estimated amount of annual average GHG emission reductions or GHG removals by sinks in the next crediting period	4,456 tCO2e per annum
Name and UNFCCC reference number of the DOE	E-0052: Carbon Check (India) Private Ltd.
Name, position and signature of the approver of the validation report	Amit Anand, CEO 

SECTION A. Executive summary

Carbon Check (India) Private Ltd. (CCIPL) has been contracted by MITCON Consultancy & Engineering Services Ltd. to conduct the validation for renewal of crediting period of the project "Bundled Wind Power Project at Rajasthan India" (UNFCCC Ref. No. 9950), against CDM Project Standard for project activities Version 03.0/08/.

The project activity involves the installation of 3 WTGs (1*1.5 MW and 2*0.6 MW each), located in the villages Sangana, Habur and Tejuva of Jaisalmer district in the state of Rajasthan, India, reaching a total installed capacity of 2.7 MW. These WTGs are of Suzlon make (model S- 82 & S-52). The power generated by the project will be replacing the equivalent amount of electricity from the Indian Grid system of India, which is dominated by fossil fuel-based grid connected power plants.
The project will replace anthropogenic emissions of greenhouse gases (GHG's) estimated to be approximately 4,456 tCO_2e per year, thereon displacing 4,789 MWh/year (after applying deration factor to generation as per the registered PDD) amount of electricity from the generation-mix of power plants connected to the Indian electricity grid. Total estimated GHG emission reductions for the chosen 7-year renewable crediting period will be 31,195 tCO_2e.

Scope of Validation
The scope of the services provided by CCIPL for the project is to perform validation of the renewable of crediting period for the project activity. The scope of validation is to assess the claims and assumptions made in the revised project design document (PDD) against the UNFCCC criteria, including but not limited to, CDM PS/8/, CDM VVS/7/, applied methodology/10/ and other relevant rules and requirements established for CDM project activities.

Validation Process

The validation process is undertaken by validation team that involves the following:

- the desk review of documents and evidence submitted by the project participant in context of the reference CDM rules and guidelines issued by CDM EB,
- undertaking virtual interview with the representative of the project participant,
- reporting audit findings with respect to clarifications and non-conformities and the closure of the findings, as appropriate and
- preparing a draft validation report for renewable of crediting period complying with the CDM requirements

An independent Technical Review team reviews the validation report prepared by validation team. The final validation report that is accepted by Technical Reviewer is then approved on behalf of Carbon Check (India) Private Ltd. and processed further as per CDM procedures.

Conclusion
The review of the revised PDD, supporting documentation and subsequent follow-up actions (interviews) has provided CCIPL with sufficient evidence to determine the fulfilment of stated criteria.

CCIPL is of the opinion that the project activity "Bundled Wind Power Project at Rajasthan India (UNFCCC ref. No- 9950)" as described in the final PDD/03/ version 08 dated 28/04/2022 meets all relevant requirements of CDM, meets host country criteria and has correctly applied methodology AMS I.D (version 18.0)/11/. Therefore, the project is being recommended to CDM EB for its renewable of crediting period.

SECTION B. Validation team, technical reviewer and approver

B.1. Validation team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Verification findings
1.	Team Leader and Local Expert	EI	Soni	Ravi Kant	Central Office	Y	NA	Y	Y
2.	Verifier and Meth Expert	EI	Soni	Ravi Kant	Central Office	Y	NA	Y	Y
3	Technical Expert	EI	Soni	Ravi Kant	Central Office	Y	NA	Y	Y

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

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical Reviewer	IR	Singh	Vikash	Central Office
2.	Expert to TR	IR	Singh	Vikash	Central Office
3.	Approver	IR	Anand	Amit	Central Office

SECTION C. Means of validation

C.1. Desk/document review

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The validation for the renewal of crediting period is performed primarily as a document review of the project design document version (final) 08 dated 28/04/2022 The cross checks between information provided in the revised CDM PDD and information from sources other than those used, if available, the team's sectoral or local expertise and, if necessary, independent background investigations. The details of the documentation reviewed during the validation are provided under Appendix 3 of this report.

C.2. On-site inspection

On-site inspection has not been done for validation of renewal crediting period. In accordance with the paragraph 30 of CDM VVS for PAs version 03.0, it is mandatory for the DOE to conduct an on-site inspection at validation for the proposed CDM project activity if:

(a) Its estimated annual average of greenhouse gas (GHG) emission reductions or net anthropogenic GHG removals is more than 100,000 tCO_2 eq; or
(b) There is pre-project information that is relevant to the requirements for registration of the project activity and may not be traceable after the registration.

The estimated annual average emission reductions for the project activity are 4,456 tCO_2 and the project activity is already registered, hence both the cases (a&b) are not applicable for the project activity, hence site visit has not been conducted. In line with the guidelines provided under paragraph 31 of CDM VVS for PAs version 03.0, alternative means are used and justified that they are sufficient for the purpose of validation.

The source documents/alternative means of validation referred by the assessment team to validate the aspect of RCP validation are as follows.

Validation requirement	Means of Validation /source documents	Validation assessment
Description of project activity	Commissioning certificates of WTGs /15/ PPA signed with Jaipur Vidyut Vitran Nigam Limited (JVVNL) /16/ Latest photographs of project site (including WTGs, energy meters and SCADA system)/23/ CDM validation report /06/ Virtual interview with site personnel on 22/04/2022/23/	The information's with reference to project capacity, technology, plant equipment's and commissioning dates as provided in section A.1 to A.3 of are found consistent with the documents and as described by the site personnel during the con-call.
Compliance of the project implementation with the registered project design document	Latest Monthly breakup reports issued by O&M contractor & endorsed by the state utility /24/ Geographical co-ordinates (Location of WTGs) verified through Google Map[1] CDM validation report /06/ PPA signed with state utility (JVVNL) /16/ Latest photographs of project site (including WTGs, energy meters and SCADA system)/23/ Virtual interview of site	Breakup reports indicate the following information: • Identification of feeder and substation to which the WTGs are connected. • Commissioning date of individual WTG • Serial number of energy meters used for monitoring • Capacity of project • Name of project participant Location of each WTG is verified through Google Map

[1] https://www.google.co.in/maps

	personnel on 22/04/2022 /23/	and found consistent with the revised PDD. Grid connectivity of the project is confirmed through the PPA.
Compliance of the registered monitoring plan with applied methodologies and standardized baselines	Latest Monthly breakup reports issued by O&M contractor & endorsed by the state utility /24/ Latest invoices raised by the PP to state utility/25/ CDM validation report /06/ PPA signed with state utility (JVVNL) /16/ Latest photographs of project site (including WTGs, energy meters and SCADA system)/23/ Virtual interview of site personnel on 22/04/2022 /23/	The organizational structure, responsibilities and competencies of the personnel confirmed through telephonic interview. Frequency of monitoring of parameters listed under registered monitoring plan is verified through breakup reports/Invoices. The methods used for measuring, recording, storing, aggregating, and reporting the data on monitored parameters are verified though PPA and interactions with site personnel. Compliance with the calibration frequency requirements for measuring instruments is verified through calibration certificates, PPA and found consistent with the revised PDD & CDM validation report. Procedure for data uncertainty, emergency preparedness, roles and responsibility, operational and management structure are mentioned in the revised PDD is found consistent with the PPA.
Assessment of data and calculation of emission reductions or net removals	CEA CO_2 Baseline Database for the Indian Power Sector, version 17 /17/ Methodology AMS I.D, V. 18 /11/	Methods, formulae and emission factor for calculating baseline emissions have been followed are in accordance with the applied methodology.

Duration of on-site inspection: **NA**				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	Not applicable	-	-	-
…	-	-	-	-

C.3. Interviews

The site visit for the project location is not conducted by the assessment team, however virtual interview was conducted, and the following stakeholders were interviewed.

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Marghade	Dhawal	Assistant Vice President (MITCON)	22/04/2022	Eligibility of project for RCP validation, Ownership of project activity, applicability of methodology, calculation of EF	Ravi Kant Soni
2.	Lawa	Mr. Daleep	Tejuva Site In charge (SUZLON)	22/04/2022	Project implementation, Monitoring and calibration procedure	Ravi Kant Soni
3.	Dhakad	Mr. Yashwant	Akal Site In charge) (SUZLON)	22/04/2022		

C.4. Sampling approach

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Not Applicable

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	-	-	-
Application and selection of methodologies and standardized baselines	-	-	-
Validity of original baseline or its update	-	CAR #1	-
Estimated emission reductions or net anthropogenic removals		CAR #2	-
Validity of monitoring plan	-	-	-
Crediting period		-	-
Project participants	-	-	-
Post-registration changes	-	-	-
Others (please specify)	CL #1 (Missing documents)	-	FAR #1
Total	01	02	01

SECTION D. Validation findings

D.1. Compliance with PDD form

Means of validation	The project participants used a later version of the PDD form/12/ for the revised PDD than the version of the PDD form of the registered PDD. By means of checking updated PDD with the latest applicable and available PDD template form, version 12.0, the DOE can confirm that the information transferred to the later version of the PDD form is materially the same as that in the registered PDD

	besides those changes highlighted and assessed under this report.
Findings	No non-conformity was observed in this regard. Therefore, no finding was raised.
Conclusion	The updated PDD is in line with the latest applicable PDD from/12/.

D.2. Application and selection of methodologies and standardized baselines

Means of validation

Through document review and telephonic interview, the assessment team reassessed the applicability of baseline, monitoring methodology and standardized baseline in the methodology based on the knowledge of the project from the initial validation, subsequent document review and the confirmation from the PP.

The project was originally registered based on methodology AMS I.D. version 17. The updated PDD applies methodology AMS I.D. version 18.0. This is appropriate because the methodology AMS I.D. version 18.0 is of its latest approved version of methodology applied in the original PDD and is valid at the time of submission of the revised PDD for the renewal of the crediting period; hence it meets the condition that for renewal of the crediting period, the methodology shall not be changed.

Following tools referred to by the methodology are also applied:

- Tool to calculate the emission factor for an electricity system – Version 07.0.0, EB 100 annex 4/14/
- 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, EB 66 annex 47 /13/

The methodology and the applied tools are valid as of the finalization of the validation report. The title, reference as well as version number is correctly provided in revised PDD/03/ for the renewal of the crediting period. The applicability of the baseline and monitoring methodology is justified in the revised PDD for the renewal of the crediting period. All applicability conditions are completely and correctly included in the revised PDD and the same are demonstrated below:

Sr. No	Criteria	Means of validation	Conclusion
1	This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass: (a) Supplying electricity to a national or a regional grid; or (b) Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.	Project activity is Greenfield wind power project, supplying electricity to national grid. This is verified thorough the PPA /16/, commissioning certificate/15/.	Criteria (a) fulfilled
2	As per Appendix table 1 of AMS.I D version 18 is applicable for following project types: a. Project supplies electricity to a national/regional grid b. Project supplies electricity to an identified consumer facility via national/regional grid (through a contractual arrangement such as wheeling)	The electricity generated by the project being supplied to national grid. This is verified through the PPA /16/.	Criteria (a) fulfilled
3	This methodology is applicable to	Project activity is	Criteria (a)

	project activities that (a) install a Greenfield plant); (b) involve a capacity addition in (an) existing plant(s); (c) involve a retrofit of (an) existing plant(s); or (d) Involve a rehabilitation of (an) existing plants(s)/unit(s); or (e) Involve a replacement of (an) existing plant (s).	Greenfield wind power project. This is verified thorough the commissioning certificate/15/ and PPA /16/.	fulfilled
4	Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology: • The project activity is implemented in an existing reservoir with no change in the volume of reservoir; • The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project emissions section, is greater than 4 W/m^2; • The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the project emissions section, is greater than 4 W/m^2.	Project activity is Greenfield wind power project/15/.	Criteria are not relevant to the project activity.
5	If the new unit has both; renewable and non- renewable components (e.g., a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW.	This project activity includes only the renewable generation component and capacity is 2.7 MW. This is verified thorough the commissioning certificate/15/ and PPA /16/.	Criteria are not relevant to the project activity.
6	Combined heat and power (co-generation) systems are not eligible under this category.	Project activity is Greenfield wind power project. The project activity is not a co-generation system	A criterion is not relevant to the project activity.

7	In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.	Project activity doesn't involve capacity addition /15/.	Criteria are not relevant to the project activity.
8	In the case of retrofit, rehabilitation or replacement, to qualify as a small-scale project, the total output of the retrofitted, rehabilitated or replacement unit shall not exceed the limit of 15 MW.	This condition is not applicable to the project activity.	Criteria are not relevant to the project activity.
9	In the case of landfill gas, waste gas, wastewater treatment and agro-industries projects, recovered methane emissions are eligible under a relevant Type III category. If the recovered methane is used for electricity generation for supply to a grid then the baseline for the electricity component shall be in accordance with procedure prescribed under this methodology. If the recovered methane is used for heat generation or cogeneration other applicable Type-I methodologies such as "AMS-I.C.: Thermal energy production with or without electricity" shall be explored.	This condition is not applicable to the project activity.	Criteria are not relevant to the project activity.
10	In case biomass is sourced from dedicated plantations, the applicability criteria in the tool "Project emissions from cultivation of biomass" shall apply.	This condition is not applicable to the project activity.	Criteria are not relevant to the project activity

The applied methodology refers to latest available versions of the following tools;
Tool to calculate the emission factor for an electricity system/13/:
The revised PDD refers and correctly applies the latest version of tool to calculate the emission factor for an electricity system, version 07.0/14/. Also, the PP has referred the CEA Baseline CO2 Emission Database version 17, dated October 2021 /17/ which was the latest available database at the time of PDD submission for RCP validation of the project activity. This version of the database (ver. 17) is designed to be consistent with version 07.0 of the "Tool to calculate the emission factor for an electricity system" published by the CDM Executive Board.

The location of the project activity is in the state of Rajasthan, in India. As per CEA Baseline CO2 Emission Database/17/, the state of Rajasthan comes under the

	Indian regional electricity grid in India, the geographic and system boundaries of which are clearly identified; information on the characteristics of the grid is available. Thus, the tool is applicable for the project activity. **Methodological Tool 21: Demonstration of additionality of small-scale project activities, v 13.1:** This tool is not required to be applied during validation of renewal crediting period. As per the paragraph 280 of CDM PS for PAs, the PP is not required to reassess the additionality of the project activity nor update the section of the PDD relating to additionality. The assessment team has validated the documentation referred to in the PDD and verified the documentation content for verifying the justification of the applicability of the methodology and confirmed that the documentation referred to in the PDD is correctly quoted and interpreted. The assessment team has also crosschecked the information provided in the PDD with the documentation other than from the PDD based on the local and sectoral knowledge of the assessment team. Thus, all the applicability conditions of the applied methodology are confirmed in line with paragraphs 68 of VVS for PAs version 03.0. Based on the above discussion, the validation team confirms that the proposed project activity meets all the applicability conditions and all other stipulations of the selected methodology AMS I.D Version 18.0.
Findings	No non-conformability was observed during assessment for validation of crediting period. Therefore, no finding was raised.
Conclusion	The assessment team confirms that the project meets each of the applicability conditions of the methodology; it also meets all the other stipulations and limitations mentioned in the other sections of the applied methodology/11/; the continued validity of the baseline is assessed and the emissions which would be resulted from the baseline scenario are updated at the start of the 2nd crediting period, as per the requirements of AMS I.D, version 18.0. Therefore, CDM requirements stipulated under VVS for PAs Version 03.0 §§404(b) is satisfied completely.

D.3. Validity of original baseline or its update

Means of validation	In accordance with VVS for PAs version03.0§§404, The assessment team reviewed the updated PDD/03/ and evaluated whether project participants assess and incorporate the impact of national and/or sectoral policies and circumstances existing at the time of requesting renewal of the crediting period on the current baseline GHG emissions, without reassessing the baseline scenario. Since the data and parameters used for determining the original baseline that was determined ex ante (and not monitored during the crediting period) are no longer valid, hence the assessment team has verified, whether the PP updated such data and parameters in accordance with the step 1.4 of the Methodological Tool "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period". The assessment team confirms that there have been no changes in the relevant national and/or sectoral regulations on implementation of projects to generated electricity from wind energy and sell to NEWNE grid (which is now a part of Integrated Indian grid) since the previous crediting period. On the other hand, the baseline scenario for installation of wind projects to generated electricity and sell to state/national grid is still valid according to methodology AMS I.D, version 18.0

As demonstrated in the registered PDD, the baseline scenario for the Project is continuous operation of the existing power plants to meet electricity demand.
As per AMS-I.D., version 18.0 §§ 19, "The baseline scenario 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." The baseline for the Project remains the same as that in the revised PDD.
The baseline for the project activity will remain the same as described in the registered PDD.
In the absence of project activity, the same amount of electricity would otherwise have been generated by the operation of some grid connected fossil fuel-based power plants or newly added generation sources into NEWNE grid (Now part of Indian grid). A verifiable description of the baseline scenario has been included in the final revised PDD.
The information presented in the PDD has been validated by an initial document review of all data. Further confirmation has been made based on the telephonic interviews and a review of information from similar projects and/or technologies. The sources referenced in the revised PDD have been quoted correctly. The information was verified against credible sources, such as the following:

- Commissioning Certificates /15/
- Power Purchase Agreement with state electricity board /16/
- CEA guidelines (CO2 Baseline Database for the Indian Power Sector, Version 17 /17/

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 "as per CDM VVS for PAs version 03.0 were applied to assess the validity of the current 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

In accordance with the guidance provided under paragraph 284 of CDM PS for PAs version 03.0, "*The project participants shall assess and incorporate the impact of national and/or sectoral policies and circumstances, existing at the time of requesting renewal of crediting period, on the current baseline GHG emissions, without reassessing the baseline scenario*".

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
Following relevant mandatory national & sectoral policies in state of Haryana are prevailing:

- The Electricity Act, 2003 /20/
- National Electricity Policy,2005 /21/
- Tariff Policy, 2006 /22/
- RERC Tariff Order, dated 24/11/2021 /18/

The assessment has confirmed that the current baseline as described in the registered PDD is following the relevant mandatory national & sectoral policies as listed above, there are no national or local laws or regulations that entail the installation of wind power project in Rajasthan.

There are no relevant mandatory national and/or sectoral polices forbidding equivalent electricity generated by the project activity that is supplied to the Indian grid which is current baseline of the project activity. Therefore, baseline scenario remains unchanged and follows all the relevant mandatory national and/or sectoral policies.

Step 1.2: Assess the impact of circumstances

The assessment team has confirmed that the baseline scenario as identified at the time of validation of the project activity was 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.

Thus, assessment team has confirmed that the project activity is a Greenfield wind power project and a voluntary investment which intends to replace equivalent amount of electricity at grid to renewable source. The investment does not lead to any continued baseline practice for the PP within their scope whereas the continued operation of the project activity would continue to replace equivalent amount of electricity at grid.

Therefore, the same baseline as identified in the previous crediting period is still valid for the project.

Furthermore, the assessment team has verified that the PP has considered the latest available CO2 Baseline Database (CEA database, version 17)/19/ at the time of requesting renewal of the crediting period for establishing the baseline emission factor, which itself considered all the new circumstances. Hence, the new circumstances do not have an impact on the baseline emission.

As per the requirement of the sub-step, it has been assessed that there were no impact of circumstances existing at the time of requesting renewal of the crediting period on the current baseline scenarios.

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

The lifetime of the project activity is 20 years /16/; hence baseline equipment (wind machines) continuously used for electricity generation during next crediting period without any investment. The assessment team able to conclude that an investment is not the most likely scenario for the renewal crediting period under consideration.

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

The grid emission factor calculated ex-ante for the 1st crediting period needs to be updated, as per the valid and latest version of "Tool to calculate the emission factor for an electricity system" /14/, the most recent information available should be used to update the emission factor for the 2nd crediting period. Hence, the emission factor is updated accordingly and appropriately described in the following section D.4 of this report.

Conclusion on step 1:

The assessment team confirm that the current baseline is still valid as per methodology AMS-I.D., version 18.0. However, the grid emission factor needs to be updated for the subsequent crediting period.

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

Step 2.1: Update the current baseline

	As discussed above the baseline scenario of the project activity is still sustained in the second crediting period, hence reassessment of baseline scenario is not required. The baseline emission factor is calculated as per the latest version of CEA CO_2 baseline database version 17 /19/ available at the time of initial PDD submission for renewal of crediting period. The approved baseline methodology has been correctly applied to identify a complete list of realistic and credible baseline scenarios, and the identified baseline scenario most reasonably represents that would occur in the absence of the proposed CDM project activity. The assessment team considers the baseline scenario is realistic and credible. In regard to requirement of VVS for PAs version 03.0.§§83, the assessment team is able to confirm the following statements: a) All the assumptions and data used by the project participants are listed in the PDD, including their references and sources; b) All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD; c) Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence, and can be deemed reasonable; d) Relevant national and/or sectoral policies and circumstances are considered and listed in the PDD; e) The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario, and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity. **Step 2.2: Update the data and parameters** The baseline emission factor will be updated ex-ante, as described in section D.4 of this report. The parameters described under step 1.4 were appropriately updated considering the latest version of methodology AMS I.D., version 18.0.
Findings	CAR #1 was raised and resolved.
Conclusion	The assessment team confirms that there have been no changes in the relevant national and/or sectoral regulations on installation wind power project for exporting electricity to power grid since the previous crediting period. On the other hand, the baseline scenario for the project remains the same as that in the registered PDD as “Electricity delivered to state grid by the Project that would otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid”. The assessment of continued validity of the current baseline scenario and update of the baseline emissions are complied with 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 VVS for PAs version 03.0. In line with CDM-PS version 03.0/09/ §§283, 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.

D.4. Estimated emission reductions or net anthropogenic removals

Means of validation	The calculation of the emissions reductions exactly follows the procedures

described in the methodology AMS I.D, version, 18.0 /11/ and relevant tool, e.g., the "Tool to calculate the emission factor for an electricity system"/13/.

The assessment team 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 revised PDD, 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 revised PDD 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 PDD.

The values presented in the PDD are considered reasonable based on the documentation and references reviewed and the results of the virtual interviews.
The estimation of the emission reductions is considered correct as the calculations have been reproduced by the assessment team with the attainment of the same results.

The algorithms for the determination of the baseline, project, and leakage are discussed in the following sections.

The GHG emission reductions are calculated applying the updated version of methodology AMS I.D version 18.0

Baseline Emissions:
As per the paragraph 22 of the methodology AMS I.D version 18.0:
"Baseline emissions include only CO2 emissions from electricity generation in power plants that are displaced due to the project activity. The methodology assumes that all project electricity generation above baseline levels would have been generated by existing grid-connected power plants and the addition of new grid-connected power plants". The baseline emissions are to be calculated as follows:

$BE_y = EG_{BL,y,} \times EF_{CO2,\ grid,y}$

Where:
BE_y = Baseline emissions in year y (t CO_2)

$EG_{BL,y,}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh)
$EF_{grid,y}$ = Combined margin CO2 emission factor for grid connected power generation in year *y* calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (tCO_2/MWh)
$EG_{BL,y,} = EG_{PJ,\ facility,y}$ (for Greenfield projects paragraph 26 AMS I.D version 18.0)

Where,
$EG_{PJ,\ facility,y}$ = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh)

The baseline emissions equivalent to tCO_2 due to the project have been calculated as the product of the net electricity supplied to the grid and the grid emission factor as per the combined margin approach described in the 'Tool to calculate the

	emission factor for an electricity system' version 07.0. The power produced will be exported to the Indian grid. Hence, the grid emission factor and the corresponding baseline emissions have been calculated for the Indian grid. The emission factor has been calculated as per Methodological Tool 07: Tool to calculate the emission factor for an electricity system" v 07.0 as recommended by the applied methodology AMS I.D v 18.0. *"A combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the 'Tool to calculate the emission factor for an electricity system'."* It is verified that the latest available version for "Tool to calculate the emission factor for an electricity system" is version 07.0 /14/ and the PP has correctly referred to the same in the section B.6.1 of the final revised PDD /03/ to determine the baseline grid emission factor. The PP has considered Option (a) of Para 17 to calculate the grid emission factor as per the Methodological Tool 07 "Tool to calculate the emission factor for an electricity system" version 07.0 since data is available from an official source. In accordance with step 1 of Tool; the project participant has identified the electricity system is based on the option 1 (under the para 17 of the tool) which is unified Indian Grid system. Therefore, the Indian grid has been correctly identified for the calculation of electricity emission factor, as the project displaces electrical energy from Indian grid, as per the CEA database version 17/17/. It is to be noted that CEA database version 17 was published in October 2021 and it was the most recent information available version at the time of first submission of the PDD to DoE, hence referred for determination of emission factor for the second crediting period. It can be confirmed that the determination of grid emission factor in compliance with the "Tool to calculate the emission factor for an electricity system" (version 07.0.0), which states that "If the DNA of the host country has published a delineation of the project electricity system and connected electricity systems, these delineations should be used". Thus, the Project Participant has considered the national grid that is delineated by the Central Electricity Authority of India which was found to be correct and acceptable. The values of OM and BM have been determined ex-ante as per the CEA CO_2 baseline database version 17 published in October 2021, which is published by the Ministry of Power, Government of India/17/. In step 2 of the Tool, the PP has considered option I "Only grid power plants are included in the calculation." Further under step 3, the PP has used the simple operating margin calculation method to determine the operating margin (OM). Validation Team has verified from the CEA CO_2 baseline database/19/ that the percentage of total grid generation by low-cost/ must-run plants (based on average of five most recent years) for the Indian grid is less than 50% of the total generation. Therefore, it is satisfied the condition stipulated under Para 40 (a) of Methodological Tool 07, Version 07, hence the simple OM method (Option a in paragraph 38) has been used as low cost/must run resources constitute less than 50% of total grid generation. As per Tool para 40 -42; The PP has chosen ex-ante option (option a of Para 42 of

Methodological Tool 07, version 07) for calculation of Simple OM emission factor using a 3-year generation-weighted average/05/, based on the most recent data available at the time of submission of the PDD.

In step 4, the PP has calculated the simple operating margin as per Option B as stipulated under Para 47 (b) of Methodological Tool 07, version 07. The PP has considered an average of the latest available three years i.e., 2018-19, 2019-20 and 2020-21 for calculation of simple OM emission factor. The value for weighted average operating margin has been validated and used as 0.9522 tCO2/MWh /17/.

In step 5; the Build margin for the Indian grid is considered as 0.8653 tCO2/MWh as per "Tool to calculate the emission factor for an electricity system" (Version 07.0, EB 100, Annex 4) para 72 (i.e., as per the provision of the section 6.5 of the tool) where the Option 1 is chosen by PP to calculate the build margin emission factor for the project activity. BM is calculated ex-ante based on the most recent information/data from CEA CO_2 Baseline Database version 17, dated October 2021 and is fixed for the entire crediting period.

In step 6, the combined margin (CM) emission factor is calculated based on option (a) i.e., weighted average CM as accordance to Tool. The weighted average combined margin has been calculated by the PP, considering the 75% weighted for operating margin and 25% for build margin; this is in accordance with the tool which states that for "*Wind and solar power generation project activities: W_{OM} = 0.75 and W_{BM} = 0.25 (owing to their intermittent and non-dispatchable nature) for the first crediting period and for subsequent crediting periods*".

The combined margin emission factor for the project activity arrives as 0.9305 tCO_2/MWh. The PP has provided the detailed calculation for the same in the ER calculation sheet. The baseline emission factor for the electricity system has been calculated on ex-ante basis and will remain fixed for the entire second crediting period.

In accordance with the Methodological tool 07: Tool to calculate the emission factor for an electricity system Version 07.0.0 /14/, "*Regional or national average default values* can be used for calculation of CO_2 Emission Factor *if values are reliable and documented in regional or national energy statistics / energy balances".*

The Central Electricity Authority of India (CEA) is a statutory organisation and the sole authority for publication of such data in India and hence, accepted. The assessment team verified that the parameters are determined ex-ante:

Parameter	Value	Source	Means of Validation
$EF_{grid,OM,y}$ Operating Margin of the Indian Grid	0.9522 tCO_2/MWh	Baseline Carbon Dioxide Emission Database Version 17 from the Central Electricity Authority (CEA), Ministry of Power, Government of India /17/	Verified value against default value listed in CEA database version 17 dated October 2021 /17/.
$EF_{grid,BM,y}$ Build Margin of	0.8653 tCO_2/MWh	Baseline Carbon Dioxide Emission	Verified value against default

the Indian Grid		Database Version 17 from the Central Electricity Authority (CEA), Ministry of Power, Government of India /17/.	value listed in CEA database version 17 dated October 2021 /17/.
$EF_{grid,CO2,y}$ Combined margin CO_2 emission factor for the project electricity system in year y	0.9305 tCO_2/MWh	Baseline Carbon Dioxide Emission Database Version 17 from the Central Electricity Authority (CEA), Ministry of Power, Government of India /17/.	Verified value against default value listed in CEA database version 17 dated October 2021 /17/.

The OM has been determined as the average of the previous 3 years' values (2018-19, 2019-20 and 2020-21) mentioned in the CEA database. The value of BM (for year 2020-21) has been sourced directly from the CEA database/17/. The combined margin emission factor has been arrived at by applying weights of 75% for OM and 25% from BM, as specified in the methodological tool 07, version 07.0.0, §§ 86 (b) for second crediting period for wind project.

The baseline emissions for the project activity have been calculated as per AMS I.D Version 18.0 §§22. The baseline emissions for the project activity have been calculated to be 4,456 tCO_2 per year.

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

Estimation of Project Emissions (PE_y):
As per the paragraph 39 of applied methodology AMS I.D version 18, for the most renewable energy project activities, $PE_y = 0$. Except for:

a) Emissions related to the operation of geothermal power plants (e.g. non-condensable gases, electricity/fossil fuel consumption);
b) Emissions from water reservoirs of hydro power plants."

Any of the conditions mentioned is not applicable for the project activity, hence $PE_y = 0$.

Estimation of Leakage Emissions (LE_y):
As per the paragraph 42 of AMS I.D version 18, The only renewable projects that consider leakage are biomass sourced from dedicated plantations, which is not the case of the project activity, thus leakage emissions are zero ($LE_y = 0$).

Emission reductions:
Emission reductions are calculated as follows:
$ER_y = BE_y – LE_y – PE_y$,
where
ER_y : Emission reductions in year y (tCO_2)
BE_y : Baseline Emissions in year y (tCO_2)
LE_y – : Project emissions in year y (tCO_2)
PE_y : Leakage emissions in year y (tCO_2)

As discussed above $PE_y=0$ and $LE_y=0$, hence
$ER_y = BE_y – 0 – 0$
$ER_y = BE_y$
$ER_y = EG_{PJ,facility,y} \times EF_{grid,y}$

	Value of $EG_{PJ,facility,y}$ ($EG_{BL,y}$) is estimated to be 4,789 MWh per year. Hence baseline emission reductions as follows: BE_y= 4,789 MWh *0.9305 tCO_2/MWh = 4,456 tCO_2 $ER_y = BE_y$ =4,456 tCO_2 per year for the selected 7 years crediting period. Total emission reductions during the Second crediting period are estimated to be 31,195 tCO_2. Note: The PP has applied the deration factor to PLF (generation) as 1.25% from third year of second renewable crediting period (10th operational year) and further from 7th year (14th operational year), as stated in the registered PDD (p.24) that deration factor of 1.25% should be applied from 6th, 10th ,14th & 18th year of project operation. The assessment team has checked the RERC tariff order /18/ and confirmed that the deration factor applied is in accordance with the provisions as outlined under paragraph 83 clause 6 (b.iii), hence the estimation of annual generation for second crediting period is found to be appropriate.
Findings	CAR #2 was raised and resolved.
Conclusion	The assessment team has assessed the calculations of project emissions, baseline emissions, leakage emissions and emission reductions. Corresponding calculations have been carried out based on calculation spreadsheets. The parameters and equations presented in the PDD, as well as other applicable documents, have been compared with the information and requirements presented in the methodology and respective tools. The assessment team has compared all the formulae to ensure consistency between those presented in the calculation files and in the PDD, methodology, and tools. This is found to be correct. In general, the assessment team is able to confirm the following: ➢ All assumptions and data used by the project participants are listed in the PDD 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 PDD; ➢ All values used in the 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, and leakage emissions; ➢ All estimates of the baseline, project and leakage emissions can be replicated using the data and parameter values provided in the PDD. The assessment team confirms that the baseline, the estimated GHG emission reductions in the final updated PDD comply with the applicable requirements in the section 7.5.5 PS for PAs version 03.0, and the valid version of the methodology applicable to the registered CDM project activity.

D.5. Validity of monitoring plan

Means of validation	The assessment team reviewed the updated PDD, checked whether the PDD update the monitoring plan section in accordance with all relevant applicable requirements in the CDM PS for PAs. Also verified whether the PDD list all data and parameters to be monitored, as required by the applied methodology and whether the monitoring plan explained the operational and management structure, responsibilities and institutional arrangement for data collection/archiving, QA/QC procedures. The project applies the approved consolidated monitoring methodology AMS-I. D version 18.0 for grid-connected electricity generation from renewable sources. The monitoring parameter relevant to this project activity described in the applied

	methodology is: $EG_{PJ,facility,y}$ = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh) For project $EG_{PJ,facility,y} = EG_{BL,y}$ The assessment team has reviewed the line diagram as provided under section B.7.3 of the revised PDD/03/, CDM validation report /06/ and confirmed during the conversations (virtual) with site personnel that the project WTGs are connected to separate feeders and each feeder has main and the check meter and the WTGs of other project developers (non-project activity) are also connected to these feeders. WTG (AK 409) is connected to 33/220 KV Grid Sub Station at Akal site and other 2 WTGs (TEJ-19 & TEJ-38) are connected to 33/220 KV Grid Sub Station Mokla located at Tejua site. There are one set of meters (main & check meter) is installed at each substation and both the substations are maintained by the DISCO. It is noted that WTGs of other promoters (not belongs to project) are also connected to the DISCOM substations. Hence, the net electricity supplied to the grid by the project activity is apportioned based on the LCS meter readings available from the individual WTGs. Apportioning procedure used in the calculation of net electricity supplied to the grid is correctly described in section B.7.3 of the revised PDD/03/. The O&M contractor (also referred as EPC contractor) applies the apportioning procedure and the PP has no role in this calculation. It was confirmed from the representatives of the O&M contractor during the virtual interviews, that the procedure to derive the electricity exported to the grid by each project owner is completely under jurisdiction of the O&M contractor and DISCOM. Values of the parameter "Net electricity supplied to the grid by project" is directly sourced from the monthly "Breakup sheet" issued by O&M contractor and endorsed by state utility/24/. The monthly breakup sheets are prepared by O&M contractor and endorsed by state utility, an external government agency and the PP has no influence in the entire procedure. Hence, the data issued reported in the breakup sheets is deemed authentic. The monitoring methodology applies consistently the choice of the option selected for monitoring of baseline emissions. The monitoring plan provide procedures for the collection and archiving of all relevant data necessary for estimation or measuring the emission reductions within the project boundary during the crediting period. The assessment team has also verified the actual photographs of monitoring equipment's (indicating technical specifications), video recording of online SCADA system and the CDM validation report /06/ and it is confirmed that registered monitoring plan as described in the revised PDD was implemented and followed during previous crediting period/06/ and in accordance with the applied methodology. All the relevant data records will be kept by the Project owner during the crediting period and electronically archived for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later. Data management and quality control measures have been confirmed through desk review of the project documents/03/ and interview with the PPs representatives/23/. Assessment team confirmed that project is not involve any sampling plan in monitoring of project activity parameters hence section B.7.2 in the revised PDD is not applicable for this project activity. **Implementation of the monitoring plan:** An organizational structure is provided in section B.7.3 of the revised PDD. The functions such as data collection, aggregation, verification, calculation, archiving, as well as the maintenance of equipment's etc. have been defined. Quality assurance and quality control procedures for recording, maintaining and data archiving etc. will be ensured according to CDM EB rules. The calibration of the meter will be implemented as per national standard. An

	emergency treatment process has been defined in PDD when the meter is in malfunction. Data management and quality control system are quoted in PDD. The monitoring staffs will be trained based on the training program described in the revised PDD. The procedures described in the revised PDD have been recognized by the assessment team through document review and virtual interviews with the relevant personnel. It is confirmed that remaining aspects of monitoring plan like monitoring procedure, metering system, calibration procedure, data recording, monitoring role and responsibility and QA/QC procedure as mentioned in the registered PDD, will remain same during the 2nd crediting period. The assessment team can confirm that the proposed monitoring plan is feasible within the project design.
Findings	No non-conformability was observed during assessment for validation of crediting period. Therefore, no finding was raised.
Conclusion	The assessment team confirms that the monitoring plan contains all necessary parameters which have been clearly described in revised PDD /02/ and that the means of monitoring described in the plan complies with the requirements of the methodology. In conclusion, based on document review and stakeholder interview, together based on local and sectoral expertise, the assessment team confirms that: ➢ The monitoring plan of the revised PDD follows the requirements of the methodology AMS I.D version18.0. ➢ Monitoring arrangements described in the monitoring plan of the revised PDD are feasible within the project design. ➢ The PP's ability to implement the monitoring plan can be guaranteed. The monitoring plan of the revised PDD is complied with the registered PDD. The assessment team is of the opinion that the project participants can implement the monitoring plan and the emission reductions achieved can be reported ex-post for verification.

D.6. Crediting period

Means of validation	The assessment team checked whether the updated PDD indicated that the next crediting period commences on the day immediately after the expiration of the current crediting period by means of a document review, use of official sources and interviews with relevant personnel during remote audit. The first 7 years renewable crediting period was from 07/05/2014 to 06/05/2021; the Project Participant is applying for a 2nd renewable crediting period, which is 7 years (07/05/2021 – 06/05/2028).
Findings	No non-conformability was observed during assessment for validation of crediting period. Therefore, no finding was raised.
Conclusion	The assessment team confirmed that the notification regarding to the request for renewal of Crediting period of the project meets the requirements of paragraph 274 CDM PCP for PAs version 03.0 and the next crediting period of the registered CDM project activity commences on the day immediately after the expiration of the current crediting period. Therefore, CDM requirements stipulated under VVS for PAs Version 03.0 §§412(v) is satisfied completely.

D.7. Project participants

Means of validation	The assessment team checked whether the names of the project participant included in the updated PDD are consistent with the names of the project participants in the registered PDD by means of desk review and interviews of PPs representative. The project participant in registered PDD is M/s MITCON Consultancy & Engineering Services Ltd. (project owner). The project participant in updated PDD is same as in the registered PDD and indicated in latest version of the MoC statement, dated 04/08/2014 available at project UNFCCC web page/07/.
Findings	No non-conformability was observed during assessment of details of Project Participant. Therefore, no finding was raised.
Conclusion	The assessment team confirms that the project participants in the updated PDD are consistent with the actual situation. Therefore, CDM requirements stipulated under VVS for PAs Version 03.0 §§412 a (vi) is satisfied completely.

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, standardized baselines or other methodological regulatory documents[2]	N	-	-
Corrections	N	-	-
Change to the start date of the crediting period	N	-	-
Inclusion of a monitoring plan	N	-	-
Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents	N	-	-
Changes to the project design	N	-	-
Changes specific to afforestation and reforestation project activities	N	-	-

SECTION E. Internal quality control

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The draft final validation report before being submitted to the client is subjected to an independent technical review to confirm that all validation activities has been completed according to the pertinent CCIPL's procedures. The technical review is performed by a technical reviewer(s) qualified in accordance with the CCIPL's qualification procedure.

SECTION F. Validation opinion

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Carbon Check (India) Pvt. Ltd. (CCIPL) has performed a validation of renewal of crediting period of the "Bundled Wind Power Project at Rajasthan India" (Ref. No. 9950). The validation was performed based on the updated sections of the PDD 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.

[2] Other standards, methodologies, methodological tools and guidelines (to be) applied in accordance with the applied(selected) methodologies are collectively referred to as the other (applied) methodological regulatory documents).

The final validation opinion was finalized in accordance with the CDM VVS for PAs version 03.0 and the CDM PS for PAs version 03.0 including the assessment of:

a) An 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 at the time of requesting renewal of crediting period;

b) The correctness of the application of an approved baseline methodology for the determination of the continued validity of the baseline or its update, and the estimation of emission reductions for the applicable crediting period.

The review of the project design documentation and the subsequent follow-up interviews have provided CCIPL with sufficient evidence to determine the validity of the original baseline and/or its update through an assessment. The project correctly applies the latest baseline and monitoring methodology AMS I.D “Grid connected renewable electricity generation”, version 18.0.

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 4,456 tCO2e and a total estimated emission reduction of 31,195 tCO2e over the 2nd renewable crediting period as specified within the final revised PDD/03/.

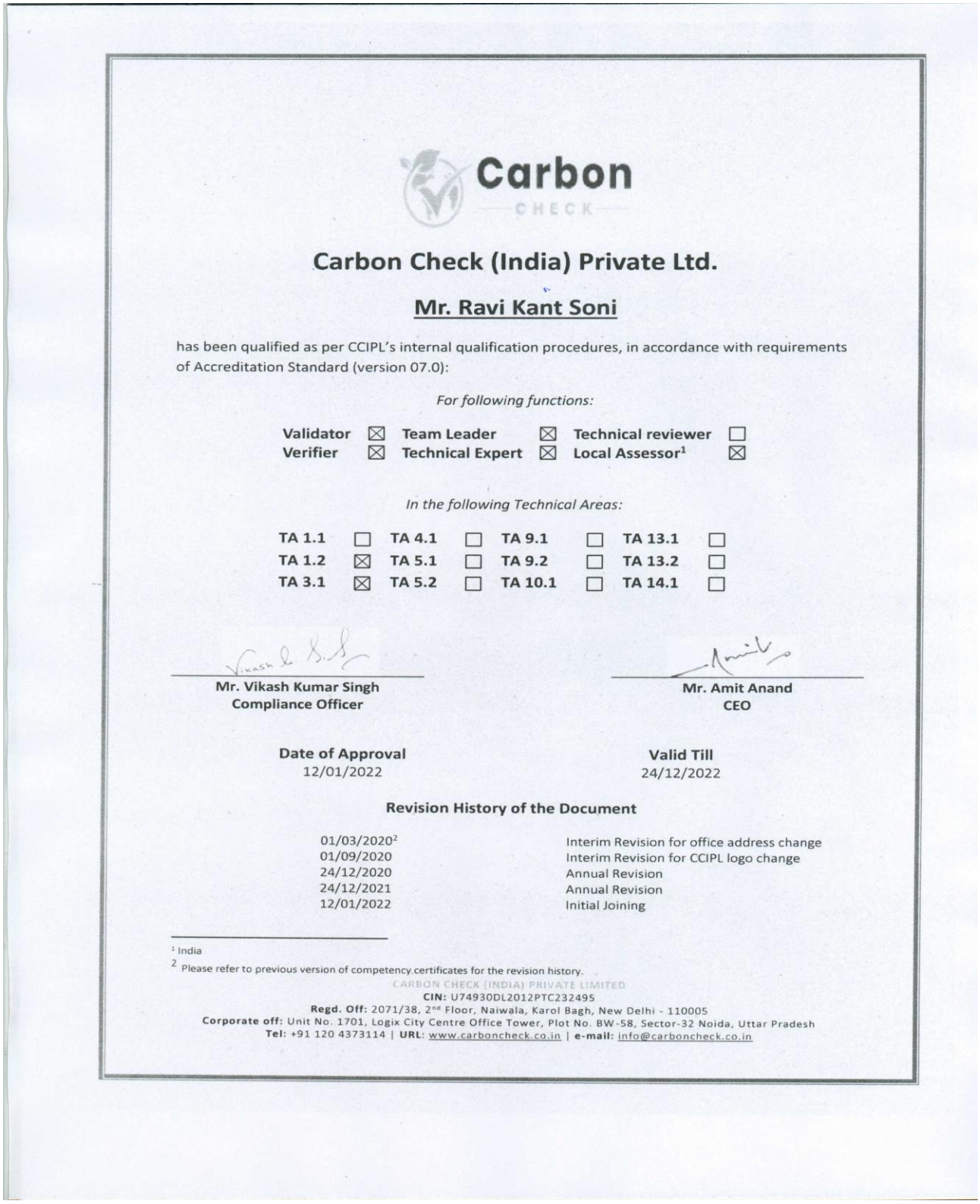
The monitoring plan provides for the monitoring of the project’s emission reductions. The monitoring arrangements described in the monitoring plan are feasible within the project design. It’s CCIPL opinion that the project participants can implement the monitoring plan and the emission reductions achieved can be reported ex-post for verification.

In summary, it is CCIPL opinion that the project activity “Bundled Wind Power Project at Rajasthan India” (Ref. No. 9950) in India, as described in the PDD, version 08 dated 28/04/2022 meets all relevant UNFCCC requirements for the renewal of the crediting period. Hence CCIPL submitted the request for renewal of the crediting period of the project activity.

Appendix 1. Abbreviations

Abbreviations	Full texts
ABT	Availability Based Tariff
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM PCP	Clean Development Mechanism Project Cycle Procedure
CDM PS	Clean Development Mechanism Project Standard
CDM VVS	Clean Development Mechanism Validation and Verification Standard
EB	Executive Board
EF	Emission Factor
EPC	Engineering, Procurement and Construction
ER	Emission Reductions
CEA	Central Electricity Authority
CER	Certified Emission Reduction
CL	Clarification Request
DOE	Designated Operational Entity
DNA	Designated National Authority
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
GOI	Government of India
IPCC	Intergovernmental Panel on Climate Change
JMR	Joint Meter Reading
JVVNL	Jaipur Vidyut Vitran Nigam Limited
MP	Monitoring Plan
MR	Monitoring Report
MWh	Megawatt hour
PDD	Project Design Document
PPA	Power Purchase Agreement
PP	Project Participant
PRC	Post Registration Changes
PS	Project Standard
RCP	Renewal of Crediting Period
RERC	Rajasthan Electricity Regulatory Commission
RMP	Revised Monitoring Plan
RPTCL	Rajasthan Power Transport Company Limited
RRVPNL	Rajasthan Rajya Vidyut Prasaran Nigam Limited
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard
WEC	Wind Energy Convertor
WEG	Wind Energy Generator
WTG	Wind Turbine Generator

Appendix 2. Competence of team members and technical reviewers



Carbon CHECK

Carbon Check (India) Private Ltd.

Mr. Ravi Kant Soni

has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):

For following functions:

Validator	☒	Team Leader	☒	Technical reviewer	☐		
Verifier	☒	Technical Expert	☒	Local Assessor[1]	☒		

In the following Technical Areas:

TA 1.1	☐	TA 4.1	☐	TA 9.1	☐	TA 13.1	☐
TA 1.2	☒	TA 5.1	☐	TA 9.2	☐	TA 13.2	☐
TA 3.1	☒	TA 5.2	☐	TA 10.1	☐	TA 14.1	☐

Mr. Vikash Kumar Singh
Compliance Officer

Mr. Amit Anand
CEO

Date of Approval
12/01/2022

Valid Till
24/12/2022

Revision History of the Document

01/03/2020[2]	Interim Revision for office address change
01/09/2020	Interim Revision for CCIPL logo change
24/12/2020	Annual Revision
24/12/2021	Annual Revision
12/01/2022	Initial Joining

[1] India

[2] Please refer to previous version of competency certificates for the revision history.

CARBON CHECK (INDIA) PRIVATE LIMITED
CIN: U74930DL2012PTC232495
Regd. Off: 2071/38, 2nd Floor, Naiwala, Karol Bagh, New Delhi - 110005
Corporate off: Unit No. 1701, Logix City Centre Office Tower, Plot No. BW-58, Sector-32 Noida, Uttar Pradesh
Tel: +91 120 4373114 | **URL:** www.carboncheck.co.in | **e-mail:** info@carboncheck.co.in

Carbon CHECK

Carbon Check (India) Private Ltd.

Vikash Kumar Singh

has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):

For following functions:

Validator	☒	**Team Leader**	☒	**Technical reviewer**	☒		
Verifier	☒	**Technical Expert**	☒	**Local Assessor**[1]	☒		

In the following Technical Areas:

TA 1.1	☒	**TA 4.1**	☒	**TA 9.1**	☐	**TA 13.1**	☒
TA 1.2	☒	**TA 5.1**	☐	**TA 9.2**	☐	**TA 13.2**	☒
TA 3.1	☒	**TA 5.2**	☐	**TA 10.1**	☐	**TA 14.1**	☒

Mr. Amit Anand
CEO

Date of Approval	**Valid Till**
13/04/2022	12/04/2023

Revision History of the Document	
01/09/2020[2]	Interim Revision for CCIPL logo change
24/12/2020	Annual Revision
24/12/2021	Annual Revision
13/04/2022	Revision in response to qualification of technical area 14.1.

[1] India, South Africa, Spanish speaking countries

[2] Please refer to previous version of competency certificates for the revision history.

CARBON CHECK (INDIA) PRIVATE LIMITED
CIN: U74930DL2012PTC232495
Regd. Off: 2071/38, 2nd Floor, Naiwala, Karol Bagh, New Delhi - 110005
Corporate off: Unit No. 1701, Logix City Centre Office Tower, Plot No. BW-58, Sector-32 Noida, Uttar Pradesh
Tel: +91 120 4373114 | **URL:** www.carboncheck.co.in | **e-mail:** info@carboncheck.co.in

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
	Basic Documents (Monitoring Report, Project Design Documents, Previous Verification Reports)			
1	PP	Registered PDD Version 05	Dated 24/03/2014	PP
2	PP	Revised PDD, version 06	Dated 16/04/2022	PP
		Revised PDD, version 07	Dated 27/04/2022	
3.	PP	Revised PDD, version 08(final)	Dated 28/04/2022	PP
4.	PP	Emission reduction calculation sheet, Version 01	Dated 16/04/2022	PP
5.	PP	Emission reduction calculation sheet, Version 02	Dated 28/04/2022	PP
6.	BVC	CDM Validation report	Dated 02/04/2014	Other: UNFCCC
7.	UNFCCC	CDM Project activity view page "Bundled Wind Power Project at Rajasthan India" https://cdm.unfccc.int/Projects/DB/BVQI1399437731.54/view	-	Other: UNFCCC
8	UNFCCC website	Clean Development Mechanism Validation and Verification Standard for Project Activity (CDM-VVS for PA), version 03.0 as per EB 111, Annex 2	Dated 09/11/2021	Other: UNFCCC
9	UNFCCC website	CDM Project Standard for Project Activity (CDM-PS for PA), version 03.0 as per EB 111, Annex 1	Dated 09/11/2021	Other: UNFCCC
10	UNFCCC website	CDM Project Cycle Procedure for Project Activity (CDM-PCP for PA), version 03.0 as per EB 111, Annex 10	Dated 09/11/2021	Other: UNFCCC
11	UNFCCC website	AMS-I.D "Grid connected renewable electricity generation", version 18	-	Other: UNFCCC
12	CDM EB	PDD template form	Version 12.0	Other: UNFCCC
13	CDM EB	Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period (EB 66, Annex 47)	V 03.0.1 Dated 02/02/2012	Other: UNFCCC
14	CDM EB	Tool to calculate the emission factor for an electricity system	Version 7.0	Other: UNFCCC
15	State utility	Commissioning Certificate KSPL	Dated 15/04/2010	PP
		Commissioning Certificate MPPL	Dated 08/12/2010	
		Commissioning Certificate MPEL	Dated 17/01/2012	
16	State utility	Power purchase Agreement KSPL	Dated 26/03/2010	PP

		Power purchase Agreement MPPL	Dated 13/09/2010	
		Power purchase Agreement MPEL	Dated 17/06/2011	
17	CEA	CEA CO_2 Baseline Database for the Indian Power Sector Version 17	Oct 2021	Other
18	RERC	RERC Tariff Order	Dated 24/11/2021	Other
19	CEA	Central Electricity Authority (Installation and Operation of Meters) Regulations - Notified on 17/03/2006 No.502/70/CEA/DP&D - AmendmentsNotifiedon26/06/2010No.502/6/2009/DP&D/D-I (http://www.cea.nic.in/reports/regulation/meter_reg.pdf)	17/03/2006	Other: CEA
20	Ministry of Power, GOI	The Electricity Act, 2003 (http://www.cercind.gov.in/Act-with-amendment.pdf)	Dated 26/05/2003	Other
21	Ministry of Power, GOI	National Electricity Policy,2005 (https://powermin.nic.in/en/content/national-electricity-policy)	Dated 12/02/2005	Other
22	Ministry of Power, GOI	Tariff Policy, 2006 http://www.orierc.org/documents/National%20Electricity%20Tariff%20Policy.pdf	January 2006	Other
23	CCIPL	Virtaul interview with PPs representatives on 22/04/2022. Latest photographs of CMS system, WTGs, and energy meters installed at site.	-	PP
24	O&M contractor	Latest Monthly breakup reports issued by O&M contractor & endorsed by the state utility	-	PP
25	PP	Latest invoices raised by the PP to state utility	-	PP

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

Table 1. CL from this validation

CL ID	01	**Section no.**	C.1	**Date:** 02/04/2022
Description of CL				
Please submit the following documents: • Power Purchase Agreement signed with state utility • Commissioning certificates of WTGs • Latest JMR (breakup reports) & invoice issued for the project activity				
Project participant response				**Date:** 27/04/2022
PP is hereby submitting the following documents along with the revised set of documents: • Power Purchase Agreement signed with state utility • Commissioning certificates of WTGs • Latest JMR & invoice issued for the project activity.				
Documentation provided by the Project participant				
1.Power Purchase Agreement signed with state utility 2.Commissioning certificates of WTGs 3.Latest JMR & invoice issued for the project activity				
DOE assessment				**Date:** 28/04/2022
The PP has submitted the PPA, commissioning certificates and latest JMR/breakup reports. The assessment team has checked the documents and confirmed that: • The commissioning dates of WTGs are consistent with the same as mentioned in the revised PDD • Grid connectivity, metering arrangements, monitoring procedure (data recording) and role & responsibility for maintenance of energy meters is verified through the PPA and the information's found consistent with the relevant sections revised PDD.				

- The following information is verified through the monthly breakup reports
  a. Details of the substation to which the WTGs are connected.
  b. Commissioning date of individual WTG
  c. Serial number of energy meters used for monitoring
  d. Capacity of project
  e. Name of project participant

All the documents submitted by the PP are found to be appropriate, hence accepted.
CL #1 is closed.

Table 2. CAR from this validation

CAR ID	01	**Section no.**	D.3	**Date: 02/04/2022**
Description of CAR				
As per clause 284 of Project standard, "*The project participants shall assess and incorporate the impact of national and/or sectoral policies and circumstances, existing at the time of requesting renewal of crediting period on the current baseline GHG emissions, without reassessing the baseline scenario*". Please clarify why the information's regarding the impact of sectoral policies and circumstances, existing at the time of requesting renewal of crediting period, on the current baseline GHG emissions are not provided in the PDD.				
Project participant response				**Date: 27/04/2022**
The relevant national and/or sectoral policies, regulations and circumstances have not been revised and are for RCP also same has been considered in accordance with the project standard. However, the amendments on the Electricity Act made on 2007 is also mentioned in the updated PDD.				
Documentation provided by the Project participant				
Revised Renewal PDD Version 7.0				
DOE assessment				**Date: 28/04/2022**
The PP has updated the PDD including the information's regarding the impact of national and/or sectoral policies and circumstances, existing at the time of requesting renewal of crediting period, on the current baseline GHG emissions, found to be appropriate, hence accepted. CAR#1 is Closed.				

CAR ID	02	**Section no.**	D.4	**Date:** 02/04/2022
Description of CAR				
Please clarify why all the data sourced from CEA database, used in calculation of emission factor is not presented in the ER calculation sheet. As per the registered PDD, deration factor 1.25% shall be applied from the 6th, 10th, 14th & 18th year of operation. In view of this information please clarify how the net generation for each year in the second crediting period is determined.				
Project participant response				**Date:** 27/04/2022
All the data sourced from CEA database is now reported in the revised emission reduction sheet. Hence Revised ER Sheet. In the second crediting period sheet, PP has applied the deration factor of 1.25 % in the 8th (Year1), 10th (Year 3) & 14th (year 7) year of the operation. Hence ER sheet made consistent in line with CDM registered PDD.				
Documentation provided by the Project participant				
Revised ER Calculation sheet Revised Renewal PDD Version 7.0				
DOE assessment				**Date: 28/04/2022**
The PP has reported all the data sourced from CEA database, in the revised ER calculation sheet. Please clarify the following issues: i. Generation for first year of 2nd crediting period as mentioned in the ER sheet is not consistent with the registered PDD ii. The PP has applied the deration factor for the 1st year generation in the 2nd CP (8th operational year, however as per the registered PDD, deration factor 1.25% shall be applied from the 6th, 10th, 14th & 18th year of operation. iii. Why the annual generation is not calculated as the summation of generation for all 3-sub bundle after applying the deration factor as per the registered PDD. CAR #2 is open				
Project participant response				**Date :** 28/04/2022

i. Generation for the first year of 2nd crediting period as mentioned in the ER sheet is now made consistent in line with registered PDD. Hence Revised CDM PDD Version 8.0. ii. PP has now corrected the ER sheet in line with registered CDM PDD. iii. The summation generation for all 3-sub bundle after applying the deration factor is now reported in the revised ER Sheet.
Documentation provided by project participant
Revised ER Sheet Revised CDM PDD Version 8.0
DOE assessment **Date:** 29/04/2022
The PP has corrected the generation for first year (2nd crediting period) in the ER calculation sheet, found to be appropriate and correct. The PP has applied the deration factor to the generation for 10th operational (3rd year of second CP) and 14th operational year (7th year of second CP), this approach is found to be in line with the registered PDD, hence accepted. The annual generation annual generation is calculated in the ER sheet, as the summation of generation for all 3-sub bundle after applying the deration factor as per the registered PDD. CAR #2 is closed.

Table 3. FAR from this validation

FAR ID	01	**Section no.**	D	**Date :** 27/04/2022
Description of FAR				
The PP is requested to apply any GWP values adopted by the CMP for any ERs achieved on or after 01/01/2021; and update their project design document in accordance with any requirements of the CMP guidance after their decision-making at CMP 16.				
Project participant response				**Date :** DD/MM/YYYY
-				
Documentation provided by project participant				
-				
DOE assessment				**Date:** DD/MM/YYYY

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Document information

Version	*Date*	*Description*
03.0	31 May 2019	Revision to: • Ensure consistency with version 02.0 of the "CDM validation and verification standard for project activities" (CDM-EB93-A05-STAN) and version 02.0 of the "CDM project cycle procedure for project activities" (CDM-EB93-A06-PROC); • Make editorial improvements.
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.

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Document Type: Form
Business Function: Renewal of crediting period
Keywords: crediting period, project activities, validation report