



**Verification and certification report form for
CDM project activities
(Version 04.0)**

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	14.7 MW Bundled Wind Power Project in the state of Maharashtra and Rajasthan, India UNFCCC No.: 7370 ¹		
Scale of the project activity	<input type="checkbox"/> Large-scale <input checked="" type="checkbox"/> Small-scale		
Version number of the verification and certification report	01		
Completion date of the verification and certification report	18/11/2021		
Monitoring period number and duration of this monitoring period	03, (02/01/2017 to 31/12/2020) Both start and last date are included.		
Version number of the monitoring report to which this report applies	02		
Crediting period of the project activity corresponding to this monitoring period	15/10/2012 – 14/10/2022 (Fixed)		
Project participants	1. M/s Gangadhar Narsingdas Agrawal, (HUF) (India) 2. Belektron d.o.o. (United Kingdom of Great Britain and Northern Ireland) 3. EKI Energy Services Limited (Australia)		
Host Party	India		
Applied methodologies and standardized baselines	Methodology: -AMS I.D – Grid connected renewable electricity generation – version 17 Standardized Methodology: Not Applicable		
Mandatory sectoral scopes	1. Energy industries (renewable-/non-renewable sources)		
Conditional sectoral scopes, if applicable	NA		
Estimated amount of GHG emission reductions or GHG removals for this monitoring duration in the registered PDD	97,152 tCO ₂		
Certified amount of GHG emission reductions or GHG removals for this monitoring period	Amount before 1 January 2013	Amount from 1 January 2013 until 31 December 2020	Amount from 1 January 2021
	0 tCO ₂	85,131 tCO ₂	0 tCO ₂
Name and UNFCCC reference number of the DOE	LGAI Technological Center, S.A. (Applus+ Certification) UNFCCC Ref. No.: E-0032		

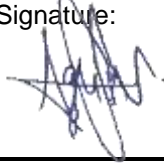
¹ https://cdm.unfccc.int/Projects/DB/KBS_Cert1348206213.9/view

**Name, position and signature of the approver
of the verification and certification report**

Mr. Agustin Calle de Miguel

Applus+ Certification CDM Technical Manager

Signature:



SECTION A. Executive summary

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The project activity consists of electricity generation from seven Wind Turbine Generators (WTG) of 2.1 MW each with total capacity of 14.7 MW in the state of Maharashtra (3 WTGs) and Rajasthan (4 WTGs). The project activity is promoted by Gangadhar Narsingdas Agrawal (HUF) (hereinafter referred to as GNA), Agrawal Minerals (Goa) Private Limited (herein after referred to as AMG) and Kamala Properties Limited (herein after referred to as KPL). GNA will be the nodal point of contact for this particular project activity.

During this monitoring period, 02/01/2017 to 31/12/2020 (First and last date included) the project activity has supplied 89,802 MWh of electricity, and thus contributing to the GHG reductions of 85,131 tCO₂.

1. Verification Scope:

The verification scope encompasses an independent and objective review and ex-post determination of the monitored reductions in GHG emissions by the DOE. The verification is based on the submitted monitoring report, the validated and registered PDD as well as its validation report, the applied monitoring methodology, relevant decisions, clarifications and guidance from the CMP and the EB and any other information and references relevant to the project activity's resulting emission reductions. These documents are reviewed against the requirements of the Kyoto Protocol, the CDM Modalities and Procedures and related rules and guidance. Based on the requirements in the CDM validation and verification standard for project activities, Version 03.0 for the project activity, Applus+ Certification has applied a rule-based approach for the verification of the project. The principles of accuracy, completeness, relevance, reliability and credibility were combined with a conservative approach to establish a traceable and transparent verification opinion. The verification considers both quantitative and qualitative information on emission reductions. The verification is not meant to provide any consultancy towards the client. However, stated requests for clarifications, corrective and/or forward actions may provide input for improvement of the monitoring activities.

2. Methodology:

LGAI Technological Center, S.A. (Applus+ Certification) – Hereinafter referred as Applus+ Certification - approach to the verification is a two-stage process.

In the 1st stage, Applus+ Certification completed a strategic review and risk assessment of the projects activities and processes in order to gain a full understanding of:

- Activities associated with all the sources contributing to the project emissions and emission reductions, including leakage if relevant;
- Protocols used to estimate or measure GHG emissions from these sources;
- Collection and handling of data;
- Controls on the collection and handling of data;
- Means of verifying reported data; and
- Compilation of the monitoring report.

Applus+ Certification used a Periodical Verification Checklist, based on the risk-based assessment of the parameters and data collection and handling processes for each of those parameters, describes the verification approach and the sampling plan.

3. Desk Review

In the 2nd stage, using the Verification Checklist, Applus+ Certification verified the implementation of the monitoring plan and the data presented in the Monitoring Report for the period in question. This involved a

site visit and desk review of the Monitoring Report. This Verification Report describes the findings of this assessment.

The Monitoring Report version 1.0 submitted by the PP was made publicly available on the UNFCCC website before the verification activities started. The published MR was assessed based on all the relevant documents. The aim of the assessment in the desk review was to:

- Verify the completeness of the data and the information presented in the MR;
- Check the compliance of the MR with respect to the monitoring plan depicted in the registered PDD and verify that the applied methodology was carried out. Particular attention to the frequency of measurements, the quality of the metering equipment including calibration requirements, and the quality assurance and quality control procedures was paid;
- Evaluate the data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

4. Assessment team

According to the sectoral scope / technical area and experience in the sectoral or national business environment, LGAI Technological Center, S.A. (Applus+ Certification) has composed a project assessment team in accordance with the appointment rules in the internal Quality Management System of LGAI Technological Center, S.A. (Applus+ Certification).

The composition of audit team shall be approved by the LGAI Technological Center, S.A. (Applus+ Certification) ensuring that the required skills are covered by the team.

The four qualification levels for team members that are assigned by formal appointment rules are as presented below:

- Lead Auditor (LA)
- Auditor (A) / Auditor in Training (AiT)
- Technical Expert (TE)
- Technical Reviewer (TR)

The sectoral scope / technical area knowledge linked to the applied methodology/ies shall be covered by the assessment team.

Name	Role	SS Coverage	TA Coverage	Financial aspect
Dr. Atul Takarkhede	LA/TE	YES	YES	NA
Mr. Simon Shen	TR	YES	YES	NA

The curriculum vitae of the DOE's Verification team members is provided in Appendix 2 of this report.

5. Review of Documentation:

The Monitoring Report version 1.0 submitted by the PP was made publicly available on the UNFCCC website before the verification activities started. The published MR was assessed based on all the relevant documents. A cross-check between information provided and information from other sources has been done. A complete list of documents reviewed is available in Appendix 3 of this report.

6. On-site Assessment and follow-up Interviews:

As a part of the verification, the remote audit (detailed in section D.2) has been performed by the assessment team. The objective of the on-site assessment is to:

- Confirm the implementation and operation of the project;
- Review the data flow for generating, aggregating and reporting the monitoring parameters;
- Confirm the correct implementation of procedures for operations and data collection;
- Cross-check the information provided in the MR documentation with other sources;

- Check the monitoring equipment against the requirements of the PDD and the approved methodology, including calibrations, maintenance, etc.
- Review the calculations and assumptions used to obtain the GHG data and ER;
- Identify if the quality control and quality assurance procedures are in place to prevent or correct errors or omissions in the reported parameters.

The details are mentioned in section D.2 of this report.

7. Quality of Evidences

Sufficient evidence covering the full verification period in the required frequency is available to verify the figures stated in the final MR. The source of the evidences will be discussed in Appendix 3 of this report. Specific cross-checks have been done in cases that further sources were available. The monitoring report's figures were checked by the assessment team against the raw data. The data collection system meets the requirements of the monitoring plan as per the methodology.

8. Reporting of Findings

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

Where a non-conformance arises the assessment team shall raise a Corrective Action Request (CAR). A CAR is issued, where:

- a. Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants;
- b. Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;
- c. Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants.

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

All CARs and CLs raised during verification shall be resolved prior to submitting a request for issuance.

Forward Action Requests (FARs) may be raised during verification for actions where the monitoring and reporting require attention and/or adjustment for the next verification period. All the CARs/CLs/FARs are being discussed in Appendix 4 of this report.

9. Internal Quality Control

As a final step of verification, the final documentation including the verification report has to undergo an internal quality control by the Technical Reviewer. Each report has to be finally approved either by the DOE's Technical Manager or the Deputy Manager. In case one of these two persons is part of the assessment team, the approval can only be given by the person who is not a part of the assessment team. If the documents have been satisfactorily approved, the request of issuance is submitted to CDM EB along with the requisite documents.

SECTION B. Verification team, technical reviewer and approver**B.1. Verification 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/document review	On-site inspection	Interviews	Verification findings
1.	Team Leader	O R	Takarkhede	Atul	True Quality Certifications Private Limited- Outsourced entity	Yes	No	Yes	Yes

B.2. Technical reviewer and approver of the verification and certification report

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	EI	Shen	Simon	Applus+ Certification
2.	Approver	IR	Calle de Miguel	Agustin	Applus+ Certification

SECTION C. Application of materiality**C.1. Consideration of materiality in planning the verification**

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
1	Human errors: Readings from Meters (if not automatic)	LOW	Human error is likely to occur if the monitoring personnel are not trained well or inexperienced in data recording procedures and monitoring processes.	All the personnel are well trained to monitor and collect data and thus, the risk associated with Human error is minimized. Assessment team checked the training records to confirm that all the personnel are well trained to handle the activities related to monitoring. Assessment team checked the training records for the complete monitoring period and confirm that the personnel are well trained to monitor and collect data for the project activity.
	Human error: Quantification of emission reduction	LOW	Use of spreadsheets without adequate data control, changes/updates, version tracking, traceability and	All the JMR (Joint Meter Report) sheets and the invoices for the complete monitoring period are checked and thus

			security	the assessment team confirms that the ER value is conservative and correct.
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C.2. Consideration of materiality in conducting the verification

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In line with Guidelines for Application of materiality in verifications, the verification team has conducted a complete verification of all the information presented in the monitoring report and data monitored as presented in the emission reduction calculation spreadsheet. There are no material errors, overestimation of ER, omission or misstatement.

SECTION D. Means of verification

D.1. Desk/document review

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The verification was performed primarily based on the review of the monitoring report and the supporting documentation. This process included review of data and information presented to verify their completeness and review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment used to include calibration requirements, and the QA/QC procedures, and an evaluation of data management and the QA/QC system in the context of their influence on the generation and reporting of emission reduction.

The initial MR Version 1 submitted by the project participant and additional background documents related to the emission reductions are reviewed as an initial step of the verification process. The subsequent step involved the identification of corrective action requests, clarification requests and Forward action request (CAR, CL and FAR) which are presented in Appendix 4 of this report. As a result of these findings, the MR is revised and submitted to assessment team. A complete list of all documents and records reviewed is as attached in Appendix 03 of this report.

D.2. On-site inspection

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No physical verification was conducted by the DOE for this CDM verification due to high threat of COVID-19 in entire country of India, traveling restrictions, Applus+ internal safety policies and the safeguarding of the involved persons' health. Government of India has ordered nationwide lockdown from 25/03/2020². Latter during second wave of pandemic, it was further imposed by various state governments state-wise lockdown and quarantine rules. States of Maharashtra and Rajasthan have imposed various restrictions on public activities & travelling.

Hence, in line with the guidance to relax mandatory site visits by DOEs due to COVID 19 pandemic published by UNFCCC, DOE has taken alternative measures to arrive at conservative estimation of emission reductions achieved, applying standard auditing techniques for verification, as referred in section 9.1.3 of the "CDM validation and verification standard for project activities, Version 03". Moreover, as verified from the ERPA provided by PP, PP has commitment of supplying of CERs to buyer by December 2021. So, the site visit cannot be postponed to a later date. Thus, as per guidance to relax mandatory site visits by DOEs due to COVID 19 pandemic, assessment team have conducted remote audit and used standard auditing techniques to verify information and compliance with applicable requirements to the extent possible, to ensure the completeness and credibility of the audit. The remote audit was conducted through Skype and audit was attended by Site In-charge the site as well as consultant. Details of attendees are given below in section D.3. The topics discussed during the remote audit are given in below table;

² https://www.mha.gov.in/sites/default/files/MHADOLrDt_3052020.pdf

Duration of Remote inspection: 18/10/2021 (through Skype)				
No.	Activity performed on-site	Site location	Date	Team member
1.	<p>The verification team conducted remote audit to confirm the information and to resolve issues identified in the document review. This involved:</p> <p>1) an assessment of the implementation and operation of the CDM project activity as per the registered PDD</p> <p>2) a review of information flows for generating, aggregating and reporting of the monitoring parameters</p> <p>3) interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the Monitoring Plan</p> <p>4) a cross-check between information provided in the MR and data from other sources</p> <p>5) a check of the monitoring equipment including calibration performance, and observations of monitoring practices against the requirements of the PDD and the applied methodology</p> <p>6) a review of calculations and assumptions made in determining the GHG data and ERs, and</p> <p>7) an identification of QA/QC procedures in place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters</p>	Jaisalmer district, State Rajasthan (RJ) & Nandurbar district State-Maharashtra (MH), India (Remote Audit through Audio/Video conference call)	18/10/2021	Dr. Atul Takarkhede

As referred above, the objective of the remote assessment was to verify the following issues:

- Confirm the implementation and operation of the project in line with CDM PDD: the project activity is implemented as per the registered PDD and there is no change in capacity or design of the project activity since commissioning. Same was confirmed from commissioning certificates, technical specifications of the WTGs & recent site photographs, PPA, interviews with PP/Site in charge and JMR as well as invoices raised by PP towards state utility;
- Review the data flow for generating, aggregating and reporting the monitoring parameters: JMR procedures are followed at the project site in line with the state utility practice and are in line with the registered PDD. JMR procedure is confirmed during the interviews with PP and assessment team also checked entire monthly JMRs issued by the state utility for the project activity with the values provided in the ER sheet for the calculations of the emission reductions;
- Confirm the correct implementation of procedures for operations and data collection: during interviews with PP, it was confirmed that implementation of procedures for operations and data collection is in line with registered PDD. Service provider is responsible for the operations, maintenance as well as maintaining other technical data of the project activity. Performance and operation data of each WTG is controlled and maintained by service provider through the dedicated software and made available to the PP as & when required;
- Cross-check the information provided in the MR documentation with other sources: the information provided in the MR was crosschecked with the commissioning certificates, PPA, calibration certificates and JMRs are issued by Statutory authority and invoices are used for cross-checking;

- Check the monitoring equipment against the requirements of the PDD and the approved methodology, including calibrations, maintenance, etc.: monitoring meters are cross checked with the previous verification reports, interviews with PP, current photographs/videos submitted by PP and calibration is checked with the calibration certificates issued by State Utility authorized third parties;
- Review the calculations and assumptions used to obtain the GHG data and ER: calculation procedures and monthly generation data is checked with JMR and crosschecked with invoices;
- Identify if the quality control and quality assurance procedures are in place to prevent or correct errors or omissions in the reported parameters: during interviews with PP, it was confirmed that quality control and quality assurance procedures are in place. Metering arrangements & JMR procedure is defined and controlled by state utility and PP do not have control on it. Assessment team checked all the monthly JMR values as well as crosschecked with the invoices and found that emission reductions are calculated conservatively.

Thus, to verify the implementation of project activity, onsite operation & maintenance, monitoring & management practices; assessment team has conducted Skype call/telephonic interviews with onsite in-charge, O&M team and also had a detail discussion with the PP representative and reviewed third party statutory documents i.e. Commissioning certificates, Power Purchase Agreement, Complete set of JMRs covering monitoring period, Invoice (for cross check of Net electricity supplied to the grid as per revised PDD), training records, breakdown log, O&M schedule, complaint/feedback register and other relevant records.

After telephonic/Skype interviews with concerned onsite persons, document reviews & site videos/photographs submitted by PP; assessment team concluded that the project activity is implemented and operated in-line with the registered PDD. There is no change in the project design or operation and monitoring practices at site which can alter the applicability of meth or additionality of the project activity. In addition to the interviews with PP, assessment team have checked the commissioning certificate, PPA and JMRs and found that the project activity is implemented as per the PDD, and Monitoring report submitted by the PP for current monitoring period. From review of JMR and invoices assessment team therefore of the opinion that project is implemented as described in the registered PDD and there is no change in monitoring practices as well as all monitoring parameters as envisaged in the PDD. All the monitored values are supported by the evidences i.e. JMRs and found that information provided in the MR is in line with the submitted evidences. Assessment team reviewed all the calibration certificates and found that monitoring meters are calibrated periodically. Detailed assessment provided later in Section E.7 of this report.

D.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Sail	Manoj	PP representative	18/10/2021	As mentioned above in section D.2 of this report	Dr. Atul Takarkhede
2.	Navarkar	Sunil	Site Incharge (MH)			
3.	Singh	Alwar	Site Incharge (RJ)			
4.	Yadav	Neetu	Consultant			

D.4. Sampling approach

No sampling is used as the verification team has reviewed all the documents like commissioning certificates, JMR (monthly reports) sheets, invoices & calibrations etc.

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

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
Compliance of the monitoring report with the monitoring	00	01	00

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
report form			
Compliance of the project implementation and operation with the registered PDD	00	00	00
Post-registration changes	00	00	00
Compliance of the registered monitoring plan with the methodologies including applicable tools and standardized baselines	00	00	00
Compliance of monitoring activities with the registered monitoring plan	00	01	00
Compliance with the calibration frequency requirements for measuring instruments	00	01	00
Assessment of data and calculation of emission reductions or net removals	00	01	00
Assessment of reported sustainable development co-benefits	00	00	00
Global stakeholder consultation	00	00	00
Others (please specify)			
Total	00	04	00

SECTION E. Verification findings

E.1. Compliance of the monitoring report with the monitoring report form

Means of verification	The verification team has determined whether the monitoring report was completed using the valid version of the applicable monitoring report form. The verification team has checked whether all the sections of the monitoring report follow the guidelines provided in the template.
Findings	CAR 01 was raised during the verification process. Please refer Appendix 4 of this report for the complete closure of the CAR.
Conclusion	DOE has made the version 01 of the monitoring report covering the monitoring period 02/01/2017 to 31/12/2020 (inclusive of both dates) publicly available through its dedicated interface on the UNFCCC CDM website on 19/08/2021 i.e., before undertaking the site visit for the verification. However, during course of the verification, the MR template have been revised and thus PP revised the MR in the latest version of the MR template available on the UNFCCC website i.e., version 09.0. The monitoring report has been prepared as per the instructions provided in the template. The verification team has concluded that the monitoring report was completed using the valid version of the applicable monitoring report form and is followed the guidelines contained in the template.

E.2. Remaining forward action requests from validation and/or previous verifications

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This is 3rd periodic verification of the project activity. No FAR was raised during the validation and previous verification of this project. Same is verified from validation report and previous verification report.

E.3. Compliance of the project implementation and operation with the registered project design document

Means of verification	The verification team determined the conformity of the actual implemented project activity and its operation with the registered project design document. DOE has, by means of a desk review and a remote audit, assessed whether all physical features of the proposed CDM project activity proposed in the registered PDD are in place, and that the project participants have operated the CDM project activity as per the registered PDD.
Findings	No findings were raised.
Conclusion	The verification team has reviewed the corrections made, the WEGs mentioned in the revised MR are in line with that given in the PDD. The verification team has reviewed the commissioning certificates to conclude that the capacity of the project is same as mentioned in the registered PDD. The capacity

does not change after the registration of the project activity as confirmed by the assessment team during verification remote audit. Project activity is in continuous operation. The situation of continuous operation was confirmed during remote audit and evident from Breakdown log sheets. No major breakdown was found. Scheduled & preventive maintenance were carried out as per manufacturer specification for the power plant. No unforeseen activity observed during the present verification that can alter the applicability or additionality of the applied methodology. The details are checked by the assessment team from the plant log records and found correct.

Assessment team also checked the relevant implementation status of the project activity and confirm that detail as presented in the MR is correct. The project commissioning dates and locations are described below along with the latitude and longitude.

WTG ID no.	State	Latitude (Northing)	Longitude (Easting)	Commissioning Date
C-31	Maharashtra	21°17' 37.34"	74°16'25.22"	31/03/2011
C- 61	Maharashtra	21°14'49.40"	74°17'32.28"	30/07/2011
C-10	Maharashtra	21°18'39.17"	74°17'55.96"	29/03/2011
MK-61	Rajasthan	27°11'34.63"	70°39'36.77"	25/01/2011
MK-62	Rajasthan	27°11' 27.99"	70°39'54.48"	25/01/2011
MK-4	Rajasthan	27°10'53.56"	70°37'54.32"	25/01/2011
SKD - 192	Rajasthan	27°12' 9.99"	70°36' 35.55"	31/03/2011

The assessment team checked the above details during the verification remote audit & review of commissioning certificates. The same are found in-line with registered PDD. The detail also forms the part of Monitoring report and thus acceptable to the assessment team.

Assessment team checked the technical specifications of WTGs during the remote audit through site in-charge interviews. The details are checked from the manufacturer technical specifications as previous verification reports. The details as mentioned in the MR are found correct.

The Technical specifications of the S-88 Suzlon 2100 WTGs are as follows:

Parameters	Specification
Rotor	
Installed electrical output	2100 kW
Diameter	88 m
Cut-in wind speed	4 m/s
Rated wind speed	14 m/s
Rotor material	Epoxy bonded fiber glass
Regulation	Pitch
Rotor swept area	6082 m ²
Cut-out wind speed	25 m/s
Rotational speed	15.4 RPM
Generator	

	Pitch system	GRP	
	Type	Asynchronous generator	
	Rated Output	2100 kW	
	Rotational speed	1010/1515 RPM	
	Operating voltage	690/600 V	
	Frequency	50/60 Hz	
	Insulation class	H	
	Cooling system	Air -cooled	
	Gear box		
	Manufacturer	Winergy	
	Type	3 stage (1 planetary and 2 helical)	
	Gear Ratio	1:98.8/1:118.1	
	Nominal load	2200kW	
	Cooling	Air cooled	
	Yaw System		
	Drive	3 electrical driven planetary drives	
	Bearing	Polyamide slide	
	Safety system		
	Mechanical brake	Hydraulic disc brake	
	The plant undergone scheduled maintenance as per the manufacturer's specifications and no unforeseen incident observed by the assessment team during the monitoring period. The details are checked by the assessment team from the plant log records and found correct.		
	Based on the documentary evidence of commissioning certificates and remote verification, DOE concludes that the project was implemented as per the registered PDD.		

E.4. Post-registration changes

E.4.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents³

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As there are no post registration changes in the project activity therefore there are no deviations in baseline as well as in monitoring plan.

E.4.2. Corrections

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There are corrections in the project activity which has been approved on 04/08/2015.

<https://cdm.unfccc.int/PRCContainer/DB/prcp347949436/view>

E.4.3. Changes to the start date of the crediting period

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Not Applicable

E.4.4. Inclusion of a monitoring plan

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Not Applicable

³ 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).

E.4.5. Permanent changes from registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents

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There are no permanent deviations applied before and also not applicable for present Monitoring period.

E.4.6. Changes to the project design

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No changes applied for the project activity. Thus, not applicable.

E.4.7. Changes specific to afforestation and reforestation project activities

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Not Applicable

E.5. Compliance of the registered monitoring plan with applied methodologies, applied standardized baselines, and other applied methodological regulatory documents

Means of verification	The verification team determined whether the registered monitoring plan is in accordance with the applied methodology AMS-I.D. ver. 17 - Grid connected renewable electricity generation including applicable tools.
Findings	No findings were raised.
Conclusion	The verification team is able to confirm that the monitoring plan contained in the registered PDD is in accordance with the approved methodology applied by the project activity, i.e., AMS-I.D. ver. 17 - Grid connected renewable electricity generation and its applicable tools. The same is followed onsite and thus assessment team confirms that project activity comply with the requirement of Approved methodology and registered PDD.

E.6. Compliance of monitoring activities with the registered monitoring plan

E.6.1. Data and parameters fixed ex ante or at renewal of crediting period

Means of verification	The assessment team checked the registered PDD to confirm the ex-ante fixed parameter mentioned in the current monitoring report. Assessment team also interviewed site personnel whether monitoring has been to check further regarding the ex-ante values used for emission reduction calculation.
Findings	No findings were raised.
Conclusion	<p>EF_{grid,OM,y}, EF_{grid,BM,y}, EF_{CM} are mentioned as ex-ante fixed parameter in the monitoring report. Assessment team checked the values, source of data, choice of data, purpose of the data mentioned in the MR from the registered PDD and confirms that the similar approach was considered for the current monitoring period also.</p> <p>The values of EF_{grid,OM,y}, EF_{grid,BM,y}, EF_{grid,CM,y} were considered from the CO₂ baseline database (Version 1.7) published by Central Electricity Authority (CEA). The default value as mentioned in the registered PDD and MR are same. The value of combined margin in India is being given by CEA and thus assessment team conclude that the value is correct and appropriate. The default value in turn is used for baseline calculation as per the formula given in the registered PDD for the current monitoring period.</p> <ul style="list-style-type: none"> • EF_{grid,OM,y} = 0.994 tCO₂e/MWh (Confirmed and checked as per the registered CDM PDD) • EF_{grid,BM,y} = 0.812 tCO₂e/MWh (Confirmed and checked as per the registered CDM PDD) • EF_{grid,CM,y} = 0.948 tCO₂e/MWh (Confirmed and checked as per the registered CDM PDD)

E.6.2. Data and parameters monitored

Means of verification	The assessment team checked the registered PDD to confirm the ex-post parameter mentioned in the current monitoring report. Assessment team also interviewed the personnel onsite to check further regarding the ex-post parameter monitoring and confirms that the same is in line with the registered PDD. AMS-I.D. ver. 17 - Grid connected renewable electricity generation which was the applied methodology during the registration of the project is also checked to ensure that monitoring parameter as mentioned in the registered PDD and current MR are in compliance with the methodology.
Findings	No findings were raised.
Conclusion	<p>As per the approved monitoring plan, following parameters are monitored by the PP:</p> <p>EG_{BL,y,GNA Maharashtra}: Electricity supplied to the grid by the Project at Maharashtra Site(MWh).</p> <p>The parameter is a calculated using the difference of export and import value measured from the electricity meter. The source of data of the parameter is Measured by the meter and as noted in the JMR provided by the state utility. Electricity export and import is measured via Bi-directional electricity meter installed on the high tension side of the transformer and the value of export and import forms the part of Meter reading statement issued by State electricity board. The meter reading is taken during a fixed billing cycle of every month and representative of state electricity board and Operation and maintenance personal onsite present during the process. Assessment team checked all the values of the electricity exported and electricity imported from the JMR statement issued by State electricity board. The electricity meters are under the custody of the DISCOM and calibrated by DISCOM as per their standard procedures. The meters are calibrated in line with Indian regulations for such installations. Accuracy of the meters is 0.2s. The accuracy class of active energy measurement is in accordance to Indian national Standards. The meter is of Elster make which is confirmed by the assessment team during the verification site visit. The net electricity exported to the grid is then calculated from the difference of export and import value. The value of EG_{BL,y,GNA Maharashtra} is then cross checked from the invoices raised to state electricity board by the project participant. The invoices also matched with EG_{BL,y,GNA Maharashtra} calculated from export and import values which is in accordance with approved methodology and registered PDD.</p> <p>Monitored value of EG_{BL,y,GNA Maharashtra} = 47,702 MWh was confirmed based on JMR submitted by PP.</p> <p>EG_{BL,y,GNA Rajasthan} : Electricity supplied to the grid by the Project at Rajasthan (MWh).</p> <p>The parameter is a calculated using the difference of export (individual)-total export and import (individual) - total import value measured from the electricity meter. The source of data of the parameter is Measured by the meter and as noted in the JMR provided by the agency. Electricity export and import is measured via Bi-directional electricity meter installed on the high tension side of the transformer and the value of export and import forms the part of Meter reading statement issued by State electricity board.</p> <p>Assessment team checked the procedure and found that the same is as per the registered PDD. The calculation is done as follows: Calculated from Total Energy Export to the Grid, Energy Import from the Grid and the gross generation data at the all WTG controller end. Metering of wind power is done as under: The first metering is carried out at the controller of the machine with on board meter. The monitoring of all these wind turbines is done from a Central Monitoring Station (CMS) as a part of central monitoring system.From this CMS of following</p>

parameters are sourced

1. EG controller, ALL
2. EG controller, ALL WTG, feeder,
3. EG controller, individual

The second metering is carried out at feeder, wherein the Joint Meter Reading (JMR) is carried out. The State Board personnel take reading of power generation every month, along with personnel from the O&M & EPC.

This metered reading is the input parameter to calculate the line losses till 33kV feeder metering point. The JMR gives both the "export" and "import" of the electricity to/ from the grid. This metering point records the following parameters

4. EG Feeder, export
5. EG Feeder, import

Similarly JMR is carried out at all 14 feeders of this wind farm connected to the Mokla sub-station. The following parameters are calculated from JMR's of 14 feeders.

6. EG Feeder, ALL, export
7. EG Feeder, ALL, import

The third metering is carried out at sub-station (220kV side), Amarsagar GSS (Grid substation), wherein the Joint Meter Reading (JMR) is carried out. The State Board personnel take reading of power generation every month, along with personnel from the O&M & EPC. The JMR contains combined export and import reading for all the two lines. This JMR is used for calculation of the amount of electricity supplied to the grid against which the utility makes the payment to the project proponent. This metered reading is the input parameter to calculate the line losses from 33kV to 220kV sub-station metering point. This metering point records the following parameter

8. EG substation, export
9. EG substation, import

The net energy is calculated as per the following formulae:

$$EG_{BL} = EG_{\text{export, individual}} - L_{\text{export}} - (EG_{\text{import, individual}} - L_{\text{import}})$$

The meters are calibrated in line with Indian regulations for such installations. Accuracy of the meters is 0.2s. The accuracy class of active energy measurement is in accordance to Indian national Standards. The meter is of Elster make which is confirmed by the assessment team during the verification site visit.

The monitored value is 11,114 MWh and found correct inline with JMRs submitted.

EG_{BL,y,AMG} : Net electricity supplied to the grid by the Project (MWh).

The source of data for the parameter is Certificate for the net electricity exported to the grid by the WTGs associated with the project activity. The parameter is Calculated from Total Energy Export to the Grid, Energy Import from the Grid and the gross generation data at the all WTG controller end.

Metering of wind power is done as under:

The first metering is carried out at the controller of the machine with on board meter. The monitoring of all these wind turbines is done from a Central Monitoring Station (CMS) as a part of central monitoring system. From this CMS of following parameters are sourced

1. EG controller, ALL
2. EG controller, ALL WTG, feeder,
3. EG controller, individual

The second metering is carried out at feeder, wherein the Joint Meter Reading (JMR) is carried out. The State Board personnel take reading of power generation every month, along with personnel from the O&M & EPC.

This metered reading is the input parameter to calculate the line losses till 33kV feeder metering point. The JMR gives both the "export" and "import" of the electricity to/ from the grid. This metering point records the following

parameters

4. EG Feeder, export

5. EG Feeder, import

Similarly JMR is carried out at all 14 feeders of this wind farm connected to the Mokla sub-station. The following parameters are calculated from JMR's of 14 feeders.

6. EG Feeder, ALL, export

7. EG Feeder, ALL, import

The third metering is carried out at sub-station (220kV side), Amarsagar GSS (Grid substation), wherein the Joint Meter Reading (JMR) is carried out. The State Board personnel take reading of power generation every month, along with personnel from the O&M & EPC. The JMR contains combined export and import reading for all the two lines. This JMR is used for calculation of the amount of electricity supplied to the grid against which the utility makes the payment to the project proponent. This metered reading is the input parameter to calculate the line losses from 33kV to 220kV sub-station metering point. This metering point records the following parameter

8. EG substation, export

9. EG substation, import

The net energy is calculated as per the following formulae:

$$EG_{BL} = EG_{\text{export, individual}} - L_{\text{export}} - (EG_{\text{import, individual}} - L_{\text{import}})$$

The monitored value is 21,005 MWh and found inline with JMRs submitted. The values have been cross-checked with the invoices raised for sale of the electricity and found inline.

EG_{BL,y,KPL} : Net electricity supplied to the grid by the Project (MWh).

The source of data for the parameter is Certificate for the net electricity exported to the grid by the WTGs associated with the project activity. The parameter is Calculated from Total Energy Export to the Grid, Energy Import from the Grid and the gross generation data at the all WTG controller end.

The metering of wind power is done as under:

The first metering is carried out at the controller of the machine with on board meter. The monitoring of all these wind turbines is done from a Central Monitoring Station (CMS) as a part of central monitoring system. From this CMS of following parameters are sourced

1. EG controller, ALL

2. EG controller, ALL WTG, feeder,

3. EG controller, individual

The second metering is carried out at feeder, wherein the Joint Meter Reading (JMR) is carried out. The State Board personnel take reading of power generation every month, along with personnel from the O&M & EPC.

This metered reading is the input parameter to calculate the line losses till 33kV feeder metering point. The JMR gives both the "export" and "import" of the electricity to/ from the grid. This metering point records the following parameters

4. EG Feeder, export

5. EG Feeder, import

Similarly JMR is carried out at all 14 feeders of this wind farm connected to the Mokla sub-station. The following parameters are calculated from JMR's of 14 feeders.

6. EG Feeder, ALL, export

7. EG Feeder, ALL, import

The third metering is carried out at sub-station (220kV side), Amarsagar GSS (Grid substation), wherein the Joint Meter Reading (JMR) is carried out. The State Board personnel take reading of power generation every month, along with personnel from the O&M & EPC. The JMR contains combined export and import reading for all the two lines. This JMR is used for calculation of the amount of electricity supplied to the grid against which the utility makes the payment to the

	<p>project proponent. This metered reading is the input parameter to calculate the line losses from 33kV to 220kV sub-station metering point. This metering point records the following parameter</p> <p>8. EG_{substation, export}</p> <p>9. EG_{substation, import}</p> <p>The net energy is calculated as per the following formulae: $EG_{BL} = EG_{\text{export, individual}} - L_{\text{export}} - (EG_{\text{import, individual}} - L_{\text{import}})$</p> <p>The monitored value is 9981 MWh and found inline with JMRs submitted. The values have been cross-checked with the invoices raised for sale of the electricity and found inline.</p> <p>Net electricity supplied by the Project activity is 89,802 MWh which was checked based on certificate of share issued. The values were cross checked with invoices submitted by PP and accepted.</p>
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E.6.3. Implementation of sampling plan

Means of verification	The verification assessed whether the compliance of the sampling efforts and surveys with the registered sampling plan in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities" if PP had applied a sampling approach to determine data and parameters monitored.
Findings	No findings were raised.
Conclusion	PP did not apply sampling plan to determine data and parameters monitored during this monitoring period. The verification team has checked all the documents such as JMR (Monthly meter Readings) report, invoice etc. and hence sampling plan was not required. The verification team hereby confirms that are checked all the documents

E.7. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	The verification team determined whether the calibration of the measuring equipment that has an impact on the claimed emission reductions is conducted by the PP at a frequency specified in the registered monitoring plan					
Findings	CAR 03 was raised during the verification process and closed successfully. Please refer Appendix 4 of this report for the detail closure of the CAR.					
Conclusion	Assessment team verified the calibration details of the installed meters with copies of calibration certificates and found that meters are calibrated as per the frequency mentioned in the registered PDD for the monitoring period. Assessment team observed no delay in meter calibration throughout the current monitoring period.					
	Maharashtra:					
	Sr. No.	Meter Details	Meter Sr. No.	Date of Calibration	Calibration valid till	Calibration compliance No Delayed calibration observed for throughout monitoring period.
	1.	Make: Elster Type: Alpha (80 A) Accuracy: 0.2s	14831484 (Main meter)	23/06/2016	22/06/2017	
				20/06/2017	19/06/2018	
				16/06/2018	15/06/2019	
				13/06/2019	12/06/2020	
				09/06/2020	08/06/2021	
	2.	Make: Elster Type: Alpha (80 A) Accuracy: 0.2s	14796430 (Check meter)	23/06/2016	22/06/2017	
				20/06/2017	19/06/2018	
				16/06/2018	15/06/2019	
				13/06/2019	12/06/2020	
				09/06/2020	08/06/2021	
	3.	Make: Elster Type: Alpha (80 A) Accuracy: 0.2s	14796438 (main meter)	24/06/2016	23/06/2017	
				20/06/2017	19/06/2018	
17/06/2018				16/06/2019		
13/06/2019				12/06/2020		
09/06/2020				08/06/2021		
4.	Make: Elster Type: Alpha (80 A)	14796439 (check meter)	24/06/2016	23/06/2017		
			20/06/2017	19/06/2018		
			17/06/2018	16/06/2019		

		Accuracy: 0.2s		13/06/2019	12/06/2020	
				09/06/2020	08/06/2021	
	5.	Make: Elster Type: Alpha (80 A) Accuracy: 0.2s	14796456 (main meter)	24/06/2016	23/06/2017	
				20/06/2017	19/06/2018	
				17/06/2018	16/06/2019	
				13/06/2019	12/06/2020	
				09/06/2020	08/06/2021	
	6.	Make: Elster Type: Alpha (80 A) Accuracy: 0.2s	14796445 (check meter)	24/06/2016	23/06/2017	
				20/06/2017	19/06/2018	
				17/06/2018	16/06/2019	
				13/06/2019	12/06/2020	
				09/06/2020	08/06/2021	

Rajasthan:

Sr No.	Meter Details	Meter Sr. No.	Date of Calibration	Calibration valid till	Calibration compliance
1.	Make: Elster Type: Alpha (80 A) Accuracy: 0.2s	RJB69751 (main meter)	17/07/2016	16/07/2017	No Delayed calibration observed for throughout monitoring period.
			14/06/2017	13/07/2018	
			11/07/2018	10/07/2019	
			08/07/2019	07/07/2020	
			06/07/2020	05/07/2021	
2.	Make: Elster Type: Alpha (80 A) Accuracy: 0.2s	RJB69753 (check meter)	17/07/2016	16/07/2017	
			14/06/2017	13/07/2018	
			11/07/2018	10/07/2019	
			08/07/2019	07/07/2020	
			06/07/2020	05/07/2021	
3.	Make: Elster Type: Alpha (80 A) Accuracy: 0.2s	RJB72833 (main meter)	15/07/2017	14/07/2018	
			12/07/2018	11/07/2018	
			09/07/2019	08/07/2020	
			07/07/2020	06/07/2021	
			05/07/2020	04/07/2021	
4.	Make: Elster Type: Alpha (80 A) Accuracy: 0.2s	RJB72834 (check meter)	15/07/2017	14/07/2018	
			12/07/2018	11/07/2018	
			09/07/2019	08/07/2020	
			07/07/2020	06/07/2021	
			05/07/2020	04/07/2021	
			20/06/2017	19/06/2018	
			17/06/2018	16/06/2019	
			13/06/2019	12/06/2020	
			09/06/2020	08/06/2021	

Assessment team confirms that all the energy meters (both main and check meter) installed are of accuracy class of 0.2s and are calibrated as per the national standards followed by the electricity board. The correction factor is correctly applied for the monitoring period.

The calibration is conducted by on behalf of DISCOM by Maharashtra State Electricity distribution corporation- Testing Unit for the state of Maharashtra and C&I Calibration private limited on behalf of Rajasthan DISCOM for the state of Rajasthan. The calibration agency follows the guideline for National Accreditation Board for Testing and Calibration Laboratories (NABL= <http://www.nabl-india.org>), Govt of India. The same is checked during the onsite visit and found correct .

E.8. Assessment of data and calculation of emission reductions or net removals

E.8.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

Means of verification	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the registered CDM project activity. The verification team has checked whether calculations of baseline GHG emissions have been carried out in accordance with the formulae and methods described in the registered monitoring plan.
Findings	CAR 04 was raised during the verification process and closed successfully. Please

	refer Appendix 4 of this report for the detail closure of the CAR.
Conclusion	<p>Baseline emissions include only CO₂e emissions from electricity generation with fossil fuel-based power plants by renewable-wind energy. The Calculation of baseline emissions for the monitoring period is presented properly in the MR and the same is checked by the assessment team and found correct. Baseline emission is calculated below as per the formula given in registered PDD.</p> <p>As per the approved methodology AMS-I.D. ver. 17 - Grid connected renewable electricity generation, baseline emissions for the project activity are the product of electrical energy baseline $EG_{BL,y}$ expressed in MWh of electricity produced by the renewable energy generating unit multiplied by the grid emission factor.</p> <p>$BE_y = EG_{BL,y} \times EF_{CO_2,grid,y}$</p> <p>$EF_{CO_2, grid,y}$ = Baseline emission factor = 0.9487 tCO₂e/MWh</p> <p>$EG_{BL,y}$ = Net Electricity supplied to the grid (MWh) = 89,802 MWh</p> <p>Annual baseline emissions= 89,802 x 0.9487 = 85,131 tCO₂e (Round down)</p>

E.8.2. Calculation of project GHG emissions or actual net anthropogenic GHG removals by sinks

Means of verification	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the registered CDM project activity. The verification team has checked whether calculations of project GHG emissions have been carried out in accordance with the formulae and methods described in the registered monitoring plan.
Findings	No findings raised
Conclusion	The project emissions are regarded as zero according to the applied methodology and registered PDD.

E.8.3. Calculation of leakage GHG emissions

Means of verification	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the registered CDM project activity. The verification team has checked whether calculations of leakage GHG emissions have been carried out in accordance with the formulae and methods described in the registered monitoring plan.
Findings	No findings were raised.
Conclusion	The leakage emissions are regarded as zero according to the applied methodology and registered PDD.

E.8.4. Summary calculation of GHG emission reductions or net anthropogenic GHG removals by sinks

Means of verification	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the registered CDM project activity. The verification team has checked whether calculations of baseline GHG emissions, project GHG emissions and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the registered monitoring plan.
Findings	No findings were raised.
Conclusion	<p>Emission reductions in this monitoring period are:</p> <p>Total Baseline Emissions: 85,131 tCO₂e</p> <p>Total Project Emission: 0 tCO₂e</p> <p>Total Leakage: 0 tCO₂e</p> <p>Total Emission Reduction: Emission reduction calculation is done based on following formula,</p>

	$\text{Emission reduction (ER}_y\text{)} = \text{Baseline Emission (BE}_y\text{)} - \text{Project Emission (PE}_y\text{)} - \text{Leakage Emission (LE}_y\text{)}$ $= 85,131 \text{ tCO}_2\text{e} - 0 \text{ tCO}_2\text{e} - 0 \text{ tCO}_2\text{e}$ $= 85,131 \text{ tCO}_2\text{e}$
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E.8.5. Comparison of actual GHG emission reductions or net anthropogenic GHG removals by sinks with estimates in registered PDD

Means of verification	The verification team has determined the emission reductions achieved during this monitoring period with the estimated value and reason for increase if any.
Findings	No findings were raised.
Conclusion	<p>The actual emission reduction achieved by the activity is 85,131 tCO₂e. The estimated emission reductions in the in the registered PDD for 365 days is 24,288 tCO₂e. The current monitoring period contains 1,460 days. The estimated value for the present monitoring period is 97,152 tCO₂e. This value is calculated based on pro-rata basis from the estimated value in the registered PDD. The calculation is checked by the assessment team in the actual emission reduction sheet and found correct.</p> <p>The actual emission reduction is 12.37% lower than the estimated value. The lower generation during the current verification period is due to the lower performance of the wind machines during the current monitoring period. Hence, it is acceptable to DOE.</p>

E.8.6. Remarks on difference from estimated value in registered PDD

Means of verification	The verification team has determined the emission reductions achieved during this monitoring period with the estimated value and reason for increase if any.
Findings	No findings were raised.
Conclusion	The actual Emission Reduction (ER) value achieved in the monitoring period is 12.37% lower than the estimated emission reductions during the current monitoring period, which is due to the lower performance of the wind machines during the current monitoring period. Hence accepted by verification team.

E.8.7. Actual GHG emission reductions or net anthropogenic GHG removals by sinks during the first commitment period and the period from 1 January 2013 onwards

Means of verification	The verification team has determined the CER achieved during first commitment period and second commitment period
Findings	No findings were raised.
Conclusion	<p>1.GHG emission reductions or net GHG removals by sinks reported up to 31 December 2012: 0 tCO₂e</p> <p>2.GHG emission reductions or net GHG removals by sinks reported from 1 January 2013 to 31 December 2020: 85,131 tCO₂e</p> <p>3.GHG emission reductions or net GHG removals by sinks reported from 1 January 2020 onwards: 0 tCO₂e</p>

E.9. Assessment of reported sustainable development co-benefits

Means of verification	Not applicable for the present monitoring period
Findings	Not applicable for the present monitoring period
Conclusion	Not applicable for the present monitoring period

E.10. Global stakeholder consultation

Means of verification	Not applicable for the present monitoring period
Findings	Not applicable for the present monitoring period
Conclusion	Not applicable for the present monitoring period

SECTION F. Internal quality control

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As a final step for Verification assessment, the final documentation, including the Verification Report, has to undergo an internal quality control by the Technical Reviewer(s) to be approved.

Details of the Technical Reviewer(s) are provided within the Verification Report in Section B.2. and Appendix 2 for further references of knowledge and capability to conduct the quality checking.

After the Technical Review process, the final documentation may undergo a final quality checking process called Administrative Review, done by the Applus+ Certification's Project Manager and/or Technical Support. For final approval, the final set of documents are prepared by the DOE's Technical Manager or its deputy and signed by the authorized signatory of the DOE.

In case any of the persons performing this final internal quality, control approval process has acted as a part of the Assessment Team or Technical Review team, the approval can only be given by DOE's authorized personnel who are not part of those teams.

If the final set of documents has been satisfactorily approved, a request of issuance is submitted to the UNFCCC CDM EB along with the relevant documents.

SECTION G. Verification opinion

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Applus+ Certification has been engaged by Gangadhar Narsingdas Agrawal (HUF) to perform 3rd periodical verification of the "14.7 MW Bundled Wind Power Project in the state of Maharashtra and Rajasthan, India" (UN reference number: 7370).

The management of Gangadhar Narsingdas Agrawal (HUF) is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project's Monitoring Plan in the registered PDD Version 1.7 dated 07/05/2015 and the applied methodology AMS-I.D. ver. 17 - Grid connected renewable electricity generation.

Our verification approach was based on the requirements as defined under the Kyoto Protocol, Marrakesh accord, as well as those defined by the CDM Executive Board. Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. The verification can confirm that:

- the project is operated as planned and described in the project design document approved by the EB;
- the monitoring plan is as per the applied methodology;
- the monitoring in Monitoring Report is as per the PDD and the monitoring plan approved by the EB;
- the development and maintenance of records and reporting procedures are in accordance with the registered monitoring plan;
- the installed equipment being essential for generating emission reduction runs reliably, however, delay in calibration observed which is addressed in line with para 366 (a) of CDM validation and verification standard for project activities, Version 03.0;
- the monitoring system is in place and generates GHG emission reductions data;
- the GHG emission reductions are calculated without material misstatements.

In our opinion, the GHG emission reductions for "14.7 MW Bundled Wind Power Project in the state of Maharashtra and Rajasthan, India" for the monitoring period 02/01/2017 to 31/12/2020; as reported in Monitoring Report, prepared on the basis of the project's Monitoring Plan are fairly stated.

Based on the information we have seen and evaluated, we confirm the following statement:

Reporting period: From 02/01/2017 to 31/12/2020;

Verified emissions in the above reporting period:

Leakage emissions	0 tCO ₂ equivalents
Project emissions	0 tCO ₂ equivalents
Baseline emissions	85,131 tCO ₂ equivalents

Emission reductions

85,131 tCO₂ equivalents

SECTION H. Certification statement

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Same as above

Appendix 1. Abbreviations

Abbreviations	Full texts
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction(s)
CEA	Central Electricity Authority
CL	Clarification Request
CM	Combined Margin
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EF	Emission Factor
ER	Emission Reductions Sheet
FAR	Forward Action Request
JMR	Joint Meter Reading
GHG	Greenhouse Gas(es)
MSEDCL	Maharashtra State Electricity Distribution Company Limited
GWP	Global Warming Potential
PDD	Project Design Document
PP	Project Participant
PPA	Power Purchase Agreement
WTG	Wind Turbine Generator

Appendix 2. Competence of team members and technical reviewers

1. **Dr. Atul Takarkhede** is Ph.D. (Environmental Sciences) from Institute of Science, RTM Nagpur University, Nagpur, and he has already published different technical papers related to environmental sciences. He counts with more than 11 years of experience in field of Environmental Auditing, consulting and accreditation. He is an expert in ISO 9001-14001, CO₂/GHG Reporting, Carbon Foot Print, Energy, Water and Waste Management reporting for organizations' environmental performance. His professional portfolio is mainly related with carrying out EIA, conducting QA/QC of EIA Reports; conducting environmental/water audits; NABET requirements appliance, functional area expert in Water Pollution & Solid & Hazardous Waste management among others. Furthermore, he counts with solid experience on CDM-VCS-GS consultancy and auditing. Currently he is associated with True Quality Certifications Private Limited and empanelled with Applus+ Certification to carry out GHG audits in the aforementioned schemes.
2. **Mr. Simon Shen** (Master's Degree in Thermal Energy Engineering, Bachelor's Degree in Environmental Engineering) is an Auditor appointed by Applus+ LGAI for the GHG project assessment, auditing and technical review. He has more than 6 years of work experience in CDM/GS4GG/VCS project assessment and review with Applus+, apart from the years of experience working as GHG Auditor and ISO 9001/14001 in TUV SUD for 3.5 years before he joined Applus+. Mr. Simon Shen has extensive experience also as former Applus+ Shanghai CDM Technical Manager.

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1.	NA	Commissioning Certificates of the Wind Power Project.	-	Project participant
2.	NA	Contract of the project participant with the DOE	-	Project participant
3.	NA	CDM validation and verification standard for project activities, Version 03.0	Version 03.0	UNFCCC
4.	NA	Joint Meter Reading (JMR) for the complete monitoring period issued by State Utility		Project participant
5.	NA	Invoices for the complete monitoring period raised by PP towards State Utility		Project participant
6.	NA	MR version 01 MR version 02	Dated 30/07/2021 Dated 17/11/2021	Project participant
7.	NA	ER sheet version 01	Dated 17/11/2021	Project Participant
8.	NA	Registered PDD Version 01.7	Dated 07/05/2015	UNFCCC website
9.	NA	Registered documents of the project activity https://cdm.unfccc.int/Projects/DB/KBS_Cer1348206213.9/view	-	UNFCCC website
10.	NA	AMS-I.D. ver. 17 - Grid connected renewable electricity generation	AMS-I.D. ver. 17	UNFCCC
11.	NA	Calibration certificates of all meter associated with current monitoring period	-	PP
12.	NA	Copy of Power Purchase Agreement (PPA) between State Utility and project proponent		PP
13.	NA	Training records of the O&M personnel	-	PP

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

Table 1. Remaining FAR from validation and/or previous verifications

FAR ID	xx	Section no.	E.2	Date: DD/MM/YYYY
Description of FAR				
No FAR is remaining from validation or previous verifications.				
Project participant response				Date: DD/MM/YYYY
NA				
Documentation provided by project participant				
NA				
DOE assessment				Date: DD/MM/YYYY
NA				

Table 2. CL from this verification

CL ID	xx	Section no.		Date: DD/MM/YYYY
Description of CL				
NA				
Project participant response				Date: DD/MM/YYYY
NA				
Documentation provided by project participant				
NA				
DOE assessment				DOE assessment
NA				

Table 3. CAR from this verification

CAR ID	01	Section no.	E.1	Date: 18/10/2021
Description of CAR				
Following inconsistencies observed during review of the MR:				
<ol style="list-style-type: none"> MR template version 8.0 have been now updated to version 9. Corrective action sought for updating MR in latest MR template. Monitoring period is not clear about inclusion of first & last dates. Corrective action sought. Name of some WEGs not consistent with that given in PDD. Corrective action sought. Following documents are requested for further analysis: <ul style="list-style-type: none"> Commissioning certificates of WTGs. PPA 				
Project participant response				Date: 19/10/2021
<ul style="list-style-type: none"> The MR is now been updated in latest template i.e versión 09. Monitoring period is now updated in page 1 of the MR about inclusion of first & last dates. The name of the WEGs is now made consistent throughout the MR. Commissioning Certificates and PPA are now submitted to the assessment team. 				
Documentation provided by project participant				
<ol style="list-style-type: none"> Updated MR Commissioning certificates of WTGs. PPA 				
DOE assessment				Date: 30/10/2021
<ol style="list-style-type: none"> PP has rectified monitoring report as per the guidelines to complete CDM MR template v.09. thus accepted. Monitoring period is now updated in page 1 of the MR about inclusion of first & last dates Name of the WTGs are now consistent with that of the PDD. PP has submitted copies of commissioning certificates & PPA of the project activity. Found consistent thus CAR is closed. 				

CAR ID	02	Section no.	E.6.2	Date: 18/10/2021
Description of CAR				

PP requested to submit all JMR & other supporting documents for all the monitoring parameters and invoices for crosscheck of electricity export/import for the project activity.	
Project participant response	Date: 19/10/2021
All JMR & invoices are now submitted to the DoE assessment team	
Documentation provided by project participant	
1. JMRs 2. Invoices	
DOE assessment	Date: 30/10/2021
Copies of Joint Meter Readings (JMR) and invoices raised by PP submitted were checked against values provided for net electricity export and emission reductions in the MR. These values were also crosschecked against emission reduction excel sheet (ER sheet) submitted. Verification team has checked and verified that the values mentioned in revised MR, ER sheet and the support documents are consistent. CAR is closed.	

CAR ID	03	Section no.	E.7	Date: 18/10/2021
Description of CAR				
PP requested to submit calibration details/certificates for cross-checking by the assessment team.				
Project participant response				Date: 19/10/2021
Calibration certificates are now submitted to the DOE assessment team.				
Documentation provided by project participant				
1. Calibration certificates				
DOE assessment				Date: 30/10/2021
During review, assessment team found that no delay in calibration is observed throughout the monitoring period. Same is also verified from copies of calibration certificates. Thus, accepted and CAR is closed.				

CAR ID	04	Section no.	E.7	Date: 18/10/2021
Description of CAR				
PP requested to submit ER calculation sheet for further assessment of the emission reduction for this monitoring period.				
Project participant response				Date: 19/10/2021
1. ER calculation sheet now submitted to the DOE assessment team.				
Documentation provided by project participant				
1. ER sheet				
DOE assessment				Date: 30/10/2021
ER sheet was checked and confirmed that values considered are in line with supporting documents. Updated MR and ER sheet were checked and confirmed to be in line. CAR is closed.				

Table 4. FAR from this verification

FAR ID	xx	Section No.		Date: DD/MM/YYYY
Description of FAR				
NA				
Project participant response				Date: DD/MM/YYYY
Documentation provided by project participant				
DOE assessment				Date: DD/MM/YYYY

Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
04.0	6 April 2021	Revision to: <ul style="list-style-type: none"> • Reflect the “Clarification: Regulatory requirements under temporary measures for post-2020 cases” (CDM-EB109-A01-CLAR).
03.0	31 May 2019	Revision to: <ul style="list-style-type: none"> • Ensure consistency with version 02.0 of the “CDM validation and verification standard for project activities” (CDM-EB93-A05-STAN); • Make structural and editorial improvements.
02.1	11 January 2018	Editorial revision to correct the numbering of appendices in the instructions.
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: Issuance Keywords: project activities, verifying and certifying		