5.5 MW BUNDLED WIND POWER PROJECT BY WMI CRANES LTD

Document Prepared By

LGAI Technological Center S.A. (Applus+ Certification)

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Summary:

Verification purpose: WMI Power Private Limited has commissioned the LGAI Technological Center, S.A. (Applus+ Certification) to carry out the verification of the project "5.5 MW Bundled Wind Power Project by WMI Cranes Ltd" (VCS ID 662). The bundled Project activity Consists 7 WTGs spread across these three states of India i.e. Maharashtra, Gujarat and Tamil Nadu. The bundled project activity includes 2 WTGs of 1.25 MW each in Maharashtra, 3 WTGs of 0.6 MW each in Gujarat and 2 WTGs of 0.6 MW each in Tamil Nadu.

The main purpose of this project activity is to generate clean form of electricity through Wind Power resource. The electricity generated from the project activity is exported to Southern regional grid (Tamil Nadu) and Western regional grid (Gujarat & Maharashtra) now unified as Indian grid.

Start date of the project activity is the 30-September-2006. This is the date on which the first WTG was commissioned and activity started emission reductions. The project has also been registered as a CDM project activity with Ref. No.2682[1] on dated 15-June-2010. Project Participant has also webhosted monitoring report for verification under CDM for the monitoring period form from 01-January-2012 to 31-May-2013, however, a letter on dated 12-September-2022 has been submitted by PP to VVB for withdrawing of Monitoring Report and also submitted an undertaking dated 12-September-2022 for avoiding double counting confirming that no GHG reduction will be claimed in any other GHG mechanism for current monitoring period. Project activity undergoes continued operation and no major breakdown had taken place except routine maintenance/shutdown.

The current monitoring period covered the period from 01-January-2012 to 20-October-2017(inclusive both days), under the crediting period 21-October-2007 to 20-October-2017. During the current verification period, the project activity has supplied 27,210 MWh of electricity, and thus contributing to the GHG reductions 22,312 tCO_2e.

A risk-based approach has been followed to perform this verification activity. In the course of verification, 05 Corrective Action request (CAR) and 00 Clarification Requests (CLs) were raised and successfully closed. No FAR was raised during this verification. The review of the Monitoring report and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and PP have provided LGAI Technological Center S.A. (Applus+ Certification) with sufficient evidence to verify the fulfilment of the stated criteria of VCS.

LGAI Technological Center S.A. (Applus+ Certification) (Hereafter referred as Applus+ Certification) has been appointed by "WMI Power Private Limited" to perform the 2nd periodic verification of the "5.5 MW Bundled Wind Power Project by WMI Cranes Ltd" under VCS standard version 4.3/10/ and guideline version 4.2/10/. The objective of this verification activity is to have an independent third party for the assessment of the project design, monitoring report/6/ to ensure a thorough assessment of the proposed project activity against the applicable CDM and VCS requirements. In particular;

- the project's baseline is assessed against "AMS-I.D. - Version 13.0"/18/
- the project's monitoring plan is assessed against "AMS-I.D. - Version 13.0"/18/
- the projects compliance with, the requirements of Article 12 of the Kyoto Protocol, the CDM Modalities and Procedures as agreed in the Marrakech Accords under decision3/CMP.1, the annexes to this decision, subsequent decisions and guidance made by COP/MOP & CDM Executive Board and other relevant rules, including the Host Country legislation and sustainability criteria along with VCS guideline version 4.2 /10/ and standard version 4.3 /10/
- CDM validation and verification standard for project activities, Version 03 /16/.

[1] https://cdm.unfccc.int/Projects/DB/SGS-UKL1244624606.95/view

- VCS standard v 4.3 /10/
- VCS program guideline v 4.2 /10/

Verification is a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of verified emission reductions (VCUs).

The scope of the verification is the independent and objective review of the Monitoring report (MR). The MR is reviewed against the relevant criteria (see above) and decisions by the CDM Executive Board and VCS executive board, including the approved baseline and monitoring methodology. The verification was based on the guidance given in the CDM validation and verification standard for project activities, Version 03.0/16/, review against registered CDM PDD & VCS PD/4/ and Final Validation report/4/ and VCS program guideline v 4.2 /10/ and standard version v 4.3 /10/.

The assessment team has employed a risk-based approach to assess the completeness and accuracy of the claims and conservativeness of the assumptions in the MR. The main focus of the assessment team is to identify the significant risks for the project implementation and the generation of VCUs. The verification is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the monitoring report combined.

The only purpose of the verification is its usage during the issuance process as part of the VCS project cycle. Therefore, LGAI Technological Center S.A. (Applus+ Certification) can't be held liable by any party for decisions made or not made based on the verification opinion, which will go beyond that purpose.

The verification has been planned and organized to achieve a Reasonable Level of assurance as per the requirement of VCS. No sampling procedure applied for document verifications. The entire documents checked verification conducted to arrive at positive verification conclusions.

The verification has been planned and organized to achieve a Reasonable Level of assurance as per the requirement of VCS. No sampling procedure applied for remote audit or document verifications. The entire documents checked/plant verification conducted to arrive at positive verification conclusions.

CONTENTS

1 INTRODUCTION

1.1 Objective

LGAI Technological Center S.A. (Applus+ Certification) (Hereafter referred as Applus+ Certification) has been appointed by "WMI Power Private Limited" to perform the 2nd periodic verification of the "5.5 MW Bundled Wind Power Project by WMI Cranes Ltd" under VCS standard version 4.3/10/ and guideline version 4.2/10/. The objective of this verification activity is to have an independent third party for the assessment of the project design, monitoring report/6/ to ensure a thorough assessment of the proposed project activity against the applicable CDM and VCS requirements. In particular;

- the project's baseline is assessed against "AMS-I.D. - Version 13.0"/18/
- the project's monitoring plan is assessed against "AMS-I.D. - Version 13.0"/18/
- the projects compliance with, the requirements of Article 12 of the Kyoto Protocol, the CDM Modalities and Procedures as agreed in the Marrakech Accords under decision 3/CMP.1, the annexes to this decision, subsequent decisions and guidance made by COP/MOP & CDM Executive Board and other relevant rules, including the Host Country legislation and sustainability criteria along with VCS guideline 4.2 and standard version 4.3 /10/
- CDM validation and verification standard for project activities, Version 03.0 /16/
- VCS standard v4.3 /10/
- VCS program guideline v4.2 /10/

Verification is a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of verified emission reductions (VCUs).

1.2 Scope and Criteria

The scope is defined as an independent and objective review of the Monitoring report (MR) for the monitoring period: 01-January -2012 to 20-October-2017 (First and last date included) prepared as per the registered CDM and PD and registered approved methodology AMS-I.D. - Version 13.0/18/. The MR is reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords and the relevant decisions by the CDM Executive Board and VCS standard 4.3 /10/ and guideline version 4.2 /10/, including the approved baseline and monitoring methodology AMS-I.D. - Version 13.0/18/. The verification was based on the requirements in the CDM validation and verification standard/16/ for project activities, Version 03 /10/ and VCS program guideline v 4.2 /10/ and standard version 4.3 /10/

The verification is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the Monitoring report. 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/7/ calculation spread sheet. It follows the paper trail back to the raw data such as meter reading records and Invoices /11/. There are no material errors, overestimation of ER, omission or misstatement. Verification team conducted Remote audit due to pandemic situation and equipment's, technical details and metering/monitoring arrangement verified through photos/certificate shared by PP. The verification team has reviewed all the documents like commissioning certificates/1/, technical specification, O&M practices, Credit Reports (Maharashtra)/ Certificate for share of electricity (Gujarat) / JMRs /11/, Invoices /11/, training records, grievance registers, photos etc.

1.3 Level of Assurance

Applus+ Certification has planned and performed the verification by obtaining evidence and other information and explanations that assessment team considers necessary to give reasonable assurance that reported estimated GHG emission reductions are fairly stated. All documentary evidences were checked, a remote audit was conducted due to pandemic situation and technical details and metering/monitoring arrangement verified through photos/certificate shared by PP to arrive at a verification conclusion by the assessment team.

In our opinion, the estimated GHG emissions reductions were calculated correctly on the basis of the approved baseline and monitoring methodology "AMS-I.D. - Version 13.0"/18/ /and the VCS standard.

1.4 Summary Description of the Project

The total installed capacity of the bundled project activity is 5.5 MW located in three different states Maharashtra, Gujarat and Tamil Nadu. The bundled Project activity Consists 7 WTGs spread across these three states of India. The bundled project activity includes 2 WTGs of 1.25 MW each in Maharashtra, 3 WTGs of 0.6 MW each in Gujarat and 2 WTGs of 0.6 MW each in Tamil Nadu. The WMI Power Private Limited is the project proponent of the project activity. The project activity was commissioned on dated 30-September-2006.

The electricity generated by the project activity is exported to the Unified Indian grid. The project activity therefore displaced an equivalent amount of electricity which would generate by fossil fuel dominant electricity grid. The (WMI Power Private Limited) PP has

entered into long term power purchase agreement with the Maharashtra State Electricity Distribution Co. Ltd., Tamil Nadu Electricity Board and Gujarat Urja Vikas Nigam Limited (GUVNL). Since, Wind Power is Greenhouse Gas (GHG) emissions free, the power generated prevents the anthropogenic gas emissions generated by fossil fuel based thermal power stations comprising coal, diesel, furnace oil and gas.

During the Current Monitoring Period from 01-January-2012 to 20-October-2017(First and last date included) the project activity has supplied 27,231 MWh of electricity, and thus contributing to the GHG reductions of 22,312 tCO_2e.

2 VERIFICATION PROCESS

2.1 Method and Criteria

Verification Process: The project assessment is based on the "CDM validation and verification standard for project activities, Version 03 /16/ and "VCS standard v4.3/10/ and program guideline version 4.2/10/" and is conducted using standard auditing techniques to assess the correctness of the information provided by the project participants. Before the assessment begins, members of the team covering the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the VCS project activity are appointed.

Once the project is received by the assessment team, the members of the assessment team carried out: -

1. A desk review of the Monitoring report against the registered CDM PDD & VCS PD and revised CDM monitoring report VCS previous monitoring Verification report/4/;
2. Follow-up interviews with project participant;
3. The resolution of outstanding issues and the issuance of the final verification report/4/ and opinion.

The prepared verification report/4/ and other supporting documents then undergo an internal quality control at the HQ (Accredited office) before being submitted to the VCS executive board.

In order to ensure transparency, assumptions must be clear and stated explicitly and background material must also be referenced. Applus+ Certification has developed a specific checklist customized for the project. The checklist demonstrates, in a transparent manner, the project criteria (requirements), discussion on each criterion by the assessment team, and the results from validating the identified criteria.

Appointment of the assessment team

According to the sectoral scope / technical area and experience in the sectoral or natio nal business environment, Applus+Certificationhas composed a project assessment te am in accordance with the appointment rules in the internal Quality Management Syste m of Applus+ Certification.

The composition of audit team shall be approved by the Applus+Certificationensuring th at 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 s hall be covered by the assessment team.

Name	Role	SS Coverage	TA Coverage	Financial aspect	Host country experience
Jitendra Mohan Singh	LA/TE	YES	YES	NA	YES
Mr. Denny Xue	TR	YES	YES	NA	NA

The detail regarding the assessment team is provided below in this report as Appendix 3

Document review

The Monitoring report version 1 submitted by the PP was reviewed against the approved methodology, registered CDM and VCS PD, final Validation report/4/ and other relevant criteria to verify the correctness, credibility, and interpretation of the presented information. Furthermore, a cross-check between information provided and information from other sources has been done. A complete list of all documents and evidence material reviewed is included in Appendix a of this report.

Follow-up interviews

A Remote audit is conducted by Applus+ Certification. Audit team performed interviews, via video/telephone conferences with project stakeholders to confirm selected information and to resolve issues identified in the document review. The detail is provided in this report.

Resolution of Clarification and Corrective Action Request

The objective of this phase of the Verification was to resolve the requests for corrective actions and clarification and any other outstanding issues which need to be clarified for Applus+ Certification positive conclusion on the Monitoring report. The Corrective Action

Requests and Clarification Requests raised by Applus+ Certification were resolved during communications between the Client and Applus+ Certification to guarantee the transparency of the verification process, the concerns raised and responses given are summarized below in the Appendix 2.

The final MR (Version 03)/6/ submitted by PP serves as the basis for the final assessment presented. Additional changes to the project during the verification process are not considered to be significant with respect to the main CDM/VCS objectives. The two CDM/VCS main objectives are the reduction of anthropogenic GHG emissions and the contribution of sustainable development to the host country.

Internal quality control

As final step of a verification of the final documentation including the verification report and the checklist have to undergo an internal quality control by the technical review committee, i.e., each report has to be finally approved either by the head of the technical review committee or the deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one to avoid any conflict of Interest.

After confirmation of the PP the positive verification opinion and relevant documents are submitted to the VCS board through the VCS web-platform.

2.2 Document Review

The documents listed in Appendix 1 of this report have been used to review, cross check and compare data provided by project participants.

2.3 Interviews

The key personnel interviewed are summarized in the table below:

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Sachdeva	Mr. Bhavik	Project Manager	07-January-2022 (Remote Audit via Zoho meeting)	Project Implementation, JMR and Share Certificate& invoicing procedure, calibration, grievance mechanism Management practices, data storage, Mechanical and electrical maintenance, O&M practices, JMR and	Jitendra Mohan Singh (Team Leader)

					Share Certificate etc.	
2.	Patel	Vijay	Local stakeholder		Local Area development, impact of livelihood	
3.	Desai	Bhavesh	Local Stakeholder		Local Area development, impact of livelihood	
4.	Yadav	Mrs. Neetu	EKI Energy Services Limited, Consultant		MR and ER preparation, Data collection, data storage, QA/QC GHG calculations, MR and ER preparation, Data collection, data storage, QA/QC Management practices	

2.4 Site Inspections

The verification team has not performed the onsite visit for the verification of this project activity. The exemption for conducting an onsite visit for this project activity is allowed by VERRA, as the VCS has not a specific requirement to preform the site visits, however, an adequate level of assurance has been achieved during the verification processes.

Moreover, a remote audit was conducted for the project activity on 07-January-2022. Remote audit was conducted due to ongoing COVID-19 pandemic situation in the entire country of India. Considering the prevalent conditions of COVID-19 pandemic, VVB decided to skip the onsite visit to avoid any potential health risks. Moreover, The VCS Program does not explicitly mandate remote audits as part of the validation and verification process, only that VVBs must achieve a reasonable level of assurance on all validations and verifications (as per Section 4.1.2 of the VCS Standard, version 4.3.

The VVB has taken alternative measures for ensuring a reasonable level of assurance while conducting the Verification process, using standard auditing techniques and advanced communication solutions in order to be able to interview the relevant stakeholders and to cross-check the relevant documentation, implementation of the project activity and its design, monitoring performance, equipment in the project activity, etc. (all the evidences and processes of cross-check are detailed within this Verification Report). The interviewed personnel and the scope and mean of interview are listed in above Section 2.3 of this Verification Report.

Technical details & metering/monitoring arrangement verified through onsite photographs/19/ name plates and calibration certificates shared by PP. All the documents were cross checked to ensure conservative estimation of emission reduction.

During the remote audit, the PP representatives were questioned about the implementation of the all WTGs under bundled project activity. Several topics like the verification of commissioning date of meters, the generation, recording, and monitoring of the data and the error accountability were discussed. To cross check the information provided by PP, various documents like technical specifications, commissioning certificates, PPA, JMR sheets, share certificates, invoice, calibration certificates, etc. were also verified.

During the remote audit, the PP representatives/ O & M personal were questioned about the implementation of the project activity. Several topics like the verification of commissioning date of meters, the generation, recording, and monitoring of the data and the error accountability were discussed. Various documents like JMR/Share certificate & monthly Invoices/11/ for the complete monitoring period, on-site Photographs includes Wind turbine Generator name plates/19/, meter specifications, key technical specifications/3/ of the major equipment like panel etc. provided to assessment team were verified through Zoho meeting (video conferencing) to establish the current status and the implementation of the Project Activity

2.5 Resolution of Findings

The objective of this phase of the Verification was to resolve the requests for corrective actions and clarification and any other outstanding issues from validation which need to be clarified for Applus+ Certification's positive conclusion on the Monitoring report. The Corrective Action Requests and Clarification Requests raised by Applus+ Certification were resolved during communications between the Client and Applus+ Certification to guarantee the transparency of the verification process, the concerns raised and responses given are summarized below in the Appendix 2.

The final MR (Version 03) /6/ submitted by PP serves as the basis for the final assessment presented. Additional changes to the project during the verification process are not considered to be significant with respect to the main CDM/VCS objectives. The two CDM/VCS main objectives are the reduction of anthropogenic GHG emissions and the contribution of sustainable development to the host country.

Areas of validation and verification findings	No. of CL	No. of CAR	No. of FAR
Project design document and Monitoring report	00	01	00
Description of project activity	00	01	00
Application of selected baseline and monitoring methodology and selected standardized baseline	00	00	00
Applicability of methodology and standardized baseline	00	00	00
Deviation from methodology	00	00	00

Areas of validation and verification findings	No. of CL	No. of CAR	No. of FAR
Clarification on applicability of methodology, tool and/or standardized baseline	00	00	00
Project boundary	00	00	00
Establishment and description of baseline scenario	00	00	00
Demonstration of additionality	00	00	00
Emission reductions	00	01	00
Calibration details	00	01	00
Monitoring plan	00	00	00
No Net harm assessment	00	00	00
Local stakeholder consultation	00	01	00
Others: - SDGs	00	00	00
Total	**00**	**05**	**00**

The list of findings and the resolution is presented in Appendix 2 of this report.

2.5.1 Forward Action Requests

This is 2nd periodic verification of the project activity. During the 1st verification under VCS, One FAR was raised by verifying VVB for revision of monitoring plan (RMP) during 1st CDM verification. Accordingly, project participant has applied revision of monitoring plan during the 1st verification under CDM (15-June-2010 to 31-December-2011) which was approved by CDM EB on 27-June-2012. Same is verified from previous verification report/04/. No FAR has been raised during current verification.

2.6 Eligibility for Validation Activities

This section is not applicable for present verification. as Applus+ Certification holds the accreditation for Validation of projects under this Sectoral Scope.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project is not registered any other GHG programs except CDM with Ref. No. 2682[2]. Project participant has obtained issuance of CERs for the monitoring period 15-June-2010 to 31-Decememebr-2011. Further, the same is confirmed by UNFCCC web site.

[2] CDM: 5.5 MW Bundled Wind Power Project by WMI Cranes Ltd. (unfccc.int)

The project has also been registered as a CDM project activity with Ref. No.2682 on dated 15-June-2010. Project Participant has webhosted monitoring report for verification under CDM for the monitoring period form from 01-January-2012 to 31-May-2013, however, a letter of undertaking on dated 12-September-2022 has been submitted by PP to VVB for withdrawal of MR from CDM verification and also submitted an undertaking dated 12-September-2022 for avoiding double counting confirming that no GHG reduction will be claimed in any other GHG mechanism for current monitoring period.

Verification team verified that PP doesn't claim GHG credit for the concerned monitoring period from CDM and any other GHG program. Further, the project activity is not availing any REC benefits and the same can be confirmed from publicly available link of REC generators.

Web-link: https://www.recregistryindia.nic.in/index.php/publics/registered_regens

Further, the project proponent has provided Declaration /12/ undertaking for not availing other forms of environmental credit including REC for the same crediting period under consideration.

3.2 Methodology Deviations

The project activity has applied correct methodology which are as per the VCS PD. Verification team has checked the verification records of previous monitoring periods and confirmed that there is no request for methodology deviation applied neither during this monitoring period nor during previous monitoring periods.

3.3 Project Description Deviations

During previous verification, One FAR was raised by verifying VVB for revision of monitoring plan (RMP) under 1st CDM verification and the same has been taken during 1st CDM verification (15-June-2010 to 31-December-2011) which has been approved by CDM EB on 27-June-2012. Apart from that, PP has taken few deviations for current monitoring plan as given below.

Project participants has sought project description deviation in line with the revised monitoring plan under CDM which was approved on 27-June-2012.

The accuracy class of meter varies from 0.2s to 0.5s as per the availability of meters with the SEB in state of Maharashtra, Gujarat and Tamil Nadu required for the project.

During current monitoring period deviation applied in accuracy class for Tamil Nadu and Gujarat site meter because as per the VCS and CDM PDD i.e., of 0.2s accuracy. Now it has been changes to 0.5s accuracy.

Project Participant has sought the following project description deviation during the current monitoring period:

Deviation-1: The parameter $EG_{,my}$, (summation of total Electricity Generated (MWh) from all the wind turbines connected to a particular feeder as measured at the individual controllers (including project activity WTGs) and EG_{ny} has been removed from section 4.2 as this parameter data is no longer available with the PP. Further, it has no impact on the Emission reduction calculation as values net electricity exported to grid has been sourced directly from the credit notes issued by Maharashtra State Electricity Distribution company Ltd. (MSEDCL). Thus, acceptable to VVB.

Deviation-2:

Maharashtra Site – Project Participant is sought this project description deviation in monitoring approach for the Maharashtra site. Since PP is getting direct value of net electricity supplied to grid by project activity WTGs, the below parameters are removed from monitoring plan.

1. $EG_{,my}$, (summation of total Electricity Generated (MWh) from all the wind turbines connected to a particular feeder as measured at the individual controllers (including project activity WTGs)
2. EG_{ny} (The summation of total Electricity Generated (MWh) at the controller from all the wind turbines of the project proponent at a particular site)
3. $EG_{JMR,export}$ (Total export as measured at the substation feeder for all wind turbines connected to the same feeder)
4. $EG_{JMR,import}$ (Total import as measured at the substation feeder for all wind turbines connected to the same feeder)

The above parameters were used by state electricity board for apportioning formula and PP do not have any control on this apportioning procedure. Also, PP may not be available all parameters used for apportioning formula; hence these parameters have been removed from section 4.2. As per methodology requirement, the net electricity supplied to grid is determined as difference of export and import of project activity WTGs and this ese parameters are kept as this parameter data is no longer available with the PP also it has no impact on the Emission reduction calculation. VVB observed that above deviation causes no change in design, scale and additionality of the project activity. Thus, accepted to VVB.

Gujarat Site: For this project activity, monitoring plan has been revised and approved by UNFCCC on dated 27/06/2012. Hence. for Gujarat sub-bundle the parameter "$EG_{(Net\ export\ by\ project\ activity)}$" has been considered. Please refer below link

https://cdm.unfccc.int/UserManagement/FileStorage/X73BF46HRIN29MKUJSDEC1Z8YOGLAT

Also, for verification of Pre CDM VCU for period 21-October-2007 to 14-June-2010, deviation has been taken for Gujarat sub-bundle parameter.

Please refer "footnote 7 and 8" of pre CDM VCU MR for more details

Monitoring parameters of Maharashtra, Gujrat and Tamilnadu has been mentioned separately in section 4.3 of the MR for better clarity

Deviation 3: In the registered VCS PD, the crediting period has been as mentioned as 21-October-2007 to 14- June-2010 which is one day before the start date of CDM crediting period, however since the project is registered in VCS in accordance with the VCS standard 2007.1 and as per VCS standard, the crediting period of 10 years is applicable for this project. The issue related to start date of crediting period has been rectified during the previous monitoring period (12-October-2007 to 14-June-2010) by the previous verifying VBB[3] Refer Section 3 of previous verification report). The project participant has considered 21-October-2007 as the start date of the crediting period. It was confirmed that the date of completion of validation is 20-October-2009, based on the final approval and signature date in the validation report dated 13-October-2009 deemed complete by the UNFCCC; thus, two years prior to the completion of validation is 21-October-2007. Hence the corrected VCS crediting period is from 21- October-2007 to 20- October-2017. Also, this date is later to 28-March-2006, thus date 21-October-2007 as start date for the crediting period is appropriate and acceptable to VVB.

VVB observed that above deviation causes no change in design, scale and additionality of the project activity. Thus, accepted to VVB.

Further, monitoring parameters of Maharashtra, Gujrat and Tamil Nadu has been mentioned separately in section 4.2 of the revised monitoring report better clarity in monitoring parameter and also due to different in joint metering reports.

Verification team observed that above deviation causes no change in design, scale and additionality of the project activity. Thus, accepted to VVB

3.4 Grouped Project

The project is not a grouped project thus this is not applicable.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

During the interviews with PP & O & M/plant in-charge and subsequent document verification; commissioning certificates/1/, PPAs/9/, JMR/share certificates/credit note/11/ and Invoices /11/, verification team concluded that the project is implemented as per the requirement of the registered VCD PD/4/ and revised monitoring plan /4/ under CDM. During the current monitoring period, it was observed that no unforeseen incident/event evolved which can impact the operation of the project activity which was verified from

[3] Verification Report and Certification Statement, by SGS dated 04-July-2011,

breakdown records. The project undergone continuous operation and only scheduled maintenance is observed as per the manufactures specification which is acceptable to the assessment team and evident from JMR/Share Certificate/11/.

Project location is confirmed by the verification team through interview with PP. Latitude and Longitude of the project activity has been checked with the help of Google earth software and onsite photographs captured using GPS app and found that the detail of latitude and longitude as mentioned in the registered MR is correct. Verification team has also checked the technical details of the project through commissioning certificate, O & M agreement and photograph containing name plate.

Verification team also checked the technical details of the project site containing latitude and longitude of the project site and confirmed that the details as mentioned in the registered CDM PDD/7/ are correct. The latitude and longitude of the project activity with the help of Google earth software and site photographs taken by GPA app and found that the latitude and longitude is consistent with the VCS PDD/CDM PDD/4/. The WTG locations and commissioning dates are provided below:

Sr. No.	WTG Location No.	Installed Capacity (MW)	GPS coordinates	WTG location Village	District
Bundle I	K 233	1.25	21°16'N 74°19'E	Kaltek, Sakri	Dhule
	K 231	1.25	21°16'N 74°19'E	Kaltek, Sakri	Dhule
Bundle II	VRRB-600/07-08 733	0.6	23°13'N 70°42'E	Khumbariya, Surajbari	Kutch
	VRRB-600/07-08 734	0.6	23°13'N 70°42'E	Khumbariya, Surajbari	Kutch
	VRRB-600/07-08 735	0.6	23°13'N 70°42'E	Khumbariya, Surajbari	Kutch
Bundle II	WEG HT SC. No. 2277	0.6	09°01'N 77°26' E	Vellalankulam, Sankarankoil	Tirunelveli
	WEG HT SC. No. 2281	0.6	09°01'N 77°26' E	Vellalankulam, Sankarankoil	Tirunelveli

Commissioning dates of WTGs

Sr. No.	WTG Location No.	Installed Capacity (MW)	Commissioning Date
Bundle I	K 233	1.25	30-Sept-2006
	K 231	1.25	13- Nov-2006
Bundle II	VRRB-600/07-08 733	0.6	28-Dec-2007
	VRRB-600/07-08 734	0.6	07-Feb-2008
	VRRB-600/07-08 735	0.6	03-Oct-2007
Bundle III	WEG HT SC. No. 2277	0.6	29-Mar-2007

	WEG HT SC. No. 2281	0.6	29-Mar- 2007

Further, Verification team confirmed through review of the VCS PD and registered CDM-PDD/4/ referred by VCS PD and previous verification report/4/ that the location of the project activity including the coordinates is same as mentioned in the registered CDM-PDD/VCS PD/4/. The project boundary includes the electricity generation equipment at the project site, sub-station and the NEWNE grid (now Indian grid). Assessment team checked the Commissioning certificates/1/ and confirmed that the dates of Commissioning for each WTG are correct.

The technical details were checked by the verification team with technical specification of WTGs/3/ and found consistent. The specification of the WTG is as follows:

Salient features of Suzlon (S-70) 1250 KW WTG

Rotor diameter	69.1 m
Installed electrical output	1250 kW
Cut –in wind speed	3 m/s
Rated wind speed	12 m/s
Cut-out wind speed	20 m/s
Rotor swept area	3750 m2
Rational speed	13.2/19.8
Rotor material	GRP
Regulation	Pitch
Generator,	Asynchronous generator, 4/6 poles
Rated output	250/1250 kW
Rotational speed	1010/1515 rpm
Operating voltage	690 v
Frequency	50 Hz
Protection	IP 56
Insulation class	H
Cooling system	Air -cooled
Gear box	3 stage gear box, 1 planetary and 2 helicaL
Manufacturer	Winergy
Gear Ratio	77.848
Nominal load	1390 kW
Type of cooling	Oil cooling system
Yaw drive system	4 active electrical yaw motors
Yaw bearing	Polyamide slide bearing
Safety system	
Aerodynamic brake	3 times independent pitch
Mechanical brake	Spring powered disc brake, hydraulical

Control unit	Microprocessor controlled, indi
	conditions, UPS back up
Design standards	GL/IEC

Salient features of Pawan Shakati PS-600 KW WTG

Rated Power	600 kW
Cut in wind speed	4 m/s
Cut out wind speed	25 m/s
Survival wind speed	70 m/s
Tips speed	64 m/s
Rotar speed	26.2 rpm
Hub height	50 m/65 m
Nacelle tilt angle	5 degree
Regulation	Pitch
Gear Box	
Type	Planetary /Helical
Gear Ratio	01:58:02
No. of Steps	3
Generator	
Rated power output	600 kW
Type	Single wound Asynchronous
Voltage	690 V
Revolutions	1527 rpm
Frequency	50 Hz
Tower	
Type	Lattice
Height	48.1 m/63.1 m
Material	Steel
Section	06-Sep
Lattice	
Nacelle Cover	Fiberglass Reinforced polyester
Rotor	
No. of blades	3
Diameter	47 m
Swept area	1735 sq.m
Power Regulation	Pitch regulated
Break System	
Aerodynamics	Full feathering of blade
Mechanical	Disc Brake Slewing system with gear Motor yawing
Controls	Microprocessor based

The project has been commissioned on 30-September-2006 which is date of commissioning of first 2.50 MW project activity. Assessment team checked the commissioning certificates /01/ and confirmed that the dates of Commissioning of the WTG is correct.

The assessment team confirmed that there is no proposed or actual change to the project design during this monitoring period except project description changes requested by PP. The project design as mentioned in the registered VCS PD /4/ is implemented and thus the same is acceptable to the assessment team. All required monitoring equipment's and procedures as mentioned in the registered PD are available and implemented in an appropriate manner.The organisational role and responsibility as mentioned in the registered PD is followed remotely..

The Project participant contribution from the project activity towards sustainable development in accordance to host country.

Contribution to sustainable development:

Ministry of Environment and Forests, has stipulated economic, social, environment and technological well-being as the four indicators of sustainable development. The project contributes to sustainable development using the following ways.

Social well-being: The project would help in generating employment opportunities during the construction and operation phases. The project activity will lead to development in infrastructure in the region like development of roads and also may promote business with improved power generation.

Economic well-being: The project is a clean technology investment in the region, which would not have been taken place in the absence of the VCS benefits the project activity will also help to reduce the demand supply gap in the state.

Technological well-being: The successful operation of project activity would lead to promotion of Wind based power generation and would encourage other entrepreneurs to participate in similar projects

Environmental well-being: Wind being a renewable source of energy, it reduces the dependence on fossil fuels and conserves natural resources which are on the verge of depletion. Due to its zero emission the Project activity also helps in avoiding significant amount of GHG emissions and specific pollutants like Sox, Nox, and SPM associated with the conventional thermal power generation facilities

Further, in accordance with the Appendix 3- the document history mentioned in the VCS Standard Version 4.3 (latest version), it is clearly mentioned that Project Proponent is required to demonstrate contributions to a minimum of three SDGs, effective immediately for all projects registered on or after 20 January 2023. Since this project is registered before 20 January 2023, SDG reporting is not required for the current version and the PP will demonstrate contribution to at least three SDGs by 20 January 2025.

Thus, demonstration of contribution to at least three SDGs for current monitoring period is not applicable

The project has also been registered as a CDM project activity with Ref. No.2682[4] on dated 15-June-2010. Project Participant has also webhosted monitoring report for verification under CDM for the monitoring period form from 01-January-2012 to 31-May-2013, however, a letter on dated 10-September-2022 has been submitted by PP to VVB for withdrawing of Monitoring Report and also submitted an undertaking dated 12-Septemeber-2022 for avoiding double counting confirming that no GHG reduction will be claimed in any other GHG mechanism for current monitoring period.

Further, the project activity has not participated under any other GHG program, apart from Verified Carbon Standard and REC. PP will not claim benefits of carbon emission reduction credits achieved through this project activity under any other GHG programme for the crediting period claimed under VCS. Moreover, the project has not generated any other form of environmental credit and a Declaration/12/ for the same has been submitted to the assessment team and the same is acceptable. The project is not registered under the REC mechanism of India and the same is cross-checked at https://recregistryindia.nic.in.

Assessment team confirms following during the verification remote audit

1. Start date of the project is 30-September-2006.
2. An undertaking has been submitted by PP for no double counting with any other GHG program. PP also has given a written declaration that project will not claim other form of GHG credit for the concerned monitoring period.
3. Assessment team confirms that this is 2nd monitoring under VCS and covers the activity from 01-January -2012 to 20-October-2017 (inclusive of both dates). VCS crediting period is of 10 years (fixed) with 21-October-2007 as the start date and crediting period end date as 20-October-2017.

   The VCUs for this monitoring period i.e., from 01-Janaury-2012 to 20-October-2017 will be claimed under VCS only. At any point of time during the crediting period, the project proponent will abide by the "Double Counting". PP have submitted declaration/12/ on the dated 12-Septemeber-2022 for avoiding double counting of the emission reductions achieved during this monitoring period.
4. Assessment team checked and found that the Project proponent of the project activity is as below for the current monitoring period:

Organization name	WMI Power Private Limited
Contact person	Mr. N. L Narsimhan

[4] https://cdm.unfccc.int/Projects/DB/SGS-UKL1244624606.95/view

Title	Vice President
Address	Bhandup (West), Mumbai, Maharashtra ,400078
Telephone	+ 91-22 - 2566161
Email	n.narasimhen@wmicranes.com

5. Assessment team also checked the details of other entity as a consultant and found correct. The details are as below

Organization name	EKI Energy Services Limited
Contact person	Project Consultant
Title	Mrs. Neetu Yadav
Address	Project Manager
Telephone	Office No 201, Plot No 48, Scheme 78, Vijay Nagar Part- II, Indore 452010, India
Email	neetu@enkingint.org

6. The quantified Emission reduction/7/ calculation for the monitoring period is correct and conservative. Assessment team also compared actual VCUs with the estimated VCUs. The estimated emission reduction for the current monitoring period is 41,159 tCO_2e. Project participant has calculated the estimated emission reduction separately for each site after deduction of none operative days as a conservative approach, whereas actual emission reduction (VCUs) achieved by the PA is 22,312 tCO_2e which is 45.79% Lower than the estimated Emission reduction/7/ the decreases in emission reduction is due to variations in climatic conditions, grid availability and other parameters which are not in the control of PP. Another reason for low ex-post values is breakdown occurred during current monitoring period, the details of same is mentioned in Appendix-2 of monitoring report. VVB confirms that value is conservative and thus acceptable to VVB.

CAR 01 and CAR 02 raised during the verification process and closed successfully. Please refer Appendix 2 of this report for the detail closure of CAR.

4.2 Safeguards

4.2.1 No Net Harm

No potential environment or socio-economic matter was found during the documents review of VCS PD and grievance register etc. The project is renewable energy project and thus no negative impact observed due to project activity.

The project activity promotes environmental and socio-economic well-being as it results in zero GHG emissions due to installation and operation of clean, renewable energy technology for electricity generation. The report on "Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects" prepared by MNRE dated September 2013[5]. This report clearly mentioned that Wind/Wind power project activity operations do not result in direct air pollution, noise pollution. Moreover, also as per the Central Pollution Control Board of India notification[6] Wind/wind project falls under White Category and are practically non-polluting.

4.2.2 Local Stakeholder Consultation

Local stakeholder consultation has been conducted at the time of project registration. For on-going stakeholders' communication, PP have maintained feedback/complaint register at the site office. Assessment team checked the copies of grievance registers submitted by PP which are available at sites and found that local stakeholders can anytime lodge their grievances if any in the register over the operational life time of the project. During interviews with PP, it was confirmed that Site Manager/In-charge is responsible to address any grievances received from stakeholders. During current monitoring period no grievance was received as verified from the grieavnce . Thus, assessment team is of the opinion that the on-going stakeholder mechanism is adequate and appropriate. CAR 03 was raised during the verification process and closed successfully. Please refer Appendix 2 of this report for the detail closure of the CAR.

4.3 AFOLU-Specific Safeguards

This section is not applicable as this project activity is a non-AFOLU project activity.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

Means of verification	The verification team assessed whether the data and calculations of GHG Emission reduction/7/ achieved resulting from the VCS PD. The verification team has checked whether calculations of baseline GHG emissions, project GHG

[5] https://smartnet.niua.org/sites/default/files/resources/report-on-developmental-impacts-of-RE.pdf

[6] http://envfor.nic.in/sites/default/files/Latest_118_Final_Directions.pdf

	emissions and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the monitoring plan of the VCS PD.
Findings	CAR 04 was raised during the verification process and closed successfully. Please refer Appendix 2 of this report for the detail closure of the CAR.
Conclusion	**Baseline Emissions:** The baseline Emissions for a given year is calculated by multiplying the energy baseline with the grid emission factor. The grid in this case would be the 'Indian Grid' Formula used: As per registered CDM PDD, Baseline emission = EGy x EFG_{grid} Where, BE_y= Baseline Emissions (tCO_2/year) Where: EG_Y : Electricity generated by the project activity in the year y EF_{Grid}: CO_2 emission factor In project case, EGy = $EG_{(Net\ export\ by\ project\ activity)}$ Where; $EG_{(Net\ export\ by\ project\ activity)}$ = Net generation from all the WTGs of the promoter at a particular site connected to same feeder. **Ex-ante Parameter:** **Plant Load Factor** = Plant Load Factor considered for the estimation of electricity generation from WTGs in each sub-bundle of the project activity (%). This has been used for the estimation of VCUs from the project. Parameter is fixed ex-ante for the entire crediting period which is found consistent with the CDM-PDD which is part of VCD PD. The ex-ante PLF are as follows: 1. Maharashtra: - 20% 2. Gujarat: - 23% 3. Tamil Nadu: - 26.7% **Installed Capacity** = Total installed capacity of the project (in MW). Installed capacity has been fixed ex-ante as per the VCS PD which is 5.5 MW. The installed capacity has been verified with the commissioning certificates of WTGs and found correct. **Grid Emission Factor:** Weighted Average Grid Emission Factor 0.86 tCO2/MWh and & 0.72 tCO2/MWh has been fixed ex-ante value which is in line with the registered CDM PDD referred in VCS PD. However, in accordance with the registered PDD, latest values of grid emission available at the time of monitoring period is to be considered ex-post. <u>Ex-post parameter:</u> As per the registered monitoring plan and deviation sought during the current monitoring period the following parameters needs to be monitored: **Monitored parameter at Maharashtra sub-bundled I:** **EG** **(Net export by project activity) =** Net generation from all the WTGs of the promoter at a particular site connected to same feeder.

	This parameter for sub-bundled I is calculated by applying apportioning procedure using the values that are monitored with the help of metering system involving common bulk meter at Walve feeder III substation and inbuilt control panel meter of the WTGs. The common bulk meters constitute main meter and check meter. The calibration of the common bulk meters (main & check meter) will be done by state utility normally on annual basis. The project participant has sourced this parameter directly from monthly credit reports/11/ for emission reduction calculations. These credit reports have been checked by the verification team and found that the data of net electricity exported to grid in emission reductions sheet is correct. This has been cross-checked from invoices/11/. which are raised by the project participant to MSEDCL. Calibration certificate /5/ of main and check meters are checked found delayed in calibration of meters. Main meter and check meter at Walve feeder -III in which WTG K 233 and K231 are connected is delayed in calibration from 17-September-2012 to 25-September-2012 and Meter connected with WEG HT SC. No. 2281 is delayed in calibration from 16-July-2013 to 29-August-2018 and from 30-June-2016 to 15 March-2017. The observed error in next calibration is within permissible limit, and thus in accordance with the paragraphs 366 (a) of VVS, version 03.0, PP has applied maximum permissible error factor of 0.2% and deducted 0.2% from export of electricity to grid. The adjusted valued after applying error factor for this parameter is verified to be 19,112.03 MWh and the has been cross checked with invoices/11/ and fond consistent. **Monitored parameter at Gujarat sub-bundled:** **EG(Net export by project activity): Net generation from all the WTGs of the promoter at a particular site connected to same feeder.** This parameter for Gujarat sub-bundled is calculated based in the measured values of export and import at Chandrobi (RRB) substation. Active Energy received at Chandrodi (RRS) substation is computed by summation of net energy recorded in Special Energy (ABT) meter in every 15-minute basis. The detail computation of active energy is carried out by State Load Dispatch Centre (SLDC) and block wise computation and meter data is published on website[7].. GETCO officials prepares "Certificate for share of electricity generated by the wind farm" based on the electricity meter readings for invoicing purpose. The Certificate for share of electricity generated by the wind Farm contains only net electricity export to grid after deduction import as verified by VVB. The project participant has sourced this parameter directly from Certificate for Share of electricity/11/ issued by GETCO for emission reduction calculations. These reports are checked for consistency in values reported in the monitoring report considered in emission reductions calculations. The value of this parameter is verified to be 7,111.92 MWh and the same has been cross-checked from invoices/11/. which are raised by the project participant to Gujarat Urja Vikas Nigam Ltd. (GUVNL). There is no delay in calibration of meters identified at Gujarat sub-bunded projects. **Monitored Parameter for Tamil Nadu site-**

[7] https://www.sldcguj.com/EnergyAccount/Energy_Block_New.php

	$EG_{JMR,export}$ - Total export from the WTG at (HTSC) TNEB meter The $EG_{JMR,export}$ has been measured through tri-vector meter installed at each HTSC connected to one WTG. The total electricity exported to the grid is measured jointly in presence of PP's representative and TNEB officials and accordingly JMRs are prepared. This parameter is being used to calculate net electricity supplied to the grid by the project activity. Export values reported in ER sheet/7/ is checked and confirmed from JMRs/11/ submitted for the project activity by the project participant. Calibration/test reports/5/ of HTSC meters are checked and they are found satisfactory for the monitoring period of the project activity. The details of meter have been provided in Appendix 5 of this report. Further, project participant has considered electricity generation value zero from 01-January-2012 to 31-August-2014 and from 01-March-2016 to 20-October-2017 due to non-availability of JMRs as a conservative approach. Thus, acceptable to VVB. Calibration certificate/5/ of main and check meters has been checked by the verification team and found that meter connected with WEG HT SC No.2277(Sr. No.TN 903073) and WEG HT SC No. 2281 (Sr.No.TNU04733) were delayed in calibration from 01-January-2012 to 15-July- 2012 and from 16-July-2013 to 29-August-2018. The identified error in next calibration is within permissible limit, and thus in accordance with the paragraphs 366 (a) of VVS, PP has applied maximum permissible error factor of 0.5% and deducted 0.5% from export of electricity to grid. The adjusted valued after applying error factor for this parameter is verified to be 1.026.17MWh. During the current monitoring period, total export of electricity by the WTG at (HTSC) TNEB is 1,026.17 MWh. Verification team has checked this value with statement of generation report issued by the Tamil Nadu Generation and Corporation Limited and found correct. **$EG_{JMR,import}$** -Total import from the WTG at (HTSC) TNEB meter This is measured parameter. this parameter is measured through tri-vector meter installed at each HTSC connected to one WTG. The power import from grid is measured jointly in presence of PP's representative and TNEB officials and accordingly JMRs are prepared. This parameter is being used to calculate net electricity supplied to the grid by the project activity. Import values reported in ER sheet/7/ is checked and confirmed from JMRs/11/ submitted for the project activity by the project participant. Calibration/test reports/5/ of HTSC meters are checked and they are found satisfactory for the monitoring period of the project activity. The details of meter have been provided in Appendix 5 of this report. Further, project participant has considered electricity generation value zero from 01-January-2012 to 31-August-2014 and from 01-March-2016 to 20-October-2017 due to non-availability of JMRs as a conservative approach. Thus, acceptable to VVB. Calibration certificate/5/ of main and check meters has been checked by the verification team and found that meter connected with WEG HT SC No.2277(Sr. No.TN 903073) and WEG HT SC No. 2281 (Sr.No.TNU04733) were delayed in calibration from 01-January-2012 to 15-July- 2012 and from 16-July-2013 to 29-August-2018. The identified error in next calibration is within permissible limit, and thus in accordance with the paragraphs 366 (a) of VVS, PP has applied maximum permissible error factor of 0.5% and deducted 0.5% from export of electricity to

grid. The adjusted valued after applying error factor for this parameter is verified to be 18.82 MWh.

During the current monitoring period, total import of electricity by the WTG at (HTSC) TNEB from grid is 18.82. Verification team has checked this value with statement of generation report issued by the Tamil Nadu Generation and Corporation Limited and found correct.

EG (Net export by project activity) = Net generation from the individual WTG.

EG (Net export by project activity) is calculated parameter and it is being directly used for emission reduction calculations. This parameter is difference between of total export from WTGs at TNEB meter ($EG_{JMR,eport}$) and total import from the WTG at TNEB meter ($EG_{JMR,import}$). The values of net electricity generation from individual WTG reported in ER sheet/6/ is checked and confirmed from JMRs/11/ submitted by PP and cross checked from invoices/11/ raised by project participant to TNEB. The values of this parameter are 1,007.35 MWh.

EF_{Grid} = Tons of CO_2 per MWh of electricity produced in western grid (now integrated into NEWNE grid) (Ex-post).

The NEWNE and Southern grids are now integrated into unified Indian Grid, there is no any separate grid emission factors for NEWNE and Southern grids, hence Indian grid emission factor is considered for all three states WTGs. Weighted average emission factor of the current generation mix is taken as per registered monitoring plan and this parameter value is directly taken by PP from CEA CO_2 baseline database for the respective period. In accordance with the registered VCS PD /CDM PDD/4/, the weighted average grid emission factor is considered as ex-post monitoring parameter. Verification team has checked the CEA CO_2 baseline database for the respective period and found correct. The grid emission factor is given below:

Period		Year	Emission Factor tCO_2/MWh	CEA CO_2 Baseline Database
From	To			
01-January--2012	31-March-2012	2011-12	0.78	Version 13[8]
01-April-2012	31-March-2013	2012-13	0.83	Version 13
01-April-2013	31-March-2014	2013-14	0.82	Version 15[9]
01-April-2014	31-March-2015	2014-15	0.82	Version 16[10]
01-April-2015	31-March-2016	2015-16	0.82	Version 17[11]
01-April--2016	31-March-2017	2016-17	0.82	Version 17
01-April-2017	20-October--2017	-	0.82	

As per Section B.6.1 of registered CDM PDD/4/,

[8] https://cea.nic.in/wp-content/uploads/baseline/2020/07/database_13.zip

[9] https://cea.nic.in/wp-content/uploads/baseline/2020/07/database_15.zip

[10] https://cea.nic.in/wp-content/uploads/baseline/2021/06/2019_20_CO2_database.zip

[11] https://cea.nic.in/wp-content/uploads/baseline/2022/02/database_17_.zip

The baseline emission is calculated as follows:
The calculation of baseline emissions is as below,
Baseline Emission = EG_y x EG_{grid}
Where:
EG_Y: Electricity generated by the project activity in the year y
EF_{Grid}: CO_2 emission factor

In project case,

$EG_y = EG_{(Net\ export\ by\ project\ activity)}$

Where;

$EG_{(Net\ export\ by\ project\ activity)}$ = Net generation from all the WTGs of the promoter at a particular site connected to same feeder.

Baseline emissions for Maharashtra sub-bundled:

Period	EG_y (MWh)	EF_{Grid} (tCO_2/MWh)	BE_y (tCO_2)
01-January-2012 to 31-March-2012	0	0.78	0
01-April-2012 to 31-December-2012	3,108.03	0.82	2,548
01-Janaury-2013 to 31-December-2013	3,491.04	0.82	2,862
01-Janauary-2014 to 31-December-2014	2,713.80	0.82	2,225
01-Janaury-2015 to 31-December-2015	2,997.31	0.82	2,457
01-January-2016 to 31-December-2016	3,706.43	0.82	3,039
01-Janaury-2017 to 20-October-2017	3,095.42	0.82	2,538
Total	19,112.03		15,669

Baseline emissions for Gujarat sub-bundled:

Monitoring Period	EG_y (MWh)	EF_{Grid} (tCO_2/MWh)	BE_y (tCO_2)
01-January-2012 to 31-March-2012	265.96	0.78	851
01-April-2012 to 31-December-2012	785.47	0.82	
01-Janaury-2013 to 31-December-2013	1,493.64	0.82	1,224
01-Janauary-2014 to -31-December-2014	1,284.12	0.82	1,052
01-Janaury-2015 to 31-December-2015	1,261.19	0.82	1,034
01-January-2016 to 31-December-2016	960.25	0.82	787
01-Janaury-2017 to 20-October-2017	1,061.30	0.82	870
Total	7,111.92		5,818

Baseline emissions for Tamil Nadu sub-bundled:

Monitoring Period	EG_y (MWh)	EF_{Grid} (tco_2/MWh)	BE_y (tCO_2)
01-January-2012 to 31-March-2012	0	0.78	0
01-April-2012 to 31-December-2012	0	0.82	0

	01-Janaury-2013 to 31-December-2013	0	0.82	0
	01-Janauary-2014 to 31-December-2014	152.65	0.82	125
	01-Janaury-2015 to 31-December-2015	843.54	0.82	691
	01-January-2016 to 31-December-2016	11.16	0.82	9
	01-Janaury-2017 to 20-October-2017	0	0.82	0
	Total	1,007.35	-	825

As the grid emission factor in registered VCS DP/CDM PDD is chosen ex-post monitoring parameter, therefore PP has calculated the baseline emission separately for the respective period.

Hence,

Total baseline emission= 15,669 tCO_2 +5,818 tCO_2+825 tCO_2

=22,312 tCO_2e (round down)

Project emission: As wind power projects fall under clean energy sources for electricity generation, the emission from the project is considered zero.

Leakage: There is no transfer of energy generating equipment or existing equipment, Hence, according to applied methodology AMS-I.D, version 13.0 /18/ leakage is considered zero.

Therefore, emission reduction is calculated as follows:

Emission reduction = Baseline emission – Project emission – Leakage

Emission reduction = 22,312 tCO_2e – 0 – 0

Emission Reductions = 22,312 tCO_2e

Verification team confirms that the monitoring has been carried out in accordance with the monitoring plan contained in the registered VCS PD/4/.

Assessment team confirmed that the GHG emission reductions and removals have been quantified correctly in line with the registered VCS PD/4/.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

Means of verification	The verification team checked the Calibration details of the monitoring meters with the Calibration Certificates/5/.
Findings	CAR 05 was raised during the verification process. The description of the CAR and its closure is described below in Appendix 2 of this report.
Conclusion	The metering arrangement is tri-vector bi-directional main & check meter energy meters. The accuracy class of meter located at Valve III feeder (MSEDCL substation), The details of meter including locations, accuracy class and calibration details are provided in Appendix 5 of this report. Monitoring meters are located at the respective State Electricity Board (SEB) substation. These meters record several parameters including electricity exported & imported. These electricity meters are being used by state electricity board for JMRs and Share certificate /11/. The calibration frequency of meters is annually, monitoring meters installed with bundled -II is calibrated as per calibration frequency in monitoring Plan. However, there is delayed in calibration of monitoring meters installed with Bundled-I and Bundled-III.

	There are delayed in calibration of meters located at Maharashtra site from 17-September-2012 to 25-September-2012 and 30-June-2016 to 15-March-2017, The observed error in delayed calibrations of meters are within permissible limit. Hence, PP has applied maximum permissible error of 0.2% in Export, Import the complete months of delayed period to arrive net electricity exported to grid as a conservative approach as per requirement of paragraphs 366(a) of VVS and acceptable to VVB. Further, the energy meters located in Tamil Nadu site were identified delay in calibration too. Calibration certificate/5/ of main and check meters has been checked by the verification team and found that meter connected with WEG HT SC No.2277(Sr. No.TN 903073) and WEG HT SC No. 2281 (Sr.No.TNU04733) were delayed in calibration from 01-January-2012 to 15-July- 2012 and from 16-July-2013 to 29-August-2018. The identified error in next calibration is within permissible limit, and thus in accordance with the paragraphs 366 (a) of VVS, version 03.3, PP has applied maximum permissible error factor of 0.5% and deducted 0.5% from export of electricity to grid. Hence accepted to VVB. The calibration of meters is done by the meter testing division of the state utility in the presence of O&M Contractor investor's representatives and State Utilities officials to ensure the working of meter within permissible limits. The calculation of net electricity supplied to grid is under purview of state electricity board and PP does not have control on it. Calibration details of the monitoring meters checked with Calibration Certificates/5/ and found correct. The plant logbook sheet/13/ is checked and there is no major breakdown during the monitoring period. No unforced error observed. No sampling procedure applied for monitoring of the data parameter and entire documents were checked by the verification team to arrive at positive verification conclusions. The monitoring plan is followed at the project site. The calculation of net electricity supplied to grid is under purview of state electricity board and PP does not have control on it. Calibration details of the monitoring meters checked with Calibration Certificates/5/ submitted by PP and found that calibration frequency of once in years is complied. Thus, the same is found consistent with certificate and monitoring report. VVB confirmed that data/ information used for determining GHG reductions and removals was sufficient in quantity and of appropriate quality. Calibration certificates of meters/ QA/QC procedure checked and found to be appropriate. Thus, Verification team concluded that the evidences are sufficient in quantity, and appropriate for the quality, to determine the GHG reductions and removals.

4.6 Non-Permanence Risk Analysis

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	
NA	NA	NA	NA	NA

5 VERIFICATION CONCLUSION

Applus+ Certification has been engaged by WMI Power Private Limited to perform the verification of the "5.5 MW Bundled Wind Power Project by WMI Cranes Ltd".

The management of WMI Power Private Limitedis 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 CDM PDD & VCS PD/4/ and the applied methodology AMS-I.D. - Version 13/18/.

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. Further, the verification has been planned and organized to achieve a Reasonable Level of assurance as per the requirement of VCS. No sampling procedure applied for document verifications. The entire documents checked/Power plant verification conducted to arrive at positive verification conclusions. The verification team can confirm that:

- the project is operated as planned and described in the project document;
- the monitoring plan is as per the applied methodology;
- the monitoring process in Monitoring Report is as per the CDM PDD & VCS PD /4/.
- the development and maintenance of records and reporting procedures are in accordance with the monitoring plan;
- the installed equipment being essential for generating Emission reduction/7/ runs reliably and is calibrated appropriately;
- the monitoring system is in place and generates GHG Emission reduction/7/ data;
- the GHG emission reductions are calculated without material misstatements.
- A Reasonable Level of assurance was achieved as planned, during verification process.
- Project complies with the verification criteria for projects and their GHG emission reductions or removals set out in VCS program guideline version 4.2 and VCS Standard version 4.3.
- Project has been implemented in accordance with the project description and subsequently validated deviations
- Verification period: 01-January -2012 to 20-October-2017 (inclusive of both days)

Verified GHG Emission reduction/7/ and removals in the above verification period:

Year	Baseline emissions or removals (tCO_2e)[12]	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
01-January -2012 to 31-December-2012	3,399	0	0	3,399
01-January -2013 to 31-December-2013	4,086	0	0	4,086
01-January -2014 to 31-December-2014	3,402	0	0	3,402

[12]Rounddown values

01-January -2015 to 31-December-2015	4,182	0	0	4183
01-January -2016 to 31-December-2016	3,835	0	0	3,835
01-January -2017 to 20-October-2017	3,408	0	0	3,408
Total	**22,312**	**0**	**0**	**22,312**

The estimated emission reduction for the current monitoring period is 41,159 tCO_2e. Project participant has calculated the estimated VCUs separately for each site after deduction of none operative days as a conservative approach, whereas actual emission reduction achieved by the PA is 22,312 tCO_2e which is 45.79% Lower than the estimated Emission reduction/7/ due to variations in climatic conditions, grid availability and other parameters which are not in the control of PP. Another reason for low ex-post values is breakdown occurred during current monitoring period and there are no generation data with PP form 01-Janaury-2012 to 31-August-2014 and from 01-March-2016 to 20-October-2017. The breakdown details is mentioned in Appendix-2 of monitoring report. VVB confirms that value is conservative and thus acceptable to VVB.

APPENDIX 1: DOCUMENTS REVIEWED DURING VERIFICATION

No.	Author	Title	References to the document	Provider
1.	Respecti ve State Utility	Commissioning certificate issued by respective state utility. *i) Maharashtra site-* *SE/DHL/Tech/Wind/8193 for (location no.231)* *SE/DHL/Tech/Wind/9769 for (location no.233)* *Ii) Gujarat site-* *GEDA/PWF/VRRB/2007-08/2907* *iii) Tamil Nadu site-* *AEE/DVT/AE2/F.WEG/R.1343-E/2007(HTSC No. 2281)* *AEE/DVT/AE2/F.WEG/R.1341/2007(HTSC No. 2277)*	Dated 30-September-2006 27-November-2006 29-September-2007 29-March-2007 29-March-2007	PP
2.	Applus	Contract of the project participant with the VVB	Contract document signed between PP and VVB	PP
3.	NA	The operational lifetime of the project activity from the manufacturer = (Technical specifications)	Manufacturer technical specifications	PP
4.	Verra	Registered CDM PDD https://cdm.unfccc.int/Projects/DB/SGS-UKL1244624606.95/view VCS PD https://registry.verra.org/app/projectDetail/VCS/662 1st verification reports (CCP.VOL0783) by SGS United Kingdom Limited. Approved revised monitoring plan under CDM CDM	Version 09, dated 04-June-2010 Dated:06-May-2011 Dated 04-July-2011 Dated 27-June-2012	UNFFFC & VERRA
5.	NA	Calibration Certificates of all energy meters	NA	PP
6.	PP	MR version 01 (Initial) MR Version 03 (Final)	13-April-2022 15-September-2022	PP
7.	PP	Emission reduction sheet version 01(Initial) Emission reduction sheet version 03(Final)	13-April-2022 15-September-2022	PP
8.	PP	O & M Agreement	-	PP
9.	PP	Power Purchase Agreement (PPA) between WMI cranes and GUVNL.	26- December-2007 05-December-2006	PP

No.	Author	Title	References to the document	Provider
		Power Purchase Agreement (PPA) between WMI cranes and MSEDCL. Power Purchase Agreement (PPA) between WMI cranes and TNEB.	02-May-2008	
10.	VCS UNFCCC	Tools/ guidelines used in the project activity • Glossary of CDM terms version 07 • VCS standard Version 4.3 • VCS Program Guide 4.2	UNFCCC CDM/VCS web site	UNFCCC
11.	State utility	JMRs/Share certificate/Credit Note invoices	For complete monitoring period.	PP
12.	PP	Declaration regarding no participation in other GHG program for the concerned monitoring period	12-September-2022	PP
13.	PP	Breakdown details for the monitoring period	-	PP
14.	PP	Employment/training records for plant persons	-	PP
15.	PP	Grievance Register	-	PP
16.	UNFCCC	CDM validation and verification standard for project activities,	Version 03.0	UNFCCC
17.	PP	Plant Logbook sheet	-	PP
18.	UNFCCC	AMS-I.D.: Grid-connected electricity generation from renewable sources	Version 13.0	UNFCCC
19.	PP	Remote audit records/onsite photographs	07-January-2022	PP

APPENDIX 2: CORRECTIVE ACTION REQUESTS, CLARIFICATION REQUESTS AND FORWARD ACTION REQUESTS (CAR/CL/FAR)

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

FAR ID	-	Section no.	-	Date : 19-January-2022
Description of FAR				
No FAR was raised from Validation and previous verification.				
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	00	Section no.	0	Date:
Description of CL				
NA				
Project participant response				Date:
NA				
Documentation provided by project participant				
NA				
DOE assessment				Date
NA				

Table 3. CAR from this verification

CAR ID	01	Section no.	4.1	Date: 19-January-2022
Description of CAR				
During desk review, the following inconsistencies were observed: 1. Date format throughout MR is not in line with the guidance to fill the MR mentioned VCS monitoring report template version 4.0. 2. Summary description in Section 1.1 of MR is not in line with the instruction to fill the MR. 3. The breakdown details of the WTGs relevant to the current monitoring period in missing in the MR. Moreover, PP also requested to submit the Plant Logbook/sheet to verify the same. 4. Title of ministry responsible for regulate SDG's indicators in India is not inline with ministry's official webpage.				

5. In section 1.10 of MR, Mentioned CDM Reference ID is not correct. Corrective action sought.
Project participant response **Date:** 13-May -2022
1. Date format throughout MR is now made in line with the guidance to fill the MR mentioned VCS monitoring report template version 4.0. 2. Summary description in Section 1.1 of MR is now updated. 3. The breakdown details of the WTGs relevant to the current monitoring period is updated in appendix 02 of the MR. 4. Title of ministry responsible for regulate SDG's indicators in India is now updated. 5. In section 1.10 in MR version 2.0 CDM Reference is now corrected.
Documentation provided by project participant
1. VCS monitoring report template version 4.0. *2.* Plant Logbook/sheet.
DOE assessment **Date:** 21-May-2022
1. PP has revised Date format throughout in MR version 02 is in line with the guidance to fill the MR mentioned VCS monitoring report template. However, MR template has been altered and PP has not used the latest version of MR. Comment open. **2.** Summary description has been revised by PP in line with guidance to fill the MR template. **Hence OK.** **3.** PP has incorporated the breakdown details of plant in Appendix 2 of revised monitoring report and also submitted the breakdown log sheet to the verification team. The has been checked by the verification team and confirms that no major breakdown observed during the monitoring period. The project undergone continuous operation and only scheduled maintenance is observed as per the manufactures specification which is acceptable to the verification team. Hence OK. **4.** Title of ministry responsible for regulating SDG's indicators in India is now updated as per current ministry's official webpage in revised monitoring report. Hence OK **5.** In section 1.10 of revised MR, Mentioned CDM Reference ID is now updated, and corrected ID is mentioned as 2682, same has been verified on CDM website found consistent. Hence OK. However, CAR remains open due to comment No 1
Project participant response **Date:** 15-September -2022
1. The MR is now updated in latest version and submitted to DOE assessment team.
Documentation provided by project participant
1. MR version 03
DOE assessment **Date:** 19-Septemeber-2022
1. PP has revised the revised the Date format throughout in revised monitoring report, now inline with VCS monitoring report template version 4.1. And template is now revised as per the latest version of VCS MR template version 4.1. Hence, **accepted CAR is Closed**.

CAR ID	02	**Section no.**	4.1	**Date:** 19-January-2022
Description of CAR				
PP requested to submit declaration regarding avoidance of double counting of emission reductions in the other GHG trading programmes and REC mechanism of India.				
Project participant response				**Date:** 13-May -2022

1. Declaration regarding avoidance of double counting of emission reductions in the other GHG trading programmes and REC mechanism is now submitted to DoE assessment team
Documentation provided by project participant
No double accounting Declaration Letter
DOE assessment | **Date:** 21-May-2022
PP has submitted "No Double Counting" undertaking dated 19-May-2022 and confirmed that no double counting of GHG reduction will be claimed for current monitoring period from CDM or other mechanism. The text of declarations is not appropriate, please resubmit the same. Hence CAR is open.
Project participant response | **Date:** 15-September -2022
Declaration regarding avoidance of double counting of emission reductions in the other GHG trading programmes and REC mechanism is now submitted to DoE assessment team
Documentation provided by project participant
No double accounting Declaration Letter
DOE assessment | **Date:** 19-September -2022
PP has submitted "No Double Counting" undertaking dated 12- September -2022 and confirmed that no double counting of GHG reduction will be claimed for current monitoring period from CDM or other mechanism. Thus, **CAR thus closed.**

CAR ID	03	**Section no.**	4.2	**Date:** 19-January-2022
Description of CAR				
In Section 2.2, PP has mentioned about process of ongoing mechanism for communication with local stakeholder as per the requirement of Para 3.16.3 and 3.16.4 of the VCS standard V.4.1. However, to verify, PP is requested to provide the supporting for the same.				
Project participant response | **Date:** 13-May-2022				
1. The supporting for the Local stake holder is now submitted to the DOE assessment team.				
Documentation provided by project participant				
1. Local stake holder Consultation.				
DOE assessment | **Date:** 21-May -2022				
PP has kept grievance register at project site for ongoing communication with Local Stakeholder and provided the copy of grievance registered to assessment team and the same is in line with the requirement of para 3.16.3 and 3.16.4 of the VCS standard V.4.1. No major issues observed during current monitoring period. Thus, **CAR is closed**				

CAR ID	04	**Section no.**	4.4	**Date:** 19-January-2022
Description of CAR				
1. PP is requested to submit emission reduction sheet to assessment team. 2. Ex-ante parameters mentioned in MR is not in line with Registered VCS PD/CDM PDD. Parameter related to grid emission factor is missing. 3. Monitoring parameters values are not provided in respective table of MR. 4. PP is requested to submit supporting documents i.e., JMR/invoices etc in support of all monitoring parameters to assessment team.				
Project participant response | **Date:** 13-May -2022				

1. Emission reduction sheet is now submitted to the DoE Assessment team. 2. Ex-ante parameters mentioned in MR is now updated and made in line in with Registered VCS PD/CDM PDD. Parameter related to grid emission factor is also now updated 3. Monitoring parameters are now updated in section 4.2. 4. The JMR/invoices in support of all monitoring parameters are now submitted to DoE assessment team.
Documentation provided by project participant
1. ER sheet 2. JMRs & Invoices 3. MR version 2.0
DOE assessment | **Date:** 21-May-2022
1. PP has submitted the emission reduction sheet for current monitoring period. The values have been found consistent with the monthly JMRs (Tamil Nadu)/credit report (Maharashtra/Certificate for share of electricity. Hence OK. 2. PP has incorporated grid emission factor as monitored parameter in Section 4.2 of revised MR. As per registered CDM PDD, latest grid emission factor is to be used. However, the latest version of CO_2 Baseline database published by Central electricity Authority (CEA) is version 17.0. Further, PP has not described how grid obtained for the project case. PP to clarify. 3. All monitoring parameter now included in 4.2 section of revised monitoring report as per registered VCS PD/CDM PDD. Hence OK. 4. PP has submitted all JMRs & invoices for the current monitoring period and the values of net electricity supplied is found consistent. Moreover, PP has apportioned the generation for last month of monitoring period with DGR data in ER sheet. However, supporting evidence for the DGR Data is missing. Hence, **CAR is Open** till submission of requisite information.
Project participant response | **Date:** 15-September-2022
2. As per registered CDM/VCS PDD the weighted average grid emission factor has been mentioned. The weighted average grid emission factor parameter is used as ex-post monitoring parameter and mentioned in section 4.2 of the MR
Documentation provided by project participant
1. ER sheet 2. MR version -03 3. DGR report
DOE assessment | **Date:**19-September-2-2022
2. As per registered CDM PDD, the weighted average grid emission factor is to be monitored. PP has rectified the same in revised MR. 4. PP has now submitted DGR data to the assessment team to verify the apportioned generation value on daily basis .and data found consistent with DGR value mentioned in emission reduction sheet. Thus, accepted and CAR is Closed.

CAR ID	04	**Section no.**	4.4	**Date:** 19-January-2022
Description of CAR				

5. PP is requested to submit emission reduction sheet to assessment team. 6. Ex-ante parameters mentioned in MR is not inline with Registered VCS PD/CDM PDD. Parameter related to grid emission factor is missing. 7. Monitoring parameters values are not provided in respective table of MR. 8. PP is requested to submit supporting documents i.e., JMR/invoices etc in support of all monitoring parameters to assessment team.
Project participant response **Date:** 13-May -2022
5. Emission reduction sheet is now submitted to the DoE Assessment team. 6. Ex-ante parameters mentioned in MR is now updated and made in line in with Registered VCS PD/CDM PDD. Parameter related to grid emission factor is also now updated 7. Monitoring parameters are now updated in section 4.2. 8. The JMR/invoices in support of all monitoring parameters are now submitted to DoE assessment team.
Documentation provided by project participant
4. ER sheet 5. JMRs & Invoices 6. MR version 4.0
DOE assessment **Date:** 21-May-2022
1. PP has submitted the emission reduction sheet for current monitoring period. The values have been found consistent with the monthly JMRs (Tamil Nadu)/credit report (Maharashtra/Certificate for share of electricity. Hence OK. 2. PP has incorporated grid emission factor as monitored parameter in Section 4.2 of revised MR. As per registered CDM PDD, latest grid emission factor is to be used. However, the latest version of CO_2 Baseline database published by Central electricity Authority (CEA) is version 17.0. Further, PP has not described how grid obtained for the project case. PP to clarify. 3. All monitoring parameter now included in 4.2 section of revised monitoring report as per registered VCS PD/CDM PDD. Hence OK. 4. PP has submitted all JMRs & invoices for the current monitoring period and the values of net electricity supplied is found consistent. Moreover, PP has apportioned the generation for last month of monitoring period with DGR data in ER sheet. However, supporting evidence for the DGR Data is missing. Hence, **CAR is Open** till submission of requisite information.
Project participant response **Date:** 06-June-2022
5. As per the registered PDD the grid emission factor is ex post thereby the latest grid emission factor i.e. Version 17 is used as is kept under Section 4.2 of the revised MR Supporting evidence for the and DGR Data is now submitted to DoE assessment team.
Documentation provided by project participant
3. ER sheet 4. MR version -03 6. DGR report
DOE assessment **Date:** 10-June-2022
3. PP has now clarified as per the CDM PDD latest available grid emission factor would be used the latest version of CO_2 Baseline database published by Central electricity Authority (CEA) is version 17.0. is used during the current monitoring period as per the CDM PDD. 7. PP has now submitted DGR data to the assessment team to verify the apportioned generation value on daily basis .and data found consistent with DGR value mentioned in emission reduction sheet. Thus, accepted and CAR is Closed.

CAR ID	05	**Section no.**	4.5	**Date:** 19-January-2022
Description of CAR				

Details related to Monitoring meters and its calibration is missing in the monitoring report. Moreover, to verify the same, PP is requested to submit copy of calibration certificates to assessment team relevant to current monitoring period of project activity. Corrective action sought.	
Project participant response	**Date:** 13-May -2022
The calibration details are now updated in appendix 1 of the MR	
Documentation provided by project participant	
1. Calibration Certificate	
DOE assessment	**Date:** 21-May-2022
PP has now provided details of meters including calibration dates under Appendix I of revised MR and submitted the calibration certificates. However, few certificates are missing for Gujrat site meter and some dates are not consistent with the dates provided in calibration certificates. Further, details of check meter not provided in MR. Also, calibration information of meter located at Tamil Nadu site is not mentioned for the complete monitoring period. PP to clarify. There is delayed in calibration of meter at Maharashtra site from 17-September-2012 to 25-September-2012, from 07-June-2015 to 29-June-2015; from 30-June-2016 to 15-March 2017. For Tamil Nadu site, the calibration delayed were from 01-January-2012 to 15-July-2012 and from 16-July-1013 to end of MP. PP has applied maximum permissible error factor. However, applied error factor is not correct. Thus, CAR is Open.	
Project participant response	**Date:** 15-Septemeber-2022
1. The missing certificates are now submitted to DOE assessment team and also the correction in the revised MR – version 03 are made in appendix 01. 2. Explanation for the applied error factor has now been provided under appendix 01 of the MR version 03.	
Documentation provided by project participant	
MR version 03	
DOE assessment	**Date:** 19-September-2022
PP has now provided missing calibration certificate to verification team and also corrected the applied delayed factor for the delayed calibration of meters located at Maharashtra site. PP has now included the explanation of error factor in Appendix 1 of revised MR. CAR closed.	

APPENDIX 3: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWERS

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 review	On-site inspection	Interview(s)	Verification findings
1.	Lead Auditor/Technical Expert	OR	Mohan Singh	Jitendra	TQC-Outsourced entity	Yes	No	Yes	Yes

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 (TR) / Technical Expert (TE)	EI	Xue	Denny	Applus+ Certification
2.	Approver	IR	Calle de Miguel	Agustin	Applus+ Certification

Short CVs of the Team:

1. **Mr. Jitendra Mohan Singh** has done Advanced MSc in Sustainable Energy Systems and Management from International Institute of Management, University of Flensburg, Germany and B.Tech. in Agricultural Engineering from Allahabad University, India. He has more than 20 years of working experience in different organizations like IARI, IIT Delhi, ICAR, IRADe, CAPART, SMEC and Perenia Carbon and M B Power (Madhya Pradesh) Ltd. in the area of Agriculture, Energy & Environment and Climate Change. He also worked on contract basis (adhoc) as a RIT expert in UNFCCC from 2010 to 2013. Currently. he is empanelled with Applus+ Certification since 2020 and has been involved Verifications of

PAs/PoAs as Lead Auditor and Technical Expert for Renewable and non-Renewable as well as Energy Demand.

2. **Mr. Denny Xue** has a Bachelor's Degree on Thermal Energy Engineering and Master´s Degree on Environmental Engineering. He has more than 10 years of experience on CDM project development. Before he joined Applus+ LGAI, he has been worked for Shanghai Chuanji Investment and Management which is a CDM consultancy company as a project manager for CDM project development. He is working with Applus+ since 2011 carrying out Validation and verification for CDM/GS/VCS project under scope 1 and 13 as auditor, lead auditor, technical expert and technical reviewer

APPENDIX 4: ABBREVIATIONS

Abbreviations	Full texts
AMS	Approved Methodology for Small Scale Projects
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
CMS	Central Monitoring system
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EF	Emission Factor
EIA	Environmental Impact Assessment
ER	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GUVNL	Gujarat Urja Vikas Nigam Limited
GWP	Global Warming potential
MSEDCL	Maharashtra Electricity Distribution Company Limited
MSEDCL	Maharashtra Electricity Distribution Company Limited
REA	Regional Energy Account
PP	Project Participant
PLF	Plant Load Factor
PPA	Power Purchase Agreement
QA/QC	Quality Assurance/Quality Control
SCADA	Supervisory Control and Data Acquisition
SISL	Suzlon Infrastructure Services Limited
t CO_2e	Tonnes of Carbon Di-oxide Equivalent
TNEB	Tamil Nadu Electricity Board
UNFCCC	United Nation Framework Convention on Climate Change
VCS	Voluntary Carbon Standards
VCU	Voluntary Carbon Units
VVB	Validation Verification Body
WTG	Wind Turbine Generator

APPENDIX 5: CALIBRATION DETAILS OF THE METERS

Sr. No.	WTG Location No.	Feeder /SS Name	Main Meter No.	Check Meter No.	Accuracy class	Date of calibration	Due date of calibration
Bundle -I	K 233	Walve feeder-III	04862765	04862469	0.2	17/09/2011 26/09/2012 [13] 12/08/2013 07/06/2014 30/06/2015 16/03/2017 [14]	16/09/2012 25/09/2013 11/08/2014 06/06/2015 29/06/2016 15/03/2018
	K 231	Walve feeder-III	04862765	04862469	0.2	17/09/2011 26/09/2012 12/08/2013 07/06/2014 30/06/2015 16/03/2017	16/09/2012 25/09/2013 11/08/2014 06/06/2015 29/06/2016 15/03/2018
Bundle -II	VRRB-600/07-08 733	Surajbari S/S	GJB02055	GJB02056	0.5	19/05/2011 17/05/2012 14/05/2013	18/05/2012 16/05/2013 13/05/2014

[13] there was a delay in calibration for sept 2012 ,thereby error factor has been applied in the ER sheet

[14]there was a delay in calibration for sept 2012 ,thereby error factor has been applied in the ER sheet

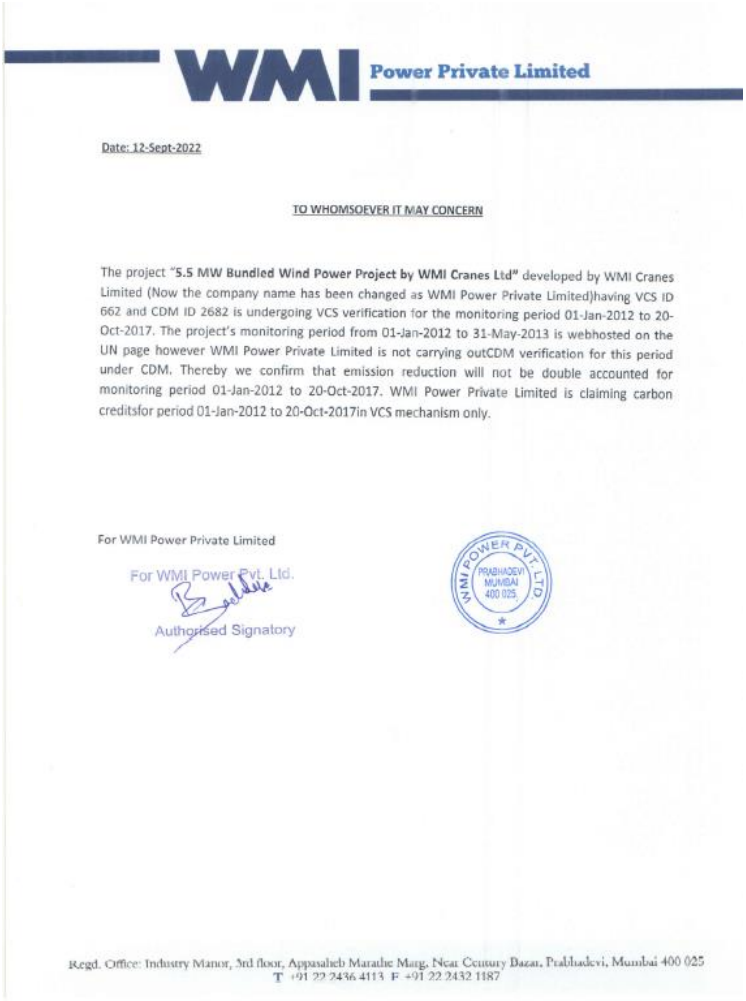
						11/05/2014 08/05/2015 05/05/2016 02/05/2017	10/05/2015 07/05/2016 04/05/2017 01/05/2018
	VRRB-600/07-08734	Surajbari S/S	GJB01199	GJB01200	0.5	06/04/2011 02/04/2012 29/03/2013 26/03/2014 21/03/2015 18/03/2016 15/03/2017	05/04/2012 01/04/2013 28/03/2014 25/03/2015 20/03/2016 17/03/2017 14/03/2018
	VRRB-600/07-08735	Surajbari S/S	GJB01175	GJB01176	0.5	10/02/2011 07/02/2012 04/02/2013 01/02/2014 24/01/2015 20/01/2016 16/01/2017	09/02/2012 06/02/2013 03/02/2014 31/01/2015 23/01/2016 19/01/2017 15/01/2018
	VRRB-600/07-08735	Surajbari S/S	GJU04171		0.5	01/09/2011 11/08/2012 08/08/2013 04/08/2014 02/08/2015 25/07/2016 23/07/2017	31/08/2012 10/08/2013 07/08/2014 03/08/2015 01/08/2016 24/07/2017 22/07/2018
Bundle -III	WEG HT SC. No. 2277	Shankarkoil S/S	TN 903073	-	0.5	16/07/2012 [15]	15/07/2013

[15] there was a delay in calibration for july 2012, thereby error factor has been applied in the ER sheet .

WEG HT SC. No. 2281	Shankarkoil S/S	TNU04733	-	0.5	6/07/2012[16]	15/07/2013

[16] there was a delay in calibration for july 2012 ,thereby error factor has been applied in the ER sheet .

APPENDIX 6: DECLARATION FOR NO DOUBLE COUNTING



WMI Power Private Limited

Date: 12-Sept-2022

TO WHOMSOEVER IT MAY CONCERN

The project "**5.5 MW Bundled Wind Power Project by WMI Cranes Ltd**" developed by WMI Cranes Limited (Now the company name has been changed as WMI Power Private Limited)having VCS ID 662 and CDM ID 2682 is undergoing VCS verification for the monitoring period 01-Jan-2012 to 20-Oct-2017. The project's monitoring period from 01-Jan-2012 to 31-May-2013 is webhosted on the UN page however WMI Power Private Limited is not carrying outCDM verification for this period under CDM. Thereby we confirm that emission reduction will not be double accounted for monitoring period 01-Jan-2012 to 20-Oct-2017. WMI Power Private Limited is claiming carbon creditsfor period 01-Jan-2012 to 20-Oct-2017in VCS mechanism only.

For WMI Power Private Limited

For WMI Power Pvt. Ltd.

Authorised Signatory

WMI POWER PVT. LTD. PRABHADEVI MUMBAI 400 025.

Regd. Office: Industry Manor, 3rd floor, Appasaheb Marathe Marg, Near Century Bazar, Prabhadevi, Mumbai 400 025
T +91 22 2436 4113 F +91 22 2432 1187

WMI Power Private Limited

Date: 12/09/2022

TO WHOMSOEVER IT MAY CONCERN

We WMI Power Private Limited, Project Proponent of the VCS Project titled "5.5 MW Bundled Wind Power Project by WMI Cranes Ltd" (VCS Project Reference no: VCS 662) hereby confirm that:

- WMI Power Private Limitedhas the sole right of use of emission reduction generated from this project activity.
- Has no binding limits of GHG emission and project activity has not been applied for any compliance market.
- The project activity has not rejected by any other GHG programme. The project activity is not claiming any REC benefits for the current monitoring period.
- The project neither has nor intended to generate any other form of GHG related environment credit for GHG emission reductions claimed under the VCS program.
- The project has been registered as CDM project titled "5.5 MW Bundled Wind Power Project by WMI Cranes Ltd." (UNFCCC No: 2682), Net emission reductions or removals generated by the Project will not be used for compliance with an emission trading program.WMI Power Private Limitedwill not claim emission reduction achieved from this project in multiple GHG mechanism for this monitoring period (01-Jan-2012 to 20-Oct-2017), hence it will avoid double counting.

For WMI Power Pvt. Ltd.

For WMI Power Private Limited

Authorised Signatory

WMI POWER PVT. LTD. PRABHADEVI MUMBAI 400 025.

Regd. Office: Industry Manor, 3rd floor, Appasaheb Marathe Marg, Near Century Bazar, Prabhadevi, Mumbai 400 025
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