WIND POWER PROJECT IN RAJASTHAN

Document Prepared By Earthood Services Private Limited

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Summary:

Earthood has performed the third verification of the VCS project "Wind power project in Rajasthan" (VCS Ref. Number 1195). During the current verification, PP have chosen the monitoring period from 01-06-2018 to 05-12-2019 (including both days).

The objective of this verification activity is to have an independent third party assessment of the project design, actual ER sheet and to ensure a thorough assessment of the implementation of project activity against the applicable CDM and VCS requirements.

The scope of verification includes confirming the implementation of the monitoring plan of the registered VCS PD, version 02 dated 08-10-2013 and the application of the monitoring methodology ACM0002 version 12.3.0.

The verification consisted of three phases:

i) desk review of the project;

ii) follow-up onsite visit and interviews with project stakeholders;

iii) resolution of outstanding issues and the issuance of the final verification report and opinion.

The overall verification, from Contract Review to Verification Report & Opinion, was conducted following Earthood internal quality procedures.

Mytrah Energy (India) Limited (MEIL) (formerly Caparo Energy (India) Limited) is an independent power producer in India. MEIL has installed 42 MW wind power project consisting total 20 turbines of 2.1 MW each in Jaisalmer District, Rajasthan. The Project activity feed generated power to the NEWNE regional grid of India (Now INDIAN gird) which helps in reducing the supply demand gap in the state. Being renewable power, using zero emissions helps to reduce GHG emissions and pollutants like SOx, NOx, and SPM emitted in the conventional thermal power generation facilities.

A risk-based approach has been followed to perform this verification activity and No uncertainties associated with the verification. During the verification process 05 CARs, 00 CL and 00 FARs were raised and are discussed in detail in Appendix 4. The review of the Monitoring report and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews with project owners have provided ESPL with sufficient evidence to verify the fulfilment of the stated criteria of VCS. ESPL confirms that the monitoring system is in place and the emission reductions are calculated without material misstatements.

Therefore, the emission reductions from the project activity "Wind power project in Rajasthan" in India during this verification period 01-06-2018 to 05-12-2019 (including both days) could be verified as below:

Vintage wise representation of the emission reductions is as follows:

Period	Baseline Emissions (tCO2e)	Project Emissions (tCO2e)	Leakages (tCO2e)	Emission Reductions (tCO2e)
01/06/2018 to 31/12/2018	39978	0	0	39978
01/01/2019 to 05/12/2019	51314	0	0	51314
Total	**91,292**	**0**	**0**	**91,292**

1 INTRODUCTION

1.1 Objective

Mytrah Energy (India) Limited has commissioned Earthood Services Private Limited (Earthood) to perform third VCS verification of the "Wind power project in Rajasthan" (hereafter called project) for the monitoring period 01-06-2018 to 05-12-2019 (including both days) with VCS Ref number 1195[1]. The objective of this verification is a thorough and independent verification for the emission reductions reported for "Wind power project in Rajasthan" and managed by Mytrah Energy (India) Limited.

This 2nd periodic verification is the independent review and ex post determination by Earthood Services Private Limited of the monitored reductions in GHG emissions that have occurred as a result of the registered VCS project activity "Wind power project in Rajasthan" during a defined monitoring period 01-06-2018 to 05-12-2019 (including both days). Certification is the written assurance by Earthood that, during a specific period in time, a project activity achieved the emission reductions 91,292 tCO_2e as verified.

1.2 Scope and Criteria

The scope of the verification is to establish and verify that;

a) The project activity has been implemented and operated as per the registered PD or any approved revised PD, and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place;

b) The monitoring report and other supporting documents provided are complete in accordance with the latest applicable version of the completeness checklist for requests for issuance of VERs, verifiable, and in accordance with applicable VCS requirements;

c) The actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan, any revised approved monitoring plan, the approved methodology including applicable tool(s) and/or, where applicable, the approved standardized baseline;

The data recorded and stored as per the monitoring methodology including applicable tool(s) and, where applicable, the standardized baseline.

[1] https://registry.verra.org/app/projectDetail/VCS/1195

1.3 Level of Assurance

A draft verification report that is prepared by assessment team will be reviewed by an independent technical review team (one or more members) to confirm if the internal procedures established and implemented by Earthood were duly complied with and such opinion/conclusion is reached in an objective manner that complies with the applicable VCS and CDM (Clean Development Mechanism) requirements as appropriate. The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team are independent of the verification team. The report approved by Quality Manager is endorsed by Managing Director, who is overall responsible to ensure quality, before final release. The further details of applicable procedures and responsibilities about Earthood Quality Management System (QMS) are available on its website (*www.earthood.in*).

Earthood's verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. Earthood planned and performed the verification by obtaining evidence and other information and explanations that Earthood considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

In our opinion the GHG emissions reductions reported for the project activity for the period 01-06-2018 to 05-12-2019 (including both days) are fairly stated in the Monitoring Report Version 02 dated 07-07-2020/2/. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology ACM0002 version 12.3.0/7/, and the VCS standard/13/.

For more information, please refer to section 5 of this verification report.

1.4 Summary Description of the Project

Mytrah Energy (India) Limited (MEIL) (formerly Caparo Energy (India) Limited) is an independent power producer in India. MEIL has installed 42 MW wind power project consisting total 20 turbines of 2.1 MW each in Jaisalmer District, Rajasthan. The Project activity feed generated power to the NEWNE regional grid of India (Now INDIAN gird) which helps in reducing the supply demand gap in the state. Being renewable power, using zero emissions helps to reduce GHG emissions and pollutants like SOx, NOx, and SPM emitted in the conventional thermal power generation facilities. Based on the onsite assessment/9/ and document review/6/,/10/&/11/, it was observed that the project activity is implemented inline with the VCS PD/1/..

Assessment team checked the Commission of all the WTGs via the commissioning Certificates and found correct/9/, /10/.

The wind power project is located in Tejwa – Mokal village, Jaisalmer District, Rajasthan State, India. The geo- coordinates of the project location is as follows along with commissioning dates are provided in Section 4.1 of this report.

The technology employed, is environment friendly technology since there are no GHG emissions associated with the electricity generation/9/.

Duration of this VCS periodic verification of the project activity is from 01-06-2018 to 05-12-2019 (inclusive both days) and total emission reductions achieved during this monitoring period is 91,292 tCO_2e.

The commissioning details of the WTGs mentioned in MR/2/ was verified from the commissioning certificates/10/ provided by the PP.

Technical description was found to be consistent with the on-site observation/9/ and registered VCS PD/1/.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Earthood internal procedures.

The Project was verified against the latest requirements and guidance set out in VCS and CDM standards.

No sampling approach has been applied by the verification team as all the monthly reported figures in the MR/2/ and the ER sheet/3/ were checked from the actual records/6/.

2.2 Document Review

The verification is performed primarily as a document review of the documents submitted at various stages of assessments. The review is performed by assessment team using dedicated protocols. The assessment team cross checks the information provided in the documents (PDD, MR, validation report) and information from sources other than those used, if available, and also conducts independent background investigations. Earthood conducted a desk review as under;

a) A review of the data and information presented to verify their completeness.

b) A review of the monitoring plan, the monitoring methodology including applicable tool(s) and, where applicable, the applied standardized baseline, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures.

c) An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

2.3 Interviews

Earthood performed an on-site visit and interviews on 22/02/2020 with project stakeholders to confirm selected information and to resolve issues identified in the document review. During the on-site visit, the PP representatives were interviewed

No.	Interviews			Date	Subject	Team Member
	Last Name	First Name	Affiliation			
1.	Pramanik	Amit	PP Representative	22/02/2020	Project implementation, WTG	Atul Takarkhede

No.	Interviews			Date	Subject	Team Member
	Last Name	First Name	Affiliation			
					operation, maintenance JMR, Calibration etc.	
2.	Kumar	Krishnan	Technician	22/02/2020	WTG operation, maintenance	

In addition, the location specified for the WTG were verified from the registered PD/1/ along with the help of mobile GPS. The operation of the WTGs was checked through the JMRs/6/ issued from the government authorities. Based on the site visit and desk review, the verification team is sufficiently confident of the implementation of the project activity as per registered PD/1/.

2.4 Site Inspections

A site visit was undertaken by Earthood from on 22/02/2020 to carry out following;

a. An assessment of the implementation and operation of the registered project activity as per the registered PD/1/.
b. A review of information flows for generating, aggregating and reporting the monitoring parameters.
c. Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the PD/1/.
d. A cross check between information provided in the monitoring report and data from other sources such as invoices.
e. A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the PD, the applied methodology including applicable tool(s), and, where applicable, the applied standardized baseline.
f. A review of calculations and assumptions made in determining the GHG data and emission reductions.
g. An identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

Technical descriptions as observed on site was found to be in line with the registered VCS PD/1/. The locations of visited WTGs was recorded through mobile application of Google earth/16/. The geo-coordinates were found inline with the registered VCS PD/1/.

2.5 Resolution of Findings

The objective of this step is to identify, discuss and conclude on the issues related to the monitoring, implementation and operations of the registered project activity that could impair the capacity of the registered project activity to achieve emission reductions or influence the monitoring and reporting of emission reductions. This is done based on the desk review and onsite assessment. The verification team prepares and/or updates a verification protocol (internal document) that records the conformities and nonconformities, which may be of following types;

CAR (Corrective Action Request) is raised if one of the following occurs:

a) Non-compliance with the monitoring plan, the methodology or the standardized baseline are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient

b) Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants

c) Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions

d) Change to the key sustainable development indicators

e) Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants.

Clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable requirements have been met. All CARs and CLs raised by the Earthood during verification shall be resolved prior to submitting a request for issuance.

FAR (Forward Action Request) is raised during verification if the monitoring and reporting require attention and/or adjustment for the next verification period.

A total of 05 CAR and 00 CL were raised in the current verification. No FAR was raised. All the findings that are raised and communicated to project participant during the verification are included under Appendix 4. The section also includes the response, if provided, by the project participants and an assessment by the verification team if it was closed out or otherwise

2.5.1 Forward Action Requests

This is third periodic verification of the project activity and no FAR was raised from validation or previous verifications.

2.6 Eligibility for Validation Activities

This section is not applicable for present verification.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

This section is not applicable for present verification

3.2 Methodology Deviations

This section is not applicable for present verification.

3.3 Project Description Deviations

This section is not applicable for present verification.

3.4 Grouped Project

This is not a grouped project.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

Mytrah Energy (India) Limited (MEIL) (formerly Caparo Energy (India) Limited) is an independent power producer in India. MEIL has installed 42 MW wind power project consisting total 20 turbines of 2.1 MW each in Jaisalmer District, Rajasthan. The Project activity feed generated power to the NEWNE regional grid of India (Now INDIAN gird). It was observed that the project activity is implemented inline with the VCS PD/9/,/6/,/10/&/11/..

The installation and specification of WTGs have been checked with commissioning certificates/10/ and during on-site assessments/9/. There was no major breakdown or shut downs during the monitoring period which might affect the applicability of methodology or might cause material errors in emission reductions/6/.

The geo- coordinates of the project location is as follows along with commissioning dates are provided below

Sr. No.	WTG ID	Latitude	Longitude	Date of Commissioning
1	MK014	27.1631	70.6809	04-08-2011
2	MK015	27.1612	70.6858	19-07-2011
3	MK016	27.1594	70.6907	19-07-2011
4	MK017	27.1576	70.6956	19-07-2011
5	MK021	27.1466	70.7251	30-09-2011
6	MK039	27.1697	70.6926	12-07-2011
7	MK040	27.1715	70.6877	12-07-2011
8	MK042	27.1752	70.6779	19-07-2011
9	MK043	27.1771	70.673	04-08-2011
10	MK066	27.1837	70.6848	12-07-2011
11	MK067	27.1812	70.6891	30-06-2011
12	MK068	27.1804	70.6949	30-06-2011
13	MK069	27.1782	70.6995	30-06-2011
14	MK092	27.1887	70.7016	19-06-2011
15	MK093	27.1905	70.6966	25-06-2011
16	MK094	27.1924	70.6917	30-06-2011
17	MK161	27.2195	70.6917	25-06-2011
18	MK163	27.2237	70.6833	25-06-2011
19	MK164	27.2255	70.6784	19-06-2011
20	MK165	27.2274	70.6735	19-06-2011

Assessment team concludes the following:

a) The implementation status of project activity was found to be in compliance with registered PD/1/.

b) VVB team has conducted the on-site visit to confirm the implementation status of the project/9/.

c) The commissioning date of the project activity was found to be accurately and consistently recorded/10/.

d) The actual operation of project activity was found to be in compliance with the flow diagram provided in registered PD/1/.

e) The emission reductions achieved during the current monitoring period are 91,292 tCO_2e/2/, /3/.

The project activity contributes to the sustainable development by utilising wind energy for generating electricity which otherwise would have been generated through fossil fuels. Thereby reduction in usage of non-renewable sources used to generate energy.

Further, the GHG emission reductions generated by the project activity has not been included by any other emissions trading program or any other mechanism that includes GHG allowance trading. Also, the project has not received any other form of environmental credit and has not been participated/rejected under any other GHG programs.

Sustainable Development- The project will contribute to the sustainable development in the following ways

1. **Social well-being:** The project helping in generating employment opportunities during the construction and operation phases. The project activity results in development in infrastructure in the region like development of roads etc.
2. **Economic well-being:** The project is a clean technology investment in the region, and also helps to reduce the demand supply gap in the state.
3. **Technological well-being:** The successful operation of project activity leads to promotion of solar based power generation and encouraging other entrepreneurs to participate in similar projects

4. **Environmental well-being:** The project activity being a renewable source of energy, reducing 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 helping in avoiding significant amount of GHG emissions.

Further the project has been implemented as described in the VCS Project Description/1/.

The total emission reductions achieved in this monitoring period i.e. from 01-06-2018 to 05-12-2019 (including both days) are 91,292 tCO_2e.

CAR 01, CAR 02 & CAR 03 was raised by assessment team and same was closed by PP by submitting revised MR and supporting documents/2/.

4.2 Safeguards

4.2.1 No Net Harm

Not applicable

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/09/. Assessment team checked the grievance registers 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 site visit and interviews with PP, it was confirmed that Site Manager/In-charge is responsible to address any grievances received from stakeholders/9/. During current monitoring period no grievance was received. Thus, assessment team is of the opinion that the ongoing stakeholder mechanism is adequate and appropriate.

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

The project monitoring has been carried in accordance with the registered VCS PD/1/ and the monitoring report/02/. The monitoring plan laid in the registered PD is being followed at the site/9/. The assessment team has verified the information flow (from data generation, aggregation, to recording, calculation and reporting for these parameters including the values) in the MR/2/.

The emission reductions are purely based on the net electricity generated and exported from the machines. PP has provided all the sufficient data for current monitoring period. The values of the parameter $EG_{PJ,y}$ used in deriving the GHG emission reduction could be very well correlated between the data sets and ER spreadsheet/3/ provided by PP. The verification of each monitoring parameter has been discussed later in section 4.5.

The calculation method and formulae used in calculating baseline emission is in compliance to the methodology used i.e. ACM0002 version 12.3.0/7/. Since project activity is a wind power project, leakage emission and project emission has been considered as zero/1/.

CAR 04 was raised for actual practices of the monitoring at the site and same was resolved by submitting revised MR/2/.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

The below tables describe how the parameter, that is to be measured according to the monitoring plan, has been verified to confirm that the actual monitoring complies with the monitoring plan, monitoring data has been thoroughly assessed and that the calibration requirements are fulfilled.

Parameter	$EG_{PJ,y}$ (MWh) Quantity of net electricity exported to the grid during the year y

Means of verification

Criteria/Requirements	Assessment/Observation
Measuring /Reading /Recording frequency	The parameter is continuously measured and monthly recorded in Monthly electricity as JMR/6/.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The reporting frequency is in line with the monitoring plan as outlined in the registered PD/1/ and monitoring methodology/7/.
Monitoring equipment	Dedicated meters located at the sub-station/delivery points/9/.
Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	Accuracy class of the equipment is 0.2s, which is in line to registered PD/1/ and consistent with calibration certificate/4/ as well. Information was found consistent onsite/9/.
Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	Accuracy class is valid for entire range.
Calibration frequency /interval:	The meters are calibrated by respective State Utility/authorized agency once in a year/1/. Same are verified from the calibration certificates provided by the PP/4/. Details of the calibration are provided in FVR Appendix 5 and revised MR Appendix 1.
Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, Pending untill the findings are closed.or as per the manufacturer's specifications?	Yes
Is the calibration of measuring equipment carried out by an accredited person or institution?	The meters are calibrated by respective State Utility's testing division/authorized agency once in a year/4/.
Is(are) calibration(s) valid for the whole reporting period?	Yes. The calibration dates are presented in appendix 5 of this report. The dates have been checked from the calibration certificates/4/. Thus, it is valid for the whole monitoring period.
Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	Yes
How were the values in the monitoring report verified?	A value of Net Electricity export by the project activity for the monitoring period

		(95,804.82 MWh) verified from monthly joint meter reading issued by State Utility submitted by PP[/6/]. The value was found to be consistently reported in MR[/2/] and ER sheet[/3/].
	If applicable, has the reported data been cross-checked with other available data?	The readings were cross checked with the monthly bills raised by PP to State Utility[/6/].
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the calibration of the monitoring meters is done by state utility periodically. Check meters also help in verifying main meter readings[/4/].
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues.
Findings	CAR 05 was raised and resolved.	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan. The implementation of the project is as per the registered PD[/1/] could be confirmed by the verification team.	

Parameter	**$E_{,WEG,I,Y}$ (MWh)** Quantity of Electricity generated by the individual WEGs of the PP in year y.
Means of verification	

Criteria/Requirements	Assessment/Observation
Measuring /Reading /Recording frequency	Electricity generated by the WEG is continuously monitored by the controller meter installed within the WEG. These reading are recorded online by the technology supplier[/6/].
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The reporting frequency is in line with the monitoring plan as outlined in the registered PD[/1/] and monitoring methodology[/7/].
Monitoring equipment	Electricity generated by the WEG is continuously monitored by the controller meter installed within the

		WEG/9/.
	Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	NA
	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	NA
	Calibration frequency /interval:	The WEG controller does not require calibration/1/.
	Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, Pending untill the findings are closed.or as per the manufacturer's specifications?	NA
	Is the calibration of measuring equipment carried out by an accredited person or institution?	NA
	Is(are) calibration(s) valid for the whole reporting period?	NA
	Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	NA
	How were the values in the monitoring report verified?	A value of Quantity of Electricity generated by the individual WEGs of the PP for the monitoring period (105226.41 MWh, cumulative for all PP WTGs) verified from Controller data reading maintained by technology supplier/6/. The value was found to be consistently reported in MR/2/ and ER sheet/3/.

	If applicable, has the reported data been cross-checked with other available data?	The readings were cross checked with online monitored data by technology supplier/6/.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	NA
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues.
Findings	No finding was raised.	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan. The implementation of the project is as per the registered PD/1/ which has been confirmed by the verification team.	

Parameters fixed ex ante:

$EF_{grid,OMsimple,y}$: tCO_2e/MWh: It is the Operating margin CO_2 emission factor of NEWNE grid at the time of project registration the mentioned value of 0.9842 tCO_2e/MWh is consistent with the registered PD/1/.

$EF_{grid,BM,y}$; tCO_2e/MWh: it is Build margin CO_2 emission factor of NEWNE grid fixed and at the time of project registration the mentioned value of 0.8588 tCO_2e/MWh is consistent with the registered PD/1/.

$EF_{grid,CM,y}$; tCO_2e/MWh: it is the Combined margin CO_2 emission factor of NEWNE grid fixed at the time of project registration the mentioned value of 0.9529 tCO_2e/MWh is consistent with the registered PD/1/.

Calibration of meters:

During the verification assessment of the project activity, accuracy of all the metering was checked/4/. The installation and working conditions of the meters were checked during the on-site inspection/9/. Calibration details of the meters are given in Appendix 5 of this report.

In line with the registered PD/1/, calibration frequency of the billing meters is once in a year and no delay in calibration has been observed in this periodic verification/4/. Further, there was not any significant period of shut-down or break-down period during this monitoring period.

GHG Calculations

The emission reduction as per the applied methodology equals the baseline emissions (project emissions and leakage emissions for such project activities is considered zero)/1/. The formula provided for the calculation of baseline emissions is:

$$BE_y = EG_{PJ,\,y} * EF_{grid,\,CM,\,y}$$

Where:

BE_y = Baseline Emissions in year y (tCO_2)

$EG_{PJ,\,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr)

$EF_{grid,\,CM,\,y}$ = Combined margin CO_2 emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (tCO_2/MWh)

Baseline emissions (BE_y) are calculated as follows:

$$BE_y = EG_{PJ,\,y} * EF_{grid,\,CM,\,y}$$

$$= 95{,}804.82 \times 0.9529$$

$$= 91{,}292\ tCO_2e$$

Project Emissions:

No project emissions are applicable since this is a wind energy generation project. This is verifiable from the applied methodology ACM0002, ver. 12.3.0/7/.

Leakage:

No leakage emissions are applicable to the project activity, since it is a wind energy generation project. This can be verified from the applied methodology ACM0002, ver. 12.3.0/7/.

Emissions Reductions for Project activity:

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
01/06/2018 to 31/12/2018	39,978	0	0	39,978
01/01/2019 to 05/12/2019	51,314	0	0	51,314
Total	**91,292**	**0**	**0**	**91,292**

4.6 Non-Permanence Risk Analysis

Not applicable

5 VERIFICATION CONCLUSION

Earthood Services Private Limited (Earthood), contracted by Mytrah Energy (India) Limited, has performed the independent verification of the emission reductions for the VCS project activity reference number 1195 "Wind power project in Rajasthan"/12/ in India for the monitoring period 01-06-2018 to 05-12-2019 (including both days) reported in the Monitoring Report Version 02 dated 07-07-2020/2/.

It is our responsibility to express an independent verification statement on the reported GHG emission reductions from the project activity.

Earthood commenced the verification on the basis of the baseline and monitoring methodology ACM 0002 version 12.3.0/7/, the monitoring plan contained in the VCS PD Version 02/1/ and VCS guidelines version 4.0/13/, Monitoring Report Version 02 dated 07-07-2020/2/ as per the process described under Section 2 of this report.

Earthood's verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. Earthood planned and performed the verification by obtaining evidence and other information and explanations that Earthood considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

In our opinion the GHG emissions reductions reported for the project activity for the period 01-06-2018 to 05-12-2019 (including both days) are fairly stated in the Monitoring Report Version 02 dated 07-07-2020. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology ACM 0002 version 12.3.0 and the VCS standard.

Monitoring period: 01-06-2018 to 05-12-2019 (both days inclusive)

Verified GHG emission reductions and removals in the above verification period:

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
01/06/2018 to 31/12/2018	39,978	0	0	39,978
01/01/2019 to 05/12/2019	51,314	0	0	51,314
Total	**91,292**	**0**	**0**	**91,292**

Approved by

Dr. Kaviraj Singh

Managing Director

Earthood Services Privated Limited

Date: 05/08/2020

Place: Gurgaon, Haryana

APPENDIX 1: DOCUMENTS REVIEWED OR REFERENCED (VERIFICATION)

S. No	Title of Document	Version	Date
1.	Registered VCS PD, VERSION 03 DATED 08-10-2013	03	20-12-2017
2.	Draft VCS Monitoring Report Final VCS Monitoring Report	01 02	12-02-2020 07-07-2020
3.	Draft ER spread sheet ER spread sheet (corresponding to the final monitoring report)	01 02	12-02-2020 07-07-2020
4.	Certificates of Calibration for all the meters belongs to project activity	-	-
5.	Invoice issued by PP for the duration of 01-06-2018 to 05-12-2019	-	-
6.	Joint Meter Readings for the duration of 01-06-2018 to 05-12-2019 Daily generation logbooks maintained at the plant for daily generation from each WTG	-	-
7.	"Consolidated baseline methodology for grid-connected electricity generation from renewable sources", ACM0002	version 12.3.0	-
8.	CO2 Baseline Database for the Indian Power Sector published by the Central Electricity Authority (CEA), Ministry of Power, Govt.	07	-
9.	On-site assessment, interviews of plant staff	-	22/02/2020
10.	Commissioning certificate for all the WTGs of the project activity from Jodhpur DISCOM for commissioning 2.1 MW x 3 dated 25-06-2011 2.1 MW x 3 dated 19-06-2011 2.1 MW x 3 dated 12-07-2011 2.1 MW x 4 dated 30-06-2011 2.1 MW x 4 dated 19-07-2011 2.1 MW x 2 dated 04-08-2011 2.1 MW x 1 dated 30-09-2011	-	-
11.	Power Purchase Agreements	-	-
12.	VCS webpage for the project, VCS ID 1195; https://registry.verra.org/app/projectDetail/VCS/1195	-	Last accessed on 18/05/2020
13.	VCS Standard	Version 4.0	Last accessed on 18/05/2020
14.	VCS Program Guide	Version 4.0	Last accessed on 18/05/2020
15.	Letter of declaration dated from PP regarding not having created or sought any other form of environmental credit for the same period and double counting	-	-
16.	Google Earth desktop/Mobile application	-	Last accessed on 18/04/2020

APPENDIX 2: COMPETENCY STATEMENT

Competence Statement			
Name	Atul Takarkhede		
Education	Ph.D. Environmental Science		
Experience	12 years		
Field	Climate Change and environment		
Approved Roles			
Team Leader	YES		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	NO		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert	YES (1.2)		
Reviewed by	Shreya Garg	**Date**	24/04/2019
Approved by	Anshika Gupta	**Date**	25/04/2019

Competence Statement			
Name	Sanjeev Kumar		
Country	India		
Education	B. Tech. (Chemical Engineering) M.Tech. (Energy Management)		
Experience	13.5 years +		
Field	Climate Change, Environment, Energy		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	YES (ACM0002, ACM0006, ACM0004, ACM0009, ACM0012, ACM0001, AMS I.D, AMS I.F, AMS I.C, AMS I.A, AMS II.D, AMS II.E, AMS III.H, AM0009, AM0013, AM0025, AM0056, AM0028, AM0029, AM0008)		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.1, TA 1.2, 4.1, 13.1)		
Reviewed by	Shreya Garg	**Date**	13/12/2018

Approved by	Anshika Gupta	**Date**	13/12/2018

Competence Statement			
Name	Shreya Garg		
Country	India		
Education	M.Sc. (Climate Science & Policy), TERI University		
Experience	6 Years +		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS.I.A., AMS.I.C., AMS.I.D., AMS.I.F., AMS.II.D., AMS.II.G., AMS.II.J., AMS.III.AV., ACM0002, ACM0012		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.2, TA 3.1)		
Reviewed by	Abhishek Mahawar	**Date**	01/03/2018
Approved by	Ashok Gautam	**Date**	01/03/2018

APPENDIX 3: ABBREVATIONS

Abbreviations	Full texts
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction(s)
CEA	Central Electricity Authority
CL	Clarification request
CM	Combined Margin
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

Abbreviations	Full texts
EIA	Environmental Impact Assessment
ER	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GWP	Global Warming potential
PP	Project Participant

APPENDIX 4: CORRECTIVE ACTION REQUESTS, CLARIFICATION REQUESTS AND FORWARD ACTION REQUESTS (CAR/CL/FAR)

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

FAR ID	XX	Section no.	E.2	Date : DD/MM/YYYY
Description of FAR				
There is no FAR from the validation of the project activity				
Project participant response				Date : DD/MM/YYYY
NA				
Documentation provided by project participant				
NA				
DOE assessment				Date: DD/MM/YYYY
NA				

Table 2. CL from this verification

CL ID	XX	Section no.	4.1	Date : DD/MM/YYYY
Description of CL				
NA				
Project participant response				Date : DD/MM/YYYY
NA				
Documentation provided by project participant				
NA				
DOE assessment				Date: DD/MM/YYYY
NA				

Table 3. CAR from this verification

CAR ID	01	Section no.	4.1	Date : 05/03/2020
Description of CAR				
Alteration in VCS MR template observed during review of MR. Correction sought.				
Project participant response				Date : 02/04/2020
Alteration in VCS MR template have now been corrected in this submission.				
Documentation provided by project participant				
VCS MR V2				
DOE assessment				Date: 10/04/2020
PP have submitted revised MR and found that page numbers are now included inline with VCS template. CAR thus closed.				

CAR ID	02	Section no.	4.1	Date : 05/03/2020
Description of CAR				
PP requested to submit declaration in effect of avoiding double counting with regard to Participation under other GHG Programs/Other forms credits.				
Project participant response				Date : 02/04/2020
Project participant declaration regarding no double counting has been provided with this submission				
Documentation provided by project participant				
Declaration regarding no double counting				
DOE assessment				Date: 10/04/2020
Declaration in effect of avoiding double counting with regard to Participation under other GHG Programs/Other forms credits have been submitted by PP. CAR closed.				

CAR ID	03	Section no.	4.4	Date : 05/03/2020
Description of CAR				
PP requested to submit copies of PPAs and commissioning certificates for the project activity.				
Project participant response				Date : 02/04/2020
Copies of PPAs and commissioning certificates are now being provided with this submission.				
Documentation provided by project participant				
PPAs and Commissioning certificates				
DOE assessment				Date: 10/04/2020
PP have submitted PPA and commissioning certificates and information in MR found inline with the certificates. CAR thus closed.				

CAR ID	04	Section no.	4.5	Date : 05/03/2020
Description of CAR				
MR lacks the actual practices of the monitoring at the sites. Correction sought in this regard.				
Project participant response				Date : 02/04/2020
Actual MR practices that are followed at the site are now included in the VCS MR V2.				
Documentation provided by project participant				
MR version 02				
DOE assessment				Date: 10/04/2020
PP have submitted revised MR with actual practices of the monitoring at the sites. CAR thus closed.				

CAR ID	05	Section no.	4.3	Date : 05/03/2020
Description of CAR				
PP requested to submit copies of the calibration certificates/meter replacement records to justify calibration frequency compliance throughout monitoring period.				
Project participant response				Date : 02/04/2020
Calibration are records are now being submitted. The calibration details for RJB90207 and RJB90206 are now being shared for the year 2018				
Documentation provided by project participant				
Calibration records				
DOE assessment				Date: 10/04/2020
PP have submitted all the calibration reports and found that there is no delay in the calibration of the monitoring Meters involved. Details of the calibration dates in the MR found correct. CAR closed.				

Table 4. FAR from this verification

FAR ID	XX	Section No.		Date : DD/MM/YYYY
Description of FAR				
There is no FAR from this verification				
Project participant response				**Date :** DD/MM/YYYY
NA				
Documentation provided by project participant				
NA				
DOE assessment				**Date:** DD/MM/YYYY
NA				

APPENDIX 5: CALIBRATION DETAILS OF THE METERS

Feeder number	Meter number	Meter make	Accuracy Class	Calibration date	Calibration due date	Delay
SEL-73	13195548	L&T	0.2s	18/04/2018	17/04/2019	No
			0.2s	23/03/2019	22/03/2020	No
	13195549	L&T	0.2s	18/04/2018	17/04/2019	No
			0.2s	23/03/2019	22/03/2020	No
SEL-112	RJB90206	L&T	0.2s	18/04/2018	17/04/2019	No
			0.2s	23/03/2019	22/03/2020	No
	RJB90207	L&T	0.2s	18/04/2018	17/04/2019	No
			0.2s	23/03/2019	22/03/2020	No