2.45 MW WIND POWER PROJECT IN RAJASTHAN, INDIA BY YAMUNA POWER AND INFRASTRUCTURE LTD.

Document Prepared By Earthood Services Private Limited

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Summary:

The project activity by Yamuna Power & Infrastructure Ltd. involves the generation of electricity through wind power plant with a total capacity of 2.45 MW. It consists of three Wind Turbine Generators (WTGs), 2 no's X 600 KW and 1 no's X 1250 KW in the state of Rajasthan, India. This is a greenfield project activity and supply the generated electricity to the NEWNE (Now Indian Grid). Thus, project activity has reduced the dependence on fossil fuel-powered power plants by substituting carbon-intensive energy with the clean renewable wind energy. As per the baseline scenario, "Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants that are fossil fuel fired power plants". The baseline scenario is the same as the scenario existing prior to the implementation of the project activity.

During the Current Monitoring Period from 02-August-2009 to 27-March-2016[1] (First and last date included) the project activity has supplied 19,265.65 MWh of electricity, and thus contributing to the GHG reductions 17,450 tCO_2e.

EKI Energy Services Limited contracted **ESPL** to conduct the verification of the project. The scope of verification includes confirming the implementation of the monitoring plan in the registered PD (Version 02 dated 05-November-2009) and the application of methodology AMS-I.D.: Consolidated methodology for grid-connected electricity generation from renewable sources, Version 14.0

[1] PP obtained exemption for choosing monitoring period more than 6 years vide VERRA letter dated 06-August-2021.

The verification consisted of three phases: a. Desk review of the project; b. Follow-up interviews/remote audit; c. Resolution of outstanding issues and issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted following ESPL's internal quality procedures.

A risk-based approach has been followed to perform this verification activity and No uncertainties associated with the verification. A total of 00 CL and 06 CARs have been raised during the verification process of the project activity which were successfully closed.

ESPL confirms that the monitoring system is in place and the emission reductions are calculated without material misstatements.

CONTENTS

1 INTRODUCTION

1.1 Objective

"EKI Energy Services Limited" has contracted ESPL (Hereinafter referred as Earthood) to conduct the verification of the project activity "2.45 MW Wind Power Project in Rajasthan, India by Yamuna Power and Infrastructure Ltd." according to the requirements of the Verified Carbon Standard Version 4.1.

The objective of this verification is to verify and certify emission reductions reported for the PA "2.45 MW Wind Power Project in Rajasthan, India by Yamuna Power and Infrastructure Ltd." for the period 02-August-2009 to 27-March-2016 (including both days).

1.2 Scope and Criteria

The scope of the verification is to establish/verify that:

- the appropriate VCS-MR form (and other templates) was used and correctly filled up; (As per https://verra.org/wp-content/uploads/2019/09/VCS-V4-Summary-of-Effective-Dates.pdf the use of updated version of all VCS Program templates and representations is mandatory from 19 March 2020)
- The project activity is in accordance with all relevant host country criteria (India);
- The project activity is in accordance with all relevant VCS rules and requirements;
- The project activity is in accordance with conditions of the latest version of applied methodology AMS-I.D.: Grid connected renewable electricity generation -Version 14.0/7/·

The verification of the project activity is based on the PD and estimated GHG emission reduction calculations.

1.3 Level of Assurance

☒ Reasonable level of assurance

☐ Limited level of assurance

ESPL'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. ESPL planned and performed the verification by obtaining evidence and other information and explanations that ESPL considers necessary to give reasonable assurance that reported estimated GHG emission reductions are fairly stated. All documentary evidences were checked, and site visit was conducted to project plant site 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 14.0 and the VCS standard, Version 4.1/14/.

1.4 Summary Description of the Project

The project activity by Yamuna Power & Infrastructure Ltd. involves the generation of electricity through wind power plant with a total capacity of 2.45 MW in the state of Rajasthan, India. This is a greenfield project activity and supply the generated electricity to NEWNE Grid (now Indian Grid). The project activity involves operation of 2 X 600 KW (Enercon Make: E-40) and 1 X 1250 KW WTGs (Suzlon make: S-66). The generated electricity through project activity is sold to Rajasthan State Rajasthan Rajya Vidyut Prasaran Nigam Limited (RVPNL). Thus, project activity reduced the dependence on fossil fuel-powered power plants by substituting carbon-intensive energy with the clean renewable wind energy. As per the baseline scenario, "Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants that are fossil fuel fired power plants".

The project is a voluntary action being undertaken by each project owner of the project activity. EKI Energy Services Limited (hereafter referred as "EKIESL") is acting as the other party for this project activity.

Verification team confirmed the capacity by verifying commissioning certificates/10/ and also verified through interview during remote audit that plants are operational in the location (Rajasthan). The details of interconnection with grid of wind power plant and commissioning details are given in Section 4.1 of this report.

The technical specifications of wind power plant confirmed with technical specifications from technology supplier and details as confirmed during site visit provided in Sec. 4.1 of this report.

The electricity meters are of a precision of 0.2. The details of meters such as make, Sr. No, calibration frequency etc. are provided in Appendix 5 of this report. The project is based on sectoral Scope 1: Energy Industries (renewable sources) with AMS-I.D.: Consolidated Baseline Methodology for Grid-connected electricity generation from renewable sources, Version 14.0

During the Current Monitoring Period from 02-August-2009 to 27-March-2016 (First and last date included) the project activity has supplied 19,265.65 MWh of electricity, and thus contributing to the GHG reductions 17,450 tCO_2e.

2 VERIFICATION PROCESS

The registered VCS project is undergoing second verification and the approach adopted to ensure the quality of emission reductions is described in the following sub-sections.

2.1 Method and Criteria

The overall verification, from Contract Review to Verification Report & Opinion, was conducted using ESPL's internal procedures. The Project was verified against the latest requirements (Version 4.1) /14/ and guidance set out in VCS Standards as applicable.

- The verification process consists of the following three phases;
- A document review of the PD /1/ and VCS MR /2/ (described in Section 2.2)
- Site visit and follow up interviews with project stakeholders (described in Section 2.3 and 2.4)
- The resolution of outstanding issues and issuance of the final report and opinion. (Described in Section 2.5)

DOE's Sampling Approach: No sampling approach was required for undertaking the current verification since all monitored data was verified by the assessment team.

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 (PD, 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

A site visit was conducted on 22-September-2021 through which covers site in the state of Rajasthan in India. No sampling procedures were adopted either in document verification and all the documents were cross checked to ensure conservative estimation of emission reduction. Technical details and metering/monitoring arrangement were verified. The names of the persons interviewed during on-site audit interview/9/is given below;

Name of Persons/Designation	Affiliation	Topics discussed	Team Member
Mr. Nishith Kumar	Yamuna Power & Infrastructure Ltd.	Project Implementation, Management practices, Grievance mechanism, Data collection, data storage, QA/QC etc. Monitoring practices, JMR, Calibration requirements etc.	Dr. Atul Takarkhede
Mr. Anant Ladukar	EKI Energy	GHG calculations, MR and ER preparation	

2.4 Site Inspections

Duration of on-site inspection: 22-September-2021				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	Assessment team checked the implementation of the project, Baseline emission, Emission reduction calculation, technical description of the project and Monitoring	Gorera & Soda Mada, Jaisalmer District, Rajasthan, India	22-September-2021	Dr. Atul Takarkhede

A site visit was conducted by the assessment team (Dr. Atul Takarkhede) on 22-September-2021 to carry out the following;

a. An assessment of the implementation and operation of the registered project activity as per the registered PD or any approved revised PD/1/and MR/2/.
b. A review of information flow 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.
d. A cross-check between information provided in the monitoring report and data from other sources such as JMR sheets, invoice slips, PPA agreement etc.
e. A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the PD/1/, 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.

2.5 Resolution of Findings

The findings may be of the following types: CAR- Corrective Action Request, CL- Clarification Request and FAR- Forward Action Request.

The list of findings and their resolution are presented in Appendix 2 of this verification report. The section also includes the response, if provided, by the project participants and an assessment by the assessment team if it was closed or otherwise. It is to be noted that all the findings have been satisfactorily resolved by the assessment team.

A total of 06 CAR and 00 CL were raised in the current verification. All the findings that are raised and communicated to project participant during the verification are included under Appendix 2. 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 2nd periodic verification of the project activity and no FAR is raised during this verification and no FAR from validation/previous verification as well.

2.6 Eligibility for Validation Activities

This section is not applicable for present verification, as ESPL holds the accreditation for Validation of projects for this Sectoral Scope.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

This section is not applicable for present verification. Same was also verified from the UNFCCC CDM website, GS registry, VERRA project database and REC registry of India.

3.2 Methodology Deviations

No methodology deviation is envisaged for present verification.

3.3 Project Description Deviations

As per registered PDD, the site co-ordinates mention is typo error for WEG no. YGCL-01 and YGCL-02. During review, Assessment team observed changed geo co-ordinates and also found same doesn't affect the project design & monitoring of the project activity. Also same is verified during site visit /9/ and Google earth application /17/. Thus, change of WTG's geo co-ordinates has been accepted by VVB.

3.4 Grouped Project

This is not a grouped project. Thus, this section is not applicable for the project activity.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

During onsite verification, Assessment team was concluded that the project is implemented as per the instruction of the registered VCS PD/1/, and this is verified from the commissioning certificates/10/. Since commissioning, the project activity running satisfactorily which is evident from JMRs/6/. During the current monitoring period it was observed that no unforeseen situation evolved which can impact the operation of the project activity. Breakdown summary is submitted by PP for the wind power plant/26/. Scheduled maintenance was carried out as per the instruction of the manufacturer and the same is acceptable to the assessment team/9/.

The project activity by Yamuna Power & Infrastructure Ltd. involves the generation of electricity through wind power plant with a combined capacity of 2.45 MW located at village Gorera & Soda Mada, Jaisalmer district in the state of Rajasthan, India/10/. There is no addition of any new project instance during this verification/1/, /2/ inline with the VCS Standard Version 4.1/14/. The technical parameters/specification have been verified by the assessment team through interview with site personal during the site visit/09/with the nameplates as well as the same is also verified with the details as provided by the manufacturer/18/. The details of WTGs & its commissioning /10/ are given below.

S.No.	WEG No.	Capacity (MW)	Latitude	Longitude	Commissioning Date
1	YGCL-01	0.6	26°44’37” N	70°51'41" E	03-March-2004
2	YGCL-02	0.6	26°45'03” N	70°51'54” E	03-March-2004
3	J-215	1.25	26° 41'15.0" N	70° 53' 23.6" E	14-March-2004

The assessment team interviewed with the PP representative in order to verify the status of the project implementation of the monitoring plan. It has also been verified as per the guidelines in AMS-I.D.: Grid-connected electricity generation from renewable sources, Version 14.0 that the calculations for the GHG emission reductions are done in accordance with the aforesaid methodology/7/.

The assessment team also confirmed that the monitoring system for emission reduction calculation was in place and in accordance with the registered VCS PD/1/.

During the current monitoring duration, no events have been found that can change the design of project/9/. thus, accepted by assessment team.

Capacity of the projects and date of commissioning verified with commissioning certificates/10/and technical specifications provided by technology supplier/18/.

Assessment team checked the technical details of the project activity from the manufactures specification and found correct/18/.

Assessment team concludes the following:

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

b) DOE has conducted the 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 17,450 tCO_2e.

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. Environmental: Since the project activity leads to cleaner production of energy, it is leading to displacement of fossil fuel-based energy.
2. Social: Setting up of the project activity has created new job openings hence is supporting employment of the local people around.
3. Cleaner Air: Since the project activity leads to lesser GHG emission it results in better air quality

Further the project has been implemented as described in the Project Description/1/. CAR 01, CAR 02, CAR 03 & CAR 04 were raised and same were resolved by revision in the MR. details are provided in Appendix 2 of this report.

The total emission reductions achieved in this monitoring period i.e., from 02-August-2009 to 27-March-2016 (including both days) are 17,450 tCO_2e.

4.2 Safeguards

4.2.1 No Net Harm

As PP does not see and identify any potential negative environmental and socio-economic impacts, hence this section is not required.

4.2.2 Local Stakeholder Consultation

Local stakeholder consultation has been conducted at the time of project registration hence not applicable in the current monitoring period. However, PP has kept a dedicated visitor cum grievance registers at the project sites which is accessible to stakeholders to provide their feedback on the project as an ongoing communication with local stakeholders. This is in compliance with the requirement of para 3.16.4 of VCS standard, Version 4.1. Assessment

team has checked the grievances register and confirms that there are no any grievances received during the current monitoring period/28/.

4.3 AFOLU-Specific Safeguards

This is non AFOLU projects, hence this section not applicable.

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 reductions achieved resulting from the MR. The verification team has checked whether calculations of baseline GHG emissions, project GHG emissions and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the monitoring plan of the MR.
Findings	CAR 05 was raised during the verification process and closed successfully. Refer Appendix 2 of this report for the detail closure of the CAR.
Conclusion	**Ex-ante Parameter:** 1. **$EF_{grid,OM,y}$:** Operating margin CO_2 emission factor in year y This Parameter is fixed ex-ante for the entire crediting period and as per the validated PD same is fixed 1009 tCO_2/GWh (0.1009 tCO_2/MWh) for NEWNE grid (Now Indian Grid). Verification team found same was used in the ER calculations. 2. **$EF_{grid,,BM,y}$:** Build margin CO_2 emission factor in year y This Parameter is fixed ex-ante for the entire crediting period and as per the validated PD same is fixed 598 tCO_2/GWh (0.598 tCO_2/MWh) for NEWNE grid (Now Indian Grid). Verification team found same emission factor is used in the ER calculations. 3. **$EF_{grid,CM,y}$:** Combined margin CO2 emission factor for NEWNE grid(now a part of Unified Indian Grid) connected power generation in year y calculated using the "Tool to calculate the emission factor for an electricity system", version 01.1, EB 35. This Parameter is fixed ex-ante for the entire crediting period and as per the validated PD same is fixed 906 tCO_2/GWh (0.906 tCO_2/MWh) for NEWNE grid (Now Indian Grid). Verification team found same emission factor is used in the ER calculations. Ex ante value of emission factor is taken from CEA database, Ver. 04. Verification team checked the EF value and found in consistent with registered PD/1/. **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: - $BE_y = EG_y * EF_{grid,,CM,y}$

Where,

$EG_{,y}$= Net quantity of electricity supplied to the manufacturing facility by the project during the year y in MWh

$EF_{grid,,CM,y}$ = Grid emission coefficient for the electricity displaced due to project activity during the year y (tCO_2/ MWh).

Thus,

BE_y = 17,450 tCO_2e (round down values)

Monitored Parameter:

1. **EG_y**: Net Electricity exported to grid by the project activity in year y

This parameter is calculated using the Joint Energy Meters (Tri vector meter of accuracy class 0.2) installed at the substation, together with controller meter reading at the WTGs. The joint energy meter (Main Meters and check meters) are two-way meters where RVNPL officials take the readings (joint meter reading) on monthly basis. The joint energy metering reading report is issued by RVNPL together with the O & M personnel. This reading is used to estimate the net power exported to the grid. The energy generated from individual WTGs is monitored continuously through SCS/LCS Controller. The net electricity exported to the grid by individual WTGs is calculated based on the appropriation of electricity as mentioned in Registered PD and MR.

Assessment team found 19,265.65 MWh value correct and inline with the JMR and invoices. Thus accepted.

The verification team has checked the entire monthly JMR reports/06/ for net electricity generated & supplied to the grid and crosschecked same with the invoices/05/ raised by PP towards State Utilities for the monitoring period. All values are found correct/3/. All the parameters are monitored and recorded as per the monitoring plan in the MR/2/. However, PP have apportioned the values for the first month of the monitoring period where date is not matching with JMR cycle. Apportioning found appropriate and conservative/3/.

The verification team has crosschecked the revised emission reduction sheet and monitoring report data with the JMR sheet and invoice and found all the values are matching.

PE_y = As per approved PD, para 35 of the Small scale methodology AMS-I.D. (Version 14.0), all renewable energy power generation project activities, emissions due to the use of fossil fuels for the backup generator can be neglected. As the project activity involved wind power project emissions (PE_y) are taken as zero/1/.

Leakage: As per approved PD, para 35 of the Small-scale methodology AMS-I.D. (Version 14.0), Leakage emissions are not considered for the project activity/1/.

	CAR 05 was raised and same were resolved by revision in the MR. details are provided in Appendix 2 of this report.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

Means of verification	The verification team checked the break down log for the monitoring period/26/. During the remote verification audit and the feeder wise location of the wind plants is also checked. The metering arrangement for WTG J215 (Suzlon) located in 220 KV Sub-Station SODA MADA, Jaisalmer. And for Enercon WTG, metering arrangement located at 220 KV GSS Amarsagar feeder 1 and Feeder 2 for Enercon (India) Ltd. Wind farm at Temedarai, Soda Bandhan & Korwan. These electricity meters are being used by state electricity board for JMR (Joint Meter Reading)/credit note electricity generation statements. The Net electricity supplied to the grid is then calculated from export and import values. The net electricity exported to the grid is also cross checked from the invoices raised to respective state electricity board which is in line with Methodology requirement for Small scale project activity/7/. The main meter reading is taken jointly on a fixed day of every month for the preceding month at the delivery point and signed by the representatives of state utility and O&M personnel/9/. In the event of failure of main meter, the check meter is used in monitoring the electricity data. The agency is experienced in the monitoring system and is managing O&M of numerous other wind farm projects. Verification team confirms the metering process by interviewing the O&M personnel and PP representatives during site visit and found the monitoring process is in line with approved PD/1/. Calibration of all the meters is done by state electricity board officials as per the industry standards/9/. The calibration is done once in a year as per calibration frequency in registered VCD PD/1/. The details of Calibration of the meters as confirmed from verification and during remote verification audit and calibration details are mentioned in Appendix 5 of this report/4/. Pre-calibrated energy meters were installed during the commissioning of the project activity and valid for 1 year/1/. The assessment team observed delay in calibration of monitoring meters during the current monitoring period. However, PP has applied conservative error factor to both electricity export and electricity import on respective months.. Assessment team checked the same and found correct/10/. The energy meter recording the export and import from the grid at substation is under the control and supervision of state electricity board officials. Similarly, O&M contractor is responsible for monitoring of the generation data at CMS/9/. PP representatives confirmed that the DGR data as well as JMR sheets and invoices will be kept for 2 years following the end of the crediting period/1/. During site visit and discussion with PP, assessment team confirm that the data will be kept for 2 years following the end of the crediting period/9/. The responsibilities and authorities of project management, data handling and

	recording, measurement methods and QA/QC procedure have been systematically established and formalized and the same was verified during the document review and by interviewing O&M personnel and checking of records/ log books maintained at site/9/.
Findings	CAR 06 was raised during the verification process and closed successfully. Refer Appendix 2 of this report for the detail closure of the CAR.
Conclusion	The assessment team confirms that the value of net electricity exported to the grid as used in emission reduction calculation is correct/3/. The verification team therefore is of the opinion that the project participant through the O&M agency is capable of implementing the monitoring plan in the context of the project activity. Interview with O&M personnel during remote verification audit also confirms that the operational and organizational chart as mentioned in MR is as per the site practice and thus assessment team confirms that the details are correct/9/. The break down log/26/ is checked and found that the wind panels undergone scheduled maintenance as per the guideline provided by the manufacturer which is acceptable to the assessment team. No unforeseen incident observed during the monitoring period which could alter the applicability of the methodology or change in project specification as mentioned in the registered PD/1/. The project undergone Continuous operation from the inception/commissioning and the same is confirmed from the JMR reports and invoices raised for the said period of verification PD/6/5/. Comparison of actual and estimate emission reductions achieved: Assessment team checked the calculation of estimated VER vs. Actual VER. As per the registered PD the amount of VERs annually is 4,133 tCO_2e/1/. The days involved in present monitoring period are 2430. Therefore, on pro-rata basis, the estimated VERs for the monitoring period is 27,516 tCO_2e. Actual VERs obtained for the monitoring period is 17,450 tCO_2e and thus the actual VER is 36.58% lower than the estimated VER. This variation is majorly due to the variations of climatic conditions, grid availability and other parameters which are not in the control of PP/6/9/. Hence, verification team confirms that decrease in VER by 36.58% in this monitoring period is acceptable. CAR 06 was raised and same were resolved by revision in the MR. details are provided in Appendix 2 of this report.

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

Earthood Services Private Limited (Earthood), contracted by EKI Energy Services Limited, has performed the independent verification of the emission reductions for the VCS project activity reference number 308 "2.45 MW Wind Power Project in Rajasthan, India by Yamuna Power and Infrastructure Ltd." in India for the monitoring period 02-August-2009 to 27-March-2016(inclusive both days) reported in the Monitoring Report Version 03 dated 07-February-2022.

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 "AMS-I.D. - Version 14.0, the monitoring plan contained in the PD version 02 and VCS guidelines version 4.0 /15/, Monitoring Report Version 03 dated 07-February-2022 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 02-August-2009 to 27-March-2016 are fairly stated in the Monitoring Report Version 03 dated 07-February-2022. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology "AMS-I.D. - Version 14.0"/7/ and the VCS standard/14/.

Verification period: 02-August-2009 to 27-March-2016(inclusive of both days).

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)
02-August-2009 to 31-December-2009	1,195	0	0	1,195
01-January-2010 to 31-December-2010	2,756	0	0	2,756
01-January-2011 to 31-December-2011	2,892	0	0	2,892
01-January-2012 to 31-December-2012	2,693	0	0	2,693
01-January-2013 to 31-December-2013	2,697	0	0	2,697

01-January-2014 to 31-December-2014	2,758	0	0	2,758
01-January-2015 to 31-December-2015	2,095	0	0	2,095
01-January-2016 to 27-March-2016	364	0	0	364
Total	**17,450**	**0**	**0**	**17,450**

Approved by

Dr. Kaviraj Singh

Managing Director **Date: 08-February-2022**

Earthood Services Privated Limited **Place: Gurgaon, Haryana**

APPENDIX 1: DOCUMENTS REVIEWED OR REFERENCED (VERIFICATION)

S.No	Title of Document	Version	Date
1.	Registered VCS PD	02	05-November-2009
2.	Initial VCS Monitoring Report Revised VCS Monitoring Report Final VCS Monitoring Report (updated for VERRA Accuracy Review)	01 02 03	09-August-2021 17-December-2021 07-February-2022
3.	ER spreadsheet (corresponding to the final monitoring report)	02	09-November-2021
4.	Certificates of calibration for all SPVs belongs to project activity	-	-
5.	Invoice issued by PP for the duration of monitoring period (02-August-2009 to 27-March-2016)	-	-
6.	Joint Meter Readings for the duration of monitoring period (02-August-2009 to 27-March-2016)	-	-
7.	AMS-I.D.: Small-scale Consolidated Methodology: Grid-connected electricity generation from renewable sources	Version 14.0	-
8.	CO_2 Baseline Database for the Indian Power Sector published by the Central Electricity Authority (CEA), Ministry of Power, Govt.	version 04	September 2008
9.	On-Site visit	-	22-September-2021
10.	Commissioning certificates/Calibrations records for initial calibration of the meters installed during commissioning of the project activity	-	-
11.	Power Purchase Agreements for SPVs	-	-
12.	VCS webpage for the project, VCS ID 308; https://registry.verra.org/app/projectDetail/VCS/308	-	Last accessed on 25-November-2021
13.	O&M contract for all project sites	-	-
14.	VCS Standard	Version 4.1	Last accessed on 30-November-2021
15.	VCS Program Guide	Version 4.0	Last accessed on 30-November-2021
16.	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	-	05-October-2021
17.	Google Earth desktop/Mobile application	-	Last accessed on 30-November-2021
18.	Technical specifications by technology supplier		
19.	Meter calibration guidelines: https://cea.nic.in/cdm-co2-baseline-database/?lang=en	-	-
20.	Photograph of site/Name plates	-	-
21.	Verification report of the last monitoring period (28-March-2006 to 01-August-2009) Report Number V-3-I-01-SS-0070	Version 01	13-May-2011
22.	Ministry of Home Affairs Order https://www.mha.gov.in/sites/default/files/MHAorder%20copy.pdf		24-March-2020
23.	Ministry of Home Affairs Order (D.O No.40-3/2020-DM-I(A) https://www.mha.gov.in/sites/default/files/MHA%20DO%20letter%20dt.14.4.2020%20to%20Chief%20Secretaries%20and%20Administrators	-	14-April-2020

S.No	Title of Document	Version	Date
	%20for%20strict%20implementation%20of%20Lockdown%20Order%20during%20extended%20period.pdf		
24.	Ministry of Home Affairs Order (Order No.40-3/2020-DM-I(A) https://www.mha.gov.in/sites/default/files/MHA%20Order%20Dt.%201.5.2020%20to%20extend%20Lockdown%20period%20for%202%20weeks%20w.e.f.%204.5.2020%20with%20new%20guidelines.pdf	-	01-May-2020
25.	https://www.mha.gov.in/sites/default/files/MHAOrderextension_1752020_0.pdf	-	17-May-2020
26.	Break down log sheet of Plants	-	-
27.	Skill development training records	-	-
28.	Copies of the grievance registers maintained at sites	-	-
29.	ERPA signed for sale of credits from the project activity		-
30.	Exemption Letter from VERRA for allowing PP to claim monitoring period more than 6 years		06-August-2021

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

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

FAR ID	00	Section no.	E.2	Date :
Description of FAR				
There is no FAR from the validation and previous verification 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	01	Section no.	4.1	Date :
Description of CL				
No CL was raised				
Project participant response				**Date :** DD/MM/YYYY
N/A				
Documentation provided by project participant				
N/A				
DOE assessment				**Date:** DD/MM/YYYY
N/A				

Table 3. CAR from this verification

CAR ID	01	Section no.	4.1	Date : 22-September-2021
Description of CAR				
Following discrepancies observed during review of the MR: 1. Alteration in MR observed for section “Content” is observed. Corrective action sought. 2. Section 1.1 and section 3 of MR not inline with the guidelines to complete VCS MR. Corrective action sought. 3. In section 2.1 of the MR need to correct the name of DNA/ Ministry and also shall provide the weblink for EIA notification 2006. Corrective action sought.				
Project participant response				**Date :** 09-November-2021
1. MR’s Content page has been updated 2. Section 1.1 and section 3 of MR has made inline with the guidelines to complete VCS MR. 3. In section 2.1 of the MR name of DNA/ Ministry has been corrected and provide the weblink for EIA notification 2006.				

Documentation provided by project participant	
Revised MR	
DOE assessment	**Date:** 30-November-2021
1. PP have submitted the revised MR & found inline with the VCS MR template. Thus, **CAR is closed.** 2. PP have submitted the revised MR and necessary changes has been made in Section 1.1 and Section 3 of MR as per the requirement of VCS-Standard_v4.1. Thus, **CAR is Closed** 3. PP have revised the name of DNA/Ministry in Revised MR and weblink for EIA notification is now updated in the Revised MR. **CAR is closed**.	

CAR ID	02	**Section no.**	4.1	**Date :** 22-September-2021
Description of CAR				
Geo-coordinate locations of the WTGs; YGCL-01 & YGCL-02 found not to be inline with the site observations. Further, geo-coordinates mentioned in the VCS PD found wrong. Corrective action sought.				
Project participant response				**Date :** 09-November-2021
As per registered PDD, the site co-ordinates mention is typo error for WEG no. YGCL-01 and YGCL-02. This are now revised in the current MR based on actual site co-ordinates in section 1.7 of this monitoring report. This change having no impact on project applicability, baseline scenario, additionality etc. The nature of change is permanent.				
Documentation provided by project participant				
Revised MR				
DOE assessment				**Date:** 30-November-2021
PP has acknowledged the issue as the deviation in the section 3.2 of revised MR. Assessment team observed there is a typo error in VCS PD. Moreover , change in geo co-ordinates does not leads to the change in project design. Thus accepted and **CAR is closed**.				

CAR ID	03	**Section no.**	4.1	**Date :** 22-September-2021
Description of CAR				
PP requested to submit all relevant supporting documents like technical specifications, commissioning certificates, break down details etc. for review by assessment team. Kindly submit.				
Project participant response				**Date :** 09-November-2021
Supporting documents like technical specifications, commissioning certificates, break down details etc. has been submitted to assessment team.				
Documentation provided by project participant				
Technical specifications Commissioning certificates Break down details				
DOE assessment				**Date:** 30-November-2021
PP has submitted copies of all requisite supporting documents to assessment team, Same found consistent with the revised MR and ER sheet. Thus accepted and **CAR is closed.**				

CAR ID	04	**Section no.**	4.1	**Date :** 20- August-2021
Description of CAR				
PP is requested to submit declaration in effect of avoiding double counting with regard to participation under other GHG Programs/Other forms credits, rejection under other GHG program, renewable energy certificate schemes etc. Kindly submit.				
Project participant response				**Date :** 09-November-2021
Declaration in effect of avoiding double counting with regard to participation under other GHG Programs/Other forms credits, rejection under other GHG program, renewable energy certificate schemes etc has been submitted				
Documentation provided by project participant				

Declaration	
DOE assessment	**Date:** 30-November-2021
PP has submitted declaration in effect of avoiding double counting with regard to participation under other GHG Programs/Other forms credits, rejection under other GHG program, renewable energy certificate schemes etc to the assessment team. Same is found correct and acceptable. Thus **CAR is closed.**	

CAR ID	05	**Section no.**	4.4	**Date :** 22-September-2021
Description of CAR				
PP requested to submit all supporting documents for calculation of net electricity generation supplied by the project activity along the copies of invoices for cross checking. Kindly submit.				
Project participant response				**Date :** 09-November-2021
All supporting documents for calculation of net electricity generation supplied by the project activity along the copies of invoices has been submitted				
Documentation provided by project participant				
JMR Invoice				
DOE assessment				**Date:** 30-November-2021
Copies of JMRs and invoices are submitted and electricity generation records found consistent with the ER sheet. Moreover, calculation of emission observed conservative too. Thus, accepted and **CAR is closed.**				

CAR ID	06	**Section no.**	4.5	**Date :** 22-September-2021
Description of CAR				
PP requested to submit copies of calibration reports covering the current monitoring period of project activity. Delayed calibrations observed in the calibration details provided under Appendix 1 of the MR. Calibration detail mentioned in MR is reserved till the submission of required evidences.				
Project participant response				**Date :** 09-November-2021
Calibration certificates has been submitted. Further there has been delay in calibration of meters – hence conservative error factor 0.2% has been applied to the values of both electricity export and electricity import on respective months.				
Documentation provided by project participant				
Revised MR Calibration Certificates				
DOE assessment				**Date:** 30-November-2021
PP has submitted copies of calibration certificates relevant to the current monitoring period of the project activity. During review of the same, assessment team observed delayed in calibration of the monitoring period. However, PP has applied conservative error factor to the value of both electricity export and electricity import on respective months. Thus, accepted and **CAR is 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 3: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWERS

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	Shreya Garg		
Country	India		
Education	M.Sc. (Climate Science & Policy), TERI University		
Experience	7 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., AMS-I.D., 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 4: ABBREVIATIONS

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

APPENDIX 5: METER CALIBRATION DETAILS

For WTG J215:-

WTG ID	Meter No.	Make	Calibration Date	Validity of Calibration	Delay in Calibration	Remarks
Suzlon Energy Limited 220 KV Sub-Station SODA MADA, Jaisalmer (WTG No. J 215)	RJB00316 (0.2 class) Main Meter (Transformer 1)	Secure	19-January-2014 22-February-2016	18-January-2015 21-February-2017	02-August-2009 to 18-January-2014 & 19-January-2015 to 27-March-2016	Due to delay, Error factor is applied from August-2009 to January-2014 & January-2015 to March-2016
	TNU00956 (0.2 class) Main Meter (Transformer 2)	Secure				
	TNU00957 (0.2 class) Main Meter (Transformer 3)	Secure				

For WTGs YGCI-01 and YGCI-02: -

WTG ID	Meter No.	Calibration Date	Validity of Calibration	Delay in Calibration	Remarks
Suzlon 220 KV GSS Amarsagar, Enercon Feeder-1 and Feeder-2	TNU 00946 (0.2 class) Main Meter - 1	29-January-2009	29-January-2010	30-January-2010 to 29-March-2010, 27-December-2013 to 12-February-2015, 14-February-2016 to 27-March-2016	Due to delay, Error factor is applied from January-2010 to March-2010, December-2013 to February-2015, February-2016 to March-2016
		30-March-2010	30-March-2011		
		26-March-2011	26-March-2012		
	TNU 00945 (0.2 class) Main Meter-2 Make: Secure	19-March-2012	19-March-2013		
		26-December-2012	26-December-2013		
		13-February-2015	13-February - 2016		
		09-April-2016	08-April-2017		

Note: Considering the monitoring period as 02-August-2009 to 27-March-2016, there has been delay in calibration of meters – hence conservative error factor 0.2% has been applied to the values of both electricity export and electricity import on respective months.