



BUNDLED WIND POWER PROJECT IN MADHYA PRADESH, GUJARAT AND KERALA BY D.J. MALPANI

Document Prepared By:



VKU Certification Pvt. Ltd.

Regd. Off: Flat No. 306, Sky Star, N-1, New Rani Bagh Khandwa Road, Indore, Madhya Pradesh, India - 452020

URL: <http://vkucertification.com>

E-mail: info@vkucertification.com

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Prepared By	VKU Certification Pvt. Ltd.
Contact	Regd. Off: Flat No. 306, Sky Star, N-1, New Rani Bagh Khandwa Road, Indore, Madhya Pradesh - 452020 URL: http://vkucertification.com E-mail: info@vkucertification.com
Approved By	Dr. Vikas Kumar Aharwal (Founder and Director) vikas.aharwal@vkucertification.com
Work Carried Out By	Ravikant Soni - Team Leader cum Technical Expert TA 1.2 Sanjay Kumar- Technical Reviewer cum Technical Expert TA 1.2

Summary:

M/s VKU Certification Pvt. Ltd. (here after referred as VKU) was commissioned by M/s EKI Energy Services Limited, to perform the sixth verification of the greenhouse gas emission reductions reported for the project activity “Bundled Wind Power Project in Madhya Pradesh, Gujarat and Kerala by D.J. Malpani.” (VCS ID 1679) in India, covering monitoring period from 01-July-2021 to 31-March-2022 (Inclusive of both start and end dates) under 1st crediting period from 28-March-2016 to 27-March-2026 (Inclusive of both dates) with regard to the relevant requirements for VCS activities.

The purpose of the verification is to have an independent review ex-post determination of the monitored reductions in GHG emission reductions and verify that the monitoring methodology was implemented according to the monitoring plan and monitoring data used to confirm the reductions in anthropogenic emissions by sources is sufficient, definitive and presented in a concise and transparent manner.

The verification scope of the project is:

- To verify that the project is implemented as described in the registered VCS Joint PD&MR/3/.

- To assess the project's compliance with other relevant rules including the host country legislation.
- To confirm that the monitoring system is implemented and fully functional to generate voluntary emission reductions without any double counting.
- To establish that the data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reduction calculation.
- To verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan;
- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement;
- To verify that reported GHG emission data is sufficiently supported by evidence.

Verification was conducted using VKU's procedures in line with the requirements specified in the VCS Program Guide Version 4.2/4/, VCS Standard Version 4.3/5/, VCS Validation and Verification manual version 3.2/21, CDM M&P, the latest version of the CDM Validation and Verification Standard 3.0/22/, and relevant decisions of the COP/MOP and the CDM EB and applying standard auditing techniques.

The verification consisted of desk review, on-site assessment and the resolution of outstanding issues and the issuance of the final verification report and certification.

VKU followed the rule-based approach to perform this verification. During the course of verification, related to operation, monitoring and GHG emission reduction calculation of the VCS project activity in relation to all relevant VCS requirements for the project activity and the applied baseline and monitoring methodology and a total of 06 findings were raised, which includes: 04 Corrective Action Request (CARs); 02 Clarification Requests (CLs). All the raised findings were successfully resolved by the PP. The same has been discussed in Appendix B of this verification report.

The verification team ensured that the reported emission reductions are complete and accurate in accordance with applicable VCS requirements in order to be certified therefore the verification team has detected no further uncertainties.

The verification shall ensure that reported emission reductions are complete and accurate in accordance with applicable VCS/CDM requirements in order to be certified.

The GHG emission reductions were calculated on the basis of the approved methodology Approved Consolidated Methodology (ACM0002) "Grid-connected electricity generation from renewable sources - Version 17.0/7/ and the monitoring plan included in the registered VCS Joint PD&MR version 03 /3/dated 19-February-2018.

In conclusion, it is VKU's opinion that the project activity "Bundled Wind Power Project in Madhya Pradesh, Gujarat and Kerala by D.J. Malpani." (VCS ID 1679) in India meets all relevant requirements for VCS standard and guidelines and correctly applies the baseline and monitoring methodology Approved Consolidated Methodology (ACM0002) "Grid-connected electricity generation from

renewable sources - Version 17.0/7/ The monitoring system is in place and the emission reductions are calculated without material misstatement.

Hence, VKU is able to certify that the emission reductions from the project during the current monitoring period from 01-July-2021 to 31-March-2022 (Inclusive of both start and end dates) under the first crediting period from 28-March-2016 to 27-March-2026 (Including both dates) amount to 77,781 tCO₂e.

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1 INTRODUCTION

1.1 Objective

M/s EKI Energy Services Limited Commissioned by M/s VKU Certification Pvt Ltd (hereafter referred as VKU) to carry out sixth verification of the project “Bundled Wind Power Project in Madhya Pradesh, Gujarat and Kerala by D.J. Malpani” (VCS ID 1679) project in India for the period from 01-July-2021 to 31-March-2022 (Inclusive of both start and end dates) under first crediting period from 28-March-2016 to 27-March-2026 (Including both dates).

This report summarizes the findings of the verification of the project, performed on the basis of VCS Requirements and UNFCCC criteria for CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The objective of the verification is to have an independent evaluation of a project activity by an accredited validation and verification body against the requirements of the VCS program guide version 4.2/4/, VCS standard version 4.3/5/and GHG program applied, on the basis of the registered project description and monitoring report version 03 dated 19-February-2018 /3/..

The verification is for the period from 01-July-2021 to 31-March-2022 (Inclusive of both start and end dates) under 1st crediting period from 28-March-2016 to 27-March-2026 (Including both dates).

The objectives of this verification exercise are, by review of objective evidence, to establish that:

- The project activity has been implemented and operated as per registered Joint VCS project description and monitoring report (Joint VCS PD&MR) and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place.
- Monitoring report and other supporting documents are complete.
- The data is recorded and stored as per the monitoring methodology and approved monitoring plan.
- To confirm that the monitoring system is implemented and fully functional to generate Verified carbon units (VCUs) without any double counting.
- To establish that the data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reduction calculation.

1.2 Scope and Criteria

The verification scope is:

- To verify that the project is implemented as described in the registered VCS JointPD&MR/3/.
- To assess the project's compliance with other relevant rules including the host country legislation.
- To confirm that the monitoring system is implemented and fully functional to generate voluntary emission reductions without any double counting.
- To establish that the data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reduction calculation.
- To verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan;
- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement;
- To verify that reported GHG emission data is sufficiently supported by evidence.
- The verification shall ensure that the reported emission reductions are complete and accurate in order to be certified.

The project is assessed against the requirements of VCS Standard version 4.3/5/, VCS Program Guide version 4.2/4/, VCS Validation and Verification manual version 3.2/21/ and related rules and guidance. VKU has, based on the recommendations in the latest version of CDM Validation and Verification Standard/22/, VCS Validation and Verification Manual version 3.2/21/ employed a rule-based approach (as criteria) in the verification, focusing on the identification of significant reporting rules and the reliability of project monitoring.

The method and criteria used for verification consisted of the following phases:

- Completeness check and desk review;
- Remote interviews with stakeholders;
- Resolution of outstanding issues and issuance of final verification report and applicable VCS Validation and Verification Deeds of Representation.

Verification is not meant to provide any consultancy towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the monitoring.

1.3 Level of Assurance

All the revisions of the verification report before being submitted to the client were subjected to an independent internal technical review to confirm that all verification activities had been completed according to the pertinent VKU's procedure, with a **Reasonable level of assurance**.

The verification report is based on the Monitoring report /1/, registered VCS Joint PD&MR /3/ and supporting documents /10//11//12//13//14//15//16/made available to the verifier and information collected through performing interviews.

The technical review was performed by a technical reviewer(s) qualified in accordance with VKU's qualification procedure. The verification team and the technical reviewers consist of the following personnel:

Role/Qualification	Last Name	First Name
VCS Team Leader & Technical Expert 1.2	Soni	Ravikant
Technical Reviewer & Technical Expert 1.2	Kumar	Sanjay

1.4 Summary Description of the Project

The project activity involves electricity generation by wind turbine generators and supplying the generated electricity to the unified Indian Grid. The project being a renewable energy generation activity, leads to removal of fossil fuel dominated electricity generation. The project activity results in reductions of greenhouse gas (GHG) emissions that are real, measurable, and verifiable and also plays beneficial role in the mitigation of climate change.

The total installed capacity of the project is 60 MW (8 units of ReGen Powertech make 1.5 MW WTG & 24 units of Inox make 2 MW WTG). The project activity employs Wind Turbine Generators (WTGs) in in Madhya Pradesh, Gujarat and Kerala states of India.

The project was commissioned on 28-March-2016 which is the earliest date of commissioning of the windmill of the project activity and run satisfactorily since then.

The purpose of the project activity is generation of clean electricity by utilizing kinetic energy of wind. As per MR, the electricity generated from the project is supplied to the Unified Indian Grid which is confirmed from registered VCS Joint PD&MR/3/, previous verification reports /29/ and interview with PP. The WTGs are commissioned between 28-March-2016 to 31-March-2017 and the dates of the WTGs are verified against the registered VCS Joint PD&MR/3/ and commissioning certificates/13/.

This information was verified during on site assessment and found to be in line with the details provided in the registered VCS Joint PD&MR/3/ "Bundled Wind Power Project in Madhya Pradesh, Gujarat and Kerala by D.J. Malpani". The emission reductions from the project activity during the current verification period 01-July-2021 to 31-March-2022 (including both start and end dates) amount to 77,781 tCO₂e.

2 VERIFICATION PROCESS

2.1 Method and Criteria

Verification was conducted using VKU's procedures in line with the requirements specified in the VCS Requirements, i.e., VCS Program Guide 4.2/4/, VCS standard version 4.3/5/. The GHG emission reductions are on the basis of the approved Baseline and monitoring methodology Approved Consolidated Methodology (ACM0002) "Grid-connected electricity generation from renewable sources - Version 17.0/7/.

The verification consisted of the following three phases

- Document review;
- On-site and remote site assessment including Interviews and actual project scenario;
- Resolution of any Material Discrepancy and the issuance of the final verification report and certification.

The following sections outline each step in more detail.

2.2 Document Review

The monitoring report (MR) version 1.0 dated 13-May-2022 /1/, version 2.0 dated 21-June-2022/1/, version 3.0 dated 23-September-2022/1/, MR version 4.0 dated 19-October-2022 /1/and MR Version 5.0 dated 14-December-2022/1/ and Final Version 6.0 dated 25-January-2023 the emission reduction calculations spreadsheet version 1.0 of 13-May-2022/2/and final version 2.0 of 23-September-2022/2/, were assessed as part of the verification. In addition, the registered VCS Joint PD&MR /3/ in particular the baseline estimations and the monitoring plan for the project was reviewed.

The following table lists the documentation that were reviewed during the verification:

/1/	EKI: VCS monitoring report for "Bundled Wind Power Project in Madhya Pradesh, Gujarat and Kerala by D.J. Malpani, • Version 1.0 of 13-May-2022 • Version 2.0 21-June-2022 • Version 3.0 of 23-September-2022 • Version 4.0 of 19-October-2022 • Version 5.0 of 14-December-2022 • Final Version 6.0 of 25-January-2023
/2/	EKI: Emission Reduction Calculation Spreadsheet, • Version 1.0 of 13-May-2022 • Final version 2.0 of 23-September-2022

/3/	EKI: Registered VCS Joint PD&MR for the project “Bundled Wind Power Project by Giriraj Enterprises” version 3.0; dated 19-February-2018 covering monitoring period (28-March-2016 to 23-December-2017)
/4/	VCS: VCS Program Guide, version 4.2 of 22-June-2022
/5/	VCS: VCS Standard, version 4.3 of 22-June-2022
/6/	VCS: Monitoring report Template VCS Version 4.1
/7/	CDM Executive Board: Baseline and Monitoring Methodology Approved Consolidated Methodology (ACM0002).” Grid-connected electricity generation from renewable sources” - Version 17.0
/8/	UNFCCC: Project search: https://cdm.unfccc.int/Projects/projsearch.html
/9/	Gold Standard Foundation: https://registry.goldstandard.org/projects?q=&page=1
/10/	Monthly JMR issued by state utility i.e., GUVNL (Gujarat Urja Vikas Nigam Limited), MPPKV.CO.Ltd,(Madhya Pradesh Paschim Kshetra Vidyut Vitaran Company Ltd and KSEB. Ltd (Kerala State Electricity Board Limited) to PP state for the current verification period (01-July-2021 to 31-March-2022)
/11/	Certificates of Calibration for all the meters belonging to the project activity for current monitoring period (01-July-2021 to 31-March-2022)
/12/	Invoice issued by PP to state utility i.e., GUVNL(Gujarat Urja Vikas Nigam Limited), MPPKV.CO.Ltd,(Madhya Pradesh Poorv Kshetra Vidyut Vitaran Company Ltd) and KSEB.Ltd (Kerala State Electricity Board Limited) to PP state for the current verification period (01-July-2021 to 31-March-2022)
/13/	Commissioning certificate of all the WTGs of the project activity issued by respective state electricity authority
/14/	Power Purchase Agreements signed between; - • M/S D.J. Malpani & MPPMCL for 1.5 MW wind power project dated 12-September-2019 • M/S D.J. Malpani & MPPMCL for 3 MW wind power project dated 12-September-2019 • M/S D.J. Malpani & MPPMCL for 7.5 MW wind power project dated 17-July-2016 • M/S D.J. Malpani &M/S Inox Wind Energy limited & KSEBL for 16 MW wind power project dated 24-August-2022 • M/S D.J. Malpani & GUVNL for 6 MW wind power project dated 03-November-2016 • M/S D.J. Malpani & GUVNL for 2 MW wind power project dated 13-February-2017 • M/S D.J. Malpani & GUVNL for 6 MW wind power project dated 30-March-2017 • M/S D.J. Malpani & GUVNL for 18 MW wind power project dated 09-November-2016
/15/	Letter of declaration from PP regarding not having created or sought any other form of environmental credit for the current verification period (01-July-2021 to 31-March-2022)
/16/	Monthly generation reports issued by O&M contractor for current verification period (01-July-2021 to 31-March-2022)
/17/	Central Electricity Authority (Installation and Operation of Meters) Regulations Notified on 17/03/2006 <u>No. 502/70/CEA/DP&D</u> Amendments Notified on 26/06/2010 <u>No. 502/6/2009/DP&D/D-I</u>

18/	Carbon Check (India) Private Ltd.:Joint Validation and verification report “Bundled Wind Power Project in Madhya Pradesh, Gujarat and Kerala by D.J. Malpani “version 2.0 19-Feurary-2018 covering monitoring period; (28-March-2016 to 23-December-2017)
/19/	Site Visit Photographs videos and attendance sheet dated 02-June-2022 and 05-December-2022
/20/	VERRA: https://registry.verra.org/app/projectDetail/VCS/1679
/21/	VCS Validation and verification manual version 3.2 dated 19-October-2016
/22/	CDM Validation and Verification Standard version 3.0 dated 19-October-2016
/23/	Breakdown Details for the current verification period (01-July-2021 to 31-March-2022)
/24/	Technical Specifications of WTGs
/25/	Grievance Register present on-site
/26/	On site and Remote visit telephonic personnel interviews dated 02-June-2022 and 05-December-2022
/27/	GPS Google software used for location during onsite visit and Google earth for desk review of WTGs
/28/	REC website Renewable Energy Certificate Registry of INDIA https://www.recregistryindia.nic.in/index.php/publics/faqs
/29/	Previous Verification reports: - • Fifth verification report covering monitoring period dated (01-January-2021 to 30-June-2021) • Fourth verification report covering monitoring period dated (01-March-2020 to 31-December-2020) • Third verification report covering monitoring period dated (01-April-2019 to 29-February-2020) • Second verification report covering monitoring period dated (24-December-2017 to 31-March-2019)
/30/	Previous Monitoring reports • Fifth VCS monitoring report for “Bundled Wind Power Project in Madhya Pradesh, Gujarat and Kerala by D.J. Malpani”, version 03 of 20-September-2021 • Fourth VCS monitoring report for “Bundled Wind Power Project in Madhya Pradesh, Gujarat and Kerala by D.J. Malpani”, version 02 of 24-May-2021 • Third VCS monitoring report for “Bundled Wind Power Project in Madhya Pradesh, Gujarat and Kerala by D.J. Malpani”, version 02 of 20-April-2020 • Second VCS monitoring report for “Bundled Wind Power Project in Madhya Pradesh, Gujarat and Kerala by D.J. Malpani”, version 02 of 03-August-2019
/31/	Tool to calculate the emission factor for an electricity system - Version 06.0

2.3 Interviews

An on-site and remote site inspection has been performed by the assessment team for Madhya Pradesh and Gujarat Sites respectively. However, the representatives of the PP and O&M contractors were interviewed personally and telephonically by assessment team on 02-June-2022 i.e., personnel responsible for monitoring of the project activity, data collection and management, and QA/QC procedure.

The details of the people interviewed at **7.5 MW Ghatiya Site, Ujjain**, are mentioned in the table below:

S.No.	Site	Name	Designation	Topic
1	Ghatiya Site	Dewantar	S.R. Engineer	Data archiving, breakdown details and maintenance of generation records
2		Shashikant Barik	Site Incharge	Project Implementation and technical details of the Project like breakdown details, calibration of meters and monitoring of required monitored parameters and implementation of QA/QC Procedure.
3		Vanya Chauhan	EKI Energy services Pvt. Ltd.	Project Implementation, records maintenance, QA/QC Procedure implementation at site

The topics covered during interview ranges from general features and implementation of project to technical details of the project like calibration details, monitoring and measuring system and data collection, recording and archiving procedures. The assessment was drawn based on the feedback received during site visit coupled with the documentation.

Local Stakeholder Interviewed at Ghatiya site, Ujjain, Madhya Pradesh:-

S.No.	Site	Name	Category	Topic
1	Ghatiya Site	Santhu Singh	Local Stakeholder	- Project activity implementation and its impact on social, economic and environmental condition of the local people. - The ongoing communication procedure and the address of their grievance by the project proponent - The employment generation due to project activity implementation.
2		Mohan Singh		
3		Dilip Singh		
4		Kalyn Singh		
5		Shankar Singh		
6		Bom Singh		
7		Ramlal		
8		Sanjay Pawar		
9		Ghanshyam Mandole		
10		Ranjit Singh		
11		Govindas		
12		Suresh Singh		
13		Kamal		
14		Kirandas		
15		Shankardas		
16		Atmaram		
17		Omprakash		
18		Kishor Choudhary		
19		Sunil Sindeal		

20		Rahul Choudhary		
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There were no negative comments received during the stakeholder consultation interview conducted on site and more details are enlisted in the section 4.2.2 below.

Resite Visit was conducted on 05-December-2022 remotely by the assessment team for all the sites except Ghatiya Site, Ujjain, Madhya Pradesh as it was covered on 02-June-2022. The representatives of the PP and O&M contractors were interviewed telephonically by assessment team on 05-December-2022 i.e., personnel responsible for monitoring of the project activity, data collection and management, QA/QC procedure and stakeholder interview.

A revised audit plan was presented to Client for the Project Wind Farm located in:

1. Dhar Site, Dhar, Madhya Pradesh
2. Sadla Site, Surendranagar, Gujarat
3. Savarkundala Site, Amreli, Gujarat
4. Kinfra Site, Palakkad, Kerala

The details of the people interviewed at **4.5 MW Dhar Site, Dhar** are mentioned in the table below:

S.No.	Site	Name	Designation	Topic
1	Dhar Site	Sidhartha Das	Site Incharge	Data archiving, breakdown details and maintenance of generation records. Project Implementation, records maintenance, QA/QC Procedure implementation at site
2		Vikrant Tiwade	Assistant Manager	Project Implementation and technical details of the Project like breakdown details, calibration of meters and monitoring of required monitored parameters and implementation of QA/QC Procedure.

The details of the people interviewed at **26 MW Savarkundla Site, Amreli**, are mentioned in the table below:

S.No.	Site	Name	Designation	Topic
1	Savarkundla Site	Rohit parmar	Site manager and Incharge	Data archiving, breakdown details and maintenance of generation records. Project Implementation and technical details of the Project like breakdown details, calibration of meters and monitoring of required monitored parameters and implementation of QA/QC Procedure.

The details of the people interviewed at **6 MW Sadla Site, Surendranagar**, are mentioned in the table below:

S.No.	Site	Name	Designation	Topic
1	Sadla Site	Satyadev mandal	Site manager and Incharge	Data archiving, breakdown details and maintenance of generation records. Project Implementation and technical details of the Project like breakdown details, calibration of meters and monitoring of required monitored parameters and implementation of QA/QC Procedure.

The details of the people interviewed at **16 MW Kinfra Site, Palakkad**, are mentioned in the table below:

S.No.	Site	Name	Designation	Topic
1	Kinfra Site	KT Kumar	Site Incharge	Data archiving, breakdown details and maintenance of generation records Project Implementation and technical details of the Project like breakdown details, calibration of meters and monitoring of required monitored parameters and implementation of QA/QC Procedure.

The topics covered during interview ranges from general features and implementation of project to technical details of the project like calibration details, monitoring and measuring system and data collection, recording and archiving procedures. The assessment was drawn based on the feedback received during site visit coupled with the documentation.

Local Stakeholders Interviewed :-

The details of the stakeholders interviewed at **4.5 MW Dhar Site,Dhar**, are mentioned in the table below:

S.No.	Site	Name	Category	Topic
1	Dhar Site	Sidhartha Das	Local Stakeholder	- Project activity implementation and its impact on social, economic and environmental condition of the local people. - The ongoing communication procedure and the address of their grievance by the project proponent - The employment generation due to project activity implementation.
2		Vishal Rathor		
3		Dinesh Rathor		
4		Devendra		

The details of the stakeholders interviewed at **26 MW SavarkundlaSite,Amreli,** are mentioned in the table below:

S.No.	Site	Name	Category	Topic
1	Savarkundla Site	Batukh kalsariya	Local Stakeholder	- Project activity implementation and its impact on social, economic and environmental condition of the local people. - The ongoing communication procedure and the address of their grievance by the project proponent - The employment generation due to project activity implementation.
2		Jagdish Kalsariya		
3		Rukhad Bhai		

The details of the stakeholders interviewed at **6 MW Sadla Site, Surendranagar**, are mentioned in the table below:

S.No.	Site	Name	Category	Topic
1	Sadla Site	Hiren Bhai	Local Stakeholder	- Project activity implementation and its impact on social, economic and environmental condition of the local people. - The ongoing communication procedure and the address of their grievance by the project proponent - The employment generation due to project activity implementation.
2		Molji Bhai		

The details of the stakeholders interviewed at **16 MW Kinfra Site, Palakkad**, are mentioned in the table below:

S.No.	Site	Name	Category	Topic
1	Kinfra Site	Sivakumar C	Local Stakeholder	- Project activity implementation and its impact on social, economic and environmental condition of the local people. - The ongoing communication procedure and the address of their grievance by the project proponent - The employment generation due to project activity implementation.
2		Akhil.C		
3		Renjith R		

2.4 Site Inspections

An On-site and remote visit was undertaken by the verification team on 02-June-2022 at the Project site in Madhya Pradesh, Gujarat and Kerala.

ReSite visit was undertaken on 05-December-2022 remotely at all the Project site in Madhya Pradesh, Gujarat and Kerala except the 7.5 MW Ghatiya Site, Ujjain to carry out the following;

- An assessment of the implementation and operation of the registered project activity as per the registered VCS Joint PD&MR /3/and VCS MR/1/;
- A review of information flows for generating, aggregating and reporting the monitoring parameters;
- Interviews/26/ with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the VCS Joint PD&MR/3/
- A cross check between information provided in the monitoring report and data from other sources such as plant logbooks, inventories, purchase records or similar data sources;
- 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;
- A review of calculations and assumptions made in determining the GHG data and emission reductions;
- A review of previous MRs/30/ and Verification reports /29/
- 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 objective of this phase of the verification is to resolve any outstanding issues which need to be clarified for VKU's positive conclusion on the project description. To guarantee transparency a verification protocol has been customized for the project. The protocol shows in a transparent manner the requirements, means of verification and the results from verifying the identified criteria.

The verification protocol consists of three situations described below: -

A corrective action request (CAR) is raised if one of the following occurs:

- Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;
- Inconsistent application of assumptions, data or calculations of emission reductions that will impair the estimate of emission reductions;
- Issues identified in a FAR during validation to be verified during verification have not been resolved by the project participants.

A clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable VCS requirements have been met.

In summary, 2 CLs and 4 CARs were raised during this verification which were closed successfully and details are given under Appendix B of this report.

2.5.1 Forward Action Requests

Based on the review of the previous Verification reports /29/and Joint validation & Verification report/18/ available, no FAR is pending which needs to be closed during the current verification. Also no FAR is raised during current verification.

2.6 Eligibility for Validation Activities

VKU has not undertaken any validation activities as part of the verification and does not hold accreditation for validation of any relevant sectoral scope. Hence this section is not applicable.

3 VALIDATION FINDINGS.

3.1 Participation under Other GHG Programs

The project has not applied under any other GHG program except VCS. The project is registered under VCS only with registration ID 1679. This was confirmed through a declaration/15/ submitted by the PP. Simultaneously, Assessment team independently has also checked other GHG Program registry websites and searched for similar projects but could not find any similar project registered on other registry websites hence accepted by the assessment team. Based on both independent assessment and declaration submitted by PP/15/, the assessment team accepted the claim that there will not be double counting from this project activity for this monitoring period. Similar exercise will be performed for all subsequent monitoring periods. Thus, ensuring emission reduction generated from the project activity will not be double counted hence accepted by the assessment team.

Audit team also checked the REC Mechanism database /28/ of India and I-REC mechanism database and found that the project activity is not accredited / registered under REC mechanism and I-REC mechanism. This was further ensured through a declaration letter /15 / from the PP that they will not be using the energy generation from this project activity during the monitoring period, under REC mechanism.

The details of the registries checked are as follows:

1. <https://www.recregistryindia.nic.in/>
2. <http://cdm.unfccc.int/>
3. <http://www.goldstandard.org/>
4. <https://verra.org/verra-standards-and-programs/>

Rejection by other GHG programs

The Project is not rejected by other GHG programs. A declaration/15/ for the same is checked and found correct by the assessment team. Also assessment team has independently checked other GHG Program registry websites and searched for similar projects but could not find any similar project rejected by any other GHG Program..

The details of the registries checked are as follows:

1. <https://www.recregistryindia.nic.in/>
2. <http://www.goldstandard.org/>
3. <https://verra.org/verra-standards-and-programs/>

3.2 Methodology Deviations

There is no methodology deviation identified during the current monitoring period. Also, there were no methodology deviations identified during the previous verifications/29/.

3.3 Project Description Deviations

Deviation 1

This deviation is related to total capacity of the project. At the time of registration, the total capacity of the project envisaged was 66 MW. Till 3rd verification (01-April-2019 to 29-February-2020) the capacity of the project was downsized to 60 MW. This is because of following reasons-

- The earlier, 22 MW capacity wind project by D. J. Malpani at Kinfara site, Kerala has been downsized to capacity of 16 MW

The above deviation which is permanent in nature is already approved during the 2nd monitoring period (24-December-2017 to 31-March-2019) which was verified by assessment team through previous verification reports/29/ available on VCS Project webpage /20/.

Deviation 2

The registered VCS Joint PD&MR mentioned three parameters like net electricity supplied to grid, electricity export by project and electricity import by project and net electricity is difference of export and import. Since PP have only one parameter data available i.e. data of net electricity supplied to grid through share certificate issued by state electricity board. Hence only single parameter of net electricity supplied to grid is considered for Gujarat plant. This does not have any impact on emission reductions. The deviation has already been approved during the 4th verification (01-March-2020 to 31-December-2020) and have no impacts on the applicability of the methodology, additionality or the appropriateness of baseline scenario. This was confirmed by assessment team through previous verification reports /29/ available on VCS Project webpage /20/.

Deviation 3

This deviation is related to the corrected Geo Coordinates of the project locations. At the time of registration, Latitude and Longitude mentioned in registered VCS Joint PD&MR. But during the time of project verification, some errors were observed in Latitude and Longitude. A revised table of Geo coordinates was updated in section 1.7 of MR during the 2nd monitoring period (24-December-2017 to 31-March-2019). This deviation is of permanent nature and does not have any impact on the project applicability, baseline scenario and additionality.

The deviation was approved during the second monitoring period (24-December-2017 to 31-March-2019).

Deviation 1 Deviation 2 and Deviation 3 are already approved in the previous verifications, thus no need to assess them in current verification period.

3.4 Grouped Project

This is not a grouped project. Therefore, this section is Not Applicable.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

During the onsite and remote audit with PP representative, it was concluded that the project is implemented as per the requirement of the registered VCS Joint PD&MR /3/ and approved monitoring plan. During the current monitoring period, it was observed through breakdown log

sheet records/23/ onsite that no unforeseen incident/event was involved which can impact the operation of the project activity. The project underwent continuous operation and only scheduled maintenance as per the manufactures specification which led to breakdown of 284.15 hours for Dhar site, 261.24 hours for Ghatiya site, 1413 hours 42 minutes for Sadla site, 2679 hours 49 minutes for Savarkundla site and 2341 hours 21 minutes for Kinfra site as per the DGR and breakdown report submitted by PP /23/ which is acceptable to the assessment team. Moreover, there is no unforeseen incident which can affect the applicability of the methodology and thus the same is acceptable to the assessment team.

Project location is confirmed by the assessment team through the GPS Google software/27/ and Google earth. Moreover, assessment team confirm that the latitudes and longitudes as mentioned in the registered Joint VCS PD&MR/3/.

The WTG wise latitudes and longitudes are confirmed below:

S. No.	Project Owner	Machine ID	District	State	Latitude (N)	Longitude (E)
1	D. J. Malpani	RGP2- 09	Ujjain	Madhya Pradesh	23° 21' 25"	75° 47' 38"
2		RGP2- 08			23° 22' 04"	75° 48' 13"
3		RGP2- 18			23° 20' 16"	75° 49' 10"
4		RGP2- 03			23° 20' 31"	75° 48' 57"
5		RGP2- 07			23° 22' 16"	75° 47' 48"
6	D. J. Malpani	IWISL/2000/16-17/3826	Surendranagar	Gujarat	22° 41' 51.9634"	71° 11' 45.4457"
7		IWISL/2000/16-17/3829			22° 42' 09.1591"	71° 12' 20.8237"
8		IWISL/2000/16-17/3830			22° 41' 59.8731"	71° 12' 31.8505"
9	D. J. Malpani	IWISL/2000/16-17/4060	Amreli	Gujarat	21° 18' 27.5358"	71° 25' 05.4767"
10		IWISL/2000/16-17/4061			21° 18' 21.8501"	71° 25' 30.1157"
11		IWISL/2000/16-17/4062			21° 18' 29.9265"	71° 26' 02.8202"
12		IWISL/2000/16-17/4063			21° 18' 18.5448"	71° 26' 03.1529"

13		IWISL/2000/ 16-17/4064			21° 18' 10.5525"	71° 26' 09.6116"
14		IWISL/2000/ 16-17/4065			21° 18' 21.4798"	71° 30' 27.9626"
15		IWISL/2000/ 16-17/4066			21° 19' 48.1147"	71° 27' 17.9010"
16		IWISL/2000/ 16-17/4067			21° 19' 59.6034"	71° 27' 03.5558"
17		IWISL/2000/ 16-17/40678			21° 20' 11.4744"	71° 27' 14.2307"
18		IWISL/2000/ 16-17/4350			21° 17' 09.9172"	71° 31' 36.7340"
19		IWISL/2000/ 16-17/4489			21° 18' 10.3896"	71° 26' 09.6792"
20		IWISL/2000/ 16-17/4490			21° 18' 18.4176"	71° 26' 03.2388"
21		IWISL/2000/ 16-17/4491			21° 18' 29.7756"	71° 26' 03.2064"
22		DJM 01			10° 47' 08.8350"	76° 47' 22.4161"
23		DJM 02			10° 47' 00.7304"	76° 47' 16.9701"
24		DJM 03			10° 46' 52.2401"	76° 47' 10.6991"
25	D. J. Malpani	DJM 05	Palakkad	Kerala	10° 46' 42.0601"	76° 47' 03.9574"
26		DJM 06			10° 46' 34.0199"	76° 46' 58.6108"
27		DJM 07			10° 46' 31.8877"	76° 47' 07.1889"
28		DJM 08			10° 46' 24.7089"	76° 47' 10.5038"

29		DJM 09			10° 46' 18.3974"	76° 47' 21.4268"
30	D. J. Malpani	ADD- 01	Dhar	Madhya Pradesh	22° 37' 50"	75° 16' 55"
31		ADD- 06			22° 37' 24"	75° 16' 29"
32		TIR- 11			22° 37' 11"	75° 16' 40"

Starting date of the operation of the project activity is 28-March-2016 which is the date of commissioning/commercial operation of the 1st WTG. Assessment team checked the commissioning certificates/13 / and confirmed that the Dates of Commissioning for the WTGs are correct. Assessment team also confirm during the onsite and remote audit/26 / that there is no change in project design and the project is implemented as per the description provided in the registered VCS Joint PD&MR/3/.

Commissioning dates of WTGs are given below

S. No.	Project Owner	Machine ID	DOC1	Village	Taluka	District	State
1	D.J. Malpani	RGP2- 09	28-March-2016	Tulaheda	Ghatiya	Ujjain	Madhya Pradesh
2		RGP2- 08	29-March-2016	Tulaheda	Ghatiya		
3		RGP2- 18		Tulaheda	Ghatiya		
4		RGP2- 03		Tajpur	Mahidpur		
5		RGP2- 07		Ranaheda	Ghatiya		
6	D.J. Malpani	IWISL/2000/16-17/3826	31-March-2017	Ranipat	Muli	Surendranagar	Gujarat
7		IWISL/2000/16-17/3829					
8		IWISL/2000/16-17/3830					
9	D.J. Malpani	IWISL/2000/16-17/4060		Pithavadi	Savarkundla	Amreli	Gujarat

¹Date Of commissioning

10		IWISL/2000/ 16-17/4061		Bhenkara			
11		IWISL/2000/ 16-17/4062		Bhenkara			
12		IWISL/2000/ 16-17/4063	31- March- 2017	Bhenkara			
13		IWISL/2000/ 16-17/4064		Bhenkara			
14		IWISL/2000/ 16-17/4065		Senjal			
15		IWISL/2000/ 16-17/4066		Piyava			
16		IWISL/2000/ 16-17/4067	31- March- 2017	Piyava			
17		IWISL/2000/ 16- 17/40678	31- March- 2017	Piyava			
18		IWISL/2000/ 16-17/4350		Piyava			
19		IWISL/2000/ 16-17/4489	31- March- 2017	Piyava			
20		IWISL/2000/ 16-17/4490		Piyava			
21		IWISL/2000/ 16-17/4491		Piyava			
22		DJM 01					
23		DJM 02					
24	D.J.Malpani	DJM 03	28- March- 2017	Kanjikode	Palakkad	Palakkad	Kerala
25		DJM 05					
26		DJM 06					

27		DJM 07					
28		DJM 08					
29		DJM 09					
30	D.J. Malpani	ADD- 01	31- March- 2016	Navagaon	Dhar	Dhar	Madhya Pradesh
31		ADD- 06		Navagaon			
32		TIR- 11		Athar			

The technical parameters have been verified with the name plates as well as with the technical specifications of WTGs and also cross checked from the technical manual of the manufacturer²/24/. Assessment team confirms that the technical parameters are consistent with the registered VCS Joint PD&MR/3/. The major technical specifications of the WTG are as follows.

The project activity comprises WTG's of ReGen Power Tech make and of INOX make.

Technical details for VENSYS 87, 1500 KW Machine:

²<http://www.regenpowertech.com/104/technical-data>

Particulars	Details
Make	ReGenPowertech
Rated power	1500 kW
Cut-in wind speed	3 m/s
Cut-out wind speed	22 m/s
Survival wind speed	52.5 m/s
Generator	Variable Speed Multi Pole Synchronous
Rotor Diameter	87 m
Swept area	5942 m ²
Speed Range	9 to 17.3 rpm
Hub Height	85 m
Design	Tubular, Four Sections
Foundation Type	Floating
Control of Output	Pitch Regulation
Speed Control	Variable, micro controller based
Low Voltage Ride Through (LVRT)	3 seconds
Primary Brake system	Aerodynamic
Pitch System	Electromechanical
Remote Monitoring	VPN
Wind Turbine type class	GL III B
Design Lifetime	25 years

Technical details for WTG 2000 DF/100- 2 MW WTG by Inox:

Sr. No.	Particulars	Details
1.	Rated power	2 MW
2.	Cut-in wind speed	3 m/s
3.	Rated wind speed	11 m/s
4.	Cut-out wind speed	20 m/s
5.	Hub height	80m
6.	Diameter	100.3 m
7.	Swept area	7894 m ²
8.	Estimated design Life time	25 years

The assessment team confirmed through onsite and remote visit/26/ with PP representative that there is no proposed or actual change to the project design during this monitoring period. It was observed that the monitoring plan was implemented as per the registered Joint VCS PD&MR/3/ and applied methodology., ACM0002 Version 17.0/7/. The organizational role and responsibility as mentioned in the registered VCS Joint PD&MR/3/ is followed onsite and remote site. Meters are calibrated as per calibration frequency in registered Joint VCS PD&MR/3/. All the emergency preparedness as mentioned in the registered VCS Joint PD&MR/3/ is followed onsite and no discrepancies were found regarding the same.

Assessment team concludes the following:

- There are no material discrepancies between project implementation and the project description provided in the registered VCS Joint PD&MR /3/.
- The monitoring plan is implemented completely and monitoring system (i.e., process and schedule for obtaining, recording, compiling and analyzing the monitored data and parameters) is appropriate.
- There are no material discrepancies between the actual monitoring system, and the monitoring plan set out in the project description and the applied methodology /7/.
- The GHG emission reductions or removals generated by the project have not been included in any emissions trading program or any other mechanism that includes GHG allowance trading except VCS /15/.

- e) The project has not received or sought any other form of environmental credit, or has become eligible to do so since validation or previous verification/29 /.
- f) The project is registered under VCS only and PP has submitted the declaration/ 15/ stating, they will claim same GHG emission reductions of the project from VCS only for the current monitoring period when project is seeking to get GHG emission reduction from VCS.
- g) The project activity complies with four indicators for sustainable development i.e., social wellbeing, economic wellbeing, environmental wellbeing and technological wellbeing in the interim approval guidelines for Clean Development Mechanism (CDM) projects from India as discussed under section 1.11 of MR /1/. Assessment team has verified the same during on site visit /19/ and found all the indicators can be observed to be effective and applicable for the project activity.

The Project activity has implemented activities that results in 2 SDG Contributions; **7.2.1** and **13**

- **7.2.1: Renewable energy share in the total final energy consumption**-80,577 MWh MWh of renewable electricity has been supplied to Indian grid during the current monitoring period that helped to increase the renewable energy share in the energy mix. The total energy supplied to Indian Grid by the project activity during its lifetime is 557,214.91 MWh (79,128 + 146,973 + 110,149.91 + 94,538 + 45,849 + 80,577) MWh
- **13: Tonnes of greenhouse gas emissions avoided or removed**- By supplying 80,577 MWh clean electricity to Indian grid, the project avoided release of 77,781 tCO₂e in to the atmosphere during the current monitoring period. The greenhouse gas emissions avoided by the project activity during its lifetime are 537,844 tCO₂e (76,380 + 141,873 + 106,298 + 91,255 + 44,257 + 77,781) tCO₂e

S. No.	Energy supplied by the project activity to grid during its lifetime (MWh)	GHG emissions avoided by the project activity during its lifetime (tCO ₂ e)	Monitoring Period dates
1	79,128	76,380	<u>28-March-2016 to 23-December-2017</u>
2	146,973	141,873	24-December-2017 to 31-March-2019 ³
3	110,149.91	106,298	<u>01-April-2019 to 29-February-2020</u>
4	94,538	91,255	<u>01-March-2020 to 31-December-2020</u>
5	45,849	44,257	<u>01-January-2021 to 30-June-2021</u>
6	80,577	77,781	01-July-2021 to 31-March-2022 (Current Monitoring period)

In view of the information's as verified above the assessment team is able to conclude that the project has been implemented as described in the registered VCS Joint PD&MR /3/ and MR /1/. The emission reduction achieved in current monitoring period from 01-July-2021 to 31-March-2022 are 77,781 tCO₂e which are 10.71% lower than what was anticipated. The lower emission reduction was due to low PLF and breakdown of

- 284.15 hours for Dhar site
- 261.24 hours for Ghatiya site
- 1413 hours 42 minutes for Sadla site
- 2679 hours 49 minutes for Savarkundla site
- 2341 hours 21 minutes for Kinfra site

This is as per the DGR and breakdown report submitted by PP /23/ for the current monitoring period and same has been justified in section 4.5 below.

³The verification was conducted for this monitoring period by Earthhood services private limited dated 11-November-2019 for the monitoring period (24-December-2017 to 31-March-2019) /29/ but the records are not available on VCS project webpage. VVB has assessed the verification report made available by PP.

4.2 Safeguards

4.2.1 No Net Harm

Being renewable wind power generation project there are no major negative impacts on air, water, soil quality and ambience are envisaged due to the implementation of project activity and no potential negative environmental and socio-economic impacts in current monitoring period, in fact project activity contributes positively by providing environment friendly power generation leading to sustainable development of the region. Also, the generation of employment supports upliftment of socio-economic status of region

According to Indian regulation, the implementation of the wind park does not require an environmental impact assessment. The Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India notification dated 14-September-2006 regarding the requirement of Environment Impact Assessment (EIA) studies as per the Environment Protection Rule, 1986 (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii) MINISTRY OF ENVIRONMENT AND FORESTS) states that any project developer in India needs to file an application to the Ministry of Environment, Forest and Climate Change (including a public hearing and an EIA) in case the industry or project is listed in a predefined list. Wind parks are not included in this list and thus an EIA is not required.

Being a renewable resource, using wind energy to generate electricity contributes to natural resource conservation. Thus, the project causes no major negative impact on the surrounding environment contributing to environmental well-being.

The potential minor negative impacts by the project activity are identified as below:

During construction

Impact on air

Movement of construction material during construction will have some impact on the air. As the transportation is quite less for the project activity, the impacts will be negligible.

Impact on water

Not much water discharge takes place during construction. However, proper sanitary arrangements will be provided by project proponents.

Impact on Land use

The land on which the project activity takes place is largely unproductive. Prior to the project activity, most of the land had no beneficial use. The project proponents had bought the land for a worthwhile application and obtained necessary approvals for installation of windmills. No dislocation of people is involved in the course of the project activity. The magnitude of the impacts during the construction phase is negligible and exists for a temporary period of time till the end of construction phase. Therefore, it would not affect the environment considerably. The impacts on the environment due to construction activities of wind turbines are negligible.

Operation and Maintenance Phase

Suzlon/Enercon maintains highest level of safety standards. Systematic and scientific maintenance of all equipment has been undertaken to ensure the best safety standards.

Impact on air

Wind energy plants are known to contribute to zero atmospheric pollution as no fuel combustion is involved during any stage of the operation.

Impact on water

There is absolutely no effluent discharge during operation of wind turbine generators.

Impact on ecology.

There are no known migratory birds/endangered species in the region of project activity. Therefore, no harm on the ecological environment is envisaged.

Socio-Economic Impacts

There is no inconvenience to the local community due to the transmission lines. The project activity helps upliftment of skilled and unskilled manpower in the region. The project will be providing employment opportunities not only during the construction phase, but also during its operational lifetime. The project activity improves employment rate and livelihood of local populace in the vicinity of the project. Moreover, the project generates eco-friendly, GHG free power which contributes to sustainable development of the region.

Conclusion

The net impact under environmental pollution category is positive as all necessary abatement measures are adopted and periodically monitored. The project activity does not have any major adverse impacts on environment during its construction or operational phase. The human-interest parameter shows positive impacts due to increased job opportunities at the facility as well as other ancillary units coming up

VVB has assessed the project activity on site and confirms that there were no negative environmental and socio-economic impacts observed during current monitoring period as all necessary measures were found in place which was confirmed during site visit /19/.

4.2.2 Local Stakeholder Consultation

The Project is already registered with VCS and registered Joint VCS PD&MR/3/; sections 2.2 describes the Local Stakeholder Consultation Process as in-line with VCS requirement.

As a part of continuous feedback from stakeholders, there were no other major comments or protest raised by the stakeholders and they were totally in support for setting up of these kinds of projects in the region.

For ongoing communication, the PP has also placed a grievance register/25 / onsite where in the stakeholder can put down his/her complaints and the same if found genuine will be addressed immediately.

However, being renewable wind power generation project there is no feedback/grievance has been reported within this monitoring period verified onsite and remotely from the grievance register placed at the site and the grievanceregister photograph/25/.

The verification team has interacted with local stakeholders during on-site assessment for Ghatiya site in Ujjain and for other 4 sites the stakeholders interaction happened remotely. The details are summarized in section 2.3 of this report and no negative comment or feedback from local stakeholders is recorded by assessment team.

4.3 AFOLU-Specific Safeguards

The project activity deals with generation of electricity using wind energy by Wind Turbine Generator (WTG) and not from AFOLU projects. Hence not applicable

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The project monitoring has been carried in accordance with the registered VCS Joint PD&MR /3/ and the monitoring report/1/ and involves just one parameter to be monitored **EGPJ,y**(Quantity of net electricity generation supplied by the project (Wind) plant/unit to the grid in year y) according to the monitoring plan and monitoring report/1/. The parameter value is sourced from JMRs/11/ and Invoices/12/. The parameter value is sourced from JMRs/11/ and Invoices/12/. Periodically calibrated meters of 0.2s accuracy class are installed at site which regularly monitor the import and export value which is monthly aggregated in JMRs. ER sheet prepared by PP has been reviewed by assessment team thoroughly by cross checking the values of JMRs and Invoices submitted by PP and found correct including all the formulae and conversions and aggregations.

The expected emission reduction from the project activity for current monitoring period are 87,114 tCO₂e for the current monitoring period, whereas the actual emission reductions achieved were 77,781 tCO₂e which is 10.71% lower than what was anticipated.

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/1/. The emission reductions are 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 net electricity generation supplied to the grid by each phase used in deriving the GHG emission reduction could be very well correlated between the data sets and ER spreadsheet/2/ provided by PP. The verification of each monitoring parameter has been discussed later in section 4.5. This lower generation of emission reduction is due to lower PLF achieved in current monitoring period which is highly driven by wind availability and PP do not have any control on it.

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/1/. The emission reductions are 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 net electricity generation supplied to the grid by each phase used in deriving the GHG emission reduction could be very well correlated between the data sets and ER spreadsheet/2/ provided by PP. The verification of monitoring parameter has been discussed later in section 4.5.

This lower generation of emission reduction is due to lower PLF achieved in current monitoring period which is highly driven by wind availability and PP do not have any control on it and breakdown of breakdown of 284.15 hours for Dhar site, 261.24 hours for Ghatiya site, 1413 hours 42 minutes for Sadla site, 2679 hours 49 minutes for Savarkundla site and 2341 hours 21 minutes for Kinfra site happened during current monitoring period. Further explanation is also provided in section 4.5 of this report.

In section 4.5 of this report and section 5.4 of MR /1/ calculations has been stated which are appropriately presented in ER spreadsheet /2/ that has been verified by the assessment team from JMRs issued to PP by State utility/10/& invoices issued by PP to state electricity authority /12/ submitted to assessment team by PP. Hence VKU states that the calculation method and formulae used in calculating baseline emission is in compliance to the methodology used i.e., ACM0002 Version 17.0/7/. Since project activity is a wind power project, and no type of fossil fuel is used under project activity during current monitoring period thus no project emission has been considered and no leakage emissions are considered as per the applied methodology Para 37 /7/.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

During the verification, all relevant documents were checked to assess the correctness and quality of data submitted by the project participants, which are used to determine emission reductions.

All records needed for monitoring are archived in line with the requirements of the registered monitoring plan. No significant, lack of evidence and missing data were detected during verification. Hence, the verification team confirms that the monitoring system ensures required quality of the monitoring system to ensure the quality of the monitored data. All internal data are subjected to QA/QC measures.

The only monitoring parameter in the project activity is “Quantity of net electricity generation supplied by the project (Wind) plant/unit to the grid in year y”, $EG_{P,y}(MWh)$. This parameter is monitored through controller reading of each WTG and the reading of bulk energy meters installed at substation.

Apportioning

In case the dates of a particular monitoring period do not match with the dates of the billing cycle, the net electricity exported to the grid would be calculated from:

Apportioning the net electricity exported to grid, as recorded in the consolidated Share Certificate/JMR Report/Credit Notes certified by the respective state DISCOM, based on the number of days in the monitoring period and the number of days for which Share Certificate/JMR Report/Credit Notes was prepared. This process is elaborated below:

- In case the dates of a particular monitoring period do not match with the dates of the billing period, the net electricity exported to the grid is calculated as follows:

$$D = (A/B)*C$$

Where:

A = Difference of number of days which are not matching of billing period and monitoring period.

B = Number of days of the billing period/ month which was not matched with the monitoring period.

C = Net Electricity supplied to the grid for that given billing period/ month.

The calculated value after apportioning is used for calculation of emission reductions during that period.

During the current monitoring period, apportioning has not been done as there is no mismatch between the monitoring period and the billing period

If any common metering is involved for project activity, then apportioning procedure will be involved which is under control of state electricity board. Based on the break-up sheets Project investor raises invoice to DISCOM/ third party which forms the basis of cross-check for the net electricity generated. The Project investor has no role in the entire procedure of apportioning.

The project activity is located in Madhya Pradesh, Gujarat and Kerala states of India. In Indian scenario the monitoring, metering arrangement, apportioning procedure, calibration frequency and feeder arrangement is under control of respective state electricity board and PP do not have any control on it. Herein the apportioning procedure mentioned is applicable in case of Madhya Pradesh sites only as in Gujarat and Kerala there is no apportioning.

Furthermore for this monitoring period, the billing cycle and monitoring period matches; so there is no need for apportioning for this monitoring period in neither of three sites. Thus, there is possibility of changes in meters, feeders for the project activity. PP is getting the net electricity supplied to grid and based on this value invoice will be raised by PP. Hence feeder wise details of WTGs, metering arrangement, monitoring procedure etc. are not mentioned in VCS Joint PD&MR.

The below tables describe how the parameter **EG_{PJ,y} (MWh)** 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 met:-

Parameter	Quantity of net electricity generation supplied by the project (Wind) plant/unit to the grid in year y, $EG_{PJ,y}$ (MWh).	
Means of verification	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	The parameter is calculated and recorded on monthly basis. The value of net electricity generation supplied to the grid as per Joint Meter Reading Report forms the basis for calculation of the emission reductions Net electricity supplied to grid is calculated as the difference of the measured values of “export” and “import” of electricity through the dedicated SEB (State electricity board) energy meter installed at the delivery point (i.e., the connected substation). Net electricity generated and supplied by the project (Wind) plant/unit to the grid = Electricity Export to the grid – Electricity Import from the grid
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The reporting frequency is hourly and recorded on monthly basis and it is in line with the monitoring plan outlined in the registered VCS Joint PD&MR /3/ and monitoring methodology/7/.
	Monitoring equipment	No monitoring equipment is used as this parameter is calculated. However, the parameters Export and Import values are calculated using measured values, which are continuously

		monitored, hourly measurement and monthly recorded.
	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?	The accuracy of the monitoring equipment used to measure the input values such as import and export to calculate net electricity generation value is 0.2s, which is as per the registered VCS Joint PD&MR /3/ which is as per the norm defined in the PPA/14/.
	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	No. The accuracy of monitoring equipment's is valid for the entire range for Dhar Site, Ghatiya site and Savarkundla site. However, for Kinfra site, Kerala calibration delay for both main and check meters from 25-March-2022 to 13-May-2022 and 27-March-2022 to 16-May-2022 have been observed similarly for Sadla site calibration delay of both main and check meters from 30-Jan-2022 to 21-April-2022 have been observed and error factor is applied by PP in the ER sheet/2/.
	Calibration frequency /interval:	Calibration frequency of the meters is once in 5 years ⁴ .
	Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency	Yes. The calibration frequency is once in 5 years as outlined in the registered VCSJoint PD&MR /03/ is in

⁴As per CEA Guideline

	of calibration, is the selected frequency in accordance with the local/national standards, or as per the manufacturer's specifications?	accordance with the national standard/17 /.
	Is the calibration of measuring equipment carried out by an accredited person or institution?	Calibration of the measuring equipment's is carried out by state utility of Madhya Pradesh, Gujarat and Kerala (MPPKVCL, GETCO and KSEB)
	Is(are) calibration(s) valid for the whole reporting period?	Yes. Calibration of meters is valid for the current monitoring period.
	Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	Yes. The calibration is carried out appropriately.
	How were the values in the monitoring report verified?	Cumulative value of EG_{PJ,y} for entire monitoring period is reported in the monitoring report/1/, and monthly values in the ER calculation sheet/2/. The monthly values were verified from the credit notes issued by state utility and found to be consistent. Value of this parameter for the current monitoring period was verified as: • 6,622 MWh for Dhar site in Madhya Pradesh • 8,936 MWh for Ghatiya site in Madhya Pradesh • 6,881 MWh for Sadla site in Gujarat

		• 34,237 MWh for Savarkundla site in Gujarat • 23,901MWh for Kinfra site in Kerala. The total net energy generated and sent to grid is: 80,577MWh
	If applicable, has the reported data been cross-checked with other available data?	The monthly reported values of EG_{PP,y} were further cross checked with the monthly invoices raised by the PP /12/ to state utility and found to be consistent.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Onsite and remote site personnel interviews/26/with the stakeholder of the project activity confirms that the necessary QA/QC procedures are in place and the data management system is effective and reliable. The desk review of the O&M agreements and registered monitoring plan and its implementation in the current monitoring period is done to satisfactorily verify that the system is in place.
	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#01, CAR#02 and CAR#03 were 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 emission reduction calculation for the project activity is estimated based on the electricity supplied by the WTGs. Since 100% data was verified, the team can ascertain that the values taken for emission reduction calculation are free from material errors.
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Parameters fixed ex ante:

EF_{grid,OM,y}; tCO₂/MWh: It is the operating margin CO₂ emission factor for of NEWNE at the time of project registration, the mentioned value of 0.9843 tCO₂/MWh is consistent with the registered VCS Joint PD&MR/3/.

EF_{grid,BM,y}; tCO₂/MWh: It is build margin CO₂ emission factor for of NEWNE at the time of project registration the mentioned value of 0.9083 tCO₂/MWh is consistent with the registered VCS Joint PD&MR /3/.

EF_{grid,CM,y}; tCO₂/MWh: It is the combined margin CO₂ emission factor for Of NEWNE at the time of project registration the mentioned value of 0.9653 tCO₂/MWh is consistent with the registered VCS Joint PD&MR /3/.

Calibration of meters:

During the verification assessment of the project activity, accuracy of all the metering have been checked and found appropriate. The installation and working conditions of the meters were checked during the on-site and remote inspection and were found to be satisfactory. Details of meters are provided in below table:

The current meter details for M/s D.J. Malpani are as follows:

The billing Energy Meters details for the project activity are as below:

The Main and Check Meter details for Dhar Site, Madhya Pradesh

Meter Details for WTG ID: TIR- 11			
Main Meter		Check Meter	
Make	Secure	Make	Secure
Meter Sl. No	XD500605	Meter Sl. No	XD500606
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration Date	01-March-2021	Calibration Date	01-March-2021
Due Date of Calibration	28-February-2026	Due Date of Calibration	28-February-2026
Delay in Calibration	No Delay	Delay in Calibration	No Delay

Meter Details for WTG ID: ADD- 01 & ADD- 06			
Main Meter		Check Meter	
Make	Secure	Make	Secure
Meter Sl. No	XD500602	Meter Sl. No	XD500603
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration Date	01-March-2021	Calibration Date	01-March-2021
Due Date of Calibration	28-February-2026	Due Date of Calibration	28-February-2026
Delay in Calibration	No Delay	Delay in Calibration	No Delay

The Main and Check Meter details for Ghatiya Site, Madhya Pradesh

Meter Details for WTG ID: RGP2- 08 & RGP2- 09 at Feeder-1			
Main Meter		Check Meter	
Make	Secure	Make	Secure
Meter Sl. No	XD500608	Meter Sl. No	XD500609
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration Date	14-September-2018	Calibration Date	14-September-2018
Due Date of Calibration	13-September-2023	Due Date of Calibration	13-September-2023
Delay in Calibration	No Delay	Delay in Calibration	No Delay
Meter Details for WTG ID: RGP2- 18, RGP2- 03 & RGP2- 07 at Feeder-2			
Main Meter		Check Meter	
Make	Secure	Make	Secure
Meter Sl. No	Y0056943	Meter Sl. No	Y0056944
Accuracy Class	0.2 s	Accuracy Class	0.2 s

Calibration Date	14-September-2018	Calibration Date	14-September-2018
Due Date of Calibration	13-September-2023	Due Date of Calibration	13-September-2023
Delay in Calibration	No Delay	Delay in Calibration	No Delay

The Main Meter details for Sadla sites

Meter details for feeder -1		Meter details for feeder -2	
Main Meter		Main Meter	
Make	Secure	Make	Secure
Meter Sl. No	GJ 3819 A	Meter Sl. No	GJ 3820A
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration Date	30-January-2017 22-April-2022	Calibration Date	30-January-2017 22-April-2022
Due Date of Calibration	29-January-2022 21-April-2027	Due Date of Calibration	29-January-2022 21-April-2027
Delay in Calibration	Delay from 30-January-2022 to 21-April-2022	Delay in Calibration	Delay from 30-January -2022 to 21-April-2022

The Main and Check Meter details for Savarkundla sites

Meter-1		Meter-2	
Main Meter		Check Meter	
Make	Secure	Make	Secure
Meter Sl. No	GJ3856A	Meter Sl. No	GJ3857A
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration Date	18-May-2017	Calibration Date	18-May-2017
Due Date of Calibration	17-May-2022	Due Date of Calibration	17-May-2022
Delay in Calibration	No Delay	Delay in Calibration	No Delay

The Main and Check Meter details for Kinfra site, Kerala

Meter Details for Feeder- 1			
Main Meter		Check Meter	
Make	L & T	Make	L & T
Meter Sl. No	16088079	Meter Sl. No	16088085
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration Date	25-March-2017 14-May-2022	Calibration Date	25-March-2017 14-May-2022
Due Date of Calibration	24-March-2022 13-May-2027	Due Date of Calibration	24-March-2022 13-May-2027
Delay in Calibration	25-March-2022 to 13-May-2022	Delay in Calibration	25-March-2022 to 13-May-2022
Meter Details for Feeder- 2			
Main Meter		Check Meter	
Make	L & T	Make	L & T
Meter Sl. No	16088074	Meter Sl. No	16088092
Accuracy Class	0.2 s	Accuracy Class	0.2 s
Calibration Date	27-March-2017 17-May-2022	Calibration Date	27-March-2017 17-May-2022
Due Date of Calibration	26-March-2022 16-May-2027	Due Date of Calibration	26-March-2022 16-May-2027
Delay in Calibration	27-March-2022 to 16-May-2022	Delay in Calibration	27-March-2022 to 16-May-2022

Assessment on delay in calibration:

The energy meter calibration certificates/11/ are checked by assessment team with respect to their calibration validity, accredited entity, accuracy class, make and calibration date and found that the calibration details provided in the MR are correct for the complete monitoring period i.e. from 01-July-2021 to 31-March-2022(inclusive of both the dates).

From the verification of above table, verification team confirms that the energy meter calibrations are valid for the entire range for Dhar Site, Ghatiya site and Savarkundla site. However, for Kinfra site-Kerala a calibration delay from 25-March-2022 to 13-May-2022 happened for Feeder-1 and 27-March-2022 to 16-May-2022 happened for Feeder-2 have been observed and PP have applied the error factor of 0.2% for the delay period. Similarly for Sadla site a calibration delay for the months from 30-January-2022 to 21-April-2022 have been observed and PP have properly applied the error factor 0.4% in the ER sheet/2/ as in Gujarat Export, Import value is not given in Net Energy share certificate, so in place of subtracting 0.2% from Export and adding 0.2% in Import value, 0.4% has been subtracted from the Net generation value as verified by the assessment team during desk review and found acceptable.

The verification team has checked all the meters and confirmed that the meters were working satisfactorily. Also, the calibration of meters is completely under purview of state utility and PP has no control over the same as confirmed through interviews of site personnel and PPA/14/ signed by the PP with state utility.

Hence it can be concluded that the approach followed by the PP is conservative and in line with the guidelines provided under paragraph 3.4.2 of VCS Validation and Verification manual version 3.2/21/ and also in line with the para 366 of CDM Validation and Verification Standard /22/. The registered Joint VCS PD&MR/3/ & MR /1/ and onsite audit observations confirm that the metering equipment are sealed and maintained by the state utility ./

The assessment team has verified the monthly credit notes issued by the state utility and confirmed that only the data recorded through main meters is used to calculate net electricity supplied to the grid consequently for ER calculations.

In view of the above discussion the assessment team is able to confirm that evidence used to determine the GHG reductions and removals are sufficient and appropriate with respect to quality and quantity.

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). The formula provided for the calculation of baseline emissions is:

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

Where:

BE_y = Baseline Emissions in year y; tCO₂

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

$EF_{grid,CM,y}$: Combined margin CO₂ emission factor for grid connected power generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (Tco2e/MWh).

The baseline emissions for the project activity for the current monitoring period are as follows: -

Baseline Emission factor = 0.9653 tCO₂e/MWh

Since the project activity is the installation of a new grid-connected renewable power plant at a site where no renewable power plant was operated prior to the implementation of the project activity, then:

$$EG_{PJ,y} = EG_{facility,y}$$

Where;

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

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

Electricity Supplied to the Grid, $EG_{PJ,facility,y} = 80,577$ MWh

Baseline Emission, $BE_y = 80,577 \times 0.9653$

=77,781 tCO₂e (ROUND DOWN VALUE)

The verification team confirms that appropriate methods and formulae for calculating baseline emissions have been followed. The assumptions, emission factors and default values that were applied in the calculations are justified. The verification team confirms that appropriate methods and formulae for calculating baseline emissions have been followed.

The assumptions, emission factors and default values that were applied in the calculations are justified. The actual emission reduction achieved during the current monitoring period are 10.71% lower than the estimated amount of emission reductions as per VCS Joint PD&MR/3/, which is due to the low PLF achieved by the project activity during the current monitoring period and breakdown due to scheduled maintenance for all 5 sites as 284.15 hours for Dhar site, 261.24 hours for Ghatiya site, 1413 hours 42 minutes for Sadla site, 2679 hours 49 minutes for Savarkundla site and 2341 hours 21 minutes for Kinfra site as per the DGR and breakdown report submitted by PP /23/. Lower PLF is completely governed by the availability of wind, which is natural phenomenon and same is beyond the control of PP.

This comparison is submitted in the ER sheet/2/ along with a justification confirming that this event of lower power generation was an unforeseen situation and also not under the direct control of PP. Since the emission reduction is less than the estimated emission reduction, no further justification is required.

All the data were made available and have been monitored as per required monitoring frequency. The means of verification for the values of parameters, used for baseline emission calculation, is described above.

VKU is of the opinion that this method of calculation of emission reductions is accurate and results in conservative estimation of emission reduction and is in line with the applicable VCS requirements.

4.6 Non-Permanence Risk Analysis

There is no non-permanence risk rating determined by the project proponent for the project activity hence not applicable

5 VERIFICATION CONCLUSION

M/s VKU Certification Pvt. Ltd. has performed the sixth verification of the emission reductions reported for the project activity “Bundled Wind Power Project in Madhya Pradesh, Gujarat and Kerala by D.J. Malpani” in India, VCS Registry Project ID 1679, for the period 01-July-2021 to 31-March-2022 (Inclusive of both start and end dates), with regard to the relevant requirements for VCS activities. The project participants of “Bundled Wind Power Project in Madhya Pradesh, Gujarat and Kerala by D.J. Malpani” project is responsible for:

- The preparation of greenhouses gas emissions data and the reported greenhouse gas emission reductions from the project on the basis set out in the monitoring plan contained in the registered VCS Joint PD&MR version 3.0 of 19-February-2018 /3/

- The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of greenhouse gas emission reductions of the project.

It is the responsibility of VKU to express an independent verification opinion about the project's conformity with the requirements of VCS Standard version 4.3 /5/and GHG program applied, on the reported greenhouse gas emission reductions from the project.

Based on documented evidence and corroborated by an on-site assessment, VKU can confirm that:

- The project has been implemented and operated as per the registered VCS Joint PD&MR/3/
- The monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable VCS Standard version 4.3/5/ requirements;
- The monitoring is in place as per the applied baseline and monitoring methodology/7/.
- The monitoring plan in the registered VCS Joint PD & MR/3/ is as per the applied baseline and monitoring methodology /7/ and tool /31/.

VKU Certification; 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. VKU Certification planned and performed the verification by obtaining evidence and other information and explanations that VKU Certification considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

It is VKU's opinion that the GHG emission reduction stated in the monitoring report version 6.0 dated 25-January-2023 for the "Bundled Wind Power Project in Madhya Pradesh, Gujarat and Kerala by D.J. Malpani" in India for the period 01-July-2021 to 31-March-2022 (Inclusive of both start and end dates) are fairly stated. The GHG emission reductions are calculated on the basis of approved methodology ACM0002. version 17.0/7/ and the monitoring plan included in the registered Joint VCS PD&MR, version 3.0 of 19-February-2018/3/.

Hence VKU is able to certify that the emission reduction from the project during the monitoring period 01-July-2021 to 31-March-2022 (Inclusive of both start and end dates) amounts to 77,781 tCO₂e.

The following table shows the Net Emission Reduction from 01-July-2021 to 31-March-2022 (Inclusive of both start and end dates) under first crediting period from 28-March-2016 to 27-March-2026 (Inclusive of both dates).

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

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
Year 2021 (01-Jul-2021 to 31-December-2021)	55,358	0	0	55,358
Year 2022 (01-January-2022 to 31-March-2022)	22,423	0	0	22,423
Total	77,781	0	0	77,781

APPENDIX A: ABBREVIATIONS

Abbreviations	Full texts
BE	Baseline Emissions
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM M&P	Modalities and Procedures CDM
CER(s)	Certified Emission Reduction(s)
CH ₄	Methane
CL	Clarification Request
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EF	Emission Factor
ER	Emission Reductions
FAR	Forward Action Request
GHG(s)	Greenhouse gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
KSEB	Kerala State Electricity Board
MoV	Means of Verification
MR	Monitoring Report
NGO	Non-governmental Organization
ODA	Official Development Assistance
PD	Project Description
PE	Project Emission
PP(s)	Project Participant(s)
Ref.	Document Reference
SS(s)	Sectoral Scope(s)
TA(s)	Technical Area(s)
UNFCCC	United Nations Framework Convention on Climate Change
VCU	Verified Carbon Unit
VKU	VKU Certification Ltd.
VCS	Verified Carbon Standard
VVS	Validation and Verification Standard
VVB	Validation and verification body

APPENDIX B: AUDIT FINDINGS

Type	Date	15-June-2022
CL#01	Reference	Section of Ver protocol: First Page &1.1
Description of the Non-Conformance		
1. PP is requested to clarify if PP has submitted the correct monitoring report to VVB for verification as the date of issue is 13/05/2021 and the current monitoring period is 01/07/2021-31/03/2021. Kindly clarify the inconsistency. 2. PP is requested to clarify the purpose of leaving the blank page after title page. 3. PP is requested to clarify if they have provided the correct MR for verification as the monitoring period is found to be inconsistent with that mentioned on title page of the MR in section 1.1. 4. PP is requested to clarify the inconsistency found in the values of latitude and longitude of the Project activity with that of the registered VCS Joint PD&MR dated 19/02/2018. 5. PP is requested to provide the picture of grievance register kept at site.		
1 st Response from PP	Date	20-June-2022
1. The correct monitoring report has been submitted, there has been a typo error in mentioning the date, and it should have been 13/05/2022 instead of 13/05/2021. 2. The blank page has been removed from the Monitoring Report. 3. The monitoring period has been corrected in section 1.1 from (01-January-2020 to 31-June-2022) to (01-July-2021 to 31-March-2022) as mentioned on title page. 4. At the time of 2nd verification (Monitoring Period - 24-Dec-2017 to 31-March-2019), Geo-coordinates of the project activity have been revised as per the actual scenario and the same has been approved. That is why the co-ordinates mentioned in current monitoring report do not match that of VCS Joint PD&MR. 5. The scan copy of grievance registers has been provided to VVB.		
1 st Assessment by Audit Team	Status	Closed
Date	06-September-2022	
Assessment team confirms that: - 1. PP has corrected the typo error in the date of issue of the current monitoring period in the revised MR version 02 dated 21-June-2022. 2. PP has removed the blank page from the monitoring report. 3. PP has corrected the monitoring period in the revised MR version 02 dated 21-June-2022, from (01-January-2020 to 31-June-2022) to (01-July-2021 to 31-March-2022) and it is found to be consistent with the monitoring period mentioned on title page. 4. The latitude and longitude mentioned for all WTG sites were revised during the second monitoring period and they were verified from the approved MR pdf provided by PP and found to be consistent with the provided revised MR thus accepted. 5. PP has submitted the pdf copy of grievance registers of all the 5 sites and no grievance has been found for the entire monitoring period.		

Hence accepted, CL#01 is closed

Type	Date	15-June-2022
CL#02	Reference	Section of Ver protocol: 1.8, 3.1 and 4.1
Description of the Non Conformance		
1. PP is requested to clarify the statement, is the Project registered or seeking the registration in section 1.8. 2. PP is requested to provide evidence to prove that the deviation 2 is closed in the previous verification in section 3.1 of the MR provided to VVB. 3. PP is requested to clarify is the deviation closed in previous monitoring period or is it open for the current monitoring period in section 3.1 of MR provided to VVB. 4. PP is requested to clarify the inconsistency found in the version number of the “tool used to calculate the emission factor for an electricity system” with that of registered VCS Joint PD&MR dated 19/02/2018 in section 4.1 of the MR. 5. PP is requested to clarify the inconsistency found in the version number of the CEA database with that of registered VCS Joint PD&MR dated 19/02/2018 in section 4.1 of the MR.		
1 st Response from PP	Date	20-June-2022
1. The project has been registered under VCS program. The correction has been done in section 1.9. 2. The deviation 2 has been closed in 4th verification (Monitoring Period - 01-March-2020 to 31-December-2020). The correction has been done in section 3.2.2 of current Monitoring Report. Also the Monitoring report for 01-March-2020 to 31-December-2020 has been provided to VVB. 3. The Deviation 1 has been closed in 2nd verification (Monitoring Period - 24-Dec-2017 to 31-March-2019) and the Deviation 2 has been closed in 4th verification (Monitoring Period - 01-March-2020 to 31-December-2020). Both the monitoring reports have been provided to VVB as evidence. Correction has been done in section 3.2.2 of MR. 4. The version number of the “tool used to calculate the emission factor for an electricity system” has been corrected from 05.0.0 to 06.0.0 in section 4.1 of the MR per the VCS Joint PD&MR dated 19/02/2018. 5. The version number of CEA database has been corrected in section 4.1 of the MR as per the VCS Joint PD&MR dated 19/02/2018.		
1 st Assessment by Audit Team	Status	Closed
	Date	06-September-2022
Assessment team confirms that: - 1. PP has clarified that the project activity is already registered thus updated the statement in section 1.9 of the revised MR version 02. 2. MR provided for the verification period (01-March-2020 to 31-December-2020) proves that the deviation 2 is already closed		

3. MR provided for the verification period (24-Dec-2017 to 31-March-2019) proves that the deviation¹ is already closed.
4. PP has updated the version number of the “tool used to calculate the emission factor for an electricity system” from 05.0.0 to 06.0.0 in section 4.1 of the revised MR version 02.
5. PP has updated the version number of the CEA database has been corrected in section 4.1 of the revised MR version 02.

Hence accepted, CL#02 is closed

Type		Date	09-January-2023
CL#03		Reference	Section of Ver protocol: 1.8, 3.1 and 4.1
Description of the Non-Conformance			
1. PP is requested to clarify whether the project activity is applied under IREC mechanism as well? 2. PP is requested to clarify how the lower achievement of ERs is in line with the sensitivity analysis conducted at the time of validation. Explain with respect to the effect of the same on additionality in section 5.4 of MR.			
1stResponse from PP		Date	18-January-2023
1. The project activity has not applied under the IREC mechanism. The project proponent has also provided undertaking that it will not claim any REC or IREC benefits for the given monitoring period. 2. Sensitivity analysis is done by varying the PLF, O&M cost, Project cost and Tariff to +10 % and -10%. For this project there is no impact on additionality as none of these parameters are crossing the breaching value.			
1stAssessment by Audit Team	Status	Closed	Date 24-January-2023
1. The project activity has not applied for any I-REC and REC mechanism and this claim is independently checked by assessment team through the specific website search and further supported by the declaration. Hence accepted. 2. PP states that the low emissions of 10.71% in the current monitoring period has not affected the PLF, O&M cost and Project cost and Tariff due to this low ERs achieved. This has been also assessed by assessment team independently and found that the variation is not breaching any of the parameter values. Hence accepted.			
CL#03 is Closed			

Type		Date	15-June-2022
CAR#01		Reference	Section of Ver protocol: 1.8, 3.1 and 4.1

Description of the Non-Conformance					
1. PP is requested to provide the reference link for the methodology applied to Project activity in section 1.8 of the MR. 2. PP is requested to kindly update the information according to the guideline mentioned in VCS MR template version 4.1 for subsection 1.11 of the submitted MR. 3. PP is requested to list down the SD contributions of the Project activity in section 1.11 of the MR. 4. PP is requested to mention the value of the net electricity generation supplied by the Project activity to the grid in section 4.2 table of the MR. 5. For the project site located in Madhya Pradesh, invoice raised to MPSEB for the exported electricity only and bills for imported electricity received separately. Please clarify how this approach is being followed for this site. 6. PP is requested to provide the complete calibration details of the Sadla site energy meter as per the calibration certificates provided in appendix -1 of the MR.					
1 st Response from PP			Date	20-June-2022	
1. Reference link has been updated for the methodology applied in section 1.8 of the MR 2. Subsection 1.11 has been updated as per the guideline mentioned in VCS MR template version 4.1. 3. The SD contributions by the project activity have been listed in section 1.11 of MR. 4. The value of the net electricity generation supplied by the Project activity to the grid has been updated in section 4.2 table of the MR. 5. For Madhya Pradesh sites, the export and import billing is done separately. The necessary correction has been done in the MR. Also the export and import values as per Invoice has been updated in the ER sheet. 6. The calibration details of Sadla site energy meter has been updated in appendix-1 of the MR as per the calibration certificates					
1 st Assessment by Audit Team		Status	Open	Date	06-September-2022
Assessment team confirms that: - 1. PP has provided the reference link for the methodology in section 1.8 of the revised MR version 02. However, it is found to be not working, kindly update the same. OPEN 2. PP is requested to provide the working hyperlink in section 1.10 in the revised MR version 02. OPEN 3. PP has updated the subsection 1.11 in the revised MR version 02 as per the guideline mentioned in VCS MR template version 4.1. However, PP is requested to update the row number of sustainable development table as per VSC MR template version 4.1. OPEN 4. PP is requested to update the weblink in section 4.1 of revised MR version 02. OPEN 5. The net electricity generation value has been included in the revised MR version 02. 6. PP has updated calibration details of Sadla site energy meter in the revised MR version 02. However, PP is requested to clarify when the validity of calibration is 5 years then how the calibration is valid till 22 April 2027 for Sadla site. OPEN					

7. PP is requested to provide the sample log book records of all the sites in the project activity for current monitoring period to verify the breakdown details provided in revised MR version 02. OPEN				
Hence CAR#01 is Open				
2 nd Response from PP			Date	23-September-2022
1. The working reference link has been updated in section 1.8 of the MR. 2. The working hyperlink has been updated in section 1.10 of the MR. 3. The row number has been updated in line with the VCS MR template version 4.1. 4. The weblinks have been updated in section 4.1 of the MR. 5. For Sadla site, the last calibration has been done in 22-April-2022, which will be valid for 5 years i.e., till 21-April-2027, the necessary correction has been done in the MR. 6. The breakdown details log sheet has been submitted to VVB for review.				
2 nd Assessment by Audit Team	Status	Open	Date	12-October-2022
1. PP has updated the links in section 1.8, 1.10 and further checked by assessment team and found to be correct thus accepted. Closed 2. PP has updated the row number in section 1.11 of revised MR version 03 and found to be correct hence accepted. Closed 3. PP has updated the calibration table for Sadla site and now it is found to be consistent with the calibration certificates provided to VVB. Hence accepted. Closed 4. PP has updated the breakdown details and the log sheet are also provided for review which are found to be consistent. Closed				
Further the PP is requested to clarify followings:				
1. For Sadla (Site No. 3), the monitoring reports lists presence of two meters (1 main meter and 1 check meter, both installed on a single feeder line). During the verification, the project proponent confirmed two feeder lines with each having only 1 main meter. 2. For Kinfra site (Site No. 5), the monitoring report specifies the energy meters to be out of calibration for a part of the applicable monitoring period.				
3 rd Response from PP			Date	18-October-2022
1. For Sadla (Site No. 3), there are two feeder lines with each having only 1 main meter. The necessary corrections have been done in Appendix 1 of the monitoring report. 2. For Kinfra site (Site No. 5), the frequency of calibrating the energy meter is once in 5 years. There has been a delay in calibration i.e., from 25-March-2022 to 13-May-2022 and 27-March-2022 to 16-May-2022. Hence, for current monitoring period an error factor of 0.2% has been applied for month of March 2022, since the meter is of accuracy class 0.2s				
3 rd Assessment by Audit Team	Status	Open	Date	09- January-2023
1. Assessment team confirms that PP has updated the meter details for Sadla site feeder lines in Appendix 1 of the monitoring report version 4.0 submitted to VVB on 18-October-2022. However, PP is requested to provide the appropriateness of using 0.4% as the net to be				

subtracted from net generation value, kindly explain this approach and the basis as per VCS or CDM standards or equivalent

2. Assessment team confirms that PP has updated the calibration details in appendix -1 of revised MR version 4 for Kinfra site and it is found to be in line with the calibration certificate submitted to VVB. However, PP is requested to provide the appropriateness of using 0.2% error factor and not 0.4% as in the case above Since the meter measures net electricity supplied to grid, so please clarify the appropriateness and correctness of the approach used on different sites. PP is further requested to justify the same by quoting reference from standards

Hence CAR#01 is Open

4 th Response from PP		Date	18- January-2023	
1. As per the general rule, based on the accuracy class of meters we subtract 0.2% error factor from export and add 0.2% error factor in import but in case of Gujarat Export and Import values are not given in the share certificate and only net generation value is present. Hence, conservatively a factor of 0.4% has been subtracted from the net generation. 2. In case of Kerala, export and import values are provided in the JMR and hence an error factor of 0.2% has been subtracted from export value and 0.2% is added in import values.				
4 th Assessment by Audit Team	Status	Closed	Date	24- January-2023
1. Assessment team confirms that the accuracy class of meters is as per the calibration certificates and the error factor applied is as per the accuracy class i.e., 0.2%. Since only share certificates are available for Gujarat sites, hence the combined error factor of 0.4% is applied in the delay of calibration period in current verification. Hence accepted. 2. Assessment team confirms that the error factor of 0.2% is correctly applied in export and import values for Kerala site. Hence accepted.				
CAR#01 is Closed				

Type		Date	15-June-2022
CAR#02		Reference	Section of Ver protocol: 4.3
Description of the Non-Conformance			
1. Please elaborate the apportioning procedure including the formulae used to calculate the value of net electricity supplied to the grid. 2. During the remote audit, site personal confirmed that there is no apportioning procedure is being followed.			
1stResponse from PP		Date	20-June-2022
1. The apportioning procedure has been updated and formula used for calculation of net electricity supplied to grid has also been described in section 4.3 of MR.			

2. Apportioning is applicable only in MP site while for Gujarat and Kerala site there is no apportioning; furthermore, for this monitoring period, the billing cycle and monitoring period matches; so there is no need for apportioning for this monitoring period in neither of three sites.				
1stAssessment by Audit Team	Status	Closed	Date	06-September-2022
Assessment team confirms that the proper apportioning is followed at Madhya Pradesh site, while for Gujarat and Kerala site no apportioning is followed. For the current verification period no apportioning procedure is applicable as the energy meter billing dates and monitoring period dates are matching. Hence accepted. CAR #02 is Closed				

Type		Date	15-June-2022	
CAR#03		Reference	Section of Ver protocol: 5 (ER Sheet)	
Description of the Non-Conformance				
ER Sheet: 1. PP is requested to update the value of export and import for the month of Feb 2022 for TIR 11 as it is found to be inconsistent with the provided JMRs. 2. PP is requested to kindly provide the location of the import values inserted as they are not matching with the provided JMRs.				
1 st Response from PP		Date	20-June-2022	
1. The value of export and import for the month of Feb 2022 for TIR 11 has been updated as per the JMR and the new ER and Net generation value have been updated in the Monitoring Report. 2. Import values are given in the JMRs under the column - Import Reading (Consumption) in the row – Difference x Multiplying Factor.				
1 st Assessment by Audit Team	Status	Closed	Date	06-September-2022
1. Assessment team confirms that PP has updated the value of export and import in Dhar site for Feb 2022 for TIR 11 and found to be consistent in the corrected ER sheet to the JMRs provided for that month. 2. PP has provided the location to verify the import values for the Kerala site and the values are found to be consistent with the provided JMRs of the entire monitoring period. Hence accepted. CAR#03 is closed				

Type	Date	09-January-2023
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CAR#04	Reference	Section of Ver protocol: 1.8, 3.1 and 4.1
Description of the Non-Conformance		
1. PP is requested to provide links to the energy generated and ERs mentioned in section 1.11 for traceability/audit trail. 2. While the project country does not require the project to undertake EIA, section 3.17.2 of the VCS Standard v4.3 requires a project to identify the potential negative impact. PP is requested to comply with this requirement in section 2.1 of MR. 3. As per section 3.1 of the VCS monitoring report template v4.1, PP is requested to list all known causes (planned, unplanned, natural, operational, seasonal, etc) that has a bearing the ERs of the project activity. 4. The total breakdown hours as per PP is: 284.15hours, 261.24 hours, 1413.17 hours, 2679.8 hours and 2341.4 hours i.e., 6980.27 hours. The total hours available in the monitoring period is: $274 * 24 = 6576$ hours per site. PP is requested to clarify on this discrepancy indicating the impact on ERs achievement.		
1 st Response from PP	Date	18-January-2023
1. The values have been updated from previous monitoring reports which can be found on the VCS page of the project. The reference link for the same have been provided in the footnote - https://registry.terra.org/app/projectDetail/VCS/1679 2. All potential negative impacts from the project activity have been mentioned in the MR. 3. All known causes (planned, unplanned, natural, operational, seasonal, etc) that has a bearing the ERs of the project activity have been mentioned in the MR. 4. The breakdown hours mentioned for each site is the sum of breakdown durations of each project WTG at that site i.e. not all WTGs were inoperative during this breakdown duration. The same can be verified from Appendix 2 of the MR.		
1 st Assessment by Audit Team	Status	Closed
	Date	24-January-2023
1. The values have been updated in section 1.11 of MR and found to be correct. Hence accepted. 2. All the potential negative impacts are addressed in section 2.1 of MR. hence accepted. 3. All the breakdown hours details have been updated in section 3.1 which are as per the breakdown details provided to assessment team. Hence accepted. 4. The breakdown hours mentioned by PP are WTG and site specific which are checked by assessment team and found correct with the breakdown details provided. Hence accepted.		
CAR#04 is Closed		

Type	Date	DD/MM/YYYY
FAR	Reference	Section of VAL/VER

Description of the Non-Conformance				
1stResponse from PP			Date	~~DD/MM/YYYY~~
1stAssessment by Audit Team	Status	~~Open/Closed~~	Date	~~DD/MM/YYYY~~

APPENDIX C: COMPETENCE STATEMENT

Team Leader-



Certification Pvt. Ltd.

VKU.F50W. Competence Statement

COMPETENCE STATEMENT

Name	Ravikant Soni
Nationality	India
Countries of Experience	India
Education Qualification	M. Tech- Energy Management B. E. - Mechanical Engineering
Year of Experience	14 Years
Area of Expertise	Climate Change & Environment / Industry
Eligible Sectoral Scope	1. GHG emission reductions from fuel combustion

Roles

Team Leader	YES
Validator	YES
Verifier	YES
Financial Expert	YES
Technical Reviewer	YES
TA Expert (TA1.1, TA1.2 and TA3.1)	YES

Technical Reviewer-



Certification Pvt. Ltd.

VKU.F50W. Competence Statement

COMPETENCE STATEMENT

Name	Sanjay Kumar
Nationality	Indian
Countries of Experience	India
Education Qualification	B.E. (Civil Engineering) M. Tech (Environmental Engineering)
Year of Experience	20 Years +
Area of Expertise	Climate Change & Environment Sustainable Development GHG Footprints
Eligible Sectoral Scope	TA 1.1 - Thermal energy generation and Renewables TA 1.2 - Renewables TA 3.1 - Energy Demand TA 6.1 - Construction TA 13.1 - Solid waste and wastewater TA 13.2 - Manure

Roles

Team Leader	YES
Validator	YES
Verifier	YES
Financial Expert	YES
Technical Reviewer	YES
TA Expert (1.1, 1.2, 3.1, 6.1, 13.1, 13.2)	YES