



VERIFICATION REPORT “WIND POWER PROJECT IN MAHARASHTRA, INDIA – ANDHRA LAKE PHASE - I”



Report ID	EPL-VCS-2024-63
Project title	Wind power project in Maharashtra, India – Andhra Lake Phase - I
Project ID	1480
Verification period	01-October-2022 to 31-December-2023
Original date of issue	03-September-2024
Most recent date of issue	11-November-2024
Version	1.1
VCS Standard Version	4.7
Client	Apraava Renewable Energy Private Limited (AREPL)

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Summary:

EcoLance Private Limited (EPL), appointed by Apraava Renewable Energy Private Limited (AREPL), has performed the 8th verification of the greenhouse gas emission reductions reported for the project activity “Wind power project in Maharashtra, India – Andhra Lake Phase - I” VCS 1480, covering monitoring period from 01/10/2022 to 31/12/2023 with regard to the relevant requirements for VCS activities.

The project activity is a grid connected wind power project involving 70 wind turbine of 0.8 MW each with total capacity of 56 MW at in Andhra lake of Pune district of Maharashtra state in India. The project thereby reduces green-house gas emissions which otherwise would have released from grid connected fossil fuel based power plants.

The objective of the verification is to have an independent review ex-post determination of the monitored reductions in GHG emissions. Verification was conducted using EPL’s procedures in line with the requirements specified in the CDM M&P, the VCS validation and verification manual version 3.2, VCS standard v4.7, ISO14064-3: 2019 and relevant decisions of the COP/MOP and the CDM EB and applying standard auditing techniques. The verification consisted of desk review of documents, on-site assessment and the resolution of outstanding issues and the issuance of the verification opinion.

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

The GHG emission reductions were calculated on the basis of the approved methodology ACM0002 ‘Grid-connected electricity generation from renewable sources’ version 21 and the monitoring plan included in the registered Project Design Document, version 1.2 of 05/10/2023.

During this verification, 5 Corrective Action Request (CARs) and 3 Clarification Requests (CLs) were identified related to operation, emission reduction calculation, monitoring of the VCS project activity in relation to all relevant VCS requirements for the project activity and the applied baseline and monitoring methodology. These CARs and CL are successfully closed after necessary

corrections/clarifications by the client. The same has been discussed in Appendix B of this verification report.

VVB found no uncertainties during this verification of the project activity.

In conclusion, it is EPL's opinion that the project activity "Wind power project in Maharashtra, India – Andhra Lake Phase - I", VCS project ID 1480, meets all relevant requirements for VCS standard and guidelines and correctly applies the baseline and monitoring methodology ACM0002 'Grid-connected electricity generation from renewable sources' version 21. The monitoring system is in place and the emission reductions are calculated without material misstatement. Hence, EPL is able to certify that the emission reductions from the project during the monitoring period 01/10/2022 to 31/12/2023 amount to 117,035 tCO₂e.

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1 INTRODUCTION

1.1 Objective

Apraava Renewable Energy Private Limited (AREPL) has appointed EcoLance Private Limited (EPL) to carry out verification of the project “Wind power project in Maharashtra, India – Andhra Lake Phase - I” (VCS 1480) for the period from 01-October-2022 to 31-December-2023 (both dates included). This report summarizes the findings of the verification of the project, performed on the basis of VCS requirements as well as UNFCCC criteria of CDM 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 4.4 /03/, VCS standard version 4.7 /04/, GHG program applied on the basis of the registered project description /07/. 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 the project description (PD) /07/ and that all physical features (technology, project equipment and monitoring systems) of the project are in place and in line with the applied methodology /06/;
- Monitoring report /01/ and Emission Reduction Calculation Sheet /02/ and other supporting documents are complete in line with the monitoring report templates for VCS, version 4.4 /05/;
- The data is recorded and stored as per the monitoring methodology /06/ and approved monitoring plan /07/.
- To confirm that the monitoring system is implemented and fully functional to generate Verified Carbon Units (VCUs) without any double counting, and 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 confirm that the project has performed to contribute to the sustainable development goals indicated in the MR /01/.

1.2 Scope and Criteria

The verification scope is:

- 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.
- to confirm that the project has performed to contribute to the sustainable development goals indicated in the MR.

The project is assessed based on the VCS program guide version 4.4 /03/, VCS standard version 4.7 /04/, VCS Validation and Verification Manual, version 3.2 /13/, VCS Monitoring Report Template version 4.4 /05/ and VCS Verification Report Template, version 4.4. EPL has employed a rule-based approach (as criteria) in the verification, focusing on the identification of significant reporting rules and the reliability of project monitoring. 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

In order to ensure a complete, transparent and timely execution of the verification task the team leader has planned the complete sequence of events necessary to arrive at a substantiated final verification opinion. Various tools have been established in order to ensure an effective verification planning.

Materiality Threshold: The verification assessment for the GHG emission reduction was conducted to provide a reasonable level of assurance of compliance against the defined audit criteria and materiality threshold as defined in the VCS standard /04/ as below:

	Threshold	Related to
☐	1 %	Emission reductions or removals for large projects achieving a total emission reduction or removal of greater than 300,000 tonnes of carbon dioxide equivalent per year
☒	5 %	Emission reductions or removals for projects achieving a total emission reduction or removal of 300,000 tonnes of carbon

		dioxide equivalent per year or less.
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Risk Analysis and verification planning: Before starting the on-site assessment, the team leader has assessed the nature, scale and complexity of the verification tasks by carrying out a strategic analysis of all activities relevant to the project activity. The team leader has collected and reviewed the information relevant to the project activities and assessed the team competency to carry out the verification and ensured that it is able to conduct the necessary risk analysis. Based on the documents review and the stage of the project, potential risks that are material for the GHG emission reporting and estimation were identified and potential mitigation measures were identified before the field verification starts. Potential reporting risks and necessary auditing procedures for residual risk areas identified and assessed are tabulated below:

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the potential risk		Assessment of the records/information/in interview with personnel to check controls/mitigation measures
		Risk level	Justification	
1.	Monitoring, recording and reporting of the information in database and ER spreadsheet.	Low	Human error in recording transferring recorded data to emission reduction worksheet.	The representative of PP and project operators are interviewed on ER calculation approach, data transfer approach/systems and QA/QC to manage and transfer data in the database and utilization of it in ER calculation. Original records shall be cross checked to ensure accuracy.
2.	Use of spreadsheets without adequate controls related to data changes/	Low	Information System: Data are recorded in calibrated energy meters which are	The audit team has interviewed the team to check the accuracy of system and QA/QC in place.

	updates, version tracking, traceability, security		used for emission reduction calculations. Traceability is maintained in monthly generated generation records.	
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Verification team formation: The appropriate verification team was formed with qualified members qualified in accordance with EPL's qualification procedure for assessing the project for this monitoring period considering the potential risks and potential mitigation measures for that risks. The verification team and the technical reviewer consist of the following personnel.

Role/Qualification	Last Name	First Name
Team Leader/Technical Expert/Verifier	Murty	Eswar
Team Member	Nath	Uddipta
Technical Reviewer	Buragohain	Champok

Consideration of materiality in conducting verification: Based on the verification planning, the audit has been carried out. This is performed by conducting on site assessment and obtaining documentary evidences and other information and explanations to achieve reasonable assurance on emission reduction reporting and compliance with the registered PD /07/. From the audit findings, it is found that the GHG emission reduction are fairly stated and are in compliance with the standards and guidelines of VCS and applied methodology /03/, /04/, /05/, /06/, /13/.

The assessment was done through relevant document review as given in section 2.2 of this report and the corrective actions/clarifications as given in appendix 2 of this report. The final verification report before being submitted to the client was subjected to an independent internal technical review to confirm that all verification activities had been completed according to the pertinent EPL's instructions, with a reasonable level of assurance. The technical review was performed by a technical reviewer qualified in accordance with EPL's qualification procedure. Therefore, there is no material changes in reporting of ER in the final version (version 1.1, dated 02-August-2024) of the monitoring report /01/ by PP. So, the audit was done appropriately and sufficiently and the result has a reasonable level of assurance confirming that emission reduction reporting is free of material errors, omissions and misrepresentations.

1.4 Summary Description of the Project

The project activity involves 56 MW wind power project for electricity generation and export to grid. The project owner is Apraava Renewable Energy Private Limited (AREPL) (formerly known as CLP Wind Firms (India) Private Limited) /16/. The project involves 70 wind turbines of 0.8 MW each Wind World India make E-53 Wind Turbine Generators /20/. The first and last machine under the project activity was commissioned on 19/08/2011 and 28/12/2011 respectively. This has been confirmed from commissioning certificates issued /15/ and validation report of the project /08/.

The generated electricity is exported to Indian Grid. The project qualifies as "Project" category as per the VCS Standard /04/. Estimated annual power generation is 89,028 MWh with full capacity resulting emission reductions of 82,885 tCO₂e per year. During this current monitoring period the project exported 1,25,709.87 MWh of electricity resulting emission reductions of 117,035 tCO₂.

The project is located at Andhra Lake of Pune district of Maharashtra state in India. The Geo-coordinates of the commissioned wind turbines under the project was checked from commissioning certificates and real time GPS using mobile app during on-site audit. The location and geo-coordinates are consistent with registered PD.

The project has completed first crediting period of 10 years from 19 August 2011 to 18 August 2021 and renewed for second crediting period from 19 August 2021 to 18 August 2031 /08/.

The main information of the project activity is summarized in the table below.

Project Participant(s)	Apraava Renewable Energy Private Limited (formerly known as CLP <i>Wind Firms (India) Private Limited</i>) /16/
Project Title	Wind power project in Maharashtra, India – Andhra Lake Phase - I
Methodology(ies)	ACM0002, version 21 /06/
Sectoral Scope(s)	01- Energy (renewable/non-renewable)
Registered PD	Version 1.2 of 05 October 2023
Starting date of the crediting period	19/08/2011
Project's crediting period	19 August 2011 to 18 August 2021 (First Crediting Period) 19 August 2021 to 18 August 2031 (Second Crediting Period)
Project documentation link	https://registry.verra.org/app/projectDetail/VCS/1480/14/

2 VERIFICATION PROCESS

2.1 Method and Criteria

Verification was conducted using EPL's procedures in line with the requirements specified in the VCS Requirements, i.e. VCS Program Guide version 4.4 /03/, VCS standard version 4.7 /04/. The GHG emission reductions is assessed on the basis of the approved baseline and monitoring methodology ACM0002: Grid-connected electricity generation from renewable sources (Version 21) /06/ and registered PD /07/.

Since the scope of the activity was to verify already registered project (not grouped project), the verification consisted of the following major three phases:

- Legal contracting with PP, Document review and planning;
 - Contract with PP for the scope of the activity
 - Desk review of the Monitoring Report /01/, Emission Reduction Calculation sheet /02/, registered Project Document /07/, Validation report /08/, UNFCCC website /09/, Gold Standard registry /10/, GCC registry /12/ and VCS registry /11/.
 - VCS validation and verification manual, version 3.2 /13/.
 - Assessment of materiality threshold based on VCS standard /04/, risk analysis, audit planning including the on-site audit planning and verification team appointment.
- On-site assessment and supporting documents review
 - On-site assessment to identify operational status and other supporting parameters and cross-checking if data recording was properly done with meeting QA/QC.
 - Interview with PP regarding the project implementation, GHG accounting systems, monitoring, project management, repair & maintenance, data management, ownership of the activity, double counting issues, QA/QC and calibration of measuring equipment etc.
- Resolution of any material discrepancy and the issuance of the final verification report and certification.
 - Issuance of the findings (CARs/CLs) based on desk study and off-site assessment regarding any discrepancy between registered documents, reporting and the actual implementation situation.
 - Prepare final verification report based on the assessment, resolution of findings and technical reviews.

The following sections outline each step in more detail. The major milestones for the validation are provided below:

- Legal contract with PP for the scope of activity: 18-January-2024
- Receipt of initial project documents: 02-May-2024
- Submission of Notice of Validation/Verification Service (NOVS): 01-June 2024
- Audit Plan communication to PP: 24-June-2024
- On-site Assessment: 2nd July 2024
- Audit finding communication to PP: 17-July-2024
- Response Received from PP: 05-August-2024
- Draft verification report shared with PP: 30-August-2024
- First version of the verification report issued for submission: 03-September-2024.

2.2 Document Review

EPL has primarily conducted the document reviews of the monitoring reports (MR) /01/ and emission reduction calculation sheets /02/ submitted by PP. Also, the registered project documents, corresponding validation report and PD /07/, /08/ have been reviewed. In addition, other supporting documents to cross-check PP's information and statements in the MR are reviewed which are listed below:

Code	Document's Name
/01/	Apraava Renewable Energy Private Limited: Monitoring Report of the project "Wind power project in Maharashtra, India – Andhra Lake Phase - I" covering monitoring period from 01 October 2022 to 31 December 2023, version 01 of 26-April-2024, version 1.1 of 02-August-2024
/02/	Apraava Renewable Energy Private Limited: Emission Reduction Calculation Spreadsheet for the project "Wind power project in Maharashtra, India – Andhra Lake Phase - I", version 1 of 26-April-2024
/03/	VCS: VCS Program Guide, version 4.4 of 29-August-2023
/04/	VCS: VCS Standard, version 4.7
/05/	VCS: VCS Monitoring Report Template, version 4.4
/06/	CDM Executive Board: ACM0002: Grid-connected electricity generation from renewable sources (Version 21) TOOL 01: Tool for the demonstration and assessment of additionality, version 7.0 TOOL 07: To calculate the emission factor for an electricity system, version 7.0
/07/	Apraava Renewable Energy Private Limited: Registered project design document for "Wind power project in Maharashtra, India – Andhra Lake Phase - I" VCS 1480, version 1.2 of 05 October 2023

/08/	Applus Certification: Joint Validation & verification report for “Wind power project in Maharashtra, India – Andhra Lake Phase - I” VCS 1480, version 2.0 of 05 October 2023
/09/	UNFCCC website for project activities and programme of activities https://cdm.unfccc.int/Projects/projsearch.html
/10/	Gold Standard Registry: https://registry.goldstandard.org/projects?q=&page=1
/11/	VERRA registry for VCS Projects: https://registry.verra.org/app/search/VCS
/12/	Global Carbon Council: GCC Project Portal https://projects.globalcarboncouncil.com/pages/gcc_home
/13/	VCS: VCS Guidance-Validation and Verification Manual, Version 3.2
/14/	Project link in VERRA: https://registry.verra.org/app/projectDetail/VCS/1480
/15/	VERRA: Project Review Report for VCS 1480, dated 04 October 2023
/16/	Ministry of Corporate Affairs, Govt. of India: Certificate of Incorporation pursuant to change of name from CLP Wind Firms (India) Private Limited to Apraava Renewable Energy Private Limited, dated 31/12/2021
/17/	Apraava Energy: https://www.apraava.com/sustainability/environment
/18/	Ministry of Labour & Employment: https://labour.gov.in/labour-law-reforms
/19/	Maharashtra State Electricity Distribution Co. Ltd.: Monthly net export and import of electricity connected to 33 kV feeder no 4, 6, 7 & 8 at 132/33 kV Andra lake substation in respect of M/s Apraava Renewable Energy Private Limited (formerly known as CLP Wind Farms (India) Pvt. Ltd.)
/20/	Apraava Renewable Energy Private Limited: Monthly invoices raised to Maharashtra State Electricity Distribution Co. Ltd. for the months from October 2022 to December 2023 for WEGs installed at Andhra lake site
/21/	Apraava Renewable Energy Private Limited: Apportioning worksheets for individual WEC generation during the monitoring period from 01 October 2022 to 31 December 2023
/22/	Maharashtra State Electricity Distribution Co. Ltd. (Rural Testing Division): Calibration/testing report of energy meters dated 13/07/2021

2.3 Interviews

During the verification, VVB conducted physical inspection of project WTGs and project site, documents check and interview with Project Proponent and stakeholders to check if the reported information for the monitoring period are correct and followed due process in-line with the registered project document /07/.

The table below list the detail of interview taken with the PP and the individuals involved in the project during the verification and associated scope of the interview:

SN	Date	Name, Role	Organization	Scope of interview
1	2 nd July 2024	Varun Shah, Dy. Manager	Apraava Energy	Project management, QA/QC for the project, Grievance mechanism, monitoring of project activity, Project implementation, ownership, legal compliance, environmental impacts, ongoing communications, calibration of the measuring equipment's, maintenance and operation etc.
2		Rahul Bajpai, Dy. Manager	Apraava Energy	
3		Prashant Prajapati, Dy. Manager	Apraava Energy	
3	2 nd July 2024	Madaiah Raghavendra, Manger	Apraava Energy	Information flows for generating, aggregating and reporting- ER calculations.
4	2 nd July 2024	Abhishek Bharti	Carbon Consultant of Apraava Energy	Data collection approach, tools and applied methodology use for ER calculation, QA/QC, Social and environmental impacts etc.
5	2 nd July 2024	Mr. Somnath	Security Guard, Local Employee at project plant	Socio-Economic benefits, stakeholder engagement, grievance handling mechanism, Corporate social responsibilities, etc.
6	2 nd July 2024	Mr. Gulab	Local Resident	

2.4 Site Visits

EPL team conducted the on-site audit from 2nd July 2024 covering all WTGs located at Andhra Lake project site in Pune district of Maharashtra state, India. During the on-site assessment of the project, there were no hindrance and all the equipment's and the systems were accessible. EPL team assessed the implementation and operation of the proposed project activity, cross checked the WTGs with respect to commissioning records and project design, reviewed the information flows for generating, aggregating and reporting the monitoring parameters, interviewed key personnel of the plant to confirm the operational and data collection procedures. Reviewed calculations and assumptions made in determining the GHG data and emission reductions, checked the quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

2.5 Resolution of Findings

The findings can be raised in any stage of the verification to ensure the transparency of the information given and the result has a reasonable level of assurance confirming that

emission reduction reporting is free of material errors, omissions and misrepresentations. The objective of this phase of the verification is to resolve any outstanding issues which need to be clarified for EPL's positive conclusion on the project description. The verification protocol shows in a transparent manner the requirements, means of verification and the results from verifying the identified criteria. The verification protocol consists of tables for Forward Action Request (FAR), Corrective Action Request (CAR) and the Clarification Request (CL); the different columns in these tables are described below.

Forward Action Request (FAR) is raised during verification to highlight issues related to project implementation that require review during the next verification or throughout remaining verifications of the project activity.

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;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impair the estimate of emission reductions;
- Issues identified in a FAR during validation or previous verifications to be verified during the current 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.

For this project activity, findings were raised after physical assessment based on the desk review of the projects specially the MR and ER sheet submitted, registered project documents and validation reports and any outstanding issues raised during validation and outcome of the physical audit. In summary, 05 CARs and 03 CLs were raised during this verification. No FAR was raised from this verification. The findings were send to PP in a separate sheet. With appropriate response ad supporting documents from the PP, these were closed successfully based on the physical assessment and cross check. The detail of the findings and their resolution are given under Appendix 2 of this report.

2.5.1 Forward Action Requests

Based on the review of the validation report and VERRA project review report /15/, no outstanding FAR is found which has to be addressed in this verification. There is no FAR raised from this verification.

2.6 Eligibility for Validation Activities

The project is a registered VCS project and already validated /14/. This is the 8th verification. The project falls under the sectoral scope of 01. This is a verification activity and EPL is accredited for validation and verification of GHG emission reduction project activities falling under sectoral scope 1 under VCS. So, the VVB comply with requirement for validation and verification for particular sectoral scope.

3 VALIDATION FINDINGS

3.1 Methodology Deviations

No methodology deviations have been applied during this monitoring period.

3.2 Project Description Deviations

In line with Paragraph 3.21 of VCS standard 4.7, deviations from project description are permitted at verification. Paragraph 3.21.2 of VCS standard v4.7 requires to assess whether the deviations impact the applicability of the methodology, additionality or the appropriateness of baseline scenario. Accordingly, VVB has assessed the deviations following CDM Guidelines on assessment of different types of changes from the project activity as described in the registered PDD, mutatis mutandis. Deviations proposed during this verification is given below:

As per registered PD	Proposed deviation as per updated PD	VVB's assessment
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The project proponent is CLP Wind Firms (India) Private Limited	The project proponent name is updated to Apraava Renewable Energy Private Limited	VVB noted the deviation is a 'Correction' in PP's name due to change of name without changing the ownership. The name from CLP Wind Firms (India) Private Limited is changed to Apraava Renewable Energy Private Limited which has been checked from Certificate of Incorporation pursuant to change of name by Ministry of Corporate Affairs, Govt. of India /16/. Hence, the correction does not have any impact on the applicability of the methodology, additionality or the appropriateness of baseline scenario. This deviation is accepted as per VCS rule. The monitoring report is correctly incorporates this change.
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VVB confirms, PP has adequately described the deviations in the monitoring report. VVB also confirms, the project remains in conformance with the VCS rules and the project deviation is valid.

3.3 New Project Activity Instances in Grouped Projects

The Project is not a group project. Therefore, this section is not applicable.

3.4 Baseline Reassessment

Did the project undergo baseline reassessment during the monitoring period?

☐ Yes

☒ No

4 VERIFICATION FINDINGS

4.1 Project Details

Item	Evidence gathering activities, evidence checked, and assessment conclusion:
Audit history	The Project Activity is a registered VCS project under VERRA with VCS ID 1480 /14/. The project was validated by Applus Certification for the second crediting period of 10 years from 19 August 2021 to 18 August 2031 /08/. This is the 2 nd verification under the second crediting period and 8 th verification from the initial crediting period.
Double counting and participation under other GHG programs	The PP has confirmed that the emission reductions for this project are not double counted and are claimed only under VERRA for this monitoring period. The PP also confirms regarding no participation in any other GHG mechanism for this monitoring period. The VVB confirms that PP is not participating in any other GHG mechanism. Furthermore, VVB confirms that the project has not been registered nor seeking registration in any other GHG program which was crosschecked by VVB in the respective standards website /09/, /10/, /11/, /12/. So, the VVB is able to confirm that this project activity is registered only in VERRA and is neither participated in other GHG programs nor intended to do so. VVB also confirm that the project is not rejected by any other program.
No double claiming with emissions trading programs or binding emission limits	The PP has confirmed that the emission reductions for this project are not double counted and only claimed under VERRA for this monitoring period. The PP also confirms regarding no participation in any emission trading program or binding limits. So, the project comply with the requirements of the VCS program.

No double claiming with other forms of environmental credit	The PP has confirmed that the emission reduction credits that will be issued in this monitoring period will not be claimed as other environmental credits /01/. Furthermore, VVB confirms that the project has not availed ERs for the current monitoring period under any of these programs which was crosschecked by VVB in the respective standards website /09/, /10/, /11/, /12/.
Supply chain (scope 3) emissions double claiming	The project does not have any supply chain emission source. The wind project is in commissioning stage and generated electricity (as product) is supplied to connected grid.
Sustainable development contributions	During the monitoring period, the project activity contributed to the sustainable development of the host country by generating clean energy and contributing to energy mix. PP also provides frequent donations to the local community for the community development. It also contributes to the well-being and health of its employees. VVB has confirmed this during the on-site audit and the evidences. From the assessment, VVB confirm that the project has contributed to achieve SDG 7, SDG 8 and SDG 13 aligning with Indian Sustainable Development Criteria and Sustainable Development Goals. SDG 7: The project utilizes the wind energy for electricity generation which replaces equivalent electricity otherwise would have generated in fossil fuel dominated grid. Therefore, the project contributes to SDG 7 (SDG Indicator 7.2.1: Renewable energy share in the total final energy consumption). SDG 8: The project has provided employment opportunity to skilled and unskilled personnel and relevant trainings for quality employment. VVB verified the employment records and training records during the monitoring period and confirms the project positively contributed to SDG 8.

	SDG 13: Project activity has reduced GHG emission in this MP by utilizing generating electricity from wind energy. During the monitoring period, the project has contributed to reduce 116,174 tCO ₂ of emissions. VVB confirm the contribution of projects towards achieving SDG 13.
Additional information relevant to the project	Not applicable as PP has not included any commercially sensitive information that are excluded from the report or public disclosure.

4.2 Safeguards and Stakeholder Engagement

4.2.1 Stakeholder Identification

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder identification	Not Applicable. PP has conducted the stakeholder on 19th February 2010 as part of validation. The makeup of stakeholders has not been changed after validation and hence stakeholder identification is not applicable.
Legal or customary tenure/access rights	Not applicable PP has conducted stakeholder consultation and the stakeholders were aware of the project at the validation period. The project is implemented following government approvals and all legal requirements were met. Hence there are no legal or customary tenure/access rights to territories and resources of the project, nor collective and conflicting rights held by stakeholders. This has been cross-checked by VVB during the on-site assessment and found valid.
Stakeholder diversity and changes over time	Not applicable The project involves stakeholders ranging from government agencies to the community. However, no changes were identified among the stakeholders involved with the project during on-site assessment.

Expected changes in well-being	The project has no significant risks and impacts. The project has contributed the community and the employee for their socio-economic benefits. This has been discussed during the on-site assessment by VVB and the claim by PP is found valid.
Location of stakeholders	The stakeholders are within the jurisdiction of Maharashtra state of India. Local people, interested government agencies are located nearby and within the state boundary of Maharashtra.
Location of resources	The project uses wind energy for electricity generation.

4.2.2 Stakeholder Consultation and Ongoing Communication

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Ongoing consultation	The PP has always welcome to receive any feedback/continuous inputs via telephone, social media, email or even personally at the project site. A feedback registry is kept at project site to record any feedback received at site. Notice is displayed for any grievance recording and redressal. So, in VVB's opinion, PP has put all the efforts for ongoing stakeholder consultations.
Date(s) of stakeholder consultation	Not applicable In this monitoring period, no specific stakeholder consultation is conducted however, PP is continuously in consultation with the stakeholders and ready to receive feedbacks as stated above.
Communication of monitored results	The result of the monitoring is always available in the VERRA website transparently /14/. Other than this, stakeholders are always welcome to put their grievances regarding the project as mentioned above through any media. During the on-site audit, VVB has cross-checked this and found in line with the PP's reporting. There was no grievance/comment found reported during the monitoring period.
Consultation records	Not applicable As neither physical consultation meeting is conducted nor received any grievances during this monitoring period, the records related

	to the consultation are not applicable. During on-site assessment, VVB found no such grievances from the stakeholders.
Stakeholder input	Not applicable As neither physical consultation meeting is conducted nor received any grievances during this monitoring period, the records related to the consultation are not applicable. During on-site assessment, VVB found no such grievances from the stakeholders.

4.2.3 Free, Prior, and Informed Consent

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Consent	Not applicable As the physical stakeholder consultation was conducted in 2010, the project was shared with the stakeholders and found no feedback claiming on rights and usage of resources. Also, in ongoing stakeholder consultation, the stakeholders at any time can put their grievances. However, there is no any ongoing or unresolved conflicts over property rights, usage, or resources found by VVB during the project on-site assessments. So, this part is not applicable for this monitoring period.
Outcome of FPIC discussion	Not applicable With the stakeholder consultation, the project was already validated. As mentioned above, there is no any ongoing or unresolved conflicts over property rights, usage, or resources found by VVB during the project on-site assessments. So, this part is not applicable for this monitoring period.

4.2.4 Grievance Redress Procedure

Item	Evidence gathering activities, evidence checked, and assessment conclusion
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Grievance received and steps taken to resolve the grievance including the outcomes of the resolution	Not applicable The PP is available to receive feedbacks/grievances at any time through different means. However, no grievance were found to be received during this monitoring period by VVB as discussed during on-site assessment.
Grievance redress procedure	The PP has placed a register at the project office to record any feedbacks/ grievances at any time. In addition, public display to comment/register any feedback at site is available. The company continuously held public meetings with local community as part of different CSR activity and does various development activities. So, in VVB's assessment, the grievance redressing mechanism is there for PP with specific focal points as verified during the on-site assessment.

4.2.5 Public Comments

Comments received	Actions taken by the project proponent	Evidence gathering activities, evidence checked, and assessment conclusion
Not applicable	Not applicable	As mentioned above, during this monitoring period, no public comments/grievances were received through any means. Same is verified during on-site assessment by VVB. PP has confirmed that any comments that will be received for issuance will be addressed by PP.

4.2.6 Risks to Local Stakeholders and the Environment

4.2.6.1 Management Experience

The project proponent is expertise in the business of renewable energy generation. Moreover the company follows highest standard of business operations in harmony with the environment following the philosophy of conservation and protection. This includes a thorough evaluation of the potential environmental and social impacts of our projects. Environmental and Social Impact Assessments (ESIA) for all of our greenfield renewable projects to identify and mitigate any potential risks. Apraava Energy has partnered with CII Foundation on a community programme to encourage local farmers to adopt sustainable methods of crop residue management in Haryana since 2019. VVB checked the details from publicly available records of the company /17/.

4.2.6.2 Risk Assessment

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Natural and human induced risks to stakeholders' wellbeing	No risk has been identified. As described above, PP has always welcomed to the stakeholders for the comment/grievances. Also, the project has not offered any risks to the stakeholder's participation. So, during on-site assessment, VVB identified no risks to the stakeholder's participation by the project activity
Risks to stakeholder participation	No risk has been identified. As described above, PP has always welcomed to the stakeholders for the comment/grievances. Also, the project has not offered any risks to the stakeholder's participation. So, during on-site assessment, VVB identified no risks to the stakeholder's participation by the project activity.
Working conditions	No risk has been identified. The Company has a robust Health, Safety, Security & Environment (HSSE) Policy & management system that is applicable to all employees, contractors and relevant stakeholders' of the organisation. As verified from on-site assessment, employees always wear PPE during O& M.
Safety of women and girls	No risk has been identified.

	PP has Health, Safety, Security and Environment (HSSE) Policy and Prevention of Sexual Harassment at Work policies in place. PP follows all the regulations and safety protocols provided to the minority and marginalized groups. VVB also checked the publicly available company's Annual Integrated Report FY 2022-23 in this regard and found to be effective.
Safety of minority and marginalized groups, including children	PP has Health, Safety, Security and Environment (HSSE) Policy and Prevention of Sexual Harassment at Work policies in place. PP follows all the regulations and safety protocols provided to the minority and marginalized groups. VVB also checked the publicly available company's Annual Integrated Report FY 2022-23 in this regard and found to be effective.
Pollutants (air, noise, discharges to water, generation and release of hazardous materials and chemical pesticides and fertilizers	The project involves electricity generation from wind energy. Hence, no significant pollutants are generated from this project.

4.2.7 Respect for Human Rights and Equity

4.2.7.1 Labor and Work

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Discrimination	To avoid discrimination, PP has laid written human rights policy as available publicly in company website /17/. There is no discrimination found followed as part of human resource management.
Sexual harassment	PP has Health, Safety, Security and Environment (HSSE) Policy and Prevention of Sexual Harassment at Work policies in place. PP follows all the regulations and safety protocols provided to the minority and marginalized groups. VVB also checked the publicly available company's Annual Integrated Report FY 2022-23 in this regard and found to be effective.

Gender equity in labor and work	To avoid discrimination, PP has laid written human rights policy as available publicly in company website /17/. There is no discrimination found followed as part of human resource management.
Forced labor	PP has laid written human rights policy as available publicly in company website /17/. No forced labor is possible as per host country's labour law /18/.
Child labor	PP has laid written human rights policy as available publicly in company website /17/. No child labor is possible as per host country's labour law /18/.
Human trafficking	The host country has put strict regulations in place to avoid any human trafficking. <i>The project proponent has also</i> laid written human rights policy as available publicly in company website /17/. The project does not create any scope for human trafficking.

4.2.7.2 Human Rights

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk identified	The host country (India) has enacted human rights protection act which is applicable for this project also. The company has strict human rights policy in place. VVB via interview with project proponent, site personnel and publicly available records such as Company annual report could confirm that the project does not put any human rights risk.

4.2.7.3 Indigenous Peoples and Cultural Heritage

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk identified	The project is a wind power project set up as per government's bidding process. There is no risk to indigenous people and cultural heritage.

4.2.7.4 Property Rights

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
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No risk identified	The project is a wind power project set up as per government's approval. All regulatory approvals are in place and verified by VVB.
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4.2.7.5 Benefit Sharing

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Summary of the benefit sharing plan	The benefit sharing is not applicable for the project. From the evidences the project is implemented by Apraava Energy and there is no disputes on property rights of the IPs, LCs and customary right holders.
Benefit sharing during the monitoring period	The benefit sharing is actually not applicable for the project as mentioned above.

4.2.8 Ecosystem Health

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Impacts on biodiversity and ecosystems	The project is a wind power project. Hence, no risk identified.
Soil degradation and soil erosion	The project is a wind power project. Hence, no risk identified.
Water consumption and stress	The project is a wind power project. Hence, no risk identified.

4.2.8.1 Rare, Threatened, and Endangered species

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Species or habitat	The project is a wind power project. Hence, no risk identified.

Areas needed for habitat connectivity	The project is a wind power project. Hence, no risk identified.
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Evidence gathering activities, evidence checked, and assessment conclusion	
Habitats for rare, threatened, and endangered species	The project is a wind power project. Hence, no risk identified.
Areas for habitat connectivity	The project is a wind power project. Hence, no risk identified.

4.2.8.2 Introduction of Species

Species introduced	Evidence gathering activities, evidence checked, and assessment conclusion
N/A	The project is a wind power project. Hence, not applicable.

Evidence gathering activities, evidence checked, and assessment conclusion	
Invasive species	The project is a wind power project. Hence, not applicable.

4.2.8.3 Ecosystem conversion

Item	Evidence gathering activities and evidence checked
Ecosystem conversion	The project is a wind power project. Hence, not applicable.

4.3 Accuracy of Reduction and Removal Calculations

GHG According to the applied methodology “ACM0002”, “Consolidated baseline methodology for grid connected electricity generation from renewable sources”, version 21 /06/, the emission reductions have been calculated based on the following formula:

Baseline Emission:

The baseline emissions (BE_y) are calculated based on the following formula:

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

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)

$EF_{grid,CM,y}$: Combined margin CO₂ emissions factor in year y (tCO₂/MWh)

And

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

Where,

$EG_{facility,y}$: Quantity of net electricity generation supplied by the project plant/unit to the grid in year 'y'

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

$EG_{PJ,y} = EG_{facility,y} = 125,709.87$ MWh during the monitoring period from 01 October 2022 to 31 December 2023.

$EF_{grid,CM,y}$: Combined margin emission factor for grid connected power generation fixed ex-ante, as 0.9310 tCO₂ /MWh /07/

Therefore,

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

$$BE_y = 125,709.87 \times 0.9310$$

$$BE_y = 117,035 \text{ tCO}_2\text{e (round down value)}$$

As per the methodology and the registered PD, the project does not need consider **project and leakage emissions**.

VVB confirms that GHG emission reductions and removals have been quantified correctly in accordance with the project description and applied methodology during the monitoring period from 01 October 2022 to 31 December 2023.

4.4 Quality of Evidence to Determine Reductions and Removals

EPL verification team confirms that all the emission sources within the project boundary have been considered appropriately. Monitoring of all parameters during the monitoring period is followed as per registered monitoring plan. Below table describes the data parameters relevant to the monitoring plan:

Data parameters fixed ex-ante and available at validation are given below:

DATA/PARAMETER Unit	Source of data	Reported value for the project period	Assessment/Observation
Operating margin CO ₂ emission factor in year y (EF _{grid,OM,y})	Data based on registered PD /07/, validation report /08/	0.9518 tCO ₂ /MWh	The EF _{grid,OM,y} was calculated and sourced from baseline CO ₂ Emission database, version 18.0 published by Central Electricity Authority, government of India. This is consistent in the registered PD /07/.
Build margin CO ₂ emission factor in year y (EF _{grid,BM,y})	Data based on registered PD /02/, validation report /08/	0.8687 tCO ₂ /MWh	The EF _{grid,BM,y} was calculated and sourced from baseline CO ₂ Emission database, version 18.0 published by Central Electricity Authority, government of India. This is consistent in the registered PD /07/.
Combined margin CO ₂ emission factor in year y (EF _{grid,CM,y}) tCO _{2e} /MWh	Data based on registered PD /02/, validation report /08/	0.9310 tCO ₂ /MWh	The EF _{grid,CM,y} was calculated and sourced from baseline CO ₂ Emission database, version 18.0 published by Central Electricity Authority, government of India. This is consistent in the registered PD /07/.

Data parameters monitored:

Data/Parameter	Assessment
Data Unit	EG _{export,y} ; MWh/year
Description	Quantity of electricity exported by the Project to the grid in year y
Source of data to be used	Joint Meter Reading Sheets and credit notes issued by Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL) for all the feeders to which WTGs of the project activity are connected. EG _{export,y} is the summation of readings of individual Joint Meter Reading Sheets.
Value of monitored parameter for the monitoring period	125,791.43 MWh during the monitoring period. The value is as per monthly electricity generation report which is recorded from energy meters and provided by State utility /19/. The value is also cross checked from monthly invoices raised by PP /20/ and found to be consistent.

Accuracy of the monitoring equipment	Feder-wise main and check energy meter of accuracy class 0.2s are installed which is consistent with registered VCS-PD /2/. The accuracy of the meters are as per industry standard.																																
Measuring/Reading/Recording frequency	Continuous monitoring and aggregated monthly basis.																																
Calculation method (if applicable)	Direct Continuous Measurement. The O&M provider does the apportioning calculation which is approved by MSEDCL and monthly JMR is prepared accordingly for feeder wise generation /19/,/21/. The values are taken directly from monthly JMR/ apportioning sheet. For the project WECs dedicated feeder wise meters are connected and generation records are taken directly from monthly JMR. In case on feeder 8 only, two non-project WECs are connected along with project WECs where generation is calculated as per provision of apportioning provided in MR and registered PD. The apportioning is duly approved by MSEDCL and accordingly invoice is raised by PP for those WECs. VVB checked the apportioning sheets /21/ and confirmed the provision is as per power purchase agreement and duly approved by MSEDCL. Further invoices reflect exact the same net generation which are reported in the emission reduction worksheet /20/. Hence, the monitoring, measurement and recording is as per registered monitoring plan and as per acceptable provision of state nodal agency.																																
Calibration																																	
Calibration frequency/interval Is the calibration interval in line with the monitoring plan of the PD?	The meter is approved, tested & sealed by the state utility. The meter is in custody of state utility. As per registered PD/monitoring plan, the calibration frequency of energy meters is at least once in every five years /07/. Therefore, the same has been followed in the monitoring plan. There is no replacement of energy meters during the monitoring plan.																																
Does the calibration cover the monitoring period? Has the calibration frequency been respected?	The monitoring period is from 01 October 2022 to 31 December 2023. The calibration details of energy meters are given below: <table><tr><th>Meter Location</th><th>Meter Serial Number</th><th>Meter Type</th><th>Calibration date /22/</th><th>Calibration validity date</th></tr><tr><td rowspan="2">Feeder 4</td><td>13098992</td><td>Main Meter</td><td>13/07/2021</td><td>12/07/2026</td></tr><tr><td>13098993</td><td>Check Meter</td><td>13/07/2021</td><td>12/07/2026</td></tr><tr><td rowspan="2">Feeder 6</td><td>13098994</td><td>Main Meter</td><td>13/07/2021</td><td>12/07/2026</td></tr><tr><td>13098995</td><td>Check Meter</td><td>13/07/2021</td><td>12/07/2026</td></tr><tr><td rowspan="2">Feeder 7</td><td>15687864</td><td>Main Meter</td><td>13/07/2021</td><td>12/07/2026</td></tr><tr><td>13099005</td><td>Check Meter</td><td>13/07/2021</td><td>12/07/2026</td></tr></table>	Meter Location	Meter Serial Number	Meter Type	Calibration date /22/	Calibration validity date	Feeder 4	13098992	Main Meter	13/07/2021	12/07/2026	13098993	Check Meter	13/07/2021	12/07/2026	Feeder 6	13098994	Main Meter	13/07/2021	12/07/2026	13098995	Check Meter	13/07/2021	12/07/2026	Feeder 7	15687864	Main Meter	13/07/2021	12/07/2026	13099005	Check Meter	13/07/2021	12/07/2026
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	13099005	Check Meter	13/07/2021	12/07/2026																													

	Feeder 8	13098996	Main Meter	13/07/2021	12/07/2026
		13098997	Check Meter	13/07/2021	12/07/2026
The calibration of energy meters covers the monitoring period.					
Calibration certificate	The meters are calibrated by <i>Maharashtra State Electricity Distribution Co. Ltd. (Rural Testing Division /22/</i> .				
Whether calibration done by an accredited person or institution?	<i>Maharashtra State Electricity Distribution Co. Ltd. (Rural Testing Division</i> state nodal agency for calibration/testing of energy meters.				

Data/Parameter	Assessment
Data Unit	EG _{import,y} ; MWh/year
Description	Quantity of electricity imported by the Project to the grid in year y
Source of data to be used	Joint Meter Reading Sheets and credit notes issued by Maharashtra State Electricity Distribution Co. Ltd. (MSEDCL) for all the feeders to which WTGs of the project activity are connected. EG _{import,y} is the summation of readings of individual Joint Meter Reading Sheets.
Value of monitored parameter for the monitoring period	81.56 MWh during the monitoring period. The value is as per monthly electricity generation report which is recorded from energy meters and provided by State utility /19/. The value is also cross checked from monthly invoices raised by PP /20/ and found to be consistent. For the project WECs dedicated feeder wise meters are connected and generation records are taken directly from monthly JMR. In case on feeder 8 only, two non-project WECs are connected along with project WECs where generation is calculated as per provision of apportioning provided in MR and registered PD. The apportioning is duly approved by MSEDCL and accordingly invoice is raised by PP for those WECs. VVB checked the apportioning sheets /21/ and confirmed the provision is as per power purchase agreement and duly approved by MSEDCL. Further invoices reflect exact the same net generation which are reported in the emission reduction worksheet /20/. Hence, the monitoring, measurement and recording is as per registered monitoring plan and as per acceptable provision of state nodal agency.
Accuracy of the monitoring equipment	Feder-wise main and check energy meter of accuracy class 0.2s are installed which is consistent with registered VCS-PD /2/. The accuracy of the meters are as per industry standard.
Measuring/Reading/Recording frequency	Continuous monitoring and aggregated monthly basis.
Calculation method (if	Direct Continuous Measurement.

applicable)	The O&M provider does the apportioning calculation which is approved by MSEDCL and monthly JMR is prepared accordingly for feeder wise generation /19/. The values are taken directly from monthly JMR/ apportioning sheet.																																													
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Does the calibration cover the monitoring period? Has the calibration frequency been respected?	The monitoring period is from 01 October 2022 to 31 December 2023. The calibration details of energy meters are given below: <table><tr><th>Meter Location</th><th>Meter Serial Number</th><th>Meter Type</th><th>Calibration date /22/</th><th>Calibration validity date</th></tr><tr><td rowspan="2">Feeder 4</td><td>13098992</td><td>Main Meter</td><td>13/07/2021</td><td>12/07/2026</td></tr><tr><td>13098993</td><td>Check Meter</td><td>13/07/2021</td><td>12/07/2026</td></tr><tr><td rowspan="2">Feeder 6</td><td>13098994</td><td>Main Meter</td><td>13/07/2021</td><td>12/07/2026</td></tr><tr><td>13098995</td><td>Check Meter</td><td>13/07/2021</td><td>12/07/2026</td></tr><tr><td rowspan="2">Feeder 7</td><td>15687864</td><td>Main Meter</td><td>13/07/2021</td><td>12/07/2026</td></tr><tr><td>13099005</td><td>Check Meter</td><td>13/07/2021</td><td>12/07/2026</td></tr><tr><td rowspan="2">Feeder 8</td><td>13098996</td><td>Main Meter</td><td>13/07/2021</td><td>12/07/2026</td></tr><tr><td>13098997</td><td>Check Meter</td><td>13/07/2021</td><td>12/07/2026</td></tr></table>					Meter Location	Meter Serial Number	Meter Type	Calibration date /22/	Calibration validity date	Feeder 4	13098992	Main Meter	13/07/2021	12/07/2026	13098993	Check Meter	13/07/2021	12/07/2026	Feeder 6	13098994	Main Meter	13/07/2021	12/07/2026	13098995	Check Meter	13/07/2021	12/07/2026	Feeder 7	15687864	Main Meter	13/07/2021	12/07/2026	13099005	Check Meter	13/07/2021	12/07/2026	Feeder 8	13098996	Main Meter	13/07/2021	12/07/2026	13098997	Check Meter	13/07/2021	12/07/2026
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Data/Parameter	Assessment
Data Unit	EG _{facility,y} ; MWh/year
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y
Source of data to be used	Joint Meter Reading Sheets and credit notes issued by Maharashtra State Electricity Distribution Co. Ltd.

	(MSEDCL) for all the feeders to which WTGs of the project activity are connected.
Value of monitored parameter for the monitoring period	125,709.87 MWh during the monitoring period. The value is as per monthly electricity generation report which is recorded from energy meters and provided by State utility /19/. The value is also cross checked from monthly invoices raised by PP /20/ and found to be consistent.
Accuracy of the monitoring equipment	Feder-wise main and check energy meter of accuracy class 0.2s are installed which is consistent with registered VCS-PD /2/. The accuracy of the meters are as per industry standard.
Measuring/Reading/Recording frequency	Continuous monitoring and aggregated monthly basis for $EG_{export,y}$ and $EG_{import,y}$
Calculation method (if applicable)	$EG_{facility,y} = EG_{export,y} - EG_{import,y}$

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.

Calibrated energy meters are in use /22/. Monthly generation data is approved by Maharashtra State Electricity Distribution Co. Ltd. /19/ and accordingly invoices are raised by project proponent /20/. The net export of electricity is directly taken from monthly generation records and apportioning sheet approved by MSEDCL /21/.

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

4.5 Non-Permanence Risk Analysis

There is no non-permanence risk rating determined by the project proponent.

5 VERIFICATION OPINION

5.1 Verification Summary

EPL has performed verification of the emission reductions reported for the project activity with regard to the relevant requirements for VCS activities. The project participants of the 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 project design document.
- 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 in line with applied methodology and VCS.

It is the responsibility of EPL to express an independent verification opinion about the project's conformity with the requirements of VCS Standard version 4.7 /04/ 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, EPL can confirm that:

- the project has been implemented and operated as per the registered Project Description /07/;
- the monitoring report /01/ and other supporting documents provided are complete and verifiable and in accordance with the applicable VCS Standard version 4.7 /04/ requirements;
- the monitoring is in place as per the applied baseline and monitoring methodology /06/;
- the monitoring plan in the MR is as per registered PD /07/ complying with the applied baseline and monitoring methodology /06/.

Verification was conducted using EPL's procedures in line with the requirements specified in the VCS program guide version 4.4, VCS standard Version 4.7, VCS validation and verification manual version 3.2, ISO14064-3: 2019, CDM M&P, the latest version of the CDM Validation and Verification Standard and relevant decisions of the COP/MOP and the CDM EB and applying standard auditing techniques.

5.2 Verification Conclusion

It is EPL's opinion that the GHG emission reduction stated in the monitoring report version 1.1 of 02-August-2024 for the "Wind power project in Maharashtra, India – Andhra Lake Phase - I" (VCS 1480)" for the period 01 October 2022 to 31 December 2023 and corresponding emission reduction calculation sheet are fairly stated with the reasonable level of assurance. The GHG emission reductions are calculated on the basis of approved methodology ACM0002 version 21.0 /06/ and the monitoring plan included in the registered Project Description, version 1.2 of 05-October-2023. Hence, EPL hereby confirm that the verification is done in line with criteria of VCS. The EPL is able to certify that the emission reduction from the project during the monitoring period is as shown below:

Verification period: From 01-October-2022 to 31-December-2023

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

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Reduction VCU's (tCO ₂ e)	Removal VCU's (tCO ₂ e)	Total VCUs (tCO ₂ e)
01-October-2022 to 31-December-2022	16,637	0	0	16,637	0	16,637
01-January 2023 to 31-December 2023	100,398	0	0	100,398	0	100,398
Total	117,035	0	0	117,035	0	117,035

5.3 Ex-ante vs Ex-post ERR Comparison

The value for achieved emission reduction is comparable to the ex-ante estimate due to variation in ceramic production compared to ex-ante.

Vintage period	Ex-ante estimated reductions/removals	Achieved reductions/removals	Percent difference	Explanation for the difference

01-October-2022 to 31-December-2023	103,776 tCO ₂ e	117,035 tCO ₂ e	12.78%	The emission reductions are high compared to estimated value due to high electricity generation which purely depends on actual wind pattern. Therefore, the change is beyond PP's control. Moreover, VVB noted, the achieved PLF during the MP is around 20.47% whereas, the breakeven PLF to reach benchmark as part of additionality assessment is 43.8% which is not reached and hence the project is still additional.
Total	103,776 tCO ₂ e	117,035 tCO ₂ e	12.78%	

APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION

PP has provided all the information transparently and hence all the information can be included in public version.

<i>Section</i>	<i>Information</i>	<i>Justification</i>	<i>Assessment method and conclusion</i>
Not Applicable	Not Applicable	Not Applicable	Not Applicable

APPENDIX 2: ABBREVIATIONS

Abbreviations	Full texts
BE	Baseline Emissions
CAR	Corrective Action Request
EPL	EcoLance Pvt. Ltd.
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
JMR	Joint Meter Reading
LoA	Letter of Approval
MoV	Means of Verification
MWh	Mega Watt Hour
MR	Monitoring Report
MSEDCL	Maharashtra State Electricity Distribution Company Limited
NGO	Non-governmental Organization

ODA	Official Development Assistance
PDD	Project Design Document
VVB	Validation Verification Body
MM	Main Meter
CM	Check Meter
SM	Standby Meter

APPENDIX 3: CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS AND FORWARDS ACTION REQUEST

Table 1. Remaining FAR from Validation

No pending FAR to be addressed.

Table 2. CL from this verification

CL ID	01	Section no.	1.12 SDG contributions	Date:	12/07/2024
Description of CL					
SDG 8.6: PP shall clarify whether 53 jobs created are for the current monitoring period only, and provide the evidence for the same.					
Project participant response				Date:	25/07/2024
The MR is updated with correct SDG contribution under SDG 8.6					
Documentation provided by project participant					
<i>Updated MR</i>					

VVB assessment	Date: 30/08/2024
Under SDG 8.6, quality of employment has been identified as SDG indicator and 1 training provided to employees which is part of this monitoring period. No other impact found reported in the MR. The training details were checked and verified by VVB and confirm the information to be correct. Hence, CL is closed.	

CL ID	02	Section no.		Date: 12/07/2024
Description of CL				
1. The JMR for Dec 2022 shows that the feeder 8 check meter has failed and needs replacement. PP shall clarify whether any meter replacement has been done during the monitoring period for the feeders in AL-1 project (4,6,7,8) and if so, the details of replacement and calibration certificates of the new meters shall be provided. 2. The monthly JMR for Dec 2022 sheet provided shows the data recorded in specific dates in the month and not depict the daily KWH data for this month. PP shall clarify and submit the complete month wise data as per the "WEC generation" file.				
Project participant response				Date: 25/07/2024
1. As per JMR of December 2022, the PT (Potential Transformer) of check meter at Feeder-8 was failed and Y-phase PT of check meter of Feeder-7 was not showing the voltage, hence MSEDCL testing team suggested to replace both the PTs on 11/10/2022. PT of check meter of Feeder-8 was replaced by MSEDCL testing team on 13/01/2023 as per JMR of January 2023. Similarly as per JMR of February 2023, PT of check meter at Feeder-7 was also replaced by MSEDCL testing team on 10/02/2023. No meters were replaced, all main meters were functional in the entire monitoring period. Hence, there is no impact on monitoring of energy generation during the applied monitoring period. 2. PP has submitted the daily generation sheet for the month of December 2022.				
Documentation provided by project participant				
<i>Daily generation sheet (Dec 2022)</i>				
VVB assessment				Date: 30/08/2024
It is noted, the main meters are not changed and did not show any error during the monitoring period. The JMR shows the correct main and check meter details which are consistent with the details in MR. Hence, there is no replacement of energy meter during the monitoring period which would have impacted the generation, The daily generation sheet for the month of December 2022 was checked and confirm the reported values to be correct. Hence, CL is closed.				

CL ID	03	Section no.	4.3	Date: 12/07/2024
Description of CL				
PP shall provide the shutdown details of the plant during the monitoring period for AL-1.				
Project participant response				Date: 25/07/2024

There is no major shut down in the applied monitoring period. The details of minor shut down details have been provided to VVB for the current MP.	
Documentation provided by project participant	
<i>Shut down details</i>	
VVB assessment	Date: 30/08/2024
Shut down details of wind turbines during the monitoring period has been submitted. Although, VVB noted the actual generation is measured as per calibrated energy meters and any shut down period did not record any generation. Further, the generations are duly approved by state nodal agency and accordingly, invoice is raised by PP to state grid. Hence, there is no impact from the shutdown of WECs. CL is closed.	

CL ID	04	Section no.		Date: 12/07/2024
Description of CL				
PP shall confirm that the GHG Emission reductions or removals generated by the project activity will not be used for compliance with an emission trading program or to meet binding limits on GHG Emissions. Relevant supporting evidence shall be provided.				
Project participant response				Date: 25/07/2024
PP has submitted 'No double counting declaration' to VVB to claim that GHG emission reduction or removal will not be used in any other emission training program.				
Documentation provided by project participant				
<i>No double counting certificate</i>				
VVB assessment				Date: 30/08/2024
PP has provided declaration that the project does not claim any other forms of credit from the generated electricity other than VCU and VVB also checked the project in other mechanisms and noted the project has not claimed any other credit during this monitoring period. Hence, CL is closed.				

Table 3. CAR from this verification

CAR ID	01	Section no.		Date: 12/07/2024
Description of CAR				
The name of the project proponent name is changed from the last revised VCS PD dated 05/10/2023. PP shall provide the reasons for name change in the relevant section under MR and provide supporting documents for project ownership.				

Project participant response	Date: 25/07/2024
Name change certificate has been submitted to validate that the name of the PP has been changed from CLP Wind Farms (India) Private Limited to Apraava Renewable Energy Private Limited (AREPL) .	
Documentation provided by project participant	
<i>Name change certificate</i>	
VVB assessment	Date: 30/08/2024
Name change of project proponent is noted from registered PD which is reported as deviation and VVB cross checked the same and justified in appropriate section of the verification report. Hence, CAR is closed.	

CAR ID	02	Section no.	1.7	Date: 12/07/2024
Description of CAR				
PP shall clarify whether it is a fixed CP or renewed one as the section 1.7 is not clear, and the CP has been renewed.				
Project participant response				Date: 25/07/2024
The project was registered under VCS 2007.1 which allowed crediting period of a maximum of 10 years which may be renewed at most two times. As per VCS standard 4, the second crediting period was renewed for duration of 10 years from 19/08/2021 to 18/08/2031				
Documentation provided by project participant				
<i>Revised MR</i>				
VVB assessment				Date: 30/08/2024
As per registered PD, renewed joint PD-MR and corresponding joint validation-verification report, the project crediting period is 10 years with twice renewable. This is consistent with VCS 2007.1 and version 3.5 standard. Hence, the corrections are accepted in the updated MR. The CAR is closed.				

CAR ID	03	Section no.	4.3, Appendix 2	Date: 12/07/2024
Description of CAR				
As per the MR, calibration frequency of the main and check meters is 5 years, however as per the calibration certificates available on site, meters are calibrated annually. PP shall clarify the same in MR as per the actual practice followed.				
Project participant response				Date: 25/07/2024

As per the notification issued by Central Electricity Authority, Govt of India dated the 17th March, 2006, PP has followed the frequency of once in a five year for main and backup meters. The same has been mentioned in the revised MR.	
Documentation provided by project participant	
<i>Revised MR</i>	
VVB assessment	Date: 30/08/2024
VVB noted, the minimum frequency of calibration of energy meters are at least once in 5 years which is as per registered monitoring plan and applicable national regulatory. Accordingly, the frequency is defined the monitoring plan and in the monitoring report. Further, VVB checked the calibration reports and energy meter details from JMR and actual site visit and noted there is no change in main energy meter. Therefore, VVB is of the opinion, the minimum frequency is maintained, and calibration records shows the meters are working without any error. Hence, PP's response is accepted and CAR is closed.	

CAR ID	04	Section no.	ER calculations, WEC generation month wise data	Date: 12/07/2024
Description of CAR				
- ER sheet provided to the audit team does not show the apportioning done for the generation data as mentioned in the MR, since the 4 feeders include WTGs from other projects also apart from AL-1. PP shall provide the apportioning data done for AL-1. - The month wise generation data provided is for all the 8 feeders with WTGs which include projects AL-2 and CLP also. PP shall provide the data pertaining to the feeders connected to AL-1 only to cross check the values provided under "Generation data" spreadsheet under ER sheet. - The "online credit note" sheet provided under WEC generation month wise data includes projects AL-2 and CLP also. PP shall provide the data pertaining to the feeders connected to AL-1 only.				
Project participant response				Date: 25/07/2024
- Currently, the only wind turbine generators (WTGs) connected to the substation are those from AREPL(Erstwhile known as CLP Wind Farms) for two registered VCS projects i.e. VCS 1480 (AL-I) and VCS VCS 1481 (AL-II). This AL-I project includes a total of 70 WTGs, which are connected to feeders 4, 6, 7, and 8. All the WTGs of AL-I are connected to dedicated feeders of 4 (WTG Loc 127 to 141), 6(WTG loc 48 to 72) and 7 (WTG loc 73 to 80 and 82 to 89). However, two WTGs (WTG 96 and WTG 97) of AL-II projects are connected to feeder 8 along with 14 WTG (Loc no 90 to 93, 98 to 100, 101 to 106, and 506) of AL-I. PP has submitted 'working excels files' and breakup excel sheets to explain apportioning and further breakup of generation at feeder 8. - As explained above, feeder 8 also includes 2 WTGs from the AL-II project (WTG 96 and WTG 97), but no other projects are represented on any of the feeders. WEC generation files are being submitted for all the 8 feeders month wise which include generation from AL-I and AL-II. Breakup of values for export and import for feeder 8 has been separated for both AL-I and AL-II in the breakup sheet attached. This apportioning is based on the locations of the WTGs, with AREPL being the sole project owner involved. - Consolidated data for 'online credit note' include the data for WTGs in AL-I and AL-II. The consolidated data has AL-I, WTGs under Phase I and similarly for AL-II is mentioned under Phase II.				
Documentation provided by project participant				

<i>WEC generation files, Invoices for AL-I, Breakup sheet</i>	
VVB assessment	Date: 30/08/2024
For the project WECs dedicated feeder wise meters are connected and generation records are taken directly from monthly JMR. In case on feeder 8 only, two non-project WECs are connected along with project WECs where generation is calculated as per provision of apportioning provided in MR and registered PD. The apportioning is duly approved by MSEDCL and accordingly invoice is raised by PP for those WECs. VVB checked the apportioning sheets and confirmed the provision is as per power purchase agreement and duly approved by MSEDCL. Further invoices reflect exact the same net generation which are reported in the emission reduction worksheet. Hence, the monitoring, measurement and recording is as per registered monitoring plan and as per acceptable provision of state nodal agency. Hence, CAR is closed.	

CAR ID	05	Section no.	5.4	Date: 12/07/2024
Description of CAR				
The actual emission reductions achieved during the current monitoring period are 15.25% higher than the estimated ERs for the comparable period. PP shall explain 1. The reason for mentioning the achieved ERs as lesser 2. The reason for increase in the ERs and shall justify the impact on additionality of the project activity.				
Project participant response				Date: 25/07/2024
1. The achieved ER are higher as compared to registered VCS PD, typo error has been corrected. 2. The actual PLF achieved in the applied MP is 20.32% which 11.95% higher as compared to registered VCS PD. As per registered VCS PD, the IRR for the Project does not exceed the benchmark even after 43.8% increase in PLF/Net generation. Hence, PLF increase of 11.95% is well below additionality limits and there is no adverse impact on additionality due to this variation. The increase in PLF is due to seasonal and cyclical variation in wind characteristics which is beyond the control of project participant.				
Documentation provided by project participant				
<i>Revised MR</i>				
VVB assessment				Date: 30/08/2024
The emission reductions are high compared to estimated value due to high electricity generation which purely depends on actual wind pattern. Therefore, the change is beyond PP's control. Moreover, VVB noted, the achieved PLF during the MP is around 20.47% whereas, the breakeven PLF to reach benchmark as part of additionality assessment is 43.8% which is not reached and hence the project is still additional. Therefore, the higher emission reduction is within the sensitivity range. Hence, CAR is closed.				

Table 4. FAR from this verification

FAR ID		Section no.		Date:
Description of FAR				
No FAR raised.				
Project participant response				Date: DD/MM/YYYY
Documentation provided by project participant				
VVB's assessment				Date: DD/MM/YYYY

APPENDIX 3: COMPETENCY CERTIFICATES



Certificate of Appointment

<< UDDIPTA NATH>>

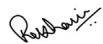
The qualification and appointment are done following the requirements of
ECOLANCE PRIVATE LIMITED (EPL/PR/5)

Standard/ Scheme			
☒ VCS	☐ CCBS	☒ GS4GG	☒ GCC
☐ SD Vista	☐ Social Carbon	☐ Plan Vivo	☐ Plastic Standard
☐ CerCarbono	☐ ISO 14064-1: 2018		

Role			
☐ Auditor	☐ Team Leader	☐ Reviewer	☒ Technical Expert
☐ Financial Expert	☒ Trainee	☐ Local Expert	☐ GHG Verifier [Applicable to 14064-1: 2018]

Sectoral Scopes	
☒ Energy Industries (Renewable/Non-Renewable)	
☐ Energy Demand	
☐ Waste Handling and Disposal	
☐ Forestry and Other Land Use	
☐ Agriculture	
☐ Livestock and Manure	
☐ General [Applicable to 14064-1: 2018]	

Certificate No	EPL/CER/UN/1
Date	01/05/2024
Validity	30/04/2025

Authorized by	Rekha Menon
Designation	Director
	



Certificate of Appointment

<< ESWAR MURTY >>

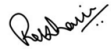
The qualification and appointment are done following the requirements of
ECOLANCE PRIVATE LIMITED (EPL/PR/5)

Standard/ Scheme			
☒ VCS	☒ CCBS	☒ GS4GG	☒ GCC
☐ SD Vista	☒ Social Carbon	☐ Plan Vivo	☐ Plastic Standard
☐ CerCarbono	☒ ISO 14064-1: 2018		

Role			
☒ Auditor	☒ Team Leader	☒ Reviewer	☒ Technical Expert
☐ Financial Expert	☐ Trainee	☐ Local Expert	☒ GHG Verifier [Applicable to 14064-1: 2018]

Sectoral Scopes	
☒ Energy Industries (Renewable/Non-Renewable)	
☒ Energy Demand	
☒ Waste Handling and Disposal	
☐ Forestry and Other Land Use	
☐ Agriculture	
☐ Livestock and Manure	
☒ General [Applicable to 14064-1: 2018]	

Certificate No	EPL/CER/EM/1
Date	15/02/2024
Validity	14/02/2025

Authorized by	Rekha Menon
Designation	Director
	



Certificate of Appointment

<< CHAMPOK BURAGOHAIN >>

The qualification and appointment are done following the requirements of
ECOLANCE PRIVATE LIMITED (EPL/PR/5)

Standard/ Scheme			
☒ VCS	☒ CCBS	☒ GS4GG	☒ GCC
☐ SD Vista	☒ Social Carbon	☐ Plan Vivo	☐ Plastic Standard
☐ CerCarbono	☒ ISO 14064-1: 2018		

Role			
☒ Auditor	☒ Team Leader	☐ Reviewer	☒ Technical Expert
☐ Financial Expert	☐ Trainee	☐ Local Expert	☒ GHG Verifier [Applicable to 14064-1: 2018]

Sectoral Scopes	
☒ Energy Industries (Renewable/Non-Renewable)	
☒ Energy Demand	
☒ Waste Handling and Disposal	
☐ Forestry and Other Land Use	
☐ Agriculture	
☐ Livestock and Manure	
☒ General [Applicable to 14064-1: 2018]	

Certificate No	EPL/CER/CH/4
Date	15/02/2024
Validity	14/02/2025

Authorized by	Rekha Menon
Designation	Director
