



**Verified Carbon
Standard**

WIND BASED POWER GENERATION BY
PANAMA WIND ENERGY GODAWARI
PRIVATE LIMITED, PUNE IN THE STATE OF
MAHARASHTRA, INDIA



Report ID	A+SH_SYST_TQC_VCS_VER_RCP_4524
Project Title	<i>Wind Based Power Generation by Panama Wind Energy Godawari Private Limited, Pune in the State of Maharashtra, India</i>
Project ID	1523
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Crediting period	<i>First Crediting Period: 31-March-2014 to 30-March-2024 (Inclusive of both the dates)</i> <i>Second Crediting period: 31-March-2024 to 30-March-2034(Inclusive of both the dates)</i>
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VCS Standard Version	4.7
Client	<i>EKI Energy Services Limited</i>
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Summary:

LGAI Technological Center, S.A. (hereafter referred to as “Applus+ Certification”) has been appointed/15/ by EKI Energy Services Limited to perform validation for renewal of crediting period (RCP) and verification of greenhouse gas emission reductions of the current project activity during monitoring period 01-August-2023 to 30-March-2024 which is part of the 1st crediting period/1/.

The project activity involves the installation of Wind Power Project in the state of Maharashtra, India. The total installed capacity of the project is 80 MW; which involves operation of 40 Wind Turbine Generators (WTGs) with capacity of 2 MW each located at Maharashtra state in India/16/. The project is promoted by Panama Wind Energy Godawari Private Limited/8//16/. The project is expected to reduce 131,077 tCO₂e per year with total 1,310,770 over 2nd crediting period/2/. The actual emission reductions for the current monitoring period from 1st crediting period are 61,078 tCO₂e/2/.

The project's validation and verification is based on submitted JPD & MR (JPD & MR) and also based on registered JPD & MR/3/ of the project available at project webpage - [Verra Search Page](#)

Scope of this validation for RCP and verification: It is to ensure that project's baseline is still relevant and reported emission reductions are complete and accurate in accordance with applicable VCS standard and relevant requirements/4/ in order to be certified. A desk review and a site visit/17/ have been conducted to verify the data submitted in the JPD & MR.

Applus+ Certification confirms the following has been reviewed:

- Baseline and monitoring plan included in the registered VCS PD/3/;
- Validation report/3/;
- CDM approved methodology for large scale projects – ACM0002 version 16.0 and 22.0/6/;
- VCS standard version 4.7 and VCS program guide version 4.4, as well as relevant VCS And UNFCCC requirements/4//6/;
- All information and references relevant to the project activity's resulting in emission reductions.

The purpose of this validation for RCP is to have an independent third party for the assessment of the project design, estimated and actual emission reductions and to ensure a thorough assessment of the project activity against the applicable VCS requirements and applied CDM methodology and tools. In particular; validation is conducted with respect to approved CDM methodology ACM0002, Grid-connected electricity generation from renewable sources --- Version 22.0

The purpose of this verification activity is to have an independent third party for the assessment of the project design, Actual emission reductions to ensure a thorough assessment of the proposed project activity against the applicable VCS requirements and applied CDM methodology and tools/6/. In particular; verification is conducted with respect to approved CDM methodology ACM0002, Consolidated methodology for grid-connected electricity generation from renewable sources”, Version 16.0

VVB has checked the project's compliance against VCS standard version 4.7, VCS program guide 4.4, VCS validation and verification manual version 3.2 and applied CDM methodology and tools/4//6/.

A risk-based approach has been followed to perform this Joint validation for RCP and verification activity. In the course of validation + verification, 06 Corrective Action requests (CARs) and 04 Clarification Requests (CLs), 00 Forward action requests (FARs) were raised and successfully closed. The review of the submitted JPD & MR and additional documents related to baseline and monitoring methodology; the subsequent background

investigation, on-site visit and follow-up interviews and provided sufficient evidences has confirmed that the project fulfills the stated criteria of VCS.

PP has submitted all the required evidences/2//5//8/ and an on-site visit/17/ was conducted leading to no uncertainties associated with the validation and verification

The review of the project description and additional documents related to baseline and monitoring methodology; the subsequent background investigation, on-site visit and follow-up interviews with PP representatives have provided LGAI Technological Center S.A. (Applus+ Certification) with sufficient evidence for positive validation opinion on RCP as per the requirement of VCS Summary of the validation and verification conclusions.

The review of the project description and additional documents related to baseline and monitoring methodology; the subsequent background investigation, on-site visit and follow-up interviews with PP representatives have provided LGAI Technological Center S.A. (Applus+ Certification) with sufficient evidence for positive verification opinion as the project is operated as planned and described in the project design, the monitoring followed is as per the applied methodology and the process is as per the registered VCS PD, the monitoring equipments are in place and are working as per the requirements, the GHG emission reductions are calculated without material misstatements and no limitation observed for the current verification.

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1 INTRODUCTION

1.1 Objective

LGAI Technological Center S.A. (Hereinafter referred as Applus + Certification) has been appointed by “EKI Energy Services Ltd.” to perform the Joint validation for RCP and verification of the project entitled “Wind Based Power Generation By Panama Wind Energy Godawari Private Limited, Pune In The State Of Maharashtra, India” by “Panama Wind Energy Godawari Private Limited” under VCS standard version 4.7 and program guide version 4.4. The objective of this Joint validation for RCP & verification activity is to have an independent third party for the assessment of the project design and monitoring report, ER sheet (ex-ante and ex-post) and to ensure a thorough assessment of the project activity against the applicable CDM and VCS requirements. In particular;

- The project’s baseline is assessed against “ACM0002: Grid Connected Renewable Electricity Generation, Version 22.0”/6/
- The project’s monitoring plan is assessed against “ACM0002: Grid Connected Renewable Electricity Generation, Version 22.0.” for renewal of crediting period and “ACM0002: Consolidated methodology for grid-connected electricity generation from renewable sources , version 16.0” for verification/6/.
- VCS standard version 4.7/4/
- VCS program guide version 4.4/4/
- VCS validation and verification manual, version 3.2/4/
- CDM Validation and verification standard for project activity, version 3.0/6/

LGAI Technological Center, S.A. (Applus+ Certification) as the Validation/Verification Body (VVB) for the project activity is accredited as a DOE by UNFCCC and also meets the competence requirements as set out in the normative reference ISO 14065:2020.

Joint Validation for RCP & verification is a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of estimated verified certified units (VCUs).

1.2 Scope and Criteria

The scope of the Joint validation and verification is the independent and objective review of the JPD & MR. The same was reviewed against the relevant criteria (see 1.1) and decisions by the VCS executive board, including the approved baseline and monitoring methodology. The validation for RCP and verification were based on the guidance given in the VCS program guide version 4.4 and standard version 4.7.

The assessment team has employed a risk-based approach to assess the completeness and accuracy of the claims and conservativeness of the assumptions in the JPD & MR. The main focus of the assessment team is to identify the significant risks for the project implementation and the generation of VCUs. The Joint validation for RCP and verification are not meant to provide

any consulting towards the project proponent. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the project design and monitoring report combined.

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

1.3 Reasonableness of Assumptions and Level of Assurance

The Joint validation and verification has been planned and organized to achieve a reasonable level of assurance as per the requirement of VCS.

The current report is based on the JPD & MR, supporting evidences made available to the VVB and information collected through performing interviews and during the on-site assessment.

Through an exhaustive process of documentary review, interviews with the project proponent, site visits, assessment on GHG Emission Reductions calculations against applicable methodology and any other regulatory document, and reporting of objective evidences, the VVB is able to reach a reasonable level of assurance on the conduction of the assessment process.

The achieved level of assurance for this Joint validation and verification is thus a reasonable level of assurance as per the requirements set out in the applied VCS Standard version 4.7 clause 4.1.10 (1).

VVB applied a materiality threshold of 5% with respect to omission or misstatements concerning reported quantities as per VCS Standard version 4.7 clause 4.1.10 (4).

Additionally, according to the VCS Validation and Verification Manual version 3.2, while all material errors, omissions and misrepresentations must be addressed for a project to receive a positive Joint validation verification opinion, when non-material errors have been found in the project documents, the VVB requested the project proponent to correct them and ensured that such errors have been addressed where practicable.

The verification conclusion is assured a reasonable level of assurance.

1.4 Summary Description of the Project

The project activity involves the installation of Wind Power Projects. The total installed capacity of the project is 80 MW; which involves operation of 40 Wind Turbine Generators (WTGs) with capacity of 2 MW each located at Maharashtra state in India/14//16. The project is promoted by Panama Wind Energy Godawari Private Limited/16/.

PP has described major milestones in the JPD & MR which are in line with the registered JPD & MR and confirmed based on registered JPD & MR/3/, commissioning certificates/16/.

Panama Wind Energy Godawari Private Limited (PWE GPL) had commissioned the 1st WTG of the wind power project on 31-March-2014/16/ and hold the assets i.e. Wind Turbine Generators (WTGs).

The project activity is located in multiple villages in Georai Taluka, Beed district, Maharashtra state, India/16/ and is operation with a few breakdowns/shutdown post commissioning, details of the same are provided in appendix 7 below. The project wind turbine unit IDs along with their commissioning details and geographical locations are presented in the below table which is checked and confirmed during the on-site visit/17/ and based on the commissioning certificates/16/ submitted.

Sr. No.	Location No.	Commissioning date	Village	Taluka	District	Latitude	Longitude
1.	G01	07-October-2014	Mulukwadi	Georai	Beed	N19 11 35.6	E75 43 38.4
2.	G02	07-October-2014	Mulukwadi	Georai	Beed	N19 11 12.3	E75 42 57.5
3.	G03	07-October-2014	Mulukwadi	Georai	Beed	N19 11 50.0	E75 43 19.7
4.	G04	06-September-2014	Mulukwadi	Georai	Beed	N19 11 30.1	E75 43 13.9
5.	G05	07-October-2014	Khopti	Georai	Beed	N19 13 35.5	E75 41 23.4
6.	G06	07-October-2014	Mulukwadi	Georai	Beed	N19 11 59.1	E75 43 35.4
7.	G07	07-October-2014	Mulukwadi	Georai	Beed	N19 11 20.6	E75 43 40.8
8.	G08	07-October-2014	Mulukwadi	Georai	Beed	N19 11 59.5	E75 43 07.2
9.	G09	07-October-2014	Mulukwadi	Georai	Beed	N19 12 04.9	E75 42 37.4
10.	G10	07-October-2014	Mulukwadi	Georai	Beed	N19 12 24.6	E75 43 13.1
11.	G11	07-October-2014	Mulukwadi	Georai	Beed	N19 12 38.0	E75 43 18.6
12.	G12	07-October-2014	Manmodi	Georai	Beed	N19 12 23.5	E75 42 36.7
13.	G13	07-October-2014	Manmodi	Georai	Beed	N19 12 36.0	E75 42 18.5
14.	G14	06-September-2014	Manmodi	Georai	Beed	N19 12 50.5	E75 42 24.3
15.	G15	06-September-2014	Manmodi	Georai	Beed	N19 12 59.8	E75 42 10.8
16.	G16	07-October-2014	Manmodi	Georai	Beed	N19 13 17.1	E75 42 10.1
17.	G17	06-September-2014	Manmodi	Georai	Beed	N19 13 22.3	E75 41 58.6
18.	G18	07-October-2014	Manmodi	Georai	Beed	N19 13 29.6	E75 42 29.3
19.	G19	07-October-2014	Khopti	Georai	Beed	N19 13 41.9	E75 42 19.2
20.	G20	07-October-2014	Manyarwadi	Georai	Beed	N19 13 45.5	E75 42 59.5
21.	G21	05-December-2014	Khopti	Georai	Beed	N19 14 06.3	E75 41 40.6
22.	G22	06-September-2014	Rajpimpri	Georai	Beed	N19 13 54.1	E75 41 27.6
23.	G23	06-September-2014	Rajpimpri	Georai	Beed	N19 13 46.6	E75 41 03.1
24.	G24	31-March-2014	Rajpimpri	Georai	Beed	N19 13 34.5	E75 40 24.8
25.	G25	31-March-2014	Rajpimpri	Georai	Beed	N19 13 23.9	E75 40 11.5
26.	G26	25-July-2014	Bangali Pimpla	Georai	Beed	N19 12 40.0	E75 37 28.9
27.	G27	25-July-2014	Sindkhed	Georai	Beed	N19 13 09.5	E75 40 21.9
28.	G28	25-July-2014	Kombadwadi	Georai	Beed	N19 13 25.4	E75 39 28.6
29.	G29	31-March-2014	Kombadwadi	Georai	Beed	N19 13 43.7	E75 39 29.9
30.	G30	31-March-2014	Devimpri	Georai	Beed	N19 13 51.7	E75 39 06.1
31.	G31	31-March-2014	Kombadwadi	Georai	Beed	N19 13 57.4	E75 39 33.0
32.	G32	25-July-2014	Sushi	Georai	Beed	N19 12 16.2	E75 37 44.2
33.	G33	31-March-2014	Sushi	Georai	Beed	N19 12 59.5	E75 38 47.3
34.	G34	31-March-2014	Sushi	Georai	Beed	N19 13 14.9	E75 38 57.3
35.	G35	31-March-2014	Sushi	Georai	Beed	N19 13 12.2	E75 38 26.2
36.	G36	31-March-2014	Sushi	Georai	Beed	N19 13 27.1	E75 38 20.9
37.	G37	31-March-2014	Kumbhejalgaon	Georai	Beed	N19 13 34.4	E75 38 00.3
38.	G38	25-July-2014	Sushi	Georai	Beed	N19 12 49.7	E75 38 08.6
39.	G39	31-March-2014	Kumbhejalgaon	Georai	Beed	N19 13 04.7	E75 37 53.8
40.	G40	31-March-2014	Bangalipimpla	Georai	Beed	N19 12 58.0	E75 37 31.5

The project was registered with crediting period as 31-March-2014 to 30-March-2024. With renewable crediting period of 10 years period which can be renewed for maximum 2 times, PP has decided to go for renewable crediting period as , 31-March-2024 till 30-March-2034 for the 2nd crediting period. The project is expected to reduce 131,077 tCO₂e per year with total 1,310,770 tCO₂e over 2nd crediting period/2/.

The actual emission reductions for the current monitoring period are 61,078 tCO₂e/2/.

2 VALIDATION AND VERIFICATION PROCESS

2.1 Method and Criteria

Validation and Verification Scope: The scope is defined as an independent and objective review of the JPD & MR. It was reviewed against the VCS standard version 4.7 and VCS program guide version 4.4, including the approved baseline and monitoring methodology ACM0002.

The Joint validation and verification is based on the requirements in the Validation and Verification Manual version 3.2, VCS program guide version 4.4 and VCS standard version 4.7/4/.

The Joint validation and verification is not meant to provide any consulting towards the project proponents. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the combined project document and the Monitoring report.

Validation and Verification Process: The project assessment is based on VCS standard version 4.7 and VCS program guide version 4.4 and is conducted using standard auditing techniques to assess the correctness of the information provided by the project proponents. Before the assessment begins, members of the team covering the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the VCS project activity are appointed.

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

- A desk review of the Joint project design documentation and monitoring report;
- Onsite visit with project stakeholders;
- The resolution of outstanding issues and the issuance of the final Joint validation and verification report and opinion.

Appointment of the assessment team:

Before the assessment begins, members of the team covering the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the VCS project activity are appointed in accordance with the LGAI Technological Center S.A. (Applus+ Certification) procedures and policies, that are in accordance with the ISO 14065:2020 regulatory provisions.

According to the sectoral scope / technical area and experience in the sectoral or national business environment, LGAI Technological Center S.A. (Applus+ Certification) has composed a project assessment team in accordance with the appointment rules in the internal Quality Management System of LGAI Technological Center S.A. (Applus+ Certification).

The composition of audit team shall be approved by the LGAI Technological Center S.A. (Applus+ Certification) Central site during its Contract Review stage, ensuring that the required skills are covered by the team.

The qualification levels for team members that are assigned by formal appointment rules are as presented below:

- Lead Auditor (LA).
- Auditor (A) / Auditor in Training (AiT).
- Technical Expert (TE).
- Technical Reviewer (TR).
- Any of the above-mentioned roles in training (iT, e.g. AiT for auditor in training, TEiT for Technical Expert in Training, etc.).

The sectoral scope / technical area knowledge linked to the applied methodology/ies shall be covered by the assessment team.

Name	Role	SS Coverage	TA Coverage	Financial aspect	Host country experience
Mr. Deepak Pundlik	LA/TE	YES	YES	NA	YES
Dr. Premjit Singh	TR/TE	YES	YES	NA	NA

The complete list of CVs is included as Appendix 5 of this report.

Document Review:

The JPD & MR submitted by the Client was reviewed against the approved methodology and other relevant criteria to verify the correctness, credibility, and interpretation of the presented information. Furthermore, a cross-check between information provided and information from other sources has been done. A complete list of all documents and evidence material reviewed is included in this report below in appendix 2.

Onsite Visit:

An Onsite inspection is conducted by LGAI Technological Center S.A. (Applus+ Certification) assessment team who performed visual inspection of project site with project stakeholders to confirm selected information and to resolve issues identified in the document review. The detail is provided in this report in the below sections.

Resolution of Clarification and Correction Action Request:

The objective of this phase of the Joint validation for RCP and verification was to resolve the requests for corrective actions and clarification and any other outstanding issues which need to be clarified for LGAI Technological Center S.A. (Applus+ Certification) positive conclusion on the JPD & MR. The Corrective Action Requests and Clarification Requests raised by LGAI Technological Center S. A. (Applus+ Certification) were resolved during communications between the Client and Applus+ Certifications to guarantee the transparency of the validation and verification process, the concerns raised and responses given are summarized below in the appendix 4.

The JPD & MR version 05 submitted by PP serves as the basis for the final assessment presented. Additional changes to the project during the Joint validation and verification process are not considered to be significant with respect to the VCS objectives which are the reduction

of anthropogenic GHG emissions and the contribution of sustainable development to the host country.

Internal quality Control:

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

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

Joint Validation and verification schedule:

Sr. No.	Description	Date
1	Desk review of the documents	06-June-2024
2	Onsite visit	17-June-2024 to 18-June-2024
3	Release of Findings	22-June-2024

2.2 Document Review

The details of the documents observed during the Joint validation and verification process are listed below in appendix 2 of this report which were reviewed, cross-checked and compared with identified and stated requirements to confirm project description, monitoring plan etc.

2.3 Interviews

The assessment team visited the site between 17-June-2024 to 18-June-2024, PP representatives and local stakeholders were interviewed.

Date of Interview: 17-June-2024 to 18-June-2024		
Sr. No.	Name of Persons	Role/Designation
1.	Mr. Ashok Shintre	Project head , Panama Wind Energy Godawari Private Limited
2.	Mr. Nilesh Waghmare	Sr. Manager, Panama Wind Energy Godawari Private Limited
3.	MR. Santosh Madake	Assistant Manager, Panama Wind Energy Godawari Private Limited
4.	Mr. Manoranjan Basava	Local stakeholder, Village – Mulukwadi
5.	Mr. Ramesh Yadav	Local stakeholder, Village - Manmodi

The topics discussed during the interview range from the project's general characteristics and implementation to its technical details, including design and technical specifications, project implementation status, project start date, location, baseline identification, monitoring practice, ER

calculation, FPIC, grievance redress procedure, management experience, risk assessment, human rights, data recording and archiving procedures etc.

2.4 Site Visits

Duration of onsite audit: 17-June-2024 to 18-June-2024				
No.	Activity performed on-site	Site location	Date	Team member
1.	Assessment team checked the implementation of the project, Baseline emission, Emission reduction calculation, technical description of the project and Monitoring along with FPIC rights, grievance mechanism, env. Impacts etc.	Multiple villages, Georai Taluka, Beed district, Maharashtra, India	17-June-2024 to 18-June-2024	Mr. Deepak Pundlik

In order to decrease audit risk to an acceptable low level and to obtain a fair degree of certainty for the current verification, the assessment team has verified adequate appropriate audit evidences.

2.5 Resolution of Findings

The objective of this step is to identify, discuss and conclude on the issues related to the project description, technical specifications, baseline and additionality, monitoring parameter and monitoring plan, implementation status and operations of the project activity to achieve emission reductions or influence the monitoring and reporting of emission reductions.

This is done based on the desk review and site assessment. The validation team prepares and/or updates a validation protocol (internal document) that records the conformities and nonconformities, which may be of following types;

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

- Non-compliance with the project description, applicability of monitoring methodology and its tools, additionality tools and has not been sufficiently documented by the project proponents, or if the evidence provided to prove conformity is insufficient;
- Non-compliance with the monitoring plan, the methodology or the standardized baseline are found in monitoring and reporting and has not been sufficiently documented by the project proponents, 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 impact the quantity of emission reductions;

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

All CARs and CLs raised by the Applus+ Certification during validation shall be resolved prior to submitting a request for registration.

During the current validation, 06 Corrective Action requests (CARs) and 04 Clarification requests (CLs) were raised and successfully closed.

All the findings that are raised and communicated to project proponent are included under Appendix 4. The section also includes the response by the project proponents and an assessment if it was closed out or otherwise.

2.5.1 Forward Action Requests

No FAR was raised as a part of current validation for RCP and verification. No FAR is open from the previous verifications.

3 VALIDATION FINDINGS

3.1 Project Details

Based on the desk review, on-site visit, follow up interviews, registered project PD, validation report, VVB concludes that submitted JPD & MR provides accurate, complete project description and gives confidence to VVB that the project details mentioned and assessed above in section 1.4 are found appropriate and gives full and complete understanding of the nature of the project.

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Audit history	In section 1.2 of the submitted JPD & MR, PP has provided audit history. The registration of the project was cross checked against project webpage Verra Search Page and confirmed that the project is registered with VERRA. The project has underwent periodic verifications as confirmed based on the project webpage. The 11 th periodic verification is currently ongoing as a part of this Joint validation and verification.
Sectoral scope	The current project is a wind power project thus, it is a renewable energy project and hence, the applicable sectoral scope is 1 – Energy industries – Renewable sources which is appropriate.
AFOLU project category, if applicable	Not applicable as this is a Non-AFOLU project.

Project activity type	The project activity type is a wind power project which is confirmed based on registered JPD & MR/3/, on-site visit/17/ and commissioning certificates/16/.
General eligibility of the project to participate in the VCS Program	- VVB confirms that the project is a large-scale wind project as per registered JPD & MR and on-site visit. As per table 2.1 of the VCS Standard version 4.7, this project activity is excluded. However, this is Joint validation for RCP and verification and hence the project exclusion is not applicable. - The project is already registered with VCS as VCS ID 1523 and this is validation for RCP. Hence, the project is not needed to meet requirements related to pipeline listing deadline. - The opening meeting was conducted on 15-July-2024 post receipt of initial documents including JPD & MR. The project has validation for RCP deadline as 30-March-2026 (i. e. within 2 years from end date of 1st crediting period which is 30-March-2024) and is met as the project will be submitted prior to this date to VERRA. - The applied methodology – CDM approved methodology ACM0002 is eligible under the VCS Program, and is a large scale methodology thus correctly applied by PP. - The current project is not a fragmented part of a larger project or activity that would otherwise exceed such limits as per the registered JPD & MR and applied methodology does not have any upper limit. - As per section 2.1.1 of VCS standard ver. 4.7, 5 scopes are identified for the project activity as below: 1) The seven Kyoto Protocol greenhouse gases. 2) Ozone-depleting substances (ODS). 3) Project activities supported by a methodology approved under the VCS Program through the methodology development and review process. 4) Project activities supported by a methodology approved under an approved GHG program, unless explicitly excluded (see the Verra website for exclusions).

	5) Jurisdictional REDD+ programs and nested REDD+ projects as set out in the Jurisdictional and Nested REDD+ (JNR) Requirements. The current project activity through its operation will replace equivalent amount of electricity from the Indian electricity grid reducing CO₂ emissions as per the registered JPD & MR thus, it satisfies scope 1 as per para 2.1.1 i. e. the seven Kyoto Protocol greenhouse gases
AFOLU project eligibility, if applicable	The project is NON-AFOLU project as it is a wind power project. Hence not applicable.
Transfer project eligibility, if applicable	The project is already registered with VCS with VCS ID as 1523. It is not transferred from the other registry. Hence not applicable.
Project design	The project design is already discussed/assessed in section 1.4 of this report. The project is not a grouped project but a project with multiple locations as evident from registered JPD & MR/3/ and on-site visit/17/.
Project ownership	As per the registered JPD & MR, the project ownership is with Panama Wind Energy Godawari Private Limited. The current ownership is with Panama Wind Energy Godawari Private Limited which was confirmed during on-site visit and based on energy generation records and invoices/8/ submitted. There is change in a shareholding structure of PWEGPL and it is now predominately held by O2 Power SG PTE LTD however, this has no effect on project ownership as the same remains with PWEGPL as evident based on PPA/5/ and energy generation records/8/.
Project start date	The project start date is 31-March-2014 which is the date of commissioning of the 1 st WTG within the project which is confirmed based on the commissioning certificates/16/ submitted.
Project crediting period	As per the registered VCS PD, the 1 st crediting period was 31-March-2014 to 30-March--2024. The second renewable crediting period for the project would be ,31-March-2024 to 30-March-2034.
Project scale	As per VCS standard version 4.7, paragraph 3.10.1 Project size categorizations are as follows:

	1) <i>Projects</i>: Less than or equal to 300,000 tonnes of CO₂e per year. 2) <i>Large projects</i>: Greater than 300,000 tonnes of CO₂e per year. The ex-ante emission reductions estimated for the 2nd crediting period are 131,077 tCO₂e/2/ which is less than 300,00 tCO₂e thus, the ‘project’ scale is confirmed. Total installed capacity of the project activity is 80 MW; which involves operation of 40 Wind Turbine Generators (WTGs) with capacity of 2 MW each/16/. Thus, total installed capacity is more than 15 MWe and it qualifies for large scale project under the CDM methodology requirement.															
Likelihood of achieving estimated GHG emission reduction or removals	The project activity is expected to reduce average annual 131,077 tCO₂e emissions for the 2nd crediting period. The submitted ex-ante ER sheet was checked to confirm that the calculations presented are correct and likelihood of achieving estimated GHG emission reduction is accepted.															
Technologies and measures implemented by the project activity	The project activity with 80 MW installed capacity is expected to generate annually about 140,160 MWh of electricity/2/. Electricity generated by the power plant is delivered to the grid through a 33 kV/132 kV sub-station from where it connects to 132 kV transmission line which is confirmed during on-site visit/17/. The billing of the generated electricity is conducted at substation located at the pooling substation. The feeder wise connection details of the WTGs are presented below which were checked during the on-site visit: <table><tr><th>WTG Location ID</th><th>Feeder Name</th><th>Feeder Connectivity</th></tr><tr><td>Location No: G33, G34, G35, G36, G37, G39, G40, G26, G32, G38</td><td>401</td><td>Feeder No. 1</td></tr><tr><td>Location No: G24, G25, G29, G30, G31, G27, G28, G05, G22, G23, G21</td><td>402</td><td>Feeder No. 2</td></tr><tr><td>Location No: G1, G2, G3, G4, G6, G7, G8, G10, G11</td><td>403</td><td>Feeder No. 3</td></tr><tr><td>Location No: G14, G15, G17, G9, G12, G13, G16, G18, G19, G20</td><td>404</td><td>Feeder No. 4</td></tr></table>	WTG Location ID	Feeder Name	Feeder Connectivity	Location No: G33, G34, G35, G36, G37, G39, G40, G26, G32, G38	401	Feeder No. 1	Location No: G24, G25, G29, G30, G31, G27, G28, G05, G22, G23, G21	402	Feeder No. 2	Location No: G1, G2, G3, G4, G6, G7, G8, G10, G11	403	Feeder No. 3	Location No: G14, G15, G17, G9, G12, G13, G16, G18, G19, G20	404	Feeder No. 4
WTG Location ID	Feeder Name	Feeder Connectivity														
Location No: G33, G34, G35, G36, G37, G39, G40, G26, G32, G38	401	Feeder No. 1														
Location No: G24, G25, G29, G30, G31, G27, G28, G05, G22, G23, G21	402	Feeder No. 2														
Location No: G1, G2, G3, G4, G6, G7, G8, G10, G11	403	Feeder No. 3														
Location No: G14, G15, G17, G9, G12, G13, G16, G18, G19, G20	404	Feeder No. 4														

	The project activity details mentioned are checked and confirmed against registered JPD & MR and during the on-site visit. The total installed capacity of the project is 80 MW; which involves operation of 40 Wind Turbine Generators (WTGs) with capacity of 2 MW each. The technical parameters have been verified with the technical specifications of WTGs/14/. Assessment team checked the commissioning certificates/16/ and confirmed that the commissioning dates for the WTGs are correct which are already provided above in section 1.4 . The technical specification of the project activity is as follows which is confirmed during the on-site visit and based on technical datasheet/14/ submitted by PP: <table border="1" data-bbox="732 871 1349 1148"> <thead> <tr> <th>Particulars</th><th>Details</th></tr> </thead> <tbody> <tr> <td>Model</td><td>Gamesa G97-2.0 MW</td></tr> <tr> <td>Rated Power</td><td>2000 kW</td></tr> <tr> <td>Diameter</td><td>97 m</td></tr> <tr> <td>Swept Area</td><td>7,390 m²</td></tr> <tr> <td>Rotational Speed</td><td>9.6 - 17.8 rpm</td></tr> <tr> <td>Design Lifetime</td><td>25 years</td></tr> </tbody> </table> VVB confirms that there are no material misstatements between project implementation and the project description.	Particulars	Details	Model	Gamesa G97-2.0 MW	Rated Power	2000 kW	Diameter	97 m	Swept Area	7,390 m ²	Rotational Speed	9.6 - 17.8 rpm	Design Lifetime	25 years
Particulars	Details														
Model	Gamesa G97-2.0 MW														
Rated Power	2000 kW														
Diameter	97 m														
Swept Area	7,390 m ²														
Rotational Speed	9.6 - 17.8 rpm														
Design Lifetime	25 years														
Implementation schedule of the project activity or activities	The project was commissioned in phase wise manner as presented in section 4.3 of JPD & MR and confirmed based on commissioning certificates/16/, power purchase agreement/5/, registered JPD & MR/3/, generation records/8/ and on-site visit interviews/17/. For the current monitoring period, the project was operational and has experienced shutdown/breakdown/13/ along with regular maintenance schedule as confirmed during on-site visit.														
Project location	The project location was confirmed during on-site visit/17/, based on google map/21/ and registered JPD & MR/3/. The table in section 1.4 above provides geographical locations for all the WTGs which are part of the project activity.														

Conditions prior to project initiation	The project is already registered with VCS ¹ . The registered JPD & MR has confirmed the conditions prior to the project initiation which were checked and confirmed. Since this is validation for RCP, the same were found acceptable.
Project compliance with applicable laws, statutes and other regulatory frameworks	The project completed the validation and continued verification in Verra. The project is in operation from year 2014 and follows all local regulatory laws and regulatory frameworks as confirmed during the on-site visit/17/.
Double counting and participation under other GHG programs	VVB confirms that project has not applied to any other carbon registry except VERRA and has not received or sought any other form of environmental credit, or has become eligible to do so since validation or previous verification. The Project had earlier applied for the CDM² under the Kyoto protocol which was under validation stage during 2013, however the PP did not continue the CDM validation and existing contract of CDM validation is terminated with VVB. Further, Declaration in effect of the same/7/ has been submitted by the PP to audit team and found to be appropriate. The assessment team has checked the other carbon registries such as CDM, GS4GG and has confirmed that this project is not registered/rejected with/by any of them and is registered with VCS only. Thus, it is concluded that the project activity is not involved on other Emissions trading programs.
No double claiming with emissions trading programs or binding emission limits	Assessment team confirms that the Net GHG emission reductions or removals generated by the Project will not be used for compliance with an emissions trading program or to meet binding limits on GHG emissions in any Emission Trading program or other binding limits. Further, Declaration in effect of the same/7/ has been submitted by the PP to audit team and found to be appropriate. The assessment team has checked the other carbon registries such as CDM, GS4GG and

¹ [Verra Search Page](#)

	has confirmed that this project is not registered with them and is registered with VCS only. VVB has noted that project GHG reductions from this project activity are not included in an emissions trading program or binding emission limit as no issuances are conducted yet. .
No double claiming with other forms of environmental credit	VVB has noted that project GHG reductions from this project activity are not part of any environmental credit scheme and the <i>project activity has not sought, received, or is planning to receive credit from another GHG-related environmental credit system</i>. The assessment team has checked the other carbon registries such as CDM, GS4GG and has confirmed that this project is not registered with them and is registered with VCS only. PP has provided a declaration/7/ that the project activity has not sought, received, or is planning to receive credit from another GHG-related environmental credit system.
Supply chain (Scope 3) emissions double claiming	The VVB has confirmed that the project proponent or authorized representative is not a buyer or seller of a product whose emissions footprint is changed by the project activity.
Sustainable development contributions	The project is expected to contribute 3 SDGs which are SDG 7, 8 and 13 for the second crediting period. SDG 7 Energy: The project contributes SDG Target 7.2 “By 2030, increase substantially the share of renewable energy in the global energy mix” and Indicator 7.2.1: “Renewable energy share in the total final energy consumption” by the utilization of wind power as a renewable energy source. The project activity is generating renewable energy through utilizing wind as a source and is expected to generate 140,160 MWh of electricity per year which is confirmed based on submitted ex-ante ER sheet. SDG 8 Decent Work and Economic Growth: During the operation phase of the project activity, it will create the job opportunities. Therefore, the project contributes to SDG Target “8.6.1 Proportion of youth (aged 15-24 years) not in education, employment or training”. The project is expected to generate at least 01 nos. of jobs which can be confirmed based on the employment records.

	SDG 13 Climate Change: The project produces clean renewable energy by diminishing CO₂ emissions. Therefore, it contributes SDG Target 13.0 “Total greenhouse gas emissions avoided or removed”. The ex-ante ER sheet has confirmed that the project is expected to reduce average annual emissions of 131,077 tCO₂e. For the current monitoring period, PP has achieved all the 3 stated SDGs and the assessment of the same is presented below: SDG 7 Energy: The project contributes SDG Target 7.2 “By 2030, increase substantially the share of renewable energy in the global energy mix” and Indicator 7.2.1: “Renewable energy share in the total final energy consumption” by the utilization of wind power as a renewable energy source. The project activity is generating renewable energy through utilizing wind as a source and for the current monitoring period has generated 62,516.16 MWh of electricity which is confirmed based on submitted ER sheet/2/ and electricity generation report and invoices raised by PP against the same/8/. SDG 8 Decent Work and Economic Growth: During the operation phase of the project activity, the project has created the job opportunities. Therefore, the project has contributed to SDG Target “8.6.1 Proportion of youth (aged 15-24 years) not in education, employment or training”. For the current monitoring period, the project has generated 07 jobs per year which was confirmed based on the employment records/9/ and on-site interviews. SDG 13 Climate Change: The project produces clean renewable energy by diminishing CO₂ emissions. Therefore, it contributes SDG Target 13.0 “Total greenhouse gas emissions avoided or removed”. The ER sheet/2/ has confirmed that the project has reduce CO₂ emissions of 61,078 tCO₂e for the current monitoring period.
Additional information relevant to the project	VVB confirms that the current project does not need the leakage management plan or implementation of leakage and risk mitigation measures in line with the applied methodology – ACM0002, version 22.0.

	VVB confirms that the PP has not used any commercially sensitive information that has been excluded from the public versions of project documents which conforms with the VCS Program requirements on what may be excluded. The details are presented transparently in the JPD & MR and to the assessment team for analysis which lead to positive conclusion for this validation and verification.
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3.2 Project Activity Instances in Grouped Projects

The current project is not a grouped project and hence this section is not applicable.

3.3 Safeguards

3.3.1 Stakeholder Engagement and Consultation

3.3.1.1 Stakeholder Identification

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder identification	As a part of project's registration, a local stakeholder meeting was conducted by PP on 27-June-2013 as a part of project's registration with VERRA. The details of the same are available in the registered JPD & MR/3/. PP had identified the following stakeholders for the project and same were invited for the meeting which was confirmed based on the stakeholder meeting report/10/ submitted. 1. Local community members 2. Employees 3. Local government officials (e.g. village council members) 4. Local media personnel 5. Regional and national government officials (e.g. district magistrate) 6. Local NGOs
Legal or customary tenure/access rights	The project is in operation from year 2014 and there are no legal/customary tenure/ access rights issues as confirmed by local villagers during on-site interviews/17/.

Stakeholder diversity and changes over time	The identified stakeholders by PP were already with diversity and no change over time is observed as evident from interviews with the local stakeholders.
Expected changes in well-being	The project has led to generation of jobs as evident from interviews with the local stakeholders.
Location of stakeholders	All the stakeholders are from villages wherein the project activity is located as confirmed through on-site visit.
Location of resources	This is not applicable as the project involves wind as a resource.

3.3.1.2 Stakeholder Consultation and Ongoing Communication

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder engagement process	As a part of project's registration, a local stakeholder meeting was conducted by PP on 27-June-2013/10/. The details of the same are available in the registered JPD & MR/3/. The submitted stakeholder meeting report/10/ confirms that PP had invited concerned stakeholders through newspaper advertisement and individual invitations. The meeting was held at Beed district and medium of communication was both, English and local language. As a part of continual engagement process followed as per registered JPD & MR, a grievance register/19/ located at the project site office. During on-site visit, it was checked and confirmed that such book is present at his office for anyone who wishes to mention any issue/grievance.
Consultation outcome	As a part of project's registration, a local stakeholder meeting was conducted by PP. The details of the same are available in the registered VCS PD. The outcome is mentioned in the registered JPD & MR and its validation report which is checked and confirmed.
Ongoing communication	As a part of ongoing communication, as per registered JPD & MR, a grievance register/book/19/ is present at the project site office. During the on-site visit, it was checked and confirmed that such register / book is present at office for anyone who wishes to mention any issue/grievance. Along with this grievance register, PP has now displayed contact details of designated point of contact to contact in case of

	complaints/grievance towards the project, at the entrance to the project site. The photographic evidence of the same which was checked is presented below in appendix 7. The contact details are as below: • Mr. Ashok Shintre • Email: ashok.shintre@o2power.in • Phone: +91 83088 08174
Stakeholder input	VVB has checked all the grievance book records/19/ and confirmed that no negative comments were received for the current monitoring period. This was also confirmed by the local stakeholders interviewed during the on-site visit.

3.3.1.3 Free, Prior, and Informed Consent

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Obtaining consent	The project is already registered with VCS and is undergoing RCP and verification activity. PP has detailed the consent procedure which was engaged at the time of project's registration and was found acceptable.
Outcome of FPIC discussion	The FPIC discussion has led to implementation of the project which is now operational for more than 10 years (commissioned in year March, 2014) and thus found appropriate.

3.3.1.4 Grievance Redress Procedure

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Development process	The grievance regress process is followed as per registered JPD & MR through a grievance register/book/19/. During on-site visit, it was checked and confirmed that such register/book is present for anyone who wishes to mention any issue/grievance. PP has now made this procedure more robust and details as mentioned in the section 2.1.4 of JPD-MR were found to be satisfactory. The procedure development included active gathering of suggestions and feedback from the stakeholders in fair and transparent manner. PP has detailed development process in the JPD-MR which was checked and found appropriate.

Grievance redress procedure	The on-site visit and interviews with PP representative and local stakeholders confirmed that the procedure is followed and no negative grievance has been noted. In the JPD-MR, PP has now mentioned stepwise grievance redressal procedure. This procedure was discussed with PP representative and found to be operational and hence acceptable.
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3.3.1.5 Public Comments

Comments received	Actions taken by the project proponent	Evidence gathering activities, evidence checked, and assessment conclusion
No comment received	No action required	The project is already registered with VCS and during public comment period, no comments were received as confirmed by PP representatives.

3.3.2 Risks to Local Stakeholders and the Environment

3.3.2.1 Management Experience

During on-site visit, the assessment team has interviewed PP representatives and have confirmed that the management team is with the PP for more than 10 years i.e. from the commissioning of the project. Thus, assessment team noted that the team has all the expertise or experience needed to support the current project activity. EKI Energy Services Ltd. acts as an other entity who is involved in documentation required for VERRA submission and is having experience of more than 10 years in this field.

3.3.2.2 Risk Assessment

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Natural and human-induced risks to stakeholders' wellbeing	No risk identified by PP which is evident during onsite visit as the project is now operational for more than 10 years and has not impacted environment/social wellbeing in the vicinity as confirmed by on-site interviews of PP representative/local stakeholders.

Risks to stakeholder participation	No risk identified by PP which is evident during onsite visit as the project is now operational for more than 10 years and has not impacted environment/social wellbeing in the vicinity. The project abides by local laws and regulations for human rights as confirmed by on-site interviews of PP representative/local stakeholders.
Working conditions	No risk identified by PP which is evident during onsite visit as the project is now operational for more than 10 years and has not impacted environment/social wellbeing in the vicinity as confirmed by on-site interviews of PP representative/local stakeholders. The working conditions at the project site were observed during on-site visit and it was confirmed that regular safety measures are followed and safety trainings are imparted on periodic basis to the project team.
Safety of women and girls	No risk identified by PP which is evident during onsite visit as the project is now operational for more than 10 years and has not impacted environment/social well-being in the vicinity as confirmed by on-site interviews of PP representative/local stakeholders. The project as on date does not engage any women/girl being remote location but PP followed local laws and regulations for women rights as confirmed by on-site interviews of PP representative/local stakeholders.
Safety of minority and marginalized groups, including children	No risk identified by PP which is evident during onsite visit as the project is now operational for more than 10 years and has not impacted environment/social well-being in the vicinity as confirmed by on-site interviews of PP representative/local stakeholders. The project as on date does not engage any minority / marginalized groups including children as confirmed by on-site interviews of PP representative/local stakeholders.
Pollutants (air, noise, discharges to water, generation of waste, release of hazardous materials, and chemical pesticides and fertilizers)	No risk identified by PP which is evident during onsite visit as the project is now operational for more than 10 years and has not impacted environment/social well-being in the vicinity as confirmed by on-site interviews of PP representative/local stakeholders. The project generates solid waste through waste cables, transformer oil but does not have air/noise, discharges to water, release of

	hazardous material and chemical pesticides and fertilizers as evident based on on-site visit. The generated waste is disposed of in line with applicable laws and regulations and PP maintains waste records/18/ for the same as checked during the on-site visit and confirmed.
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3.3.3 Respect for Human Rights and Equity

3.3.3.1 Labor and Work

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Discrimination	No risk identified by PP which is evident during onsite visit as the project is now operational for more than 10 years and has not discriminated employed people / local stakeholders in the vicinity as confirmed by on-site interviews of PP representatives including operational team /local stakeholders. Also review of PP's Human Resource policy/18/ has confirmed that PP has established anti-discrimination/sexual harassment and gender equality policy.
Sexual harassment	No risk identified by PP which is evident during onsite visit as the project is now operational for more than 10 years and has not had any case of sexual harassment as confirmed by on-site interviews of PP representative/local stakeholders.
Equal pay for equal work	No risk identified by PP which is evident during onsite visit as the project is now operational for more than 10 years and has a company policy in place which confirms equal pay for equal work as confirmed by sample salary records/18/, on-site interviews of PP representatives/employees / local stakeholders/17/.
Gender equity in labor and work	No risk identified by PP which is evident during onsite visit as the project is now operational for more than 10 years and has not created any gender un-equality in labor and work as confirmed by on-site interviews of PP representative/local stakeholders.
Forced labor	No risk identified by PP which is evident during onsite visit as the project is now operational for more than 10 years and has not used/using any forced labor as confirmed by on-site interviews of PP representative/local stakeholders.

Child labor	No risk identified by PP which is evident during onsite visit as the project is now operational for more than 10 years and has not used/using any child labor as confirmed by on-site interviews of PP representative/local stakeholders.
Human trafficking,	No risk identified by PP which is evident during onsite visit as the project is now operational for more than 10 years and has not conducted human trafficking as confirmed by on-site interviews of PP representative/local stakeholders.

3.3.3.2 Human Rights

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk identified	No risk identified by PP which is evident during onsite visit as the project is now operational for more than 10 years and has not violated any human rights as confirmed by on-site interviews of PP representative/local stakeholders. Further, the PP recognizes, respects, and promotes the protection of the rights of IPs, LCs, and customary rights holders in line with applicable international human rights law ³ , the UNDRIP ⁴ which is found acceptable.

3.3.3.3 Indigenous Peoples and Cultural Heritage

Risk identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk identified	No risk identified by PP which is evident during onsite visit as the project is now operational for more than 10 years and has no indigenous peoples and cultural heritage in the vicinity of the plant as confirmed during the on-site interviews of PP representative/local stakeholders.

3.3.3.4 Property Rights

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
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³ <https://www.ohchr.org/sites/default/files/Documents/Publications/fs9Rev.2.pdf>

⁴ https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf

No risk identified	No risk identified by PP which is evident during onsite visit as the project is now operational for more than 10 years and has all the property rights established through right of use as confirmed during the on-site interviews of PP representative/local stakeholders.
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3.3.3.5 Benefit Sharing

The project activity does not benefit sharing agreement with anyone as evident from the interviews with PP representative and hence this section is not applicable.

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Process used to design the benefit sharing plan	Not applicable.
Summary of the benefit sharing plan	Not applicable.
Approval and dissemination of benefit sharing plan	Not applicable.
Benefit sharing during the monitoring period	Not applicable.

3.3.4 Ecosystem Health

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Impacts on biodiversity and ecosystems	The project activity is now operational for more than 10 years. PP has confirmed that no impact on biodiversity is likely to be caused as the project

	activity is not installed nearby any wildlife area/protected area etc as confirmed during the on-site visit.
Soil degradation and soil erosion	The project activity is now operational for more than 10 years. The project is not expected to lead to soil degradation and soil erosion as no continual construction/operational activities having such impacts are conducted by PP. This is confirmed during on-site visit and through interviews with local stakeholders.
Water consumption and stress	The project activity is now operational for more than 10 years. The project is not expected to lead to water consumption/ stress. The water which is being used for drinking purpose at the project site is brought from the nearby village and for wastewater being generated, a septic tank is present to take care of the same. This is confirmed during on-site visit and through interviews with local stakeholders.

3.3.4.1 Rare, Threatened, and Endangered species

This section is not applicable as the assessment team through on-site visit and interviews have confirmed that there are no rare, threatened and endangered species within the project area.

Risk identified	Evidence gathering activities, evidence checked, and assessment conclusion
Species and habitat	Not applicable.
Areas needed for habitat connectivity	Not applicable.

3.3.4.2 Introduction of Species

This section is not applicable as the assessment team through on-site visit and interviews have confirmed that there are no planting or introduction of species by the project activity.

Species introduced	Evidence gathering activities, evidence checked, and assessment conclusion
Not applicable.	Not applicable.

3.3.4.3 Ecosystem conversion

Risks Identified	Evidence gathering activities and evidence checked
Ecosystem conversion	The project activity is now operational more than 10 years. As per the registered JPD & MR, on-site visit and interviews confirmed that there is no ecosystem conversion.

3.4 Application of Methodology

3.4.1 Title and Reference

Assessment team checked that following methodologies and tools are applicable for the project activity. The details are as below:

Methodology : ACM0002: Grid Connected Renewable Electricity Generation, Version 22.0⁵ for renewal of crediting period and, ACM0002 “Consolidated methodology for grid-connected electricity generation from renewable sources”, Version 16.0.⁶ for verification

The methodology refers to following CDM tools:

- Tool 01 - Tool for the demonstration and assessment of additionality (version 07.0.0)⁷
- Tool 07 - Tool to calculate the emission factor for an electricity system (Version 07.0)⁸
- Tool 11 - Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period (Version 03.0.1)⁹

3.4.2 Applicability

The choice of methodology ACM0002 Version 22.0 is justified as the project activity meets the relevant applicability criteria:

The applicability conditions of the methodology as mentioned below were checked and the assessment team confirmed that they are valid as confirmed based on the submitted documentary evidences and observations/interviews during the on-site visit:

Methodology ID	Applicability condition	Assessment and conclusion
ACM0002 version 22.0		
	This methodology is applicable to grid-connected renewable	The registered JPD & MR and on-site visit has confirmed

⁵ <https://cdm.unfccc.int/methodologies/DB/XB1TX7TAZ6SLWM9B7BC67THHVD16JV>

⁶ <https://cdm.unfccc.int/methodologies/DB/XB1TX7TAZ6SLWM9B7BC67THHVD16JV>

⁷ <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-01-v7.0.0.pdf>

⁸ Please see <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-07-v7.0.pdf>

⁹ Please see <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-11-v3.0.1.pdf>

	energy power generation project activities that: (a) Install a Greenfield power plant; (b) Involve a capacity addition to (an) existing plant(s); (c) Involve a retrofit of (an) existing operating plant(s)/unit(s); (d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or (e) Involve a replacement of (an) existing plant(s)/unit(s); or (f) Install a Greenfield power plant together with a grid-connected Greenfield pumped storage power plant. The greenfield power plant may be directly connected to the PSP or connected to the PSP through the grid.	that the project activity is an installation of greenfield wind power plant without PSP/BESS which is a renewable energy generation project activity. Hence this condition is satisfied.
	In case the project activity involves the integration of a BESS, the methodology is applicable to grid-connected renewable energy power generation project activities that: (a) Integrate BESS with a Greenfield power plant; (b) Integrate a BESS together with implementing a capacity addition to (an) existing solar photovoltaic or wind power plant(s)/unit(s);	The registered JPD & MR and on-site visit has confirmed that the project activity is an installation of greenfield wind power plant without PSP/BESS which is a renewable energy generation project activity. Hence this condition is not applicable.

	(c) Integrate a BESS to (an) existing solar photovoltaic or wind power plant(s)/unit(s) without implementing any other changes to the existing plant(s); (d) Integrate a BESS together with implementing a retrofit of (an) existing solar photovoltaic or wind power plant(s)/unit(s); (e) Integrate a BESS together with a Greenfield power plant that is operating in coordination with a PSP. The BESS is located at site of the greenfield renewable power plant.	
	The methodology is applicable under the following conditions: (a) Hydro power plant/unit with or without reservoir, wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit; (b) In the case of capacity additions, retrofits, rehabilitations or replacements (except for wind, solar, wave or tidal power capacity addition projects) the existing plant/unit	The registered JPD & MR and on-site visit has confirmed that the project activity is an installation of greenfield wind power plant. Thus, Condition (a) is applicable as the project activity is wind power plant/unit. Conditions (b) is not applicable as the project activity is an installation of greenfield wind power plant and not a capacity additions,

	must have started commercial operation prior to the start of a minimum historical reference period of five years. The reference period is used for the calculation of baseline emissions and defined in the baseline emission section. Furthermore, no capacity expansion, retrofit, or rehabilitation of the plant/unit has been undertaken between the start of this minimum historical reference period and the implementation of the project activity; (c) In case of Greenfield project activities applicable under paragraph 7(a) above, the project proponents shall demonstrate that the BESS was an integral part of the design of the renewable energy project activity (e.g., by referring to feasibility studies or investment decision documents); (d) The BESS should be charged with electricity generated from the associated renewable energy power plant(s). Only during exigencies 2 may the BESS be charged with electricity from the grid or a fossil fuel electricity generator. In such cases, the corresponding GHG emissions shall be accounted for as project emissions following the	retrofits, rehabilitations or replacements. Conditions (c) is not applicable as the project activity is an installation of greenfield wind power plant but without the BESS. Conditions (d) is not applicable as the project activity is an installation of greenfield wind power plant but without the BESS.
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	requirements under section 5.4.4 below. The charging using the grid or using fossil fuel electricity generator should not amount to more than 2 per cent of the electricity generated by the project renewable energy plant during a monitoring period. During the time periods (e.g., week(s), months(s)) when the BESS consumes more than 2 per cent of the electricity for charging, the project proponent shall not be entitled to issuance of the certified emission reductions for the concerned periods of the monitoring period. (e) In case the project activity involves PSP, the PSP shall utilize the electricity generated from the renewable energy power plant(s) that is operating in coordination with the PSP during pumping mode.	Conditions (e) is not applicable as the project activity is an installation of greenfield wind power plant and does not involve PSP.
	In case of hydro power plants, one of the following conditions shall apply: (a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or (b) The project activity is implemented in existing single or multiple reservoirs, where	The registered JPD & MR and on-site visit has confirmed that the project activity is an installation of greenfield wind power plant. Thus, this condition is not applicable.

	the volume of the reservoir(s) is increased and the power density, calculated using equation (7), is greater than 4 W/m² ; or (c) The project activity results in new single or multiple reservoirs and the power density, calculated using equation (7), is greater than 4 W/m² ; or (d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, calculated using equation (7), is lower than or equal to 4 W/m² , and all of the following conditions shall apply: (i) The power density calculated using the total installed capacity of the integrated project, as per equation (8), is greater than 4 W/m² ; (ii) Water flow between reservoirs is not used by any other hydropower unit which is not a part of the project activity; (iii) Installed capacity of the power plant(s) with power density lower than or equal to 4 W/m² are: a. Lower than or equal to 15 MW; and b. Less than 10 per cent of the total installed capacity of integrated hydro power project.	
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	In the case of integrated hydro power projects, project proponents shall: (a) Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro power project; or (b) Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of water balance is to demonstrate the requirement of specific combination of reservoirs constructed under CDM project activity for the optimization of power output. This demonstration has to be carried out in the specific scenario of water availability in different seasons to optimize the water flow at the inlet of power units. Therefore, this water balance will take into account seasonal flows from river, tributaries (if any), and rainfall for minimum of five years prior to the implementation of the CDM project activity	The registered JPD & MR and on-site visit has confirmed that the project activity is an installation of greenfield wind power plant. Thus, this condition is not applicable.
	In the case of PSP, the project proponents shall demonstrate in the PDD that the project is not using water which would	The registered JPD & MR and on-site visit has confirmed that the project activity is an installation of greenfield wind

	have been used to generate electricity in the baseline.	power plant. Thus, this condition is not applicable.
	The methodology is not applicable to: (a) Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site; (b) Biomass fired power plants/units	The registered JPD & MR and on-site visit has confirmed that the project activity is an installation of greenfield wind power plant and not a project switching from fossil fuels or biomass fired power plant/unit. Hence this condition is not satisfied.
	In the case of retrofits, rehabilitations, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is “the continuation of the current situation, that is to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance”.	The registered JPD & MR and on-site visit has confirmed that the project activity is an installation of greenfield wind power plant and not a retrofit, rehabilitations, replacements or capacity additions. Hence this condition is not satisfied.
	In addition, the applicability conditions included in the tools referred to below apply.	The applicability of tools is discussed separately below.

Tool ID	Applicability condition	Assessment and conclusion
Tool 07, version 07		

	This tool may be applied to estimate the OM, BM and/or CM when calculating baseline emissions for a project activity that substitutes grid electricity that is where a project activity supplies electricity to a grid or a project activity that results in savings of electricity that would have been provided by the grid (e.g. demand-side energy efficiency projects).	In line with registered JPD & MR, PP has used this tool to estimate OM, BM and/or CM when calculating baseline emissions for a project activity that substitutes grid electricity that is where a project activity supplies electricity to a grid. Hence this condition is applicable.
	Under this tool, the emission factor for the project electricity system can be calculated either for grid power plants only or, as an option, can include off-grid power plants. In the latter case, two sub-options under the step 2 of the tool are available to the project proponents, i.e. option IIa and option IIb. If option IIa is chosen, the conditions specified in “Appendix 1: Procedures related to off-grid power generation” should be met. Namely, the total capacity of off-grid power plants (in MW) should be at least 10 per cent of the total capacity of grid power plants in the electricity system; or the total electricity generation by off-grid power plants (in MWh) should be at least 10 per cent of the total electricity generation by grid power	As per the registered VCS PD and on-site visit, the current project activity is a grid connected wind power plant. Hence this condition is applicable. The assessment team checked section 5.1 of Joint PD & MR which confirms that emission factor for the project electricity system is calculated for grid power plants only.

	plants in the electricity system; and that factors which negatively affect the reliability and stability of the grid are primarily due to constraints in generation and not to other aspects such as transmission capacity.	
	In case of CDM projects the tool is not applicable if the project electricity system is located partially or totally in an Annex I country.	The registered JPD & MR and on-site visit has confirmed that the host country – India is non-annex 1 country and hence condition is not applicable.
	Under this tool, the value applied to the CO ₂ emission factor of biofuels is zero.	As per the registered VCS PD and on-site visit, the current project activity is a grid connected wind power plant and not using any biofuel. Hence this condition is not applicable.

Tool ID	Applicability condition	Assessment and conclusion
Tool 11 version 03.0.1		
	This tool provides a stepwise procedure to assess the continued validity of the baseline and to update the baseline at the renewal of a crediting period, as required by paragraph 49 (a) of the modalities and procedures of the clean development mechanism.	The current project activity is undergoing validation for renewal of crediting period. Hence this tool is applicable which is acceptable.
	The tool consists of two steps. The first step provides an approach to evaluate whether the current baseline is still	The current project activity is undergoing validation for renewal of crediting period. PP has demonstrated

	valid for the next crediting period. The second step provides an approach to update the baseline in case that the current baseline is not valid anymore for the next crediting period.	stepwise applicability of the tool in the submitted JPD & MR section 3.4 which is checked and confirmed. The assessment of the same is provided in section 3.4.4 below.
Tool 01, version 07.0.0		
	Para 9 - The use of the “Tool for the demonstration and assessment of additionality” is not mandatory for project participants when proposing new methodologies. Project participants may propose alternative methods to demonstrate additionality for consideration by the Executive Board. They may also submit revisions to approved methodologies using the additionality tool.	The assessment team has checked and confirmed that PP is not proposing a new methodology/ies during renewal of crediting period.
	Para 10 - Once the additionally tool is included in an approved methodology, its application by project participants using this methodology is mandatory	The current project activity is undergoing validation for renewal of crediting period (RCP). There is no need to demonstrate additionality again at the time of RCP however, the assessment team checked that this tool is applicable at the time of project’s registration and being used at that time.

VVB confirms that the methodology is applicable to the project as the project activity is a grid connected greenfield wind power project.

In addition, for the emission factors, that were used to calculate estimated emission reductions, CEA database version 19/20/ is used in line with the requirements of Tool 07 which is checked and found appropriate.

PP has explained the scenarios and applicability of the baseline methodology appropriately in the JPD & MR and found correct. LGAI Technological Center S.A. (Applus+ Certification) confirms that the application of the baseline methodology is transparent and conservative and confirms that the chosen baseline and monitoring methodology is applicable to the project activity.

3.4.3 Project Boundary

The spatial extent of the project boundary includes the project power plant, and all power plants connected physically to the electricity system that the project power plant is connected to. Greenhouse's gases included in the project boundary and used in calculations of emission reductions are given in Table below.

Table: Emissions sources included in or excluded from the project boundary

Source		Gas	Included?	Assessment and conclusion
Baseline	Grid-connected electricity generation	CO ₂	Yes	Main emission source: Fossil fuels fired for electricity generation cause CO ₂ emissions. It is included to baseline calculation to find the displaced amount by the project activity.
		CH ₄	No	Minor emission source. Excluded for simplification. This is conservative
		N ₂ O	No	Minor emission source. Excluded for simplification. This is conservative
		Other	NA	NA
Project	Greenfield Wind energy conversion system	CO ₂	No	Minor emission source. Excluded for simplification. This is conservative
		CH ₄	No	Minor emission source. The project activity will not create a new reservoir. Therefore, there will not be any project emission. This is conservative
		N ₂ O	No	Minor emission source. Excluded for simplification. This is conservative
		Other	No	Minor emission source. Excluded for simplification. This is conservative

3.4.4 Baseline Scenario

The methodological tool “Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period”¹⁰ (version 03.0.1)/6/ is adopted by PP to assess the continued validity of the baseline and to update the baseline. This tool provides a stepwise procedure to assess the continued validity of the baseline and to update the baseline at the renewal of a crediting period, as required by paragraph 49 (a) of the modalities and procedures of the clean development mechanism. According to this tool, the following steps are applied.

Step 1: Assess the validity of the current baseline for the next crediting period

Step 1.1: Assess compliance of the current baseline with relevant mandatory national and/or sectoral policies

VVB has confirmed that the baseline scenario remains unchanged¹¹ and is in compliance with all the relevant mandatory national and/or sectoral policies based on sectoral and host country expertise.

Step 1.2: Assess the impact of circumstances

At the time of registration, PP had identified the baseline scenario of the project activity as the electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid connected power plants and by the addition of new generation sources into the grid which is confirmed based on registered Joint PD &MR. Thus, the assessment team noted that this project activity was a voluntary investment which was intended to replace equivalent amount of electricity at grid from renewable source. As PP was not bound to incur this investment; absence of project activity would not have led to any continued baseline practice for PP whereas the continued operation of the project activity would continue to replace equivalent amount of electricity at grid which is appropriate. Hence, the identified baseline still remains valid for the project. Therefore, the assessment of the changes in market characteristics is not required for the renewal of the project's crediting period under VCS.

Furthermore, project proponent has considered the latest available CO₂ Baseline Database (CEA database, version 19) which was available at the time of requesting renewal of the crediting period for establishing the baseline emission factor, which itself considered all the new circumstances. Hence, the VVB accepts that new circumstances do not have an impact on the baseline emission.

Thus, VVB confirms that current baseline remains same and there is no impact if circumstances, existing at the time of requesting renewal of crediting period.

Step 1.3: Assess whether the continuation of the use of current baseline equipment(s) or an investment is the most likely scenario for the crediting period for which renewal is requested

¹⁰ <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-11-v3.0.1.pdf>

¹¹ <https://powermin.gov.in/en/content/power-sector-glance-all-india>

As assessed in step 1.2, the baseline scenario for the project activity was the electricity import/generation from the power plants connected to the electricity grid. This is evident as the current project activity is grid connected wind power plant operational from year 2014 as per registered Joint PD&MR. The same document i. e. Joint PD&MR further confirms that the project activity was a green field project and there was no any baseline equipment or investment involved in project activity. Therefore, VVB accepts that this condition is not applicable to the project activity.

Further, the tool asks to check whether the remaining technical lifetime of the equipment that would have continued to be used in the absence of the project activity, as determined in the registered document, exceeds the crediting period for which renewal is requested. VVB has checked the registered Joint PD&MR and confirmed that it mentions technical life time of the wind turbines as 25 years. With 1st crediting period is over, the remaining technical life time of the equipments exceeds the crediting period for which renewal is requested. Thus, it satisfies the requirement and is acceptable.

Step 1.4: Assessment of the validity of the data and parameters

This step stipulates that “Where emission factors, values or emission benchmarks are used and determined only once for the crediting period, they should be updated, except if the emission factors, values or emission benchmarks are based on the historical situation at the site of the project activity prior to the implementation of the project and cannot be updated because the historical situation does not exist anymore as a result of the CDM project activity.”

In the context of the present project activity the emission factor has been updated along with the approach used to calculate the emission factor.

The project chosen ex-ante default value i.e., Emission Factor. As per the Guidance given in Tool, the emission factor is updated as follows:

- The operating margin is calculated as per the CEA database, version 19.0 Government of India/20/ and the requirements of “Tool to calculate the emission factor for electricity system” version 07/6/. The operating margin calculation is checked by the assessment team and found correct.
- The build margin is considered as per the CEA database, version 19.0 Government of India and the requirements of “Tool to calculate the emission factor for electricity system” version 07. The value considered is checked by the assessment team and found correct.
- The Combined margin calculation is carried out as per “Tool to calculate the emission factor for electricity system” version 07. The value considered is checked by the assessment team and found correct.

The emission factor is fixed ex-ante and thus will be used for the complete 2nd renewable crediting period.

Step 2: Update the current baseline and the data and parameters

As evident from the explanation provided above the baseline scenario remains unchanged. Only the approach used to calculate the baseline emission factor is updated as per the latest version of CEA database available at the time of JPD & MR submission for renewal.

Step 2.1: Update the current baseline

Update the current baseline emissions for the subsequent crediting period, without reassessing the baseline scenario, based on the latest approved version of the methodology applicable to the project activity. The procedure should be applied in the context of the sectoral policies and circumstances that are applicable at the time of request for renewal of the crediting period.

As the above explanation was found acceptable by the VVB. Hence, the Baseline scenario remains unchanged.

Step 2.2: Update the data and parameters

If the application of Step 1.4 showed that the data and/or parameter(s) that were only determined at the start of the crediting period and not monitored during the crediting period are not valid anymore, project proponents should update all applicable data and parameters.

It was found acceptable by the VVB that the approach used to calculate the baseline emission factor is updates as per the latest version of the CEA database available at the time of renewal i. e. version 19.0.

Assessment team conclude that the above-mentioned baseline scenario is in line with the applied methodology “ACM0002: Grid Connected Renewable Electricity Generation, Version 22.0¹²” and is described appropriately in the final version of JPD & MR. Thus accepted.

3.4.5 Additionality

VVB has checked and confirmed that investment analysis was considered at the time of project’s registration with VCS and the project is additional. The on-site visit interviews and document review confirms that the project has adhered to regulatory guidelines during its operational conditions and no changes in the project design has occurred. Thus, additionality demonstrated at the time of project’s registration remains valid for the 2nd crediting period.

3.4.6 Quantification of GHG Emission Reductions and Carbon Dioxide Removals

Quantification of baseline emissions

The project has applied ACM0002, version 22.0.

For baseline emissions PP has used equation 11 as per paragraph 57 which include only CO₂ emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity. The methodology assumes that all project electricity generation above baseline levels would have been generated by existing grid-connected power plants and/or the addition of new grid-connected power plants. The baseline emissions are to be calculated as follows:

¹² Please see <https://cdm.unfccc.int/UserManagement/FileStorage/ZPFJL010U2RYC6N3HASIXV7K84QBG9>

$$BE_y = EG_{PJ,y} \times EF_{grid,CM,y} \quad \text{Equation (11)}$$

Where,

BE_y = Baseline emissions in year y (tCO₂/yr)

$EG_{PJ,y}$ = Quantity of net electricity generation that is produced and supplied to the grid as a result of the implementation of the CDM 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 TOOL 07 (t CO₂/MWh)

Since the project activity is greenfield hydroelectric power plant, the electricity generation of the project activity is calculated using equation 12 as per paragraph 59 where,

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

Where:

$EG_{PJ,y}$ = Quantity of net electricity generation that is produced and supplied to the grid as a result of the implementation of the CDM 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)

Thus, the baseline emissions for the project activity will be calculated as,

$$BE_y = EG_{facility,y} \times EF_{grid,CM,y} \text{ which is found appropriate and accepted.}$$

For calculation of emission factor, PP has detailed the calculation in the submitted ER workbook - Emission Factor Sheet.

Determination of CO₂ emission factor of grid ($EF_{grid,CM,y}$):

As per the applicable methodology paragraph 83, $EF_{grid,CM,y}$ should be determined as per tool 07. The review of submitted Joint PD & MR has confirmed that PP has used tool 07 for the calculation of grid emission factor which is appropriate and accepted.

Further, PP has used procedures prescribed in the Tool 07 - "Tool to calculate the Emission Factor for an electricity system", version 07 for calculation of combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) which are further used to calculate the emission factor which is found appropriate.

Applicability of the tool: The tool may be applied to estimate the OM, BM and/or CM when calculating baseline emissions for a project activity that substitutes grid electricity, i.e., where a project activity supplies electricity to a grid or a project activity that results in savings of electricity that would have been provided by the grid (e.g., demand-side energy efficiency projects).

The project activity supplies electricity to Indian Electricity grid. Hence this tool is applicable in case of project activity.

The weighted average CM method (option A) has been used as the preferred option by PP which is found appropriate. The combined margin emissions factor is calculated as follows:

$$EF_{grid,CM,y} = EF_{grid,OM,y} \times w_{OM} + EF_{grid,BM,y} \times w_{BM}$$

Where:

$EF_{grid,BM,y}$	=	Build margin CO ₂ emission factor in year y (tCO ₂ /MWh)
$EF_{grid,OM,y}$	=	Operating margin CO ₂ emission factor in year y (tCO ₂ /MWh)
w_{OM}	=	Weighting of operating margin emissions factor (%)
w_{BM}	=	Weighting of build margin emissions factor (%)

The following default values should be used for w_{OM} and w_{BM} :

Wind and solar power generation project activities: $w_{OM} = 0.75$ and $w_{BM} = 0.25$ (owing to their intermittent and non-dispatchable nature) for the first crediting period and for subsequent crediting periods.

All other projects: $w_{OM} = 0.5$ and $w_{BM} = 0.5$ for the first crediting period, and $w_{OM} = 0.25$ and $w_{BM} = 0.75$ for the second and third crediting period, unless otherwise specified in the approved methodology which refers to this tool.

As mentioned before, PP has calculated the baseline emission factors as per CEA sourced data (CEA database, version 19.0¹³) for the Indian grid according to the formulas specified above. As this is the most authentic information available in the public domain, the baseline emission factor used in the calculation of baseline emissions for the proposed project activity is being referred from the same for transparency and conservativeness.

$$EF_{grid,CM,y} = (0.9580 * 0.75) + (0.8670 * 0.25)$$

$$EF_{grid,CM,y} = 0.9352 \text{ tCO}_2/\text{MWh}$$

For verification of the 2nd monitoring period from the 1st crediting period, combined margin factor which is fixed ex-ante for the 1st crediting period at the time of registration i. e. 0.4476 tCO₂e is used and found acceptable. PP has presented detailed calculation in the JPD & MR and submitted ER sheet which was checked and confirmed.

Quantification of project emissions

As per para 40 of the applied methodology ACM0002, version 22.0, the project emissions are calculated by PP as follows which is acceptable.

$$PE_y = PE_{FF,y} + PE_{GP,y} + PE_{HP,y} + PE_{BESS,y} + PE_{PSP,y}$$

Where:

¹³ <https://cea.nic.in/cdm-co2-baseline-database/?lang=en>

PE_y = Project emissions in year y (t CO₂e/yr)

$PE_{FF,y}$ = Project emissions from fossil fuel consumption in year y (t CO₂/yr)

$PE_{GP,y}$ = Project emissions from the operation of dry, flash steam or binary geothermal power plants in year y (t CO₂e/yr)

$PE_{HP,y}$ = Project emissions from water reservoirs of hydro power plants and pumped storage plants in year y (t CO₂e/yr)

$PE_{BESS,y}$ = Project emissions from charging of a BESS using electricity from the grid or from fossil fuel electricity generators (t CO₂e/yr)

$PE_{PSP,y}$ = Project emissions from utilizing electricity from the grid for pumping operation of PSP in excess to the production of the renewable power plant operating in coordination with the PSP (tCO₂e/yr).

Since this is a wind power plant project, no project emissions are applicable which is acceptable.

Thus, there would be '0' project emissions from the project activity which is acceptable.

Quantification of leakage emissions

For leakage emissions, as per paragraph 71 of the applied methodology, no other leakage emissions are considered. Thus, PP has not considered any leakage emissions in line with the para's applicability which is found appropriate.

VVB has checked the JPD & MR, submitted ER sheet and confirm that all relevant assumptions and data are correctly listed in the JPD & MR including their references and sources.

All data and parameter values used in the project description are considered reasonable in the context of the project and are in conformance with the VCS Program rules. The VVB was able to replicate all the estimates of the baseline emissions using the data and parameter values provided in the Joint PD & MR.

Assessment of ex-ante parameters:

1. $EF_{grid,OM,y}$: The parameter - Operating Margin CO₂ emission factor in year y is calculated as generation-weighted average using the data of most recent 3 years (2020-21, 2021-22 and 2022-23), sourced from Baseline CO₂ Emission Database, Version 19.0, December-23 published by Central Electricity Authority (CEA), Government of India. VVB noted that this is in line with tool 07 requirements, is calculated using the most recent database published by the host country and calculated value was found to be correct and acceptable. The value - 0.9580 tCO₂/MWh will be used for calculation of baseline emissions and is fixed for the entire crediting period which is appropriate.

2. $EF_{grid,BM,y}$: The parameter - Build Margin CO₂ emission factor in year y is calculated as generation-weighted average using the data of most recent year (2022-23), sourced from

Baseline CO₂ Emission Database, Version 19.0, December-23 published by Central Electricity Authority (CEA), Government of India. VVB noted that this is in line with tool 07 requirements , is calculated using the most recent database published by the host country and calculated value was found to be correct and acceptable. The value - 0.8670 tCO₂/MWh will be used for calculation of baseline emissions and is fixed for the entire crediting period which is appropriate.

3. $EF_{grid,CM,y}$: The parameter –Combined Margin CO₂ emission factor in year y is calculated using the values of above tow parameters and weighted averages as 75% and 25% in line with the tool 07 guidance and hence acceptable. The value - 0.9352 tCO₂/MWh will be used for calculation of baseline emissions and is fixed for the entire crediting period which is appropriate.

Assessment of ex-post parameters:

1. $EG_{facility,y}$: The parameter - Quantity of net electricity generation supplied by the project (Wind) plant/unit to the grid during monitoring period will be measured and calculated using the value of net electricity generation supplied to the grid as per Joint Meter Reading Report (JMR) forms provided by state distribution company - Maharashtra State Electricity Distribution Company Limited (MSEDCL). The value can be cross checked against the invoices raised by the PP to MSEDCL which is found acceptable. PP will calculate net electricity supplied to grid as the difference of the measured values of “export energy ” and “import energy” of electricity through the dedicated energy meters installed at the delivery point (i.e., the connected substation) which was confirmed during the interviews and acceptable.

The value of this parameter for the 2nd crediting period is 140,160 MWh. The calculation of the parameter is presented in the ER sheet ‘Estimated ER for 2nd CP’ which is checked and found acceptable.

For the current monitoring period i. e. from 01-August-2023 to 30-March-2024 (243 days), the value of the parameter is 62,516.16 MWh. The vintage wise generation is provided below:

Sr. No.	Monitoring period	Electricity generation (MWh)
1	01-August-2023 to 31-December-2023	46,544.56
2	01-January-2024 to 30-March-2024	15,971.60
	Total	62,516.16

VVB has checked and confirmed the values against the submitted copies of monthly Joint meter readings which were cross checked against the invoices. The values as per these documents are presented in the ER sheet ‘Generation (JMRs)’ and ‘Generation (Invoices)’ which are checked and found acceptable.

MSEDCL has installed a set of meters – Main and Check meters at the substation which is confirmed and evident from the submitted copies of Joint meter readings. PP will continuous monitor the generated electricity with hourly measurement by energy meters and at least monthly recording through JMRs which is found appropriate. The generated data will be archived

electronically and maintained for the entire crediting period plus two years by the PP which is appropriate.

The energy meters used for energy monitoring are of class 0.2s tri vector meters. The meters are in custody of MSEDCL and calibrated by them at least once in 5 years which is found acceptable based on regional expertise. The calibration details of the energy meters are provided in appendix 6 which were checked based on submitted calibration certificates.

VVB concluded that PP has correctly applied the methodology and referenced tool to calculate baseline emissions, project emissions, leakage and reductions and removals during the project crediting period.

VVB confirms that;

- a. all relevant assumptions and data are listed in the JPD & MR, including their references and sources.
- b. All data and parameter values used in the JPD & MR are reasonable in the context of the project and are in conformance with the VCS Program rules.
- c. All estimates of the baseline emissions can be replicated using the data and parameter values provided in the project description.

The expected annual average emission reductions for the 2nd crediting period is as below:

Vintage period	Estimated baseline emissions (tCO ₂ e)	Estimated project emissions (tCO ₂ e)	Estimated leakage emissions (tCO ₂ e)	Estimated reduction VCU (tCO ₂ e)	Estimated removal VCU (tCO ₂ e)	Estimated total VCUs (tCO ₂ e)
31-March-2024 to 31-December-2024	99,116	0	0	99,116	0	99,116
01-January-2025 to 31-December-2025	131,077	0	0	131,077	0	131,077
01-January-2026 to 31-December-2026	131,077	0	0	131,077	0	131,077
01-January-2027 to 31-December-2027	131,077	0	0	131,077	0	131,077
01-January-2028 to 31-December-2028	131,077	0	0	131,077	0	131,077

01-January-2029 to 31-December-2029	131,077	0	0	131,077	0	131,077
01-January-2030 to 31-December-2030	131,077	0	0	131,077	0	131,077
01-January-2031 to 31-December-2031	131,077	0	0	131,077	0	131,077
01-January-2032 to 31-December-2032	131,077	0	0	131,077	0	131,077
01-January-2033 to 31-December-2033	131,077	0	0	131,077	0	131,077
01-January-2034 to 30-March-2034	31,961	0	0	31,961	0	31,961
Total	1,310,770	0	0	1,310,770	0	1,310,770

3.4.7 Methodology Deviations

For the current project activity, there are not any previously validated methodology deviations and PP has not applied for any such deviation for the new crediting period.

3.4.8 Monitoring Plan

For the current project activity, required data for monitoring is the net electricity delivered to the grid by the project activity which is used for calculation of emission reductions.

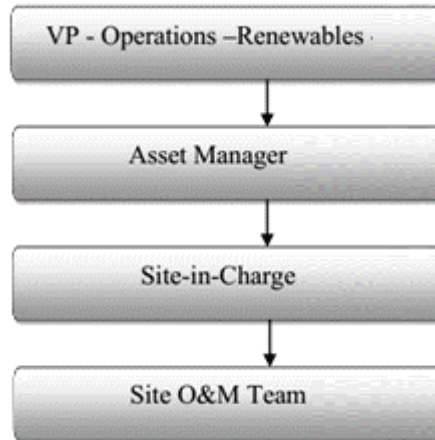
As per the monitoring methodology, in order to monitor the mitigation of GHG due to the project activity, the total energy exported needs to be measured. The net energy supplied to grid by the project activity multiplied by emission factor for regional grid, results in providing baseline emissions for the project activity.

As confirmed during on-site visit, PP uses Supervisory control and data acquisition (SCADA) system for continuous monitoring and the JMR is prepared based upon the controller data with due approval of the concerned authorities.

Since the baseline emission factor is based on an ex-ante determination, monitoring of this parameter is not required. The sole parameter for monitoring is the net electricity exported to the grid which is as per the registered JPD & MR and hence accepted.

PP has developed the monitoring plan in accordance with the modalities and procedures for CDM project activities. It describes the monitoring organization, parameters to be monitored, monitoring practices, quality assurance, quality control procedures, data storage and archiving in line with the registered JPD & MR.

The authority and responsibility for registration, monitoring, measurement, reporting and reviewing of the data rests with the PP and following structure for data monitoring, collection, data archiving and calibration of equipment's is followed by PP which is checked and confirmed during the on-site visit.



Responsibilities of Head: Overall functioning and maintenance of the project activity.

Responsibilities of Plant In-charge: Responsibility for Maintains the data records, ensures completeness of data, and reliability of data (calibration of equipment's).

Responsibilities of Shift In-charge: Responsibility for day-to-day data collection and maintains day to day log book for monitored data.

PP has assigned the responsibility of operation and maintenance of WTGs to Suzlon global services limited as confirmed during on-site observation and interviews.

Procedures for internal audit of compliance with monitoring procedures

PP has established an internal audit team comprising of the VP-Operations, Asset Manager and other members (if needed by the VP-Operations) who will independently conduct internal audit of monitored data. The internal audit will be conducted at least once every year and more than once if required by the VP-Operations.

The internal audit team is reviewing all the records pertaining to energy production, exports, imports. The team also checks the monitoring equipment's for accuracy and whether calibration was performed.

The Site-in-charge in association with the Site O&M Team is responsible for all the queries raised by the internal audit team as confirmed during on-site interviews.

The internal audit team communicate to the Site-in-charge and Site O&M Team about the non-compliances (if any) with the monitoring plan. The internal audit team also suggests corrective actions and indicate areas of improvement to the persons involved in monitoring the data. The site in-charge is supposed to close the non-conformances prior to the verification visit by the VVB.

QA/QC procedures:

The energy meters at the feeders are maintained and owned by MSEDCL. Neither the project proponent nor the site personnel have any control over it. The records can be cross-checked with the records of sold electricity to MSEDCL. The installed energy meters are calibrated by MSEDCL at-least once in five years.

Data Archiving:

Monthly data is being archived electronically and in paper form and stored for the entire crediting period and two years thereafter.

Training and maintenance requirements:

As evident from on-site interviews and document review that, PP conducts periodic trainings to ensure safety of men and machines.

Electricity generation record:

A monthly Joint meter reading of the energy meters is taken by MSEDCL officials and Suzlon (O&M contractors who is representatives of the project investor). Apportioning of net electricity generation from each WTG connected to Indian Electricity Grid is then determined as follows:

1	Apportioning Ratio	=	$\frac{\text{Generation at WTG Controller}}{\text{Total Generation of all WTG controller for feeder}}$
2	Electricity Import from WTG by the grid (EG_{import})	=	Import from Main/Check Meter * Apportioning Ratio
3	Electricity Export to the WTGs by the grid (EG_{export})	=	Export from Main/Check Meter * Apportioning Ratio
4	Net electricity generated by WTG	=	Electricity Import from WTG by the grid - Electricity Export to the WTGs by the grid

Above steps for calculation of EG_{import} and EG_{export} are carried out by MSEDCL Officials & energy break-up sheet is issued by them. Based on the same, PP raises invoice to DISCOM which forms the cross-check for the net electricity generated.

Emergency Preparedness and Uncertainty Procedure:

In case Main meter or check meter is found to be outside the acceptable limits of accuracy or faulty or not functioning properly, it will be repaired, recalibrated or replaced as soon as possible by the DISCOM (MSEDCL). In the event that the Main meter is not in service as a result of maintenance, repairs or calibration, the check meter will be used. In case both the main and check meter are found to be outside the acceptable limits of accuracy or faulty or not functioning properly, both the meters shall be calibrated immediately and the error percentage found in the

main meter during its calibration shall be applied to its metered energy data for the entire period since its last calibration to obtain the corrected value of net electricity exported to the grid.

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 will 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.

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

No sampling procedure applied for monitoring of the data parameter and entire documents were checked by the assessment team to arrive at positive Joint validation and verification conclusions. The monitoring plan is followed at the project site. Thus, assessment team concluded that the evidences are sufficient in quantity, and appropriate for the quality, to determine the GHG reductions and removals

Based on desk review and on-site observations and discussion with PP representative, VVB concluded that the project activity adheres to the registered monitoring plan as well as applied methodology.

3.5 Non-Permanence Risk Analysis

Not applicable for the present project activity.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

Based on desk review and on-site visit and interviews, VVB was able to confirm that the project is implemented as per the registered JPD & MR and in line with the applied methodology.

Implementation Status	Assessment steps, evidence checked, & conclusion:
Project implementation	The total installed capacity of the project is 80 MW; which involves operation of 40 Wind Turbine Generators (WTGs) with capacity of 2 MW each. The on-site visit and interviews/17/ have confirmed that the project design has not changed post registration with VCS.

	The generated electricity is measured by energy meters installed at sub-station end. The billing is conducted based on this net generation which was confirmed based on generation records/8/ and on-site interviews/17/. For the current monitoring period, PP has not received any grievance from local stakeholder and grievance redressal system found to be in line with registered project description. VVB further confirms that there are no material misstatements between the project implementation and the Project Description.
Monitoring plan	Assessment of monitoring plan is already provided above in section 3.4.8. VVB further confirms that there are no material misstatements between the project implementation and the Project Description.
AFOLU-specific project implementation	This is Non-AFOLU project and hence not applicable.

4.2 Accuracy of Reduction and Removal Calculations

In section 7 of JPD & MR, PP has quantified the emission reductions using the formulae as per the registered JPD & MR and applied methodology.

VVB has checked the accuracy of reductions, including accuracy of spreadsheet formulae, conversions and aggregations, and consistent use of the data and parameters and has confirmed that the calculated emission reductions are accurate, conservative and appropriate.

Verification team confirmed that the location of the project activity including the coordinates is same as mentioned in the JPD & MR.

VVB further confirms that the methods and formulae set out in the project description for calculating baseline emissions, project emissions and leakage emissions have been followed by PP.

The project activity has undergone continuous operation, and only scheduled maintenance is observed as per the manufactures specification which is acceptable to the assessment team and evident from the data from the monthly meter readings and meter reading protocols for the whole of the monitoring period provided as cross-check values apart from the invoices.

PP has used default values for emission factor as per the registered JPD & MR as the verification is being conducted for 11th monitoring period from the 1st crediting period. VVB has checked and confirmed the appropriateness of the default values used in the JPD & MR they are in conformance with the VCS Program rules. VVB has checked and confirmed that there are no manual transposition errors between data sets have occurred.

The project is not participating in any other environmental credits or other GHG programs and has not been rejected by any GHG programs. The project activity is not participating in any other Emission trading programme and other binding limits. The declaration mentioning the same has been submitted by the PP to the VVB. The project has implemented activities that contribute to sustainable development as described in the Joint PD & MR and the same has been verified during the onsite visit.

4.3 Quality of Evidence to Determine Reductions and Removals

The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the JPD & MR. The verification team has checked whether calculations of baseline GHG emissions, project GHG emissions and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the monitoring plan of the JPD & MR.

Calculation of emission reductions:

The registered JPD & MR, submitted most recent version of JPD & MR and emission reductions sheet for 2nd crediting period and current monitoring period were checked and confirmed to conclude that PP has calculated emission reductions appropriately as per the registered JPD & MR and applied methodology.

Parameters fixed ex-ante:

For 1st crediting period:

- a. $EF_{grid,OM,y}$ - The Operating margin CO₂ emission factor for the project electricity system in year y is considered based on data available based on CEA database, version 10.0. Ex-ante fixed value is 0.9862 tCO₂/MWh
- b. $EF_{grid,BM,y}$ - The Build margin CO₂ emission factor for the project electricity system in year y is considered based on data available based on CEA database, version 10.0. Ex-ante fixed value is 0.9495 tCO₂/MWh
- c. $EF_{grid,CM,y}$ - The Combined margin CO₂ emission factor for the project electricity system in year y is calculated based on above 2 parameters using equation in Tool 07 and the ex-ante fixed value is 0.9770 tCO₂/MWh

For 2nd crediting period:

- a. $EF_{grid,OM,y}$ - The Operating margin CO₂ emission factor for the project electricity system in year y is considered based on data available based on CEA database, version 19.0. Ex-ante fixed value is 0.9580 tCO₂/MWh
- b. $EF_{grid,BM,y}$ - The Build margin CO₂ emission factor for the project electricity system in year y is considered based on data available based on CEA database, version 19.0. Ex-ante fixed value is 0.8670 tCO₂/MWh
- c. $EF_{grid,CM,y}$ The Combined margin CO₂ emission factor for the project electricity system in year y is calculated based on above 2 parameters using equation in Tool 07 and the ex-ante fixed value is 0.9352 tCO₂/MWh

Parameters fixed ex-post:

As per the registered monitoring plan and requirement of the registered methodology following parameters needs to be monitored:

$EG_{PJ,y}$ = The verification team has checked the entire monthly JMR reports/8/ for net electricity generated & supplied to the grid and crosschecked same with the invoices/8/ raised by PP towards the DISCOM for the current monitoring period. All values are found correct. All the parameters are monitored and recorded as per the monitoring plan in the registered VCS JPD & MR/3/. The verification team has crosschecked the revised emission reduction sheet/2/ and monitoring report data with the JMRs and invoices and found all the values are matching. During the current monitoring period, the project activity supplied 62,516.16 MWh electricity to the grid.

The energy meters used were checked during the on-site visit and the details of the same are presented below in appendix 6.

Emission reductions:**1. For the current monitoring period:**

As per the registered JPD & MR, the emission factor for the 1st crediting period is 0.9770 tCO₂/MWh. PP has used the same value for calculation of emission reductions for the current monitoring period which is part of 1st crediting period. The electricity generation records submitted have confirmed that the total electricity generation for the current monitoring 140,160 MWh.

Thus,

$$EG_{facility,y} = 62,516.16 \text{ MWh}$$

$$EF_{grid,CM,y} = 0.9770 \text{ tCO}_2/\text{MWh}$$

$$BE_y = 62,516.16 * 0.9770 = 61,078 \text{ tCO}_2e$$

And since project emission and leakage emissions are zero,

$$ER_y = BE_y = 61,078 \text{ tCO}_2e$$

The monitoring period is from 01-August-2023 to 30-March-2024. The vintage-wise emission reductions for the period are provided below which were cross checked against ER sheet/2/ and confirmed.

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Total VCUs (tCO ₂ e)
01-August-2023 to 31-December-2023	45,474	0	0	45,474
01-January-2024 to 30-March-2024	15,604	0	0	15,604
Total	61,078	0	0	61,078

The expected total emission reductions over the complete 2nd crediting period are provided below:

Vintage Wise Estimated Emission Reductions (tCO ₂ e)	
Year	Estimated Emission Reductions
31-March-2024 to 30-March-2025	131,077
31-March-2025 to 30-March-2026	131,077
31-March-2026 to 30-March-2027	131,077
31-March-2027 to 30-March-2028	131,077
31-March-2028 to 30-March-2029	131,077
31-March-2029 to 30-March-2030	131,077
31-March-2030 to 30-March-2031	131,077
31-March-2031 to 30-March-2032	131,077
31-March-2032 to 30-March-2033	131,077
31-March-2033 to 30-March-2034	131,077
Total number of years	10
Estimated annual average emission reductions	131,077

5 VALIDATION AND VERIFICATION OPINION

5.1 Validation and Verification Summary

LGAI Technological Center S.A. (hereinafter referred to as Applus+ Certification) has been appointed by EKI Energy Services Limited to perform the validation for renewal of crediting period

and verification for emission reductions of 11th periodical monitoring period under the 1st crediting period of the project activity “Wind Based Power Generation by Panama Wind Energy Godawari Private Limited, Pune in the State of Maharashtra, India” (VCS Ref. No. 1523).

The management of EKI Energy Services Limited is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project’s Monitoring Plan in the JPD & MR. Thus, GHG statement is responsibility of EKI Energy Services Limited through Panama Wind Energy Godawari Private Limited which is the project proponent.

The validation and verification team have checked all the available data i.e. project design documents, monitoring plan, estimated and actual electricity generation based on project capacity and electricity generation records along with invoices raised placed before the validation/verification body to confirm that the qualified opinion presented is in line with criteria set out in VCS version 4.7, including the required qualifications or modifications.

The project conforms with the validation criteria for the project activity and its GHG emission reductions or carbon dioxide removals set out in VCS version 4.7, including the required qualifications or modifications.

We confirm that the project activity has been implemented in accordance with the registered project description and subsequently validated variations. As a part of re-assessment of the baseline, emission factors have been revised by PP which are acceptable. The project’s baseline for the 2nd crediting period remains the same. The project description, baseline, monitoring is revised and updated as per the most recent version of the methodology.

Our Joint validation and verification approach was based on the requirements as defined under the applicable VCS standard, relevant UNFCCC requirements and ISO 14064-3: 2019. Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. The validation can confirm that:

- the project is implemented and operated as per the registered JPD & MR;
- the monitoring plan in the registered JPD & MR is as per the applied methodology and same is continued for the 2nd crediting period;
- the monitoring complies with the registered JPD & MR;
- the monitoring system defined is checked and generates GHG emission reductions data;
- the GHG emission reductions are calculated without material misstatements.

Our Joint validation and verification approach was based on the requirements as defined under the applicable VCS standards, relevant UNFCCC requirements and ISO 14064-3: 2019.

Our Joint validation and verification approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these.

The achieved level of assurance for this validation is thus a reasonable level of assurance as per the requirements set out in the applied VCS Standard version 4.7.

5.2 Validation Conclusion

With reasonable level assurance, no limitation on the data availability as on-site visit was conducted and all the data was available and risk-based method; our validation has confirmed and concluded that the data and information supporting the GHG statement assertion were projected in nature based on the evidences submitted. As a part of re-assessment of the baseline, emission factors have been revised by PP which are acceptable, however the assessment team notes that the actual results may vary since the estimates are based on assumptions that are subject to change.

Our validation concludes that the project is likely to achieve the estimated GHG emission reduction or carbon dioxide removals described below.

Crediting Period: 31-March-2024 to 30-March-2034

Validated estimated GHG emission reductions and carbon dioxide removals for the project crediting period:

Vintage period	Estimated baseline emissions (tCO ₂ e)	Estimated project emissions (tCO ₂ e)	Estimated leakage emissions (tCO ₂ e)	Estimated reduction VCU (tCO ₂ e)	Estimated removal VCU (tCO ₂ e)	Estimated total VCU (tCO ₂ e)
31-Mar-2024 to 31-Dec-2024	99,116	0	0	99,116	0	99,116
01-Jan-2025 to 31-Dec-2025	131,077	0	0	131,077	0	131,077
01-Jan-2026 to 31-Dec-2026	131,077	0	0	131,077	0	131,077
01-Jan-2027 to 31-Dec-2027	131,077	0	0	131,077	0	131,077
01-Jan-2028 to 31-Dec-2028	131,077	0	0	131,077	0	131,077
01-Jan-2029 to 31-Dec-2029	131,077	0	0	131,077	0	131,077
01-Jan-2030 to 31-Dec-2030	131,077	0	0	131,077	0	131,077

01-Jan-2031 to 31-Dec-2031	131,077	0	0	131,077	0	131,077
01-Jan-2032 to 31-Dec-2032	131,077	0	0	131,077	0	131,077
01-Jan-2033 to 31-Dec-2033	131,077	0	0	131,077	0	131,077
01-Jan-2034 to 30-Mar-2034	31,961	0	0	31,961	0	31,961
Total	1,310,770	0	0	1,310,770	0	1,310,770

5.3 Verification conclusion

LGAI Technological Center S.A. (hereinafter referred to as Applus+ Certification) has been appointed by EKI Energy Services Limited to perform the verification of greenhouse gas emission reductions of the project activity “Wind Based Power Generation by Panama Wind Energy Godawari Private Limited, Pune in the State of Maharashtra, India” (VCS Ref. No. 1523).

The management of EKI Energy Services Limited is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project’s Monitoring Plan in the VCS PD & MR. Thus, GHG statement is responsibility of EKI Energy Services Limited through Panama Wind Energy Godawari Private Limited which is the project proponent.

The project conforms with the verification criteria for the project activity and its GHG emission reductions or carbon dioxide removals set out in VCS version 4.7, including the required qualifications or modifications.

We confirm that the project activity has been implemented in accordance with the project description and subsequently validated variations.

Our verification approach was based on the requirements as defined under the applicable VCS standards, relevant UNFCCC requirements and ISO 14064-3: 2019. Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. The verification can confirm that:

- the project is implemented and operated as per the submitted final version of JPD & MR;
- the monitoring plan in the submitted final version of JPD & MR is as per the applied methodology;
- the monitoring complies with the registered JPD & MR;
- the monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable VCS;

- the installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately;
- the monitoring system is in place and generates GHG emission reductions data;
- the GHG emission reductions are calculated without material misstatements.

In our opinion, the GHG emission reductions for “Wind Based Power Generation by Panama Wind Energy Godawari Private Limited, Pune in the State of Maharashtra, India” during the monitoring period 01-August-2023 to 30-March-2024 as reported in JPD & MR, prepared on the basis of the project’s Monitoring Plan are fairly stated.

Our verification approach was based on the requirements as defined under the applicable VCS standards, relevant UNFCCC requirements and ISO 14064-3: 2019.

Our verification approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. The achieved level of assurance for this verification is thus a reasonable level of assurance as per the requirements set out in the applied VCS Standard version 4.7. Based on the information we have seen and evaluated, we confirm the following statement:

Verification Period: From 01-August-2023 to 30-March-2024

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 (tCO ₂ e)	Removal VCU (tCO ₂ e)	Total VCUs (tCO ₂ e)
01-August-2023 to 31-December-2023	45,474	0	0	45,474	0	45,474
01-Jan-2024 to 30-March-2024	15,604	0	0	15,604	0	15,604
Total	61,078	0	0	61,078	0	61,078

5.4 Ex-ante vs Ex-post ERR Comparaison

Vintage period	Ex-ante estimated reductions/removals (tCO ₂ e)	Achieved reductions/removals (tCO ₂ e)	Percent difference	Explanation for the difference
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01-August-2023 to 31-December-2023	57,400	45,474	-20.78 %	VVB noted that this difference is due to the breakdown observed for certain period which is noted in the submitted JPD & MR appendix 3 and cross checked during the on-site visit. Hence found acceptable.
01-January-2024 to 30-March-2024	33,765	15,604	-53.79 %	VVB noted that this difference is due to the breakdown observed for certain period which is noted in the submitted JPD & MR appendix 3 and cross checked during the on-site visit. Hence found acceptable.
Total	91,165	61,078	-33.00 %	VVB noted that this difference is due to the breakdown observed for certain period which is noted in the submitted JPD & MR appendix 3 and cross checked during the on-site visit. Hence found acceptable.

APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION

Not applicable

APPENDIX 2: REFERENCES

Sr. No.	Author	Title	Reference	Provider
1.	NA	Joint PD & MR (Initial Version) Joint PD & MR (Final Version)	Version 01, dated 07-May-2024 Version 06 dated 05-May-2025	PP
2.	NA	Emission Reduction sheet (Initial Version) Emission Reduction sheet (Initial Version)	Version 01, dated 07-May-2024 Version 02, dated 29-October-2024	PP
3.	NA	Registered VCS Joint PD & MR Joint Validation and Verification report	Version 02 dated 15-March-2016 Version 01, dated 17-March-2016	VERRA
4.	NA	- VCS Standard - VCS Program guide - VCS Validation Verification Manual	Version 4.7 Version 4.4 version 3.2	
5.	NA	Power purchase agreement between PP and Maharashtra State Electricity Distribution Company Limited	Dated 01-August-2014	PP
6.	NA	ACM0002: Grid-connected electricity generation from renewable sources Tool for the demonstration and assessment of additionality Tool to calculate the emission factor for an electricity system Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period CDM validation and verification standard for project activities	Version 16.0 and version 22.0 Version 07.0.0 Version 07.0 Version 03.0.1 Version 3.0	UNFCCC
7.	NA	Declaration by PP for No double counting of Emission Reductions	26-July-2023	PP
8.	NA	Electricity generation reports for electricity supplied to grid for this monitoring period and invoices raised	For complete monitoring period: 01-August-2023 to 30-March-2024	PP
9.	NA	Supporting documents for creation of local jobs, trainings to local etc.	-	PP

10.	NA	Stakeholder meeting report conducted on 27-June-2013	-	PP
11.	NA	Calibration certificate of the energy meters	Dated 25-August-2020	Project participant
12.	NA	Operations & Maintenance Agreement	-	PP
13.	NA	Breakdown details of the complete monitoring period	-	Project participant
14.	NA	Technical specifications of wind turbine generators from manufacturers	Manufacturer technical specifications	Project participant
15.	NA	Contract of the project participant with the VVB	Contract document signed between PP and VVB	Project participant
16.	NA	Commissioning certificates of the WTGs implemented in the project site.	NA	Project participant
17.	Applus	Onsite interviews attendance sheet and Observations Notes	17-June-2024 to 18-June-2024	-
18.	PP	Company HR policy Employee records including attendance sheet/salary slips etc. Waste management records	-	-
19.	PP	Stakeholder grievance register	-	-
20.	Government of India	CEA database, version 19.0	-	-
21.	Alphabet Inc.	Google map	-	-

APPENDIX 3: ABBREVIATIONS

Abbreviations	Full texts
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CL	Clarification Request
CM	Combined Margin
CDM	Clean Development Mechanism
DISCOM	Distribution Company
DOE	Designated Operational Entity
ER	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
IPCC	Intergovernmental Panel on Climate Change
JMR	Joint Meter Reading
JPD & MR	Joint project description and monitoring report
MP	Monitoring Plan
MR	Monitoring Report
MSEDCL	Maharashtra State Electricity Distribution Company Limited
OM	Operating Margin
PD	Project Description
PP	Project Proponent
PS	Project Standard
PWEGPL	Panama Wind Energy Godawari Private Limited
RCP	Renewal of Crediting Period
tCO ₂	Tonnes of Carbon Di-Oxide
TR	Technical Review

UNFCCC	United Nations Framework Convention on Climate Change
VVB	Validation and Verification Body
VCU	Voluntary Carbon Unit
VVS	Validation and Verification Standard
WTG	Wind Turbine Generator

APPENDIX 4: FINDINGS OVERVIEW

Table 1. Remaining FAR from Project verification and/or previous verifications

FAR ID	Section no.	Date:
Description of FAR		
Project proponent's response		Date:
Documentation provided by Project Owner		
VVB assessment		Date:

Table 2. Clarification Requests (CL) from this Joint RCP validation and verification

CL ID	01	Section no.	3.1	Date: 21-June-2024
Description of CL				
1. THE JPD & MR mentions PP name as Panama Wind Energy Godawari Private Limited (PWE GPL). During on-site visit, the PP representative confirmed that the project assets are transferred to another company and PWE GPL does not own then now. PP to clarify on the same.				
Project proponent's response				Date: 30-July-2024
PP would like to clarify that the assets remain under the ownership of the Panama Wind Energy Godawari Private Limited (PWE GPL). This can be confirmed through the Power Purchase Agreements and monthly invoices. All of which are issued by PWE GPL, with payments being received into PWE GPL's account. The only change pertains to the shareholding structure of PWE GPL, which is now predominantly held by O2 Power SG PTE LTD. The shareholding pattern has been shared accordingly.				
Documentation provided by Project proponent				
Shareholding Pattern Revised Joint PD+MR Undertaking letter				
VVB assessment				Date: 08-August-2024
PP response is accepted. Also, the submitted shareholding pattern was reviewed and confirmed that O2 Power SG PTE Ltd. is a major shareholder in the PWE GPL however, the project specific documentation is still in the name of PWE GPL. Hence no change/deviation is required for the project description is confirmed. Thus CL 01 is closed.				
CL ID	02	Section no.	3.1	Date: 21-June-2024
Description of CL				

In section 1.1, it is mentioned that - GHG emission reductions from the project activity is around 131,077 tonnes of CO2e and total GHG emission reductions for the chosen 10-year crediting period is 1,310,770 tonnes of CO2e for second Crediting period. PP to provide more clarity on the values as it is not clear what is emission reduction from the project activity for the 2 nd crediting period.	
Project proponent's response	Date: 30-July-2024
Details of GHG emission reductions first crediting period and second crediting period is now being mentioned in section 1.1.	
Documentation provided by Project proponent	
Revised Joint JPD & MR V 2	
VVB assessment	Date: 08-August-2024
Revised JPD & MR version 02, dated 30-July-2024, was checked and confirmed that in section 1.1, PP has revised the sentence and provided the clarity on the values, and it was consistent with the ER sheet. Hence, this CL is closed.	
CL 02 is closed	

CL ID	03	Section no.	3.1	Date: 21-June-2024
Description of CL				
In section 1.18.2, PP has chosen SDG indicator 4.4.1: Proportion of youth and adults with information and communication technology (ICT) skills, by type of skills and the values shown against the same are for the trainings conducted. The indicator refers to proportion of youth and adults and not to the trainings conducted. More details available at https://unstats.un.org/sdgs/metadata/files/Metadata-04-04-01.pdf Kindly clarify.				
Project proponent's response				Date: 30-July-2024
In the previous approved verification, we considered SDG Indicator 4.4.1, which has since been identified as not relevant. Now, during the RCP, we have updated the Sustainable Development Goals (SDG) focus to SDG Target 8.6, specifically Indicator 8.6.1: Proportion of youth (aged 15 – 24 years) not in education, employment, or training.				
Documentation provided by Project proponent				
Revised Joint PD+MR				
VVB assessment				Date: 08-August-2024
The revised Joint PD&MR version 02 has been reviewed and confirmed that section 1.18.2 has been updated, and SDG indicator 4.4.1 has been removed, the update now includes SDG target 8.6, specifically indicator 8.6.1, which the assessment team finds acceptable. Hence, this CL is closed.				
CL 03 is closed				

CL ID	04	Section no.	3.3	Date: 21-June-2024
Description of CL				
Section 2.3.3 mentions PP is committed to protect regional as well as national cultural heritage. During on-site visit, no regional / national cultural heritage was observed on-site by the VVB.				
Project proponent's response				Date: 30-July-2024
Section 2.3.3 is now being revised as per actual site practice; same details being incorporated in revised documents.				
Documentation provided by Project proponent				
Revised Joint PD+MR				
VVB assessment				Date: 08-August-2024

Section 2.3.3 of the revised JD PD &MR was checked and confirmed that PP has revised the section and provide the information as per actual site practice, which is found appropriate to the verifier. Hence, this CL is closed.

CL 04 is closed

Table 3. Corrective Action Requests (CAR)CAR from this Joint RCP validation and verification

CAR ID	01	Section no.	3.1	Date: 21-June-2024
Description of CAR				
As per VCS Joint JPD & MR template guidelines,				
a. In section 1.1, add <i>The implementation status and relevant implementation dates (e.g., dates of construction, commissioning, and continued operation periods) along with location of the project.</i> b. In section 1.2, the date format shall be (DD-Month-YYYY – DD-Month-YYYY) c. In section 1.4.1, Justify that the project activity is included under the scope of the VCS Program and not excluded under Table 2.1 of the VCS Standard / Provide information to demonstrate that the project meets requirements related to the pipeline listing deadline, the opening meeting with the validation/verification body, and the validation deadline / Demonstrate that the applied methodology is eligible under the VCS Program / and include any other relevant eligibility criteria. d. In section 1.11, PP has selected $\geq 300,000$ tCO₂e/year (large project) whereas the below table mentions average annual emission reductions as 131,077 tCO₂e/year. Moreover, the yearly average is 136,936 tCO₂e though annual Ers are same for 10 years. e. In section 1.15, PP shall identify and demonstrate compliance of the project with all and any relevant local, regional and national laws, statutes and regulatory frameworks rather than just confirming the same. f. In section 1.18.1, PP shall provide a description of how the project contributes to achieving any nationally stated sustainable development priorities, including any provisions for monitoring and reporting these. g. In section 1.18.2, the template requirement says; <i>evidence of the project's SD contributions shall be provided as appendices to this report</i> while the same is missing. h. In section 2.1.2, <i>Use the table below to describe the process for and the outcomes from the stakeholder consultation conducted prior to project initiation.</i> Whereas, PP has provided information which is post project's initiation. i. In section 2.3.2, Demonstrate how the project recognizes, respects, and promotes the protection of the rights of Ips, LCs, and customary rights holders in line with applicable international human rights law, and the United Nations Declaration on the Rights of Indigenous Peoples and ILO Convention 169 on Indigenous and Tribal Peoples. j. In section 3.4, Identify and justify the baseline scenario, in accordance with the procedure set out in the applied methodology and any relevant tools. Where the procedure in the applied methodology involves several steps, describe how each step is applied and clearly document the outcome of each step. Explain and justify key assumptions, rationale, and methodological choices. Provide all relevant references. k. In section 3.5.1, the answer to 3rd point is 'no' then, describe which mandated laws, statutes, or other regulatory frameworks require project activities and provide evidence of systematic non-enforcement to demonstrate regulatory surplus. l. In section 4.1, mention the operation of the project activity(s) during the monitoring period, including any information on events that may impact the GHG emission reductions or removals and monitoring and any other changes (e.g., to project proponent or other entities) as during on-site visit, PP representative has confirmed that Project assets are transferred to other entity, m. In section 5.4, vintage period shall be DD-MMM-YYYY to 31-Dec-YYYY				
Project proponent's response				Date: 30-July-2024
a) In section 1.1, The implementation status and relevant implementation dates along with location of the project are now being added. b) In section 1.2, the date format is being corrected. c) The section 1.4.1 is being revised and in-lined with Template reequipments.				

- d) In section 1.11, Typo error is being corrected in revised documents.
- e) In Section 1.15, the Project Proponent (PP) has identified and demonstrated compliance with all relevant local, regional, and national regulations by securing necessary state approvals and adhering to the Electricity Act 2003, National Electricity Policy 2005, and Tariff Policy 2006. Compliance is shown through these secured approvals and alignment with all applicable laws and policies.
- f) In section 1.18.1, Description of how the project contributes to achieving any nationally stated sustainable development priorities are now being added in revised documents.
- g) In section 1.18.2, Sustainable Development Contributions are now being added in revised documents.
- h) Section 2.1.2 is being revised and corrected as per template requirements.
- i) Section 2.3.2 is being revised and corrected as per template requirements.
- j) Section 3.4 is being revised and corrected as per template requirements.
- k) Section 3.5.1, the mandated laws, statutes, or Regulatory Frameworks is mention in 1.15 section of Joint PD+MR.
- l) The project is running smoothly since commissioning, there were no any instances / events occurred that would alter the GHG reductions, methodology applicability and monitoring procedure. This went for the schedule maintenance at regular intervals. Further breakdown details has been provided in APPENDIX II: MAJOR BREAKDOWN DETAILS. Furthermore, although the project assets have been transferred to another entity, this change does not alter the monitoring and reporting processes, additionality, project design, monitoring approach, or emission reduction calculations.
- m) In section 5.4, vintage period is being revised.

Documentation provided by Project proponent

Revised Joint PD+MR

Revised ER sheet

VVB assessment

Date: 08-August-2024

- a) Section 1.1 of the Joint PD & MR version 02, dated 30-July-2024 was reviewed and confirmed that PP has mentioned relevant implementation dates along with location. Hence, this part of CAR is closed.
- b) It was checked and confirmed that PP revised the date format in section 1.2 of the Joint PD & MR. Hence, this part of CAR is closed.
- c) VVB has checked and confirmed that section 1.4.1 of the Joint PD& MR has been revised and made in line with the template requirement. Hence, this part of CAR is closed.
- d) In section 1.11, PP has revised error and corrected the check box, found acceptable to the assessment team. Hence, this part of CAR is closed.
- e) VVB has checked and confirmed that in section 1.15 of the revised Joint PD&MR version 02 dated 30-July-2024, PP identified and demonstrated compliance of the project with all and any relevant local, regional and national laws, statutes and regulatory frameworks, which is found appropriate to the assessment team. Hence, this part of CAR is closed.
- f) Section 1.18.1 of the project activity has been checked and confirmed that PP has revised the section accordingly. Hence, this part of CAR is closed.
- g) In the revised Joint PD& MR version 02, PP has included the evidences for SD contribution and it's found acceptable to the VVB. Hence, this part of CAR is closed.
- h) Section 2.1.2 has been revised and made consistent with the template requirement. Hence, this part of CAR is closed.
- i) Revised Joint PD & MR was checked and confirmed that in section 2.3.2, PP has made required correction as per template requirement and it was found appropriate to the assessment team. Hence, this part of CAR is closed.
- j) VVB has reviewed revised Joint PD & MR version 02, section 3.4, PP has Identified and justified the baseline scenario, in accordance with the procedure set out in the applied methodology and any relevant tools and explained and justified key assumptions, rationale, and methodological choices. Same has been found acceptable to the VVB team. Hence, this part of CAR is closed
- k) PP response is accepted. Same has been cross verified in section 1.15 of Joint PD & MR and found appropriate to the VVB. Hence, this part of CAR is closed.
- l) PP response is accepted and submitted supporting documents have been checked and confirmed that mentioned information under section 4.1 of the Joint PD & MR version 02 are appropriate. Hence, this part of CAR is closed.

- m) Section 5.4 of the revised JPD & MR was reviewed and confirmed that PP has been revised date format and made consistent as per template requirement. Hence, this part of CAR is closed.

CAR 01 is closed

CAR ID	02	Section no.	3.4.2	Date: 21-June-2024
Description of CAR				
In section 3.2, under applicability of methodology not all the concerned paragraphs as per the applied methodology are considered. E.g. par 5 of ACM0002 version 21 is not found in the JPD & MR. PP to review complete applicability criteria. Correction sought. Further, in the same section applicability of the applied tool shall be discussed.				
Project proponent's response				Date: 30-July-2024
Section 3.2 is now being revised as per latest methodology and all paragraphs are now being considered of ACM0002: Grid-connected electricity generation from renewable sources --- Version 22.0.				
Documentation provided by Project proponent				
Revised Joint PD+MR				
VVB assessment				Date: 08-August-2024
Section 3.2 of the revised JPD & MR version 02 dated 30-July-2024 was checked and confirmed that PP has updated the applicability criteria and included the missing paragraphs which is in lined with ACM0002 version 22. Hence, this part of CAR is closed.				
CAR 02 is closed				

CAR ID	03	Section no.	3.4.3	Date: 21-June-2024
Description of CAR				
In section 3.3, paragraph referred for the project boundary i. e. para 20 is not the correct one as per the applied methodology version 21.0. JPD & MR mentions - <i>Therefore, the project boundary includes all the 40 numbers of WTGs along with the WTGs of the other project proponents connected to the sub-station, which is further connected to the network of the NEWNE grid, i.e. the project boundary also includes the NEWNE grid.</i> As observed during on-site visit, there are no other WTGs connected to the sub station. The concerned electricity grid is not know as NEWNE grid. Corrections sought. The project boundary diagram is not correct as the WTGs are not directly connected to MSIEDCL substation as confirmed during the on-site visit.				
Project proponent's response				Date: 30-July-2024
Section 3.3 are now being revised and corrected as per actual site practice.				
Documentation provided by Project proponent				
Revised Joint PD+MR Single line Diagram				
VVB assessment				Date: 08-August-2024

In section 3.3 of the revised Joint PD& MR version 02 dated 30-July-2024, PP has revised paragraph no. as per updated methodology ACM0002 Version 22.0. Moreover, PP has revised and corrected the grid name. Also, PP has submitted Single line diagram which was reviewed by the assessment team and revised project boundary diagram in the submitted Joint PD& MR was found consistent as per SLD and actual site practice, thus, it was found appropriate to the assessment team. Hence, this CAR is closed.

CAR 03 is closed

CAR ID	04	Section no.	3.4.4	Date: 21-June-2024
Description of CAR				
In section 3.4, the paragraph referred from methodology for baseline scenario is incorrect. The section does not describe the assessment of baseline scenario in line with tool 11.				
Project proponent's response				Date:
Section 3.4 are now being revised as per methodology para 27. Now it is in-lined with tool 11 requirement.				
Documentation provided by Project proponent				
Revised Joint PD+MR				
VVB assessment				Date: 08-August-2024
It was checked and confirmed that PP has revised reference of paragraph in section 3.4 which is found in lined with tool 11. Hence, this part of CAR is closed.				
CAR 04 is closed				

CAR ID	05	Section no.	4.2	Date: 21-June-2024
Description of CAR				
PP shall re-check the section 5.1, calculation of emission factor as the data references are provided for state of Rajasthan when the project is located in Maharashtra and grid is referred as NEWNE whereas no such nomenclature exists now.				
Project proponent's response				Date: 30-July-2024
In section 5.1 the Typo error is now being corrected and Unified Indian Grid is being used throughout the revised report.				
Documentation provided by Project proponent				
Revised Joint PD+MR				
VVB assessment				Date:
PP has revised section 5.1 of Joint PD& MR and referred the data of "Maharashtra", as the project is located there. Also, PP has revised and corrected the name of grid. Hence, this part of CAR is closed.				
CAR 05 is closed				

CAR ID	06	Section no.	4.1	Date: 21-June-2024
Description of CAR				
Section 6.3 mentions Gamesa team in the flow chart for project operations. However, during on-site visit, it was observed that project's day to day operation and O&M is being taken care by Suzlon India team.				
Project proponent's response				Date: 30-July-2024
Typo error is now being correct and latest O&M agreement are now being submitted to VVB.				
Documentation provided by Project proponent				

Revised Joint PD+MR	
VVB assessment	Date: 08-August-2024
VVB has reviewed the submitted latest O&M contract dated 01/09/2023 and observed that the O&M agreement for the project activity is between Panama Wind Energy Godawari Pvt Ltd and Suzlon Global Services Limited. Same has been found consistent in the submitted Joint PD& MR. Hence, this part of CAR is closed. CAR 06 is closed	

APPENDIX 5: COMPETENCY STATEMENTS

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interviews	Findings
1.	Lead Auditor /Technical Expert	OR	Pundlik	Mr. Deepak	TQC-Outsourced entity	Yes	Yes	Yes	Yes

Technical reviewer and approver of the verification and certification report

No.	Role	Type of resource	Last name	First name	Affiliation (e. g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer (TR) /Technical Expert	EI	Singh	Dr. Premjit	Applus+ Certification
2.	Approver	IR	Calle de Miguel	Mr. Agustin	Applus+ Certification

Short CVs of the Team:

Name	Short CV Background Information
Mr. Deepak Pundlik	Mr. Deepak Pundlik has of experience in climate change, waste management and environmental management. After completing Masters in Environment Sciences from Pune university, He has worked in waste management field. As a GHG consultant, He handled projects under renewable energy, waste management sectors during his stint with companies - MITCON and Thermax. Post Thermax, Deepak was involved in organic farming research project with Tata Institute of Social Sciences. As a GHG auditor, He has validated/verified projects under CDM/VCS/GS and GCC mechanisms from renewable energy, energy demand, waste management sectors. He is based in Pune, India and will act as a Lead Auditor and Technical Expert for the Project. Currently he is associated with True Quality Certifications Pvt. Ltd. (Applus+ Certification's Outsourced Entity).

Dr. Premjit Singh	Dr. N Premjit Singh has a PhD in Mechanical Engineering (Thesis: Design and development of a square parabolic dish system with a concentrated photovoltaic (CPV) module for performance improvement) from the Indian Institute of Technology (IIT) Chennai, India, awarded in 2021. M. Tech in Energy Technology, Tezpur University, Napaam, India (2007), and B.Tech in Mechanical Engineering (2005), NERIST, Nirjuli, India. He has extensive experience of about 7 years with DOEs, including UNFCCC CDM and other carbon related schemes (e.g., VCS, GS, GCC), and 5 years + in research projects, renewable energy, and energy audits. In Applus+ since March 2023, he has been the Product Assurance Manager for CDM/VCS/GS4GG/GCC Department to ensure the quality of the performance of different assessments. Coordinate the global team for technical reviews, and identify the training needs for the auditors and technical reviewers to improve the quality of reports. Holds experience as a Lead Auditor, Validator and Verifier for GHG mitigation projects and programmes of activities in Sectoral Scope 1.2 (Renewables), and is qualified as per Applus+ procedures. Dr. N Premjit Singh is based in Gurugram, India. Dr. N Premjit Singh participate as part of the Audit Team as a Technical Reviewer.
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APPENDIX 6: CALIBRATION DETAILS OF THE METERS

Location: 132 Kv Rajpimpri S/s				Class of Meter: 0.2s		Make & Model: Elster A 1800	
WTG Location ID	Feeder Name	No. of WTGs	Feeder Connectivity	Main Meter Sr. No.	Check Meter Sr. No.	Calibration date	Validity of Calibration
Location No: G33, G34, G35, G36, G37, G39, G40, G26, G32, G38	401	10	Feeder No. 1	5288748	5288752	21-August-2020	20-August-2025
Location No: G24, G25, G29, G30, G31, G27, G28, G05, G22, G23, G21	402	11	Feeder No. 2	5288749	5288753	21-August-2020	20-August-2025
Location No: G1, G2, G3, G4, G6, G7, G8, G10, G11	403	09	Feeder No. 3	5288750	5288751	21-August-2020	20-August-2025
Location No: G14, G15, G17, G9, G12, G13, G16, G18, G19, G20	404	10	Feeder No. 4	5288754	5288755	21-August-2020	20-August-2025

APPENDIX 7 BREAKDOWN DETAILS

Location number	Stoppage date	Stop time	Start date	Start time	Total Stoppage hours	Error	Action
PWEGPL-20	24-August-2023	17:00	26-October-2023	16:40	1511:40:00	Transformer Mounting hardware broken	Transformer Mounting hardware replaced with crane
PWEGPL-23	19-October-2023	11:46	29-March-2024	12:00	3876:14:00	Blade crack	Blade repair is under repairs same is expected to restore by 12-March-2024
PWEGPL-06	10-February-2024	8:54	14-February-24	11:24	98:30:00	DE & NDE Bearing Replacement	DE & NDE Bearing Replacement
Total Stoppage Hours					5486:24:00		

Contact details of designated point of contact being displayed at the project site entrance:

