



250 MW WIND POWER PROJECT BY MYTRAH ENERGY



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Summary:

Verification purpose: LGAI Technological Center S.A. (Applus+ Certification) (Hereafter referred as Applus+ Certification) has been appointed by “M/s Mytrah Vayu (Sabarmati) Pvt. Ltd” to perform the 4th periodic verification of the “250 MW Wind Power Project by Mytrah Energy”.

The main purpose of this verification activity is to have an independent third party for the assessment of the project design, monitoring report to ensure a thorough assessment of the proposed project activity against the applicable CDM and VCS requirements. The project activity involves installation of 250 MW wind power project in the state of Tamil Nadu. The electricity generated from the WTGs will sent to Indian electricity grid. The project is registered with VCS with Project ID 2020¹.

Start date of the project activity is the 30-January-2019. The monitoring period for this VCS verification is chosen from 01-June-2021 to 28-February-2022 (including both days) and the project activity achieved 366,103 tCO₂e emission reductions during this monitoring period thereon displacing 390,802 MWh amount of electricity from the generation-mix of power plants connected to the Indian Grid, which is mainly dominated by thermal/fossil fuel-based power plant. The scope of the verification is the independent and objective review of the Monitoring Report (MR). The MR is reviewed against the relevant criteria (see above) and decisions by the CDM Executive Board and VCS executive board, including the approved baseline and monitoring methodology. The verification was based on the guidance given in the CDM validation and verification standard for project activities, version 03.0, review against registered PD and Final Validation report, CDM Project Standard for project activities, version 03.0, CDM project cycle procedure for project activities, version 03.0 and VCS standard version 4.1. A risk-based approach has been followed to perform this verification activity. In the course of verification, 07 Corrective Action request (CAR) and 00 Clarification Requests (CLs) were raised and successfully closed. No FAR was raised during this verification. The review of the Monitoring report and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and PP

¹ <https://registry.verra.org/app/search/VCS/All%20Projects>

have provided LGAI Technological Center S.A. (Applus+ Certification) with sufficient evidence to verify the fulfilment of the stated criteria of VCS.

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 MR. The main focus of the assessment team is to identify the significant risks for the project implementation and the generation of VCUs. The verification is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the monitoring report combined. The only purpose of the verification is its usage during the issuance process as 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 verification opinion, which will go beyond that purpose. The verification has been planned and organized to achieve a Reasonable Level of assurance as per the requirement of VCS. No sampling procedure applied for document verifications. The entire documents checked/WTGs verification conducted to arrive at positive verification conclusions.

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1 INTRODUCTION

1.1 Objective

LGA Technological Center S.A. (Hereinafter referred as Applus+ Certification) has been appointed by Mytrah Vayu (Sabarmati) Pvt. Ltd. to perform the 4th periodic verification of the project entitled “250 MW WIND POWER PROJECT BY MYTRAH ENERGY” under VCS standard version 4.2 and program guide version 4.1. The objective of this verification activity is to have an independent third party for the assessment of the project design, monitoring report and final verification report and to ensure a thorough assessment of the proposed project activity against the applicable CDM and VCS requirements. In particular; the project's baseline and monitoring plan is assessed against applied methodologies –

- ACM0002 (version 19.0) “Consolidated methodology for grid-connected electricity generation from renewable sources”
- The project's compliance with the requirements of Article 12 of the Kyoto Protocol, the CDM Modalities and Procedures as agreed in the Marrakech Accords under decision 3/CMP.1, the annexes to this decision, subsequent decisions and guidance made by COP/MOP & CDM Executive Board and other relevant rules, including the Host Country legislation and sustainability criteria along with VCS program guide, version 4.1 and standard version 4.2.
- CDM Validation and Verification Standard for project activities, version 03.0
- CDM Project Standard for project activities, version 03.0
- CDM project cycle procedure for project activities, version 03.0

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 carbon units (VCUs).

1.2 Scope and Criteria

The scope is defined as an independent and objective review of the Monitoring report (MR) prepared as per the registered VCS-PD and registered approved methodologies ACM0002 version 19.0. The MR is reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords and the relevant decisions by the CDM Executive Board and VCS standard, version 4.2 and VCS Program guide version 4.1, including the approved baseline and monitoring methodologies applied. The verification was based on the requirements in the CDM validation and verification standard for project activities, Version 03.0, CDM Project Standard for project activities, version 03.0, CDM

project cycle procedure for project activities, version 03.0 and VCS program guide, version 4.1 and VCS standard version 4.2.

The verification is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the Monitoring report. In line with Guidelines for Application of materiality in verifications, the verification team has conducted a complete verification of all the information presented in the monitoring report and data monitored as presented in the emission reduction calculation spread sheet. There are no material errors, overestimation of ER, omission or misstatement. The verification team has reviewed all the documents like commissioning certificates, energy generation records, invoices etc.

1.3 Level of Assurance

The verification has been planned and organized to achieve a Reasonable Level of assurance as per the requirement of VCS. The entire documents checked/ remote audit verification conducted to arrive at positive verification conclusions.

1.4 Summary Description of the Project

The project activity involves installation and operation of a 250 MW wind power project in Tamil Nadu state of India. The project activity is promoted by M/s Mytrah Vayu (Sabarmati) Pvt. Ltd. and acting as project proponent. The commissioning details of the project and their location of installation are mentioned in the table below: -

Name of Investor	Capacity in MW	Date of commissioning	State
Mytrah Vayu (Sabarmati) Pvt. Ltd.	128.79 MW	30-January-2019	Tamil Nadu
	58.32 MW	16-April-2019	
	62.89 MW	11-May-2019	

The monitoring period this VCS verification covered from 01-June-2021 to 28-February-2022 (inclusive of both dates) and the project activity has achieved 366,103 tCO₂e emission reductions during this monitoring period.

Assessment team checked the WTG commissioning with the commissioning certificates and found correct. The project is implemented as per the description in the registered PD. No event observed during the current monitoring period which can alter or deviate from the methodology requirement.

2 VERIFICATION PROCESS

2.1 Method and Criteria

Verification Process: The project assessment is based on the Clean Development Mechanism Validation and Verification Standard for project activities, version 03.0 and VCS standard 4.2 and VS program guide, version 4.1 and is conducted using standard auditing techniques to assess the correctness of the information provided by the project participants. 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 monitoring Report against the registered PD;
- Follow-up interviews with project participant;
- The resolution of outstanding issues and the issuance of the final verification report and opinion.

The prepared verification report and other supporting documents then undergo an internal quality control at the HQ (Accredited office) before being submitted to the VCS executive board.

In order to ensure transparency, assumptions must be clear and stated explicitly and background material must also be referenced. LGAI Technological Center, S.A. (Applus+ Certification) has developed a specific checklist customized for the project. The checklist demonstrates, in a transparent manner, the project criteria (requirements), discussion on each criterion by the assessment team, and the results from verifying the identified criteria.

Appointment of the assessment team

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) ensuring that the required skills are covered by the team.

The four 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)

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
Pankaj Kumar	LA/TE	YES	YES	NA	YES
Simon Shen	TR	YES	YES	NA	NA

The complete list of CVs is included as Appendix 3 of this report.

Document review

The Monitoring Report version 1 submitted by the PP was reviewed against the approved methodology, registered VCS PD, final validation report 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 1.

Follow-up interviews

A remote audit was conducted by LGAI Technological Center S.A. (Applus+ Certification) who performed interviews, telephone conferences 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 Corrective Action Request

The objective of this phase of the Verification was to resolve the requests for corrective actions and clarification and any other outstanding issues which need to be clarified for Applus+ Certification positive conclusion on the Monitoring report. The Corrective Action Requests and Clarification Requests raised by Applus+ Certification were resolved during communications between the Client and Applus+ Certification to guarantee the transparency of the verification process, the concerns raised and responses given are summarized below in the Appendix 2.

The final MR Version 03 submitted by PP on 13-April-2022 serves as the basis for the final assessment presented. Additional changes to the project during the verification process are not considered to be significant with respect to the main CDM/VCS objectives. The two CDM/VCS main objectives 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 verification of the final documentation including the final 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 project owners, the positive verification opinion and relevant documents are submitted to the VCS secretariat through the VCS web-platform.

2.2 Document Review

The details of the document observed during the verification process are listed below in appendix 1 of this report.

2.3 Interviews

A remote audit was conducted for the project activity on 07-April-2022. Remote audit was conducted due to ongoing COVID-19 pandemic situation in the entire country of India. Taking into account the rules of relevant national and local authorities (local to the DOE offices as well as to locality of the remote audits), World Health Organization (WHO) recommendations, policies of the DOE and other relevant travel restrictions and guidance (for example, a requirement to self-isolate upon return). Moreover, The VCS Program does not explicitly mandate remote audits as part of the validation and verification process, only that VVBs must achieve a reasonable level of assurance on all validations and verifications (per Section 4.1.2 of the VCS Standard, v4.1).

The VVB has taken alternative measures to reach reasonable level of assurance and conducted remote audit through Skype/Telephone with site personal & consultant (refer section 2.3) with the PP representative. This is also in line with the COVID-19 travel guidance for projects of VERRA.

Technical details & metering/monitoring arrangement verified through onsite photographs/name plates and calibration certificates shared by PP. All the documents were cross checked to ensure conservative estimation of emission reduction.

During the remote audit, the PP representatives were questioned about the implementation of the project activity. Several topics like the verification of commissioning date of equipments, generation records, and monitoring of the data and the error accountability were discussed. To cross check the information provided by PP, various documents like technical specifications, commissioning certificates, PPA, Joint Meter readings, invoices, calibration certificates etc. were also verified. The names of the persons interviewed during remote audit through skype & telephonic interview is given below;

Organization	Name of Persons/Designation	Topics discussed	Team Member
Mytrah Vayu (Sabarmati) Pvt. Ltd.	Mr. Iyyapan Muppidathi	Project activity implementation Operation, Calibration, O&M practices, energy generation records etc. LSC mechanism, Mechanical maintenance, Electrical maintenance, Project description, Invoicing practices	Pankaj Kumar
Infinite Solutions	Ms. Nitya Sharma	MR, ER calculations etc.	

During the remote audit, the PP representatives were questioned about the implementation of the project activity. Several topics like the verification of commissioning date of equipments, the generation, recording, and monitoring of the data and the error accountability were discussed. Various documents like the Joint Meter Readings, invoices, on-site Photographs includes Wind Turbine Generator nos., meter specifications, were verified on skype video call to establish the current status and the implementation of the Project Activity.

2.4 Site Inspections

Remote Audit: 07-April-2022				
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. Assessment team also checked that whether the monitoring plan as described in the VCS PD is actually practised onsite. Also, assessment team checked any change in host country criteria which may affect the baseline of the project activity.	Remote audit (Through Skype)	07-April-2022	Pankaj Kumar

2.5 Resolution of Findings

The objective of this phase of the 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)'s positive conclusion on the project design and Monitoring report. The Corrective Action Requests and Clarification Requests raised by LGAI Technological Center S.A. (Applus+ Certification) were resolved during communications between

the Client and LGAI Technological Center S.A. (Applus+ Certification) to guarantee the transparency of the validation process, the concerns raised and responses given are summarized below in the appendix 2.

The final MR Version 03 submitted by project owners on 13-April-2022 serves as the basis for the final assessment presented. Additional changes to the project during the verification process are not considered to be significant with respect to the main CDM/VCS objectives. The two CDM/VCS main objectives are the reduction of anthropogenic GHG emissions and the contribution of sustainable development to the host country.

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
Project design document and Monitoring report	00	02	00
Description of project activity	00	02	00
Application of selected baseline and monitoring methodology and selected standardized baseline			
- Applicability of methodology and standardized baseline	00	00	00
- Deviation from methodology	00	00	00
- Clarification on applicability of methodology, tool and/or standardized baseline	00	00	00
Project boundary	00	00	00
Establishment and description of baseline scenario	00	00	00
Demonstration of additionality	00	00	00
Emission reductions	00	01	00
Calibration details	00	01	00
Monitoring plan	00	00	00
No Net harm assessment	00	00	00
Local stakeholder consultation	00	00	00
Others (please specify)- - Regarding double counting Declaration - ER Sheet - Supporting documents	00	01	00
Total	00	07	00

The list of findings and their resolution is presented in appendix 2 of this report.

2.5.1 Forward Action Requests

This is 4th periodic verification of the project activity and no FAR was raised from previous validation, verification or/and during this verification process.

2.6 Eligibility for Validation Activities

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

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project activity is registered under VCS only (VCS Project ID 2020) and is neither de-registered nor seeking registration under any other emission trading program/mechanism.

As per the MR and undertaking provided, PP would not consider the credit from any other mechanism for the current monitoring period. The undertaking is provided to confirm that there is no any double accounting for current monitoring period. Further, assessment team confirms that the project activity is not participating in any other form of environmental credits. Also, the project activity is not registered for REC benefits. The same was verified by checking the REC website.

3.2 Methodology Deviations

The project activity has applied correct methodology which are as per the registered VCS PD and thus no deviation is sought regarding the methodology. The project complies with all the requirement of the methodology and thus deviation to the methodology is not a requirement for the present project activity.

3.3 Project Description Deviations

During current monitoring period there is no deviation that has been applied. However, PP had applied for below deviations which were requested and accepted during earlier verification² is as follows:

1. The meter reading practice in India is upgrading to optimum level which based on robust technology and requires minimum human intervention. Currently in this monitoring period, the deviation is for Tamil Nadu state project having Project Investor name Mytrah Vayu (Sabarmati) Pvt. Ltd. but not limited to further upgradation at another states of India. The monitoring practice is updated (October 2018) and it's shifted to Deviation Settlement Mechanism (DSM) in order to more strengthen the national grid. The export and import values are omitted and no longer provided, only net export values are being provided for the invoicing to respective boards/government institutions. In DSM, PP have to forecast electrical energy generation in day time blocks (In India, 15 minutes each block, total 96 blocks) well in advance.

The invoicing is done on the forecasted value. The actual generation deviation from the forecasted values is penalized, it depends upon the deviation magnitude. Therefore

² <https://registry.verra.org/app/projectDetail/VCS/2020>

instead of export and import values, the net values is directly obtained (either by including deviation to the schedule values or directly considering the actual values from the SRPC report) for the emission reduction calculation. The approach doesn't alter the emission reduction and its calculations.

For Southern Region, Total Energy schedule and the Actual values (which is the actual Net delivered) is maintained by the Southern Regional Power Committee (SRPC) Secretariat, Central Electricity Authority, Government of India. Regional Energy Account (monthly net export) for every month in respect of Southern Region has been uploaded on the SRPC website, www.srpc.kar.nic.in. Since the document is provided by government nodal agency, therefore no any cross-checking is required. The nature of deviation is permanent.

The above deviation is approved in 2nd periodic verification.

2. PP had requested for deviation regarding the change in feeder from the registered VCS PD which is approved during earlier verification. Till last verification, PP was using two feeders i.e Bay-222 and Bay-223 and 6 energy meters for the Project activity energy supply to the grid. PP has now transferred Bay-223 transferred to M/s Orange power and project energy metering will be through Bay-222 with 3 nos. Of energy meters. This deviation is approved in 3rd periodic verification.

3.4 Grouped Project

The project does not involve any addition of new project activity and thus the project do not fall under grouped project.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

During the remote audit, it was concluded that the project is implemented as per VCS PD and this is verified from the commissioning certificate, statutory clearances submitted. During the current monitoring period it was observed that no unforeseen situation evolved which can impact the operation of the project activity. Scheduled maintenance was carried out as per the instruction of the manufacturer and the same is acceptable to the assessment team.

Project location is confirmed by the assessment team through interview with PP during remote audit and assessment of monitoring report. Assessment team also checked the technical details of the project site containing latitude and longitude of the project site and confirmed that the details as mentioned in the registered VCS PD are correct.

The WTG locations are provided in following table.

SL. No	Name of Investor	Location Name	Latitude	Longitude
1.	M/s Mytrah Vayu (Sabarmati) Pvt. Ltd.	MAN-322	8°58' 04.93"	77° 55' 00.64"
2.		MAN-321	8°58' 24.09"	77° 55' 22.36"
3.		MAN -222	8°57' 49.51"	77° 54' 36.21"
4.		MAN-215	8°57' 04.03"	77° 53' 07.05"
5.		MAN-323	8°57' 30.49"	77° 53' 08.89"
6.		MAN-199	8°59' 57.17"	77° 52' 43.33"
7.		MAN-324	8°56' 59.21"	77° 52' 17.266"
8.		MAN-197	9°00' 44.43"	77° 52' 05.52"
9.		MAN-319	8°59' 53.26"	77° 54' 48.26"
10.		MAN-196	9°01' 06.79"	77° 52' 15.16"
11.		MAN-328	9°01' 42.51"	77° 53' 41.77"
12.		MAN-326	9°00' 17.87"	77° 54' 37.53"
13.		MAN-320	8°58' 43.03"	77° 54' 41.61"
14.		MAN-353	8°57' 22.58"	77° 54' 40.81"
15.		MAN-380	8°57' 31.83"	77° 54' 14.29"
16.		MAN-311	9°01' 24.09"	77° 53' 43.03"
17.		MAN-312	9°01' 53.19"	77° 54' 49.58"
18.		MAN-349	9°03' 04.87"	77° 55' 21.34"
19.		MAN-361	9°02' 49.37"	77° 56' 49.38"
20.		MAN-379	9°01' 40.26"	77° 52' 27.36"
21.		MAN-350	9°02' 45.455"	77° 55' 46.40"
22.		MAN-362	9°03' 10.15"	77° 56' 09.18"
23.		MAN-345	9°02' 24.90"	77° 55' 26.67"
24.		MAN-305	9°02' 15.08"	77° 51' 55.31"
25.		MAN-340	9°00' 53.28"	77° 56' 03.52"

26.		MAN-378	9°05' 18.50"	77° 56' 46.48"
27.		MAN-304	9°02' 32.51"	77° 51' 27.31"
28.		MAN-377	9°03' 59.32"	77° 57' 18.22"
29.		MAN 356	9°01' 06.19"	77° 57' 49.32"
30.		MAN-366	9°04' 34.66"	77° 55' 26.91"
31.		MAN 314	9° 01' 20.72"	77° 57' 46.01"
32.		MAN-159	8°59' 46.60"	77° 49' 42.66"
33.		MAN-161	9°00' 26.84"	77° 49' 03.72"
34.		MAN-160	9°00' 12.76"	77° 49' 41.56"
35.		MAN-415	8°58' 58.96"	77° 50' 49.62"
36.		MAN-412	8°58' 28.65"	77° 50' 15.30"
37.		MAN-417	8°58' 16.30"	77° 50' 39.34"
38.		MAN-388	8°57' 13.89"	77° 47' 52.29"
39.		MAN-146	8°59' 53.96"	77° 48' 37.98"
40.		MAN-280	8°58' 57.03"	77° 47' 35.55"
41.		MAN-297	9°02' 00.42"	77° 49' 53.49"
42.		MAN-189	9°01' 11.35"	77° 51' 03.61"
43.		MAN-185	9°00' 54.47"	77° 50' 21.21"
44.		MAN-184	9°00' 32.44"	77° 50' 27.81"
45.		MAN-299	9°01' 52.73"	77° 50' 58.57"
46.		MAN-301	8°58' 19.75"	77° 46' 48.29"
47.		MAN 351	9°02' 01.39"	77° 57' 35.38"
48.		MAN 194	9°01' 59.33"	77° 52' 34.78"
49.		MAN 437	9°02' 18.69"	77° 56' 27.38"
50.		MAN 370	9°04' 14.19"	77° 56' 41.50"
51.		MAN 341	9°01' 20.09"	77° 56' 01.65"
52.		MAN 416	8°58' 30.61"	77° 51' 13.21"

53.		MAN 405	8°59' 22.95"	77° 49' 34.56"
54.		MAN-201	8°58' 59.80"	77° 51' 36.21"
55.		MAN-444	8°56' 44.56"	77° 50' 17.04"
56.		MAN 398	8°56' 30.02"	77° 50' 08.32"
57.		MAN-483	8°59' 28.03"	77° 47' 21.78"
58.		MAN-486	8°59' 54.90"	77° 47' 24.90"
59.		MAN-485	8°59' 42.49"	77° 47' 57.16"
60.		MAN-480	8°58' 09.42"	77° 47' 16.54"
61.		MAN-481	8°58' 25.50"	77° 47' 06.75"
62.		MAN-443	9°01' 12.22"	77° 49' 11.56"
63.		MAN 162	9°00' 41.42"	77° 48' 29.02"
64.		MAN-127	9°01' 34.55"	77° 49' 55.41"
65.		MAN 126	9°01' 48.64"	77° 49' 54.15"
66.		MAN-494	9°02' 02.97"	77° 50' 29.70"
67.		MAN-497	9°01' 01.99"	77° 48' 30.88"
68.		MAN-17	8°50' 24.87"	77° 53' 28.09"
69.		MAN-24	8°49' 27.46"	77° 54' 15.25"
70.		MAN-22	8°50' 35.38"	77° 54' 09.83"
71.		MAN-255	8°47' 46.68"	77° 49' 24.71"
72.		MAN-253	8°47' 11.41"	77° 49' 48.05"
73.		MAN-26	8°48' 49.65"	77° 53' 27.41"
74.		MAN-55	8°51' 19.15"	77° 52' 42.76"
75.		MAN-16	8°50' 33.64"	77° 52' 55.62"
76.		MAN-79	8°50' 21.64"	77° 48' 48.32"
77.		MAN-490	8°49' 58.53"	77° 50' 20.022"
78.		MAN-20	8°48' 56.29"	77° 52' 57.64"

79.		MAN-03	8°46' 42.12"	77° 51' 11.26"
80.		MAN-04	8°46' 20.45"	77° 51' 21.36"
81.		MAN-11	8°49' 49.58"	77° 52' 29.67"
82.		MAN-02	8°48' 32.40"	77° 50' 59.91"
83.		MAN 05	8°46' 10.74"	77° 50' 53.70"
84.		MAN 82	8°47' 02.26"	77° 51' 32.44"
85.		MAN 258	8°48' 50.75"	77° 48' 59.17"
86.		MAN 264	8°49' 22.98"	77° 51' 50.30"
87.		MAN 19	8°49' 43.94"	77° 53' 13.25"
88.		MAN 115	8°50' 08.55"	77° 54' 35.45"
89.		MAN 12	8°49' 25.81"	77° 52' 28.67"
90.		MAN 13	8°49' 05.67"	77° 52' 16.91"
91.		MAN 18	8°49' 07.25"	77° 54' 00.83"
92.		MAN 10	8°50' 14.01"	77° 54' 05.67"
93.		MAN 15	8°50' 54.31"	77° 53' 19.72"
94.		MAN 498	8°45' 50.84"	77° 50' 44.16"
95.		MAN 499	8°46' 23.84"	77° 51' 59.74"
96.		MAN-158	8°59' 34.14"	77° 49' 09.56"
97.		MAN-125	8°57' 53.07"	77° 46' 41.11"
98.		MAN-136	9°00' 17.13"	77° 4' 53.96"
99.		MAN-491	9°02' 30.79"	77° 53' 51.52"
100.		MAN-492	9°02' 19.48"	77° 53' 09.58"
101.		MAN-488	9°00' 24.42"	77° 51' 32.88"
102.		MAN-493	9°00' 52.89"	77° 50' 57.94"
103.		MAN-355	8°58' 03.78"	77° 48' 57.02"
104.		MAN-500	8°54' 35.50"	77° 49' 39.38"

105.		MAN-501	8° 54' 09.24"	77° 50' 10.31"
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The technical specification of the WTG is as follows:

Parameter	Specification
Installed electrical output	2400 kW
Diameter	116 m
Hub height	94 m
Rated wind speed	11 m/s
Rotor speed	15.68 rpm
Generator	Doubly fed asynchronous generator
Certifications	IEC 61400-1; IEC class S

The start date of the project is 30-January-2019. This is the date; the first WTG was commissioned which is in line with VCS Standard version 4.2.

The assessment team confirmed through interview with O & M personnel during remote audit that there are no changes into the project design during this monitoring period. It was found that the monitoring plan was implemented as per the requirement of the VCS PD & approved monitoring Plan and applied methodologies. The organisational role and responsibility as mentioned in the registered VCS PD is followed onsite. The calibration of energy meter is carried out as per the required frequency mentioned in the VCS PD. A delay was observed for the one (1) month in the re-calibration and PP has applied maximum permissible error for the generation in this period as the delayed calibration certificate confirms that no error was present in the energy meters. All the emergency preparedness as mentioned in the registered VCS PD is followed onsite and no discrepancies were found regarding the same.

The Project participant contribution from the project activity towards sustainable development in accordance to host country:

As confirmed during the remote audit, the project displaces electricity produced in fossil fuel-based power plants, by using clean renewable source to generate electricity and thereby contributes to sustainable development through reduction in greenhouse gas (GHG) emissions. It has also been confirmed that the project implementation has led in contribution to SDG 07, 08 and SDG 13 (as stated in section 1.11 of the submitted MR). The project supplies clean, affordable and renewable energy (390,802 MWh net electricity under the monitoring period) without reliance on fossil fuels for generation of electricity to meet the growing demands in the region. The generated electricity avoided release of 366,103 tCO₂ in to the atmosphere. During current monitoring period, 11 persons were employed on the Project site and 01 training was arranged for the team.

The project is not involved in any other form of GHG emission program and VCU's generated from this verification will not be used for other trading program to avoid any kind of double counting. The same is confirmed by the PP during the verification remote audit. Assessment team also conducted independent review regarding the same and found that the statement of the PP is

accurate and project is not involved in any other kind of GHG trading for the present verifications/monitoring period.

The assessment team observed that the project is in line with the registered VCS PD and applied methodologies and thus no clarification/deviation is sought.

Assessment team confirms following during the verification remote audit:

1. Start date of the project is 30-January-2019.
2. An undertaking letter has been submitted by PP for no double counting with any other GHG program. PP also has given a written declaration that project will not claim other form of GHG credit for the concerned monitoring period.
3. Assessment team confirms that this is 4th monitoring under VCS and covers the activity from 01-June-2021 to 28-February-2022 (inclusive of both dates). VCS crediting period is of 10 years with 30-January-2019 as the start date and crediting period end date as 29-January-2029.
4. GHG credits from 01-June-2021 to 28-February-2022 will be claimed under VCS only. At any point of time during the crediting period, the project proponent will abide by the "Double Counting".
5. Assessment team checked and found that the Project proponent of the project activity is as below for the current monitoring period:

Organization name	<i>Mytrah Vayu (Sabarmati) Pvt. Ltd.</i>
Contact person	<i>Mr. Ramesh Kure</i>
Title	<i>Assistant Manager</i>
Address	<i>1st Floor, 8001, 8th Floor, Q-City, Nanakramguda, Gachibowli, Hyderabad 500032, Telangana, INDIA</i>
Telephone	<i>+91 72888 75975</i>
Email	<u>cleancredits@mytrah.com</u>

6. The quantified emission reduction calculation for the monitoring period is correct and conservative. Assessment team also compared actual VCU with the estimated VCUs and found that the actual VCUs are 366,103 tCO₂e which are 3.34% lower than the estimated emission reductions i.e. 378,737 tCO₂e during this monitoring period.

Finding: CAR 01, 02, 03, 04 and 07 were raised and successfully closed. Please refer Appendix 4 for more information.

Thus, after complete assessment of monitoring report VVB Team confirms that the project has been implemented as described in the project description.

4.2 Safeguards

4.2.1 No Net Harm

No potential environment or socio-economic matter was found during the discussion with PP during remote audit. The project is renewable energy project and thus no negative impact observed onsite as confirmed by PP during remote audit.

The project activity promotes environmental and socio-economic well-being as it results in zero GHG emissions due to installation and operation of clean, renewable energy technology for electricity generation. The report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013 clearly mentioned that wind-based power project activity operations do not result in direct air pollution, noise pollution.

However, assessment team still conducted the No net harm assessment for some of the parameters and the result is described below:

Sr. No.	Indicator	Assessment team opinion
1	Air quality	The project generates clean energy which replaces the fossil fuel intensive electricity generation. Also report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013 clearly mentioned that wind plant operations do not result in direct air pollution. Therefore, it is validated that mitigation measures were robustly implemented on ground for air quality issues project will have a positive impact on air quality.
2	Soil condition	There are negligible impacts envisaged during operation of the project activity being wind power-based power project. For mitigating the impacts during construction, various mitigation measures were taken which is validated from the plant records of PP and the interview with local villagers. It was also confirmed that, the vegetation planted at project site helps to reduce soil erosion. The same is confirmed during the discussion with stakeholders during remote audit.

Sr. No.	Indicator	Assessment team opinion
		Therefore, it can be concluded that the project has no effect on soil conditions during its operation because it has no waste coming out.
3	Biodiversity	During the verification remote audit, it was observed that the condition of ground vegetation is good and no rare species is found in the around area. The project site is not on the migration route of migratory bird nor is the project affecting aquatic life. With the implementation of Project, the green cover has increased at the Project site; the biodiversity in the vicinity will be improved with the vegetation improvement.
4	Employment Generation	The project activity employed local population as skilled workers as well as security guards. The personnel employed by the project activity are also provided trainings and exposed to various awareness programs therefore a positive indicator has been accepted.
5	Livelihood of the poor	The project is associated with infrastructure development like roads in the nearby areas and promoting economic activities like grants to local school and communities' temples etc. Also, project employed local villagers as guards for the security of power project.

4.2.2 Local Stakeholder Consultation

All the stakeholders are happy with the implementation and operation of the project activity and no negative comments envisaged for the project activity. There was no change in project description from the VCS PD. Complaint/suggestion/feedback register is maintained at site as a part of ongoing communication with stakeholders in line with clause 3.16.17 of VCS Standard, ver. 4.2 and appropriate actions taken time to time by PP. Assessment team confirmed the same during the remote audit and document review i. e. grievance register.

4.3 AFOLU-Specific Safeguards

Not applicable

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

Means of verification	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the MR. The verification team has checked whether calculations of baseline GHG emissions, project GHG emissions and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the monitoring plan of the VCS PD and MR.
Findings	No findings raised
Conclusion	Baseline emission: The baseline Emissions for a given year is calculated by multiplying the energy baseline (EB) with the grid emission factor of the grid. Formula Used: - $BE_y = EG_y \times EF_{\text{electricity}, y}$ Where; BE_y = Baseline emission in tCO₂e EG_y = net quantity of electricity generation as a result of the project activity $EF_{\text{electricity}, y}$ = CO₂ emission factor for the electricity displaced due to the project activity during the year y in tCO₂/MWh Ex-ante parameters: $EF_{\text{grid}, OM, y}$: Operating margin CO₂ emission factor in year y in tCO₂/MWh Calculated as per “Tool to calculate the emission factor for an electricity system, version 7.0” as 3-year generation weighted average using data for the years 2015-2016, 2016-2017 & 2017- 2018. The data are obtained from “CO₂ Baseline Database for Indian Power Sector” version 14, published by the Central Electricity Authority, Ministry of Power, Government of India. The value 0.9610 is used for the calculation of the Baseline Emission and is found to be consistent with the registered VCS PD/03/. $EF_{\text{grid}, BM, y}$: Build margin CO₂ emission factor in year y in tCO₂/MWh Calculated as per “Tool to calculate the emission factor for an electricity system, version 7.0” as 3-year generation weighted average using data for the years 2015-2016, 2016-2017 & 2017- 2018. The data is obtained from “CO₂ Baseline Database for Indian Power Sector” version 14, published by the Central Electricity Authority, Ministry of Power, Government of India. The value 0.8644 is used for the calculation of the Baseline Emission and is found to be consistent with the registered VCS PD/03/. $EF_{\text{grid}, CM, y}$: Combined margin CO₂ emission factor in year y in tCO₂/MWh

Combined margin emission factor has been calculated by the Central Electricity Authority in accordance with CDM methodology: ACM0002 and tool to calculate the emission factor for an electricity system.

The combined margin emissions factor is calculated as follows:

$$EF_{grid,CM,y} = EF_{grid,OM,y} * W_{OM} + EF_{grid,BM,y} * W_{BM}$$

Where:

$EF_{grid,BM,y}$ = Build margin CO₂ emission factor in year y (tCO₂/MWh)

$EF_{grid,OM,y}$ = Operating margin CO₂ emission factor in year y (tCO₂/MWh)

W_{OM} = Weighting of operating margin emissions factor (%) = 75%

W_{BM} = Weighting of build margin emissions factor (%) = 25%

The value 0.9368 is used for the calculation of the Baseline Emission and is found to be consistent with the registered VCS PD/03/.

Monitored Parameter:

$EG_{PJ,y}$: Quantity of net electricity generation supplied by the project (Wind) plant/unit to the grid during the monitoring period in MWh

The value of the net electricity generation supplied by the project activity is directly sourced from the “Deviation Settlement Account document” issued by Southern Regional Power Committee (SRPC). Electricity exported by the project to grid at project site switch yard is the actual generation recorded and monitored by the metering system installed at the project site switch yard.

The metering system comprises of three individual special energy meters (SEMs) (acts as standby meters) installed at the power station, for each generating unit. These are connected via four transmission lines of 220 kV, each having its own SEM meter (main meter and check meter). PP has applied a permanent deviation in monitoring plan. The monitoring practice was updated in October 2018 to Deviation Settlement Mechanism (DSM). The export and import values are omitted and no longer provided, only net export values are being provided to PP for the invoicing. In DSM, PP have to forecast electrical energy generation in day time blocks (In India, 15 minutes each block, total 96 blocks) well in advance. The invoicing is done on the forecasted value. The actual generation deviation from the forecasted values is penalized to PP, it depends upon the deviation magnitude. Therefore, instead of export and import values, the net values are directly obtained (either by including deviation to the schedule values or directly considering the actual values from the SRPC report) for the emission reduction calculation. The approach doesn't alter the emission reduction and its calculations.

For Sothern Region, Total Energy schedule and the Actual values (which is the actual Net delivered) is maintained by the Southern Regional Power Committee (SRPC) Secretariat, Central Electricity Authority, Government of India. Regional Energy Account (monthly net export) for every month in respect of Southern Region has been uploaded on the SRPC website, www.srpc.kar.nic.in. Furthermore, the net electricity supplied to the grid is provided by government nodal agency, hence no cross-checking is required.

The net electricity supplied the grid by the project activity during the monitoring period is 390,802 MWh. The verification team has checked the entire monthly “deviation settlement account” reports for the net electricity generated & supplied to the grid and cross checked the invoices raised by the PP to the state Utilities which is the scheduled power being feed into the grid for the monitoring period. All relevant monitoring parameters have been verified with regard to the appropriateness of the applied measurement/determination method, the correctness of the values applied for ER calculation, the accuracy, and applied QA/QC measures.

The verification team has checked the entire monthly Energy generation records applicable for the monitoring period as per the project activity applied for verifications and found the monitoring parameter is monitored and recorded as per the monitoring plan in the registered VCS PD. The net electricity supplied by project activity to grid is calculated by subtracting total electricity imported by project from grid from total electricity delivered by project to grid.

The verification team has crosschecked the emission reduction sheet and monitoring report data with the energy generation reports and found all the values are matching.

The calculation of baseline emissions is as below,

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

$$BE_y = 390,802 \times 0.9368$$

$$BE_y = 366,103 \text{ tCO}_2\text{e (round down value)}$$

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
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	01-June-2021 to 28-February-2022	366,103	0	0	366,103
		366,103	0	0	366,103
Project emissions: The project activity involves in harnessing wind power. Hence, in line with the applied methodology, project emissions are zero. Leakage emissions: The project activity involves in harnessing wind power. Hence, in line with the applied methodology, leakage emissions are zero. Thus, Emission Reductions are: The emission reductions (ER_y) by the Project activity during a given year y is the difference between baseline emissions (BE_y), project activity emissions (PE_y) and leakage, as follows $ER_y = BE_y - PE_y - LE_y$ $= 366,103 - 0 - 0$ $= 366,103 \text{ tCO}_2\text{e}$ VVB confirmed that GHG reductions and removals have been quantified correctly and in line with monitoring procedure in VCS PD and applied methodology.					

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

Means of verification	The verification team checked the shutdown/break down log for the monitoring period. During the verification of remote audit, the energy meters are also checked. The Calibration details of the monitoring meters are also checked with calibration certificates.
Findings	CAR 05 and 06 were raised and successfully closed. Please refer Appendix 4 for more information.
Conclusion	The metering arrangement is Energy Meters with tri-vector bidirectional energy meters of Secure Make; accuracy class 0.2s (main and check) at the State Electricity Board (SEB) substation. These meters record several parameters including electricity exported & imported. These electricity meters are being used by state electricity board for monthly generation reports.

	All the meters are of same accuracy class i.e. 0.2s as per the requirement of the registered PD. On-site photographs and interview during remote audit with O&M personnel also confirms the same. A delay in calibration was observed for 1st month of the monitoring period. An maximum error factor of 0.2 is applied for the energy generation of the delayed period as the delayed calibration report showed no error during the check and hence acceptable. During commissioning of the WTGs monitoring meters of accuracy class i.e. 0.2s were installed. The meters are monitored continuously & cumulative readings are taken at the end of the month by joint meter reading procedure. These are sealed by State Utilities to avoid malfunctioning with meter readings. Meter is calibrated once in 5 years by the meter testing division of the state utility in the presence of O&M Contractor / investor's representatives and State Utilities officials to ensure the working of meter within permissible limits. The calculation of net electricity supplied to grid is under purview of state electricity board and PP does not have control on it. Calibration details of the monitoring meters checked with calibration certificates submitted by PP and found that calibration frequency of 5 years is complied. The break down log is checked and there is no major breakdown during the monitoring period. No unforced error observed. No sampling procedure applied for monitoring of the data parameter and entire documents were checked by the VVB team to arrive at positive verification conclusions. The monitoring plan is followed at the project sites. The monitoring meters were calibrated in line with the registered monitoring plan and there was no delay in calibration observed. Thus, VVB team concluded that the evidences are sufficient in quantity, and appropriate for the quality, to determine the GHG reductions and removals.
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4.6 Non-Permanence Risk Analysis

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
1.	Not applicable	Not applicable	Not applicable	Not applicable

5 VERIFICATION CONCLUSION

Applus+ Certification has been engaged by Mytrah Vayu (Sabarmati) Pvt. Ltd. to perform the 4th periodic verification of the "250 MW WIND POWER PROJECT BY MYTRAH ENERGY"

The management of the project participant/owner is responsible for the preparation of the GHG emissions data and the reported/estimated GHG emissions reductions on the basis set out within the project's Monitoring Plan in the VCS PD and MR and the approved methodologies.

Our Verification approach was based on the requirements as defined under the Kyoto Protocol, Marrakesh accord, as well as those defined by the CDM Executive Board and VCS Standard version 4.2. 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 operated as planned and described in the project document;
- the monitoring plan is as per the applied methodology;
- the monitoring process in Monitoring Report is as per the VCS PD
- the development and maintenance of records and reporting procedures are in accordance with the monitoring plan
- the monitoring system is in place and generates GHG emission reductions data;
- the GHG emission reductions are calculated without material misstatements.
- A reasonable level of assurance was achieved during the verification.
- No limitation observed for the present verification

Verification period: From 01-June-2021 to 28-February-2022 (first and last date included).

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

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
01-June-2021 to 28-February-2022	366,103	0	0	366,103
Total	366,103	0	0	366,103

The estimated emission reduction achieved from the project activity for the current monitoring period is 378,737 tCO₂e, whereas actual emission reductions achieved are 366,103 tCO₂e, which is 3.34% lower than estimated emission reductions. As actual VCUs are lower than estimated value for the MP which is due to climatic factors affecting wind power generation, VVB confirmed the value is conservative and acceptable.

APPENDIX I: DOCUMENTS REVIEWED DURING VERIFICATION

No.	Author	Title	References to the document	Provider
1.	NA	Monitoring Report, (Initial Version) Monitoring Report, (Final Version)	Version 01, dated 14-March-2022 Version 03 dated 13-April-2022	PP
2.	NA	Emission Reduction sheet (Initial Version) Emission Reduction sheet (Final Version)	Version 01, dated 14-March-2022 Version 03 dated 13-April-2022	PP
3.	NA	Registered VCS PD & MR Joint Validation and verification report 3 rd Verification report	Version 02 dated 20-December-2019 Version 01 dated 24-December-2019 Version 01 dated 01-September-2021	VERRA
4.	NA	VCS Standard VCS Programme guide VCS Validation Verification Manual	Version 4.2 Version 4.1 version 3.2	VERRA
5.	NA	Technical specifications / photographs of turbines, electricity meters etc. Single line diagram and meter locations / Layout		PP
6.	NA	Power purchase agreements for the WTGs		PP
7.	NA	Commissioning Certificates for the WTGs installed	C-38 to C-43, C-45 to C-46, C-54, C-55. C-56 and C-58: dated 30-January-2019 C-50: Dated 03-January-2012 C-48, C-57, C-63: dated 12-January-2012 C-64: dated 13-January-2012 C-51 and C-52: dated 30-January-2012 C-47 and C-49, C-59, C-60, C-66: dated 15-February-2012 C-42, C-53: dated 22-February-2012	PP

No.	Author	Title	References to the document	Provider
8.	NA	ACM0002: Grid-connected electricity generation from renewable sources	Version 19.0	UNFCCC
9.	NA	Remote auditing for verification of measuring and monitoring procedure, • Video recordings & snapshots of the project site/equipment's • Interviews and data/log review	07-April-2022	PP
10.	NA	Deviation settlement account statement for entire monitoring period	01-June-2021 to 28-February-2022	PP
11.	NA	Invoices raised during the monitoring period	01-June-2021 to 28-February-2022	PP
12.	NA	Organization structure/chart		PP
13.	NA	Declaration of No Double Counting	30-03-2022	PP
14.	NA	Calibration certificates of energy meters		PP

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

Summary of findings	CAR	CL	FAR
	07	00	00

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

FAR ID	Section no.	Date:
Description of FAR		
Project participant response		Date:
Documentation provided by project participant		
DOE assessment		Date:

Table 2 CL from this verification

CL ID	Section no.	Date:
Description of CL		
Project participant response		Date:
Documentation provided by project participant		
DOE assessment		Date:

Table 3. CAR from this verification

CAR ID	Section no.	Date:
01	1.1, 1.8	11/04/2022
Description of CAR		
1. In Section 1.1, language of the description provided is in future tense. As its verification, description need to be reframed accordingly.		
2. In Section 1.8, the version number of the methodology mentioned 19.04. Verification team needs clarification on same.		

Project participant response	Date: 12/04/2022
1. The language is reframed as per the commissioned status of the project activity in revised MR version 2.0. 2. The version number of the methodology has been corrected as version 19.0 in the revised MR version 2.0	
Document submitted	Date: 12/04/2022
Revised MR Version 2.0	
DOE assessment	Date: 13/04/2022
1. PP has revised futuristic language in Section 1.1 where not applicable which is checked and confirmed. Hence this part of CAR is closed. 2. PP has revised version and corrected to to 19.0 in Section 1.8 of revised MR which is checked and confirmed. Hence this part of CAR is closed. CAR is closed.	

CAR ID	02	Section no.	2.1	Date: 11/04/2022
Description of CAR				
In Section 2.1, the weblink is not provided for the report by MNRE dated September 2013 on “Development Impacts and Sustainable Governance Aspects of Renewable Energy Projects”. Hence, corrective action sought.				
Project participant response				Date: 12/04/2022
In section 2.1, the weblink is mentioned for MNRE report on “Development Impacts and Sustainable Governance Aspects of Renewable Energy Projects”				
Documents submitted				Date: 12/04/2022
Revised MR Version 2.0				
DOE assessment				Date: 13/04/2022
The weblink is now revised by PP and same is accessible. Hence this CAR is closed.				

CAR ID	03	Section no.	1.9, 1.10, 1.11	Date: 11/04/2022
Description of CAR				
1. PP shall provide an undertaking for no double counting of GHG reductions claimed for current monitoring period. 2. In section 1.11, PP shall provide the evidences for the claiming the contributions over Project lifetime for SDG 7.2.1 and SDG 13.0.				
Project participant response				Date: 12/04/2022
1. Undertaking for no double counting of GHG reduction is submitted herewith. 2. To support the contributions over Project lifetime for SDG 7.2.1 and SDG 13.0, VCS issuance document is submitted herewith.				
Project participant response				Date: 12/04/2022
1. Undertaking for no double counting of GHG reduction 2. FVR for previous monitoring period				
DOE assessment				Date: 13/04/2022
1. PP has provided undertaking dated for no double counting of GHG reductions claimed for current monitoring period which is checked and found acceptable. Hence this part of CAR is closed.				

2. FVR for previous monitoring period was checked to confirm that contributions claimed over Project lifetime for SDG 7.2.1 and SDG 13.0 are acceptable. Hence this part of CAR is closed.
CAR is closed.

CAR ID	04	Section no.	5.4	Date: 11/04/2022
Description of CAR				
In section 5.4, it is mentioned that actual ER achieved is 1.28% higher than the estimated ER whereas in ER sheet the data is showing 1.28% lower than the estimated ERs. Verification team sought the corrective action on the same.				
Project participant response				Date: 12/04/2022
The actual ER is 1.28 % lower than the estimated ER for this monitoring period. This has been corrected in the Revised MR versión 2.0				
Documentation provided by project participant				
Revised MR version 2.0				
DOE assessment				Date: 13/04/2022
AS per ER sheet actual ER for current monitoring period are less than the estimated ER. Revised MR now mentions the same which is in line with the ER sheet and acceptable. CAR is closed.				

CAR ID	05	Section no.	1.11, 3.1	Date: 11/04/2022
Description of CAR				
Section 1.11 of revised MR mentions 2 SDG whereas as per VCS guidelines at least 3 SDG shall be considered for the Project Activity which is evident from the registered VCS PD. PP shall use consistent terminology in the VCS MR. For Wind Turbines, section 3.1 uses WEGs whereas elsewhere in the VCS MR, they are denoted by WTGs. In line with VCS glossary of terms, PP shall use VCUs and not VERs in the VCS MR for the emission reductions claimed under VERRA. Section 5.1 mentioned calculated ER i. e. 373,881 tCO2e as round down value however, as per actual calculations this value is incorrect. PP shall correctly apply round down changes in the ER sheet, which are not found, and revised MR with the correct value.				
Project participant response				Date: 12/04/2022
Section 1.11 is revised and SDG 8 is also included. WTG is made consistent in the revised MR Version 3.0 VCU's is used instead of VER's in the revised MR version 3.0. This has been corrected in the ER sheet and replicated in revised MR Version 2.0				
Documentation provided by project participant				
1.Revised MR Version 3.0 2.ER Sheet				
DOE assessment				Date: 13/04/2022
Section 1.11 is now revised to include SDG 07, 08 and 13 which are in line with the registered VCS PD and acceptable. Hence this part of CAR is closed.				

PP has now corrected revised MR to maintain consistency and use WTG for Wing Turbine Generators which is checked and confirmed. Hence this part of CAR is closed.

PP has corrected and mentioned VCUs in the revised MR which is checked and confirmed. Hence this part of CAR is closed.

Actual ER value i. e. 3,73,758 tCO₂e is now consistent in the revised MR and ER sheet which is checked and confirmed. Hence this part of CAR is closed.

CAR is closed.

CAR ID	06	Section no.	4.2	Date: 11/04/2022
Description of CAR				
Section 4.2 does not mention delayed calibration details but appendix 1 mentions the same. However, in the ER sheet delay factor is not applied to the month of June, 21. PP shall correct the ER sheet and MR accordingly.				
Project participant response				Date: 12/04/2022
The error factor is applied in the ER sheet and section 4.2 of revised MR is also updated.				
Documentation provided by project participant				
Revised MR Version 3.0 ER sheet				
DOE assessment				Date: 13/04/2022
As per the supporting document, it is evident that a calibration delay is observed for the 1 st month of monitoring period. Since, no error is identified in the delayed calibration, application of error factor as 2% is acceptable. PP has revised ER sheet and has made MR consistent with the values mentioned in the ER sheet.				
CAR is closed.				

CAR ID	07	Section no.	Appendix 2	Date: 11/04/2022
Description of CAR				
The date format in Appendix 2 is DD-MM-YYYY which is inconsistent with the MR as date format used in MR is DD-MONTH-YYYY. Further, the font and font size used in Appendix 2 is not matching with rest of the MR.				
Project participant response				Date: 12/04/2022
The date format is made consistent throughout revised MR Version 3.0				
Documentation provided by project participant				
Revised MR Version 3.0				
DOE assessment				Date: 13/04/2022
The date format DD-Month-YYYY is now made consistent in the revised MR which is checked and confirmed.				
CAR is closed.				

Table 4. FAR from this verification

FAR ID		Section no.		Date:
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Description of FAR	
Project participant response	Date:
Documentation provided by project participant	
DOE assessment	Date:

APPENDIX 3: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWERS

Verification team member

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	Interview(s)	Verification findings
1.	Lead Auditor/Technical Expert	OR	Kumar	Pankaj	TQC-Outsourced entity	Yes	No	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)	EI	Shen	Simon	Applus+ Certification
2.	Approver	IR	Calle de Miguel	Agustin	Applus+ Certification

Short CVs of the Team:

- Mr. Pankaj Kumar** has done M. Sc in Environment Management from Forest Research Institute, Dehradun and B. Sc. (Hons.) in Environment & Water Management from Magadh University, Bihar, India. He has also done Post Graduate Diploma in Environmental Law from NLSIU, Bangalore. He has more than 12 years of working experience in GHG Assessments and has participated during his career in Agencies and DOEs like MITCON, Agrinergy, Carbon Check and is empaneled with Applus+ Certification since 2015 for the performance of CDM/VCS/GS project assessments. He has extensive experience in the Renewable, Waste Management and Energy Demand Scopes of UNFCCC CDM and has done more than 100 Validations and Verifications of PAs and PoAs as Lead Auditor, Technical Expert and Technical Reviewer, mainly in Asia, Africa, USA, Asia Pacific and Americas under CDM, Verified Carbon Standard, Gold Standard & Social Carbon Standard, Brazil. He is an experienced, qualified and result oriented Environment and climate change professional having 16 yrs. of relevant

experience in Climate Change (Mitigation & Adaptation), Environmental Due Diligence, Disaster Risk Reduction, Climate finance, adaptation planning, capacity building, validation and verification of GHG project. He can also provide technical support for environmental investigative, remedial projects involving air, water and soil, Waste management, EIA, Environmental Compliance, ISO 14001, OHSAS 18001, GHG accounting (ISO 14064) and Carbon foot printing. Mr. Pankaj Kumar is based in Patna, India. Mr. Pankaj Kumar may participate as part of the Audit Team as Lead Auditor and Technical Expert for the assessment.

2. **Simon Shen** (Master Degree in Thermal Energy Engineering, Bachelor Degree in Environmental Engineering) is a Lead Auditor appointed by Applus+ LGAI for the GHG project assessment. He is based in Shanghai. He has several years of work experience in environmental protection field. Before he joined Applus+ LGAI, he had been worked for TÜV SÜD as a GHG Validator/Assessment team and ISO 9001/14001 Lead Auditor for 3.5 years. before he joined Applus+. Mr. Simon Shen has extensive experience also as former Applus+ Shanghai CDM Technical Manager. Mr. Simon Shen is based in Shanghai, China. Mr. Simon Shen participates in the project's technical review team.

APPENDIX 4: ABBREVIATIONS

Abbreviations	Full texts
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction(s)
CEA	Central Electricity Authority
CL	Clarification Request
CM	Combined Margin
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EF	Emission Factor
EIA	Environmental Impact Assessment
ER	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GWP	Global Warming Potential
MP	Monitoring period
PP	Project Participant
VCUs	Voluntary Carbon Units
VVB	Validation/Verification body

APPENDIX 5: CALIBRATION DETAILS

Meter SI.No.	Make	Class	Initial Meter calibration date	Due date of calibration	Previous due date for Calibration	Installed at location
SA0013A, SA0014A, SA0016A	Secure	0.2 s	26-June-2021	25-June-2026	14-June-2021	230/33 kV Maniyachi Pooling Sub-station.

APPENDIX 6: BREAKDOWN DETAILS

Month	Reason	From	Date	Duration (in hours)
June-2021	MAN-253 Transformer failure	29-May-2021	01-June-2021	43.77
	MAN-196 Blade tip damaged	09-June-2021	31-June-2021	336
	MAN-162, was in stopped condition due to Blade tip damage	01-April-2021	14-June-2021	336
July-2021	MAN-366, Blade tip damaged	24-July-2021	31-July-2021	166
	MAN-379 Generator failure	19-July-2021	31-July-2021	312
August-21	MAN-379 Generator failure	19-July-2021	31-August-2021	744
	Feeder-8&11 Break down due to double circuit fell down due to cyclone ,25 WTG'S is in stopped condition	24-August-2021	26-August-2021	144
	MAN-125, Battery voltage not ok axis-1 due to ROW issue machine stopped	12-August-2021	31-August-2021	480

	MAN-10, Generator stator or busbar terminal hardware melted	03-August-2021	31-August-2021	624
September-2021	MAN-125, Battery voltage not ok axis-1 due to ROW issue machine stopped	12-August-2021	30-September-2021	720
	MAN-003, Converter communication fault stopped due to ROW issue	28-September-2021-	30-September-2021	72
	MAN-379 Generator failure	19-July-2021	30-September-2021	720
October-2021	Feeder-8&11 Break down due to DCOH Poles collapsed due to cyclone ,25 WTG'S is in stopped condition	06-October-2021	16-October-2021	528
	MAN-125, Battery voltage not ok axis-1 due to ROW issue machine stopped	12-August-2021	25-October-2021	600
	MAN-146, Battery voltage not ok axis-2 Stopped due to ROW issue	09-October-2021	31-October-2021	552
	MAN-379 Generator failure	19-July-2021	31-October-2021	744
	MAN-497, VCB Breakdown machine stopped due to ROW Issue	30-September-2021	31-October-2021	744
	MAN-003, Converter communication fault stopped due to ROW issue	28-September-2021-	31-October-2021	744
	MAN-127, UPS fault stopped due to pathway issue and spare not available	26-October-2021	31-October-2021	144
	MAN-253 Battery voltage not ok axis-stopped due to pathway issue	31-October-2021	31-October-2021	24
	MAN-443, Battery voltage not ok axis-2, Stop due to pathway issue	12-October-2021	21-October-2021	240
November-2021	MAN-379 Generator failure	19-July-2021	30-November-2021	720
	MAN-497, VCB Breakdown machine stopped due to ROW Issue	30-September-2021	30-November-2021	720

	MAN-321 VCB Beak down stopped due to pathway issue	03-November-2021	30-November-2021	672
	MAN-003, Converter communication fault stopped due to ROW issue	28-September-2021-	30-November-2021	744
	MAN-79, Pitch service switch stopped due to pathway issue	03-November-2021	30-November-2021	456
	MAN-405, Battery voltage not ok axis-2, Stopped due to pathway issue	02-November-2021	15-November-2021	336
	MAN-11,12,13,19,264,20 Line break down due to ROW issue line not charged	30-November-2021	30-November-2021	26.6
	MAN-127, UPS fault stopped due to pathway issue and spare not available	26-October-2021	14-November-2021	336
	MAN-126, UPS fault stopped due to pathway issue and spare not available	02-November-2021	12-November-2021	264
	MAN-498, Battery voltage not ok axis-2, Stopped due to pathway issue	20-November-2021	30-November-2021	264
	MAN-258, VCB break down stopped due to pathway issue	03-November-2021	30-November-2021	672
	MAN-255, VCB Break down stopped due to pathway issue	01-November-2021	11-November-2021	264
	MAN-146, Battery voltage not ok axis-2 Stopped due to ROW issue	09-October-2021	30-November-2021	720
	MAN-253, Battery voltage not ok axis-1, stopped due to pathway issue	31-October -2021	30-November-2021	720
	MAN-158, Battery voltage not ok axis-2, stopped due to pathway issue	05-November-2021	15-November-2021	264
December-2021	MAN-497, VCB Breakdown machine stopped due to ROW Issue	30-September-2021	31-December-2021	744

	MAN-379 Generator failure	19-July-2021	31-December-2021	744
	MAN-321 VCB Beak down stopped due to pathway issue	03-November-2021	31-December-2021	744
	MAN-494, UPS Fault stopped due to pathway issue and spare not available	01-December-2021	10-December-2021	240
	MAN-146, Battery voltage not ok axis-2 Stopped due to ROW issue	09-October-2021	31-December-2021	744
	MAN-253, Battery voltage not ok axis-1, stopped due to pathway issue	31-October-2021	31-December-2021	744
	MAN-498, Battery voltage not ok axis-2, Stopped due to pathway issue	20-November-2021	13-December-2021	312
	MAN-11,12,13,19,264,20 Line break down due to ROW issue line not charged	30-November-2021	31-December-2021	4464
	MAN-003, Converter communication fault stopped due to ROW issue	28-September-2021-	31-December-2021	744
	MAN-497, VCB Breakdown machine stopped due to ROW Issue	30-September-2021	31-December-2021	744
January-2022	MAN-321 VCB Beak down stopped due to pathway issue	03-November-2021	06-January-2022	144
	MAN-379 Generator failure	19-July-2021	31-January-2022	744
	MAN-126, Generator stator cable issue	01-January-2022	31-January-2022	744
	MAN-497, VCB Breakdown machine stopped due to ROW Issue	30-September-2021	17-January-2021	488
	MAN-003, Converter communication fault stopped due to ROW issue	28-September-2021-	31-January-2022	744
	MAN-146, Battery voltage not ok axis-2 Stopped due to ROW issue	09-October-2021	04-January-2021	96

	MAN-11,12,13,19,264,20 Line break down due to ROW issue line not charged	30-November- 2021	16-January-2021	2304
	MAN-253, Battery voltage not ok axis-1, stopped due to pathway issue	31-October-2021	31-January-2022	744
February-2022	MAN-003, Converter communication fault stopped due to ROW issue	28-September- 2021-	28-February-2022	744
	MAN-11,12,13,19,264,20 Line break down due to ROW issue line not charged	14-February-2022	17-February-2022	672
	MAN-253, Battery voltage not ok axis-1,s topped due to pathway issue	31-October-21	28-February-22	672
	MAN-379 Generator failure	19-July-2021	28-February-2022	672
	MAN-125 Battery voltage not ok Due to ROW issue	21-February-2022	28-February-2022	672
	MAN-126, Generator stator cable issue	01-January-2022	31-January-2022	672