



GREEN ENERGY PROJECT AT GUJARAT BY POWERICA LIMITED



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Project Title	Green Energy Project at Gujarat by Powerica Limited
Version	01
Report ID	Internal Project ID: A+SH_SYST_TQC_VCS_VER_37221

Report Title	Green Energy Project at Gujarat by Powerica Limited
Client	Powerica Limited
Pages	36
Date of Issue	17/06/2022
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Summary:

Verification purpose: Powerica Limited has commissioned the LGAI Technological Center, S.A. (Applus+ Certification) to carry out the verification of the project “Green Energy Project at Gujarat by Powerica Limited” (VCS ID 1211). The project is located at Bhachau, in the Kutch district of Gujarat. The total installed capacity of the project activity is 25.2 MW comprises 14 WTGs of 1.80 MW each. The project activity has been commissioned on dated 25-February-2012 and continuous operational since commissioning. The electricity generated by the project activity is supplied to NEWNE grid (now Indian grid). Thus, the project has contributed to reduction of GHG emissions by displacing fossil fuel dominated grid-based electricity with renewable energy – wind energy based renewable electricity. The project has also been registered as a CDM project activity with Ref. No.8672¹ on dated 31-January-2013.

Start date of the project activity is 25-February-2012. This is the day which the first phase of project activity was commissioned and started emission reductions. An undertaking has been submitted by PP for double counting confirming that no GHG reduction will be claimed in any other GHG mechanism for current monitoring period. Project activity undergoes continued operation and no major breakdown had taken place except routine maintenance/shutdown.

The current monitoring period covered the period from 01-February-2021 to 24-February-2022(inclusive both days), under the crediting period of 25-February-2012 to 24-February-2022. During the current verification period, the project activity has supplied 58,344.87 MWh of electricity, and thus contributing to the GHG reductions 55,590 tCO_{2e}.

A risk-based approach has been followed to perform this verification activity. In the course of verification, 05 Corrective Action requests (CAR), 01 Clarification Requests (CLs) and 00 Forward action requests (FARs) were raised and successfully closed. The review of the Monitoring report and additional documents related to baseline

¹<https://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1355215731.08/view>

and monitoring methodology; the subsequent background investigation, follow-up interviews and PP have provided VVB with sufficient evidence to verify the fulfilment of the stated criteria of VCS.

LGAI Technological Center S.A. (Applus+ Certification) (Hereafter referred to as Applus+ Certification) has been appointed by 'Powerica Limited' to perform the verification of the "Green Energy Project at Gujarat by Powerica Limited" under VCS standard 4.2 and project 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 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, monitoring plan is assessed against the applied methodologies "ACM0002- Consolidated baseline methodology for grid-connected electricity generation from renewable resources (version 13.0.0). 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 4.1 and standard, version 4.2

- CDM Validation and Verification Standard for project activities, version 03.0/9/
- CDM Project Standard for project activities, version 03.0/9/
- VCS standard version 4.2/8/
- VCS program guide version 4.1/8/

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 verified carbon units (VCUs).

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 the project activities, version 03.0, review against registered VCS-PD/CDM PDD and Final Validation report, CDM Project Standard for project activities, version 03.0 and VCS program guide, version 4.1 and standard version 4.2.

The VVB 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 remote audit or document verifications. The entire documents checked/plant verification conducted to arrive at positive verification conclusions.

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1 INTRODUCTION

1.1 Objective

LGAI Technological Center S.A. (Hereinafter referred as Applus+ Certification) has been appointed by Powerica Limited to perform the verification of the project entitled “Green Energy Project at Gujarat by Powerica Limited” 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 13.0.0) “Consolidated methodology for grid-connected electricity generation from renewable sources”/10/
- 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 03.0/9/
- CDM Project Standard for project activities, version 03.0/9/

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/CDM PDD and registered approved methodologies ACM0002 (version 13.0.0)/10/. 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 03.0/9/, CDM Project Standard for project activities, version 03.0 /9/and VCS program guide, version 4.1/8/ and standard version 4.2/8/.

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 certificate, Energy generation records, fuel records 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 total installed capacity of the project is 25.2 MW wind power generation consisting 14 Wind Turbine Generators (WTGs) of 1.8 MW each. The WTGs are located in Villages: Jangi, Lakhapar, Vadhiya, Lakhdhargadh and Godpar of Kutch District in the state of Gujarat. The project is promoted by Powerica Limited. The project activity was commissioned on dated 25-February-2012.

The project activity helps to reduce the supply demand gap in the state and also helps in contributing to the sustainable development by using wind energy as the source of power generation and reduction of GHG Emissions. In the project site, there are other wind projects owned by other customers connected to the same substation. There is an apportioning procedure which is approved by the state nodal agency for apportioning the electricity to each and every customer.

During the Current Monitoring Period from 01-February-2021 to 24-February-2022(First and last date included) the project activity has supplied 58,344.87 MWh of electricity, and thus contributing to the GHG reductions of 55,590 tCO_{2e}.

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
Jitendra Mohan Singh	LA/TE	YES	YES	NA	YES
Denny Xue	TR	YES	YES	NA	NA

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

Document review

The Monitoring Report (version 01)/5/ submitted by the PP was reviewed against the approved methodology, registered VCD PD/ CDM PDD, 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 02)/5/ on dated 16-June-2022 submitted by the project participant 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 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

The key personnel interviewed are summarised in the table below:

Sr. No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Samuel	James	Director AWT Energy	13-June-2022 (Via zoho video conferencing)	Project Implementation, JMR & invoicing procedure, calibration, grievance mechanism	Jitendra Mohan Singh
2.	Kumar	Dinesh	Site In-charge Powerica Limited			
3.	T.	Arunkumar	Site In-charge PP representative			
4.	Makkar	Shivani	Carbon Assets Manager AWT Energy			
5.	Patil	Shital	Consultant EKI Energy Services Ltd		Monitoring Report, Emission Reductions calculation	

2.4 Site Inspections

The verification team has not performed the onsite visit for the verification of this project activity. The exemption for conducting an onsite visit for this project activity is allowed by VERRA, as the VCS has not a specific requirement to perform the site visits, however, an adequate level of assurance has been achieved during the verification processes. The reason for not conducting the onsite visit is the assessment for verification has been conducted during the COVID-19 pandemic, hence, this fact sums to the necessity of avoiding traveling to the site, given the restrictions in the countries in which the assessment team is based, and the ones applicable in the host country of the PA, apart from globally applied restrictions to its personnel and contractors during the pandemic.

The VVB has taken alternative measures for ensuring a reasonable level of assurance while conducting the Verification process, using standard auditing techniques and advanced communication solutions in order to be able to interview the relevant stakeholders and to cross-check the relevant documentation, implementation of the project activity and its design, monitoring performance, equipment in the project activity, etc. (all the evidences and processes of cross-check are detailed within this Verification Report). The interviewed personnel and the scope and mean of interview are listed in above Section 2.3 of this Verification Report.

Technical details/specification of WTGs & metering/monitoring arrangement verified through onsite photographs/videos, 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 on dated 13-June-2022, the PP representatives were questioned about the implementation of the project activity. Several topics like the verification of commissioning date of WTGs, the generation, recording, 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/1/, Power Purchase Agreement (PPA), Certificate for share of electricity issued by GETCO/3/, invoice/4/, calibration certificates/17/, etc. were also verified.

During the remote audit, the PP representatives/ O & M personal were questioned about the implementation of the project activity. Several topics like the verification of commissioning date of meters, the generation, recording, and monitoring of the data and the error accountability were discussed. Various documents like the Certificate for share of electricity issued by GETCO/3/ & monthly Invoices/4/ for the complete monitoring period, on-site Photographs includes WTGs name plate/ videos of all WTGs/19/, meter specifications, key technical specifications of the major equipment like panel etc. provided to assessment team were verified through Zoho meeting (live video conferencing call) to establish the current status and the implementation of the Project Activity

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 02 on dated on 16-June-2022 submitted by project participant 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	00	00
Description of project activity	01	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

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
Establishment and description of baseline scenario	00	00	00
Demonstration of additionality	00	00	00
Emission reductions	00	02	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	00	00
Total	01	05	00

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

2.5.1 Forward Action Requests

No FAR was raised from previous validation 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 also registered under CDM (<https://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1355215731.08/view>) with fixed crediting period from 31-January-2014 to 30-January-2024. PP has not claim CERs under CDM mechanism. The project activity has been registered under VERRA with VCS ID 1211 (<https://registry.verra.org/app/projectDetail/VCS/1211>).

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 CDM PDD. Verification team confirmed that there is no request for methodology deviation applied neither during this monitoring period nor during previous monitoring periods.

3.3 Project Description Deviations

The project participant has sought project description deviation in calibration frequency from once in 3 years as mentioned in project description/CDM PDD to once in 5 years during the monitoring period 31-January-2013 to 30-September-2018. The calibration of meters is not in control of PP and same is done by state electricity board. The state electricity board does not follow any fixed calibration frequency; hence deviation was sought for change in calibration frequency as once in five years. This calibration frequency is mentioned as per CEA notification as per CEA (Installation and Operation of Meters) (Amendment) Regulations, 2019 (<https://cea.nic.in/regulations-category/metering-regulations/?lang=en>).

The change in calibration frequency does not have any impact on ER calculations as during monthly reading state electricity board official and PP representative check the meter conditions. Also, both parties accept the reading and PP raise the invoice to state electricity board based on monthly JMR reading. Thus, financial obligations are involved which ensures that meters are running accurately. VVB confirms that same practice has been followed by PP during this 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 has been implemented as per registered CDM PDD/VCS PD/7/. The same has been verified from the commissioning certificate/1/, 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.

There was no major breakdown reported during the monitoring period as verified from the Plant Log sheets/18/ submitted by PP. Only Schedule maintenance was carried out as per instruction of manufacture and the same

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 CDM PDD/7/ are correct.

The WTG locations and commissioning dates are provided in following table.

WTG ID	WTG No.	Village	Latitude(°N)	Longitude(°E)
JW 01 New	VWT/1800/11-12 / 2552	Jangi	23° 11' 54"	70° 34' 54"
JW 29	VWT/1800/11-12/2553	Jangi	23° 12' 01"	70° 32' 25"
VW 49	VWT/1800/11-12/2554	Lakhapar (Vandhiya)	23° 12' 11"	70° 36' 52"
VW 54 New	VWT/1800/11-12/2555	Godpar (Vandhiya)	23° 12' 14"	70° 36' 38"
JW 02 New	VWT/1800/11-12/2593	Jangi	23° 11' 40"	70° 34' 45"
JW 05 New	VWT/1800/11-12/2594	Jangi	23° 11' 49"	70° 35' 07"
VW 80	VWT/1800/11-12/2595	Modpar (Vandhiya)	23° 12' 22"	70° 35' 27"
VW 66	VWT/1800/11-12/2607	Vandhiya	23° 16' 03"	70° 35' 06"
VW 67	VWT/1800/11-12/2608	Vandhiya	23° 15' 25"	70° 35' 45"
VW 79	VWT/1800/11-12/2609	Vandhiya	23° 14' 46"	70° 37' 40"
VW 48	VWT/1800/11-12/2610	Lakhdhirgadh (Vandhiya)	23° 15' 23"	70° 35' 17"
VW 62	VWT/1800/11-12/2611	Vandhiya	23° 15' 45"	70° 34' 56"
VW 63	VWT/1800/11-12/2612	Vandhiya	23° 15' 51"	70° 35' 21"
VW 71	VWT/1800/11-12/2613	Vandhiya	23° 13' 29"	70° 36' 18"

The start date of the project is 25-February-2012. This is the date on which first phase of WTGs was commissioned and project started emission reduction which is in line with VCS Standard version 4.2. Assessment team checked the Commissioning certificates/1/and confirmed that the dates of Commissioning for each WTG are correct. The commissioning dates of WTGs are as follows:

WTG ID	WTG No.	Date of Commissioning
JW 01	VWT/1800/11-12/2552	25-Feb-2012
JW 29	VWT/1800/11-12/2553	25-Feb-2012
VW 49	VWT/1800/11-12/2554	25-Feb-2012
VW 54	VWT/1800/11-12/2555	25-Feb-2012
JW 02	VWT/1800/11-12/2593	21-Mar-2012
JW 05	VWT/1800/11-12/2594	21-Mar-2012
VW 80	VWT/1800/11-12/2595	21-Mar-2012
VW 66	VWT/1800/11-12/2607	30-Mar-2012
VW 67	VWT/1800/11-12/2608	27-Mar-2012
VW 79	VWT/1800/11-12/2609	27-Mar-2012

VW 48	VWT/1800/11-12/2610	30-Mar-2012
VW 62	VWT/1800/11-12/2611	30-Mar-2012
VW 63	VWT/1800/11-12/2612	30-Mar-2012
VW 71	VWT/1800/11-12/2613	30-Mar-2012

The assessment team confirmed that there is no proposed or actual change to the project design during this monitoring period except to the changes in contact details of PPs. The technical details were checked by the verification team with technical specification of WTGs/11/ and found consistent. The specification of the WTG is as follows:

Parameters	Value
Make	Vestas
Model	V-100
Rated Power	1800 KW
Rotor diameter	100 m
Swept area	7850 m ²
Cut in wind speed	4 m/s
Cut out wind speed	20 m/s
No. of Blades	3
Rotor Speed	14.4 rpm
Hub Height	80 m
Generator Type	Asynchronous with wound rotor, slip rings

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 CDM PDD/VCS PD/7/ & approved monitoring Plan and applied methodologies. The organisational role and responsibility as mentioned in the registered CDM PDD/VCS PD/7/ is followed onsite. The calibration of energy meter is carried out as per the accepted deviation in calibration frequency during the monitoring period from 01-February-2021 to 24-February-2022. There is no delay in calibration of meters observed. All the emergency preparedness as mentioned in the registered CDM PDD/VCS PD/7/ 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: The same has been described in Section 1.11 of MR.

The project activity fulfilled the contribution of sustainable development to the host country by implementing environmentally friendly technology and creating employment opportunities to the local community. Same is confirmed during remote audit. PP has not provided SDG contributions in the section 1.11 of the MR as demonstration of SDG contribution is applicable from 20-January-2025².

² <https://verra.org/wp-content/uploads/2022/01/VCS-Summary-of-Effective-Dates-2022-01.pdf>

The project is not involved in other form of GHG emission program except CDM mechanism. VVB confirms through review of project activity web page under CDM³ and confirms that PP has not claimed CERs under CDM. VCUs 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 web sites <https://registry.terra.org/app/projectDetail/VCS/1211> were checked to confirm the same:

Assessment team hereby also confirms from the declaration made by PP the projects are not registered under the any other scheme except CDM(UN Ref. No. 8672)⁴, Other environmental or GHG credits (i.e., GS4GG, GCC etc.) & REC mechanism of India and the same is cross-checked at <https://recregistryindia.nic.in>. Moreover, as per state tariff policy the project is not eligible to receive REC benefits as it is selling power to State electricity grid.

The assessment team observed that the project is in line with the registered CDM PDD 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 25-February-2012
2. An undertaking letter/16/ 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 verification under VCS covers the monitoring period from 01-February-2021 to 24-February-2022 (inclusive of both dates). VCS crediting period is of 10 years (fixed) with 25-February-2012 as the start date and crediting period end date as 24-February-2024.
4. GHG credits from monitoring period 01-February -2021 to 24-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>Powerica Limited</i>
Contact person	<i>Mr. Pradeep Gupta</i>
Title	<i>Head - Wind Energy Division</i>

³ <https://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1355215731.08/view>

⁴ <https://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1355215731.08/view>

Address	<i>9th Floor, Godrej Coliseum, Sion (E), Mumbai - 400022, Maharashtra, India</i>
Telephone	<i>+ 91 22 4001 2000</i>
Email	<i>pradeep.gupta@powericaltd.com</i>

Organization name	<i>EKI Energy Services Limited</i>
Contact person	<i>Shital Patil</i>
Title	<i>Project Manager</i>
Address	<i>Office No 201, Plot No 48, Scheme 78, Vijay Nagar Part- II, Indore 452010, India</i>
Telephone	<i>+91-9028885805</i>
Email	<i>shital@enkingint.org/ registry@enkingint.org</i>

6. The estimated emission reduction achieved from the project activity for the current monitoring period is 65,395 tCO₂e (61,360 tCO₂e/365 days x 389 days), whereas actual emission reductions achieved are 55,590 tCO₂e, which is 14.99% 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 and not in the control of project participants,

Finding: CL 01, CAR 01 & CAR 02 were raised and successfully closed. Please refer Appendix 4 for more information.

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. 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

Sr. No.	Indicator	Assessment team opinion
		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

Project participant has kept a grievance register at project site & sought comments/grievances/suggestions from local stakeholders including local community, government agencies and NGOs which is accessible to stakeholders to provide their feedback on the project as a part of ongoing communication with stakeholders in line with requirement of clause 3.16.17 of VCS Standard, ver. 4.2. However, no comments/grievances/suggestions have been received from the aforementioned stakeholders during the current monitoring period. Project participant has also submitted the copy of register and the same has been checked by the verification team and confirms that during the current monitoring period, no any grievances received. Verification team confirmed the same during the remote audit and document review.

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 CDM PDD and MR.
Findings	CAR 03 and CAR 04 were raised and successfully closed. Please refer Appendix 4 for more information.
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: - $BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$ Where; Where: BE_y = Baseline emissions in year y (tCO ₂) $EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into 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 the latest version of the “Tool to calculate the emission factor for an electricity system” (Version 02.2.1) (tCO₂/MWh). The project activity is the installation of a new, grid connected renewable power plant (Greenfield project) with no renewable power plant operating prior to the implementation of the project activity, hence, $EG_{PJ,y}$ has been calculated as: $EG_{PJ,y} = EG_{facility,y}$ Where: $EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the 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) Therefore, $BE_y = EG_{facility,y} \times EF_{grid,CM,y}$ Where, BE_y = Baseline Emissions (tCO₂/year) $EG_{facility,y}$ = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh/yr) $EF_{grid,CM,y}$ = Combined margin CO₂ emission factor for grid connected power generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (Version 02.2.1) (tCO₂/MWh). Ex-ante fixed parameters: The baseline emission factors are sourced from the registered VCS PD/CDM PDD. Combined margin CO₂ emission factor ($EF_{grid,CM,y}$) is 0.9528 tCO₂/MWh. The calculation approach was in line with the registered VCS PD/CDM PDD. Values of ex-ante parameters are as follows: $EF_{grid,CM,y}$ = Calculated as per “Tool to calculate the emission factor for an electricity system, version 02.2.1” as 3-year generation weighted average using data for the years 2008-09, 2009-10 and 2010-11. The data are obtained from “CO₂ Baseline Database for Indian Power Sector” version 07, published by the Central Electricity Authority, Ministry of Power, Government of India. The value 0.9842 is used for the calculation of the Baseline Emission and is found to be consistent with the registered VCS PD/CDM PDD. $EF_{grid,BM,y}$ = The Build Margin emission factor is sourced from Central Electricity Authority: CO₂ Emission Database CEA CO₂ Baseline database Version 07, published by the Central Electricity Authority, Ministry of Power, Government of India. The value 0.8588 tCO₂/MWh is used for the calculation of the Baseline Emission and is found to be consistent with the registered VCS PD/CDM PDD. The combined margin emissions factor is calculated as follows:
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$$EF_{grid,CM,y} = EF_{grid,OM,y} * W_{OM} + EF_{grid,BM,y} * W_{BM}$$

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 (0.75)

W_{BM} = Weighting of build margin emissions factor (0.25)

After calculation, the Combined Emission factor is obtained as 0.9528 tCO₂/MWh.

Monitored Parameter: As per registered VCS PD/CDM PDD, the following monitoring parameter is monitored:

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

The energy generated from the wind farm is being monitored by Tri-vector Main and Check Meter (bi-directional) installed at WTG yard as well as at substation. The energy meters are of accuracy class 0.5s (Main Meter) and 0.2s (Check meter) located at WTGs yard and 0.2s located at substation (all meters). Monthly meter readings are taken from the meter located at substation and certified by the representatives of GETCO Officials and the representatives of the project proponent. The Certificate for share of electricity generated by the wind is issued by GETCO and based on this PP raise invoice. The certificate for share of electricity contains final value of quantity of net electricity generation supplied by the project. The details of Meters are as follows:

Details of Meters located at WTG yards:

WTG Unique ID	Main Meter Sr. No.	Accuracy class	Check Meter Sr. No.	Accuracy Class	Make
JW01	GJU64156	0.5s	GJU 64796	0.2s	Secure
JW02	GJU62542	0.5s	GJU 64791	0.2s	Secure
JW05	GJU64802	0.5s	GJB 5645	0.2s	Secure
JW29	GJU64155	0.5s	GJU 64795	0.2s	Secure
VW48	GJU64809	0.5s	GJB 56473	0.2s	Secure
VW49	GJU64157	0.5s	GJU 64794	0.2s	Secure
VW54	GJU64158	0.5s	GJU 64793	0.2s	Secure
VW62	GJU64805	0.5s	GJU 64797	0.2s	Secure
VW63	GJU64812	0.5s	GJU 64798	0.2s	Secure
VW66	GJU64804	0.5s	GJU 64800	0.2s	Secure
VW67	GJU64807	0.5s	GJU 64792	0.2s	Secure
VW71	GJU64813	0.5s	GJU 74497	0.2s	Secure
	XD448016	0.5s			Secure
VW79	GJU64806	0.5s	RJB 78141	0.2s	Secure
VW80	GJU64803	0.5s	GJU 64790	0.2s	Secure

	The meters located at the substation ((220/30 kV S/S Vandhiya sub-station)				
	Line	Sr. No. Main Meter	Make	Sr. No. Check Meter	make Accuracy class
	Line 1	GJB 01664	Secure	GJ-2311-A	L & T 0.2s
	Line 2	GJB 01665	Secure	GJ-2363-A	L & T 0.2s
The calibration frequency of meters is once in 5 years. The details of calibration of meters are provided in Section 4.5 of this report. During the current monitoring period, quantity of net electricity generation supplied by the project is 58,344.87 MWh. The verification team has checked Certificate for share of electricity issued by GETCO /3/and found that quantity net electricity generation supplied to the grid is correct. Quantity of net electricity generation supplied to the grid has also been cross verified with the monthly invoices/4/ issued by the PP and found consistent. Verification team has also cross check the Certificate for share of electricity by wind farm available on line at GETCO website. The calculation of baseline emissions is as below, $BE_y = EG_{\text{facility},y} \times EF_{\text{grid,CM},y}$ $BE_y = 58,344.87 \text{ MWh} \times 0.9528 \text{ tCO}_2 / \text{MWh}$ $BE_y = 55,590 \text{ tCO}_2\text{e (round down)}$ 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 $ER_y = BE_y - PE_y$ $= 55,590 \text{ tCO}_2 - 0$ $= 55,590 \text{ tCO}_2\text{e}$ Verification team confirms that the monitoring has been carried out in accordance with the monitoring plan contained in the registered VCS PD/7/. Assessment team confirmed that the GHG emission reductions and removals have been quantified correctly in line with the registered VCS PD/7/.					

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
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	meters are also checked. The Calibration details of the monitoring meters are also checked with calibration certificates.																																																															
Findings	CAR 05 was raised and successfully closed. Please refer Appendix 4 for more information.																																																															
Conclusion	The metering arrangement is bi-directional energy meters (main and check) at the substation as well as at WTG yard. These meters record several parameters including electricity exported & imported. The electricity meters located at the sub-station are being used by state electricity board (GETCO) for Share certificate statements. Verification team found that since metering arrangement, monitoring practice, accuracy class, calibration interval is under control of state electricity board, the PP does not have control over this process. The calibration frequency of meters are once in 5 years as per project description deviation. The same has been accepted during the previous verification. The calibration details of meters installed are as follows: Meter located at WTG yard: <table><tr><th>WTG No.</th><th>Sr. No. Main meter</th><th>Calibration date</th><th>Validity of calibration</th></tr><tr><td>JW01</td><td>GJU64156</td><td>07-March- 2018</td><td>06-March- 2023</td></tr><tr><td>JW02</td><td>GJU62542</td><td>26-March- 2019</td><td>25-March-2024</td></tr><tr><td>JW05</td><td>GJU64802</td><td>26-March- 2019</td><td>25-March-2024</td></tr><tr><td>JW29</td><td>GJU64155</td><td>27-March- 2019</td><td>26-March-2024</td></tr><tr><td>VW48</td><td>GJU64809</td><td>04-April- 2019</td><td>03-April-2024</td></tr><tr><td>VW49</td><td>GJU64157</td><td>26-March- 2019</td><td>25-March-2024</td></tr><tr><td>VW54</td><td>GJU64158</td><td>26-March- 2019</td><td>25-March-2024</td></tr><tr><td>VW62</td><td>GJU64805</td><td>04-April- 2019</td><td>03-April-2024</td></tr><tr><td>VW63</td><td>GJU64812</td><td>04-April- 2019</td><td>03-April-2024</td></tr><tr><td>VW66</td><td>GJU64804</td><td>04-April- 2019</td><td>03-April-2024</td></tr><tr><td>VW67</td><td>GJU64807</td><td>04-April-2019</td><td>03-April-2024</td></tr><tr><td rowspan="2">VW71</td><td>GJU64813</td><td>09-March- 2018</td><td>08-March-2023</td></tr><tr><td>XD448016</td><td>19-Jan-2018</td><td>18-January- 2023</td></tr><tr><td>VW79</td><td>GJU64806</td><td>25-March- 2019</td><td>25-March-2023</td></tr><tr><td>VW80</td><td>GJU64803</td><td>26-March- 2019</td><td>25-March-2023</td></tr></table>	WTG No.	Sr. No. Main meter	Calibration date	Validity of calibration	JW01	GJU64156	07-March- 2018	06-March- 2023	JW02	GJU62542	26-March- 2019	25-March-2024	JW05	GJU64802	26-March- 2019	25-March-2024	JW29	GJU64155	27-March- 2019	26-March-2024	VW48	GJU64809	04-April- 2019	03-April-2024	VW49	GJU64157	26-March- 2019	25-March-2024	VW54	GJU64158	26-March- 2019	25-March-2024	VW62	GJU64805	04-April- 2019	03-April-2024	VW63	GJU64812	04-April- 2019	03-April-2024	VW66	GJU64804	04-April- 2019	03-April-2024	VW67	GJU64807	04-April-2019	03-April-2024	VW71	GJU64813	09-March- 2018	08-March-2023	XD448016	19-Jan-2018	18-January- 2023	VW79	GJU64806	25-March- 2019	25-March-2023	VW80	GJU64803	26-March- 2019	25-March-2023
	WTG No.	Sr. No. Main meter	Calibration date	Validity of calibration																																																												
	JW01	GJU64156	07-March- 2018	06-March- 2023																																																												
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	VW80	GJU64803	26-March- 2019	25-March-2023																																																												
	Check meter installed at WTGs yard are as a part of emergency procedure and to be used only in case of failure of main meter. State Utility has not calibrated the check meter located at WTGs yard as these meters are not in used, Joint metering is being done at substation. Also, data of check meter readings not being used for calculations of baseline emissions.. PP do not have any control on it,																																																															

	calibration practice is under state electricity board and state electricity board did not calibrate check meters. Hence no calibration details available for check meter. Further, verification team confirmed through interview of PP representative that main meter at both places were not found any defective during the current monitoring period and joint meter reading is being taken at substation meter which is being used for preparation if certificate foe share of electricity by the project activity and there is no role of check meter located at WTG yards , thus acceptable to VVB. Meter Located at sub-station: <table><tr><th>Line</th><th>Sr. No. Main Meter</th><th>Sr. No. Check Meter</th><th>Calibration date</th><th>Calibration valid till</th></tr><tr><td>Line 1</td><td>GJB 01664</td><td>GJ-2311-A</td><td>02-February-2019</td><td>01-February-2024</td></tr><tr><td>Line 2</td><td>GJB 01665</td><td>GJ-2363-A</td><td>02-February-2019</td><td>01-February-2024</td></tr></table> Verification team confirms through review of calibration certificate that main meters and check meters are of accuracy class of 0.5s and 0.2s, All the meters are calibrated as per calibration frequency mentioned in monitoring plan i.e once in five year/17/. The calibration of meters is carried out by Meter Testing Laboratory, Paschim Gujarat VIJ Company Ltd. Which is a Govt Agency for testing of meters thus acceptable to the assessment team. The Meter and testing division of Paschim Gujarat VIJ Company Ltd.is accredited by NABL (National Accreditation Board for Laboratory, Govt of India) to carry out the testing of the meters which is as per the national regulation and thus traceability of the Calibration is also confirmed by the assessment team. It is reported that the data will be kept for 2 years following the end of the crediting period or till the last issuance of VCUs for the project activity whichever occurs later. The responsibilities and authorities of project management, data handling and recording, measurement methods and QA/QC procedure have been systematically established and formalized and the same was verified during the remote audit. Remote audit and interview with site personnel also confirms that the operational and organizational chart as mentioned in registered VCS PD/ CDM PDD is as per the site practice and thus assessment team confirms that the details are correct.	Line	Sr. No. Main Meter	Sr. No. Check Meter	Calibration date	Calibration valid till	Line 1	GJB 01664	GJ-2311-A	02-February-2019	01-February-2024	Line 2	GJB 01665	GJ-2363-A	02-February-2019	01-February-2024
Line	Sr. No. Main Meter	Sr. No. Check Meter	Calibration date	Calibration valid till												
Line 1	GJB 01664	GJ-2311-A	02-February-2019	01-February-2024												
Line 2	GJB 01665	GJ-2363-A	02-February-2019	01-February-2024												

	The shutdown / break down reports/18/ are checked and found that the plant undergone scheduled maintenance and break down. Assessment team checked the routine maintenance log book and confirmed that it does not have any impact on project design and monitoring procedures. No unforced error observed. Assessment team confirmed that data/ information used for determining GHG reductions and removals were sufficient in quantity and of appropriate quality. Calibration certificates of meters/ QA/QC procedure checked and found to be appropriate.
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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 Powerica Limited to perform periodic verification of the “Green Energy Project at Gujarat by Powerica Limited”.

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/ CDM PDD 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 CDM PDD
- 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
- Project complies with the verification criteria for projects and their GHG emission reductions or removals set out in VCS program guideline version 4.1 and VCS Standard version 4.2.
- Project has been implemented in accordance with the project description and subsequently validated deviations

Verification period: From 01-February-2021 to 24-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-February-2021 to 31-December- 2021	49,845	0	0	49,845

01-janaury-2022 to 24-February-2022	5,746	0	0	5,746
Total	55,590	0	0	55,590

The estimated emission reduction achieved from the project activity for the current monitoring period is 65,395 tCO₂e (61,360 tCO₂e/365 days x 389 days), whereas actual emission reductions achieved are 55,590 tCO₂e, which is 14.99% lower than estimated emission reductions. As actual VCU are lower than estimated value for the MP which is due to climatic factors affecting wind power generation and not in the control of project participants,

APPENDIX I: DOCUMENTS REVIEWED DURING VERIFICATION

No.	Author	Title	References to the document	Provider
1.	NA	Commissioning Certificates of WTGs	Commissioning Certificates of all WTGs issued by GEDA	Project participant
2.	Applus	Contract of the project participant with the DOE A+SH_SYST_TQC_VCS_VER_37221	Dated: 05-January-2022	Project participant
3.	State Utility	Certificate for share of electricity	JMR records	Project participant
4.	PP	Invoices raised during the monitoring period	01-February-2021 to 31-24-February-2022	Project participant
5.	NA	Monitoring Report, (Initial Version) Monitoring Report, (Final Version)	Version 01, dated 20-May-2022 Version 02 dated 16-June-2022	Project participant
6.	NA	Emission Reduction sheet (Initial) Emission Reduction sheet (Final)	Version 01, dated 20-May-2022 Version 02 dated 16- June-2022	Project participant
7.	NA	Registered CDM PDD Registered VCS PD Previous Verification report (MP:01-February-2020 to 31-janaury-2021	Version 05 dated 24-January-2013 Version 02 dated 13-January-2014 Version 01, dated 30-March-2021	UNFCCC / VERRA
8.	VERRA	VCS Standard VCS Programme guide	Version 4.2 Version 4.1	VERRA
9.	UNFCCC	CDM validation and verification standard for project activities, Version 03.0 CDM Project Standard for project activities, version 03.0	UNFCCC CDM web site	UNFCCC
10.	UNFCCC	ACM0002: Grid-connected electricity generation from renewable sources	Version 13.0.0	UNFCCC
11.	Vestas	Technical specifications of WTGs	-	Project participant
12.	PP	Single line diagram and meter locations / Layout	-	Project participant
13.	NA	Power purchase agreement for the WTGs	For all 14 WTGs	Project participant

No.	Author	Title	References to the document	Provider
14.	NA	Remote auditing for verification of measuring and monitoring procedure, - Video recordings of all WTGs & snapshots of the project site/equipment's - Interviews and data/log review	13-June-2022	Project participant
15.	NA	Organization structure/chart	-	Project participant
16.	NA	Declaration of No Double Counting	09-May-2022	Project participant
17.	GETCO	Calibration Certificates	Calibration Certificates of all Meters	GETCO
18.	PP	Plant log sheet	01-February-2021 to 24-February-2022	Project participant
19.	PP	Photographs of WTGs Name plates/Videos of all WTGs	-	Project participant
20.	PP	Grievance register	Current MP	Project participant

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

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:
01	4.1	14-June-2022
Description of CL		
During desk review, verification team found that commissioning certificates of all WTGs is not submitted by PP. PP is requested to clarify the same.		
Project participant response		Date: 16-June-2022
Commissioning certificates of all WTGs are being submitted.		
Documentation provided by project participant		
Commissioning Certificates		
DOE assessment		Date:
PP has now submitted the commissioning certificates of all WTGs. Verification team has checked the commissioning dates mentioned in Section 3.1 of MR and found correct. CL closed.		

Table 2. CAR from this verification

CAR ID	Section no.	Date:
01	4.1	14-June-2022
Description of CAR		
Monitoring Report has been prepared in Version 4.0 of MR template which is no more valid version of MR template. PP is requested to submit the MR in latest version of VCS MR template.		
Project participant response		Date: 16-June-2022
Monitoring report is being updated in latest version of VCS MR template.		
Documentation provided by project participant		
MR V02		

DOE assessment	Date: 17-June-2022
PP has updated the monitoring report in latest version of VCS MR template. Thus, CAR closed.	

CAR ID	02	Section no.	4.1	Date: 14-June-2022
Description of CAR				
The project activity is also registered under CDM as mentioned in Section 1.10 of monitoring report. PP requested to submit declaration regarding avoidance of double counting of emission reductions in the other GHG trading programmes and REC mechanism of India. Further, provide details of any GHG credits claimed under such programs.				
Project participant response				Date: 16-June-2022
1. Declaration regarding avoidance of double counting of emission reductions in the other GHG trading programmes and REC mechanism is being submitted. 2. Details of any GHG credits claimed under mentioned in section 1.9 of MR.				
Documentation provided by project participant				
1. Declaration 2. MR V02				
DOE assessment				Date: 17-June-2022
PP has submitted undertaking dated 09-May-2022 regarding avoidance of double counting of emission reductions in the other GHG trading programmes and REC mechanism of India. CAR closed.				

CAR ID	03	Section no.	4.4	Date: 14-June-2022
Description of CAR				
Verification team has checked the net electricity supplied to grid provided in ER calculation spreadsheet with certificate of share of electrify issued by Gujarat Energy Transmission Corporation Limited (GETCO) and found correct. However, value is not consistent in Section 4.2 and Section 5.1 of MR.				
Project participant response				Date: 16-June-2022
The net electricity supplied to grid provided in ER calculation spreadsheet and values in section 4.2 and 5.1 of monitoring report is now consistent.				
Documentation provided by project participant				
MR V02 and ERV02				
DOE assessment				Date: 17-June-2022
PP has corrected the net electricity exported to grid on Section 4.1 and 5.1 of revised MR. CAR closed.				

CAR ID	04	Section no.	4.4	Date: 14-June-2022
Description of CAR				
Verification team found that calculated baseline emission in Section 5.1 is not consistent with the calculated value in ER spread sheet.				
Further, emission reduction calculation formula in Section 5.4 is not consistent with applied methodology and registered CDM PDD which part of VCS PD.				

Project participant response	Date: 16-June-2022
1. Calculated baseline emission in section 5.1 of MR is now updated as per ER spread sheet. 2. <i>Emission reduction calculation formula in Section 5.4 is being updated as per applied methodology and registered CDM PDD part of VCS PD.</i>	
Documentation provided by project participant	
MR V02 and ERV02	
DOE assessment	Date: 17-June-2022
PP has now corrected the baseline emission in Section 5.1 in line with emission reduction. PP has also corrected the emission reductions calculation formula in Section 5.4 as per applied methodology. CAR closed.	

CAR ID	05	Section no.	4.5	Date: 14-June-2022
Description of CAR				
<i>Make & Accuracy class of meters are not mentioned in Appendix 1; Energy meter calibration details. Also, during remote audit via live video it was observed that main meter and check meters are installed with each WTGs and substations. However, the same is not mentioned in MR.</i> <i>Further, PP is requested to submitted supporting evidence of meter calibration carried out during the current monitoring period.</i>				
Project participant response				Date: 16-June-2022
1. Make and accuracy class of meters are being mentioned in Appendix 1 of MR. 2. Details of main and check meters are being provided in MR. As a part of emergency procedure, the check meter will be used in case of failure of main meter. Check meter readings not used for calculations of baseline emission so there is no requirement of calibration of check meter. PP do not have any control on it, calibration practice is under state electricity board and state electricity board did not calibrate check meters. Hence no calibration details available for check meter.				
Documentation provided by project participant				
1. MR V02 2. Calibration Certificates				
DOE assessment				Date: 17-June-2022
PP has now added the accuracy class of main meter and check meters in Appendix 1. PP has also now added the information of check meters installed at WTG yards as well as at substation. PP has also submitted the calibration certificates of all main meter located at WTG yard and at substation. Check meter installed at WTG yard as a part of emergency procedure and to be used in case of failure of main meter. Check meter readings not used for calculations of baseline emission so State electricity board had not calibrated the check meter. PP do not have any control on it, calibration practice is under state electricity board and state electricity board did not calibrate check meters. Hence no calibration details available for check meter located at substation. Nevertheless, joint metering is being done at substation and there is no impact of no calibration of check meter. Hence acceptable to VVB. CAR closed.				

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	Singh	Jitendra Mohan	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	Xue	Denny	Applus+ Certification
2.	Approver	IR	Calle de Miguel	Agustin	Applus+ Certification

Short CVs of the Team:

1. **Jitendra Mohan Singh**, has done Advanced MSc in Sustainable Energy Systems and Management from International Institute of Management, University of Flensburg, Germany and B.Tech. in Agricultural Engineering from Allahabad University, India. He has more than (18) years of working experience in different organizations like IARI, IIT Delhi, ICAR, IRADe, CAPART, SMEC and Perenia Carbon and M B Power (Madhya Pradesh) Ltd. in the area of Agriculture, Energy & Environment and Climate Change. He also worked on contract basis (ad hoc) as a RIT expert in UNFCCC from 2010 to 2013. Currently, he is empanelled with

Applus+ Certification since 2020 and has been involved Verifications of Pas/PoAs as Lead Auditor and Technical Expert for Renewable and non-Renewable as well as Energy Demand.

2. **Mr. Denny Xue** (Master's Degree in Environmental Engineering, Bachelor's Degree in Thermal Engineering) is an Auditor appointed by Applus+ LGAI for the GHG project assessment, auditing and technical review. He has more than 6 years of work experience in CDM/GS4GG/VCS project assessment and technical review with Applus+. Before he joined Applus+ LGAI, he has been working for Shanghai Chuanji Investment and Management which is a CDM consultancy company as a project manager for CDM project development.

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
GEDA	Gujarat Energy Development Agency
GETCO	Gujarat Energy Transmission Corporation
PP	Project Participant

APPENDIX 5: DECLARATION OF NO DOUBLE COUNTING

POWERICA LIMITED

Date: 09/05/2022

Undertaking Letter

This undertaking is in reference to the current monitoring period i.e. 01/01/2021 to 31/12/2021 of VCS Project activity titled *"Green Energy Project at Kutch by Powerica Limited"* wherein **POWERICA LIMITED**, hereby declares following:-

1. Projects is never rejected by Other GHG Programs.
2. The project is not registered with any mechanism generating environmental attributes.
3. The project is hosted in India, which is a Non-annex country and there is no compliance with an emission trading program or to meet binding limits on GHG emissions for this project activity.
4. Project ownership and right of use as per the VCS compliance rest with **POWERICA LIMITED**.
5. Project activity does not result in creation of another form of environmental credit during the period for which VCUs are claimed.
6. The electricity generated from this project is not availing Environmental or electrical credits from India.
7. Double counting would be avoided at any cost for the VCS monitoring period 01-January-2021 to 31-December-2021.

Also it is to be noted that, **POWERICA LIMITED** would not use net GHG emission reductions by this project for compliance with emission trading program to meet binding limits on GHG emissions.

For POWERICA LIMITED




Mr. Pradeep Gupta
Director
Wind Division



A PROMISE FOR POWER

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