VERIFICATION REPORT

WIND POWER PROJECT AT THENI BY POWERICA LIMITED

Document Prepared By RINA Services S.p.A. (RINA)

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Summary:

The project under consideration is set up to produce clean power from the wind electric converters (WECs). The generated electricity is supplied to the national grid The project consists of 6 Wind Turbine Generators (WTGs) of total generating capacity of 9.9 MW (6 units of Vestas make V82 WTG) in Theni district of the state of Tamil Nadu, India. The generated electricity is supplied to the National grid comprising mainly fossil fuel-based power plants.

Verification is the periodic independent review and ex-post determination by a DOE of the monitored reductions in GHG emissions that have occurred as a result of the registered VCS project activity during a defined monitoring period. Certification is the written assurance by a DOE that, during a specific period in time, a project activity achieved the emission reductions as verified. The objective of this verification is to verify and certify emission reductions reported for the project "Wind power project at Theni by Powerica Limited", for the period 01/01/2021 to 31/12/2021.

Verification is conducted using RINA procedures in line with the VCS Standard Version 4.1, available at the time of the verification starts, and applying standard auditing techniques. RINA assessed and determine that the implementation and operation of the project activity, and steps taken to report emission reductions comply with the VCS criteria. The verification assessment involved a document review of relevant documentation. The review of the project design documentation, monitoring report and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and stakeholders have provided RINA S.p.A. with sufficient evidence to validate the fulfilment of the stated criteria.

During the verification 02 CLs are identified in relation to evidence for emission reduction calculation; RINA thus request the resolution of the findings prior to proceeding with the verification process. The PPs are invited to respond to the issued listed in Appendix II. During the process of verification by VVB, the PP provided the substantial evidence and updated documents, thus CLs were closed correctly.

In conclusion, it is RINA's opinion that the project activity "Wind power project at Theni by Powerica Limited", as described in the Monitoring Report version 03 of 20/06/2022 meets all relevant requirements for CDM and VCS activities and all relevant host Party criteria and correctly applies the baseline and monitoring methodology AMS –I.D "Grid connected renewable electricity generation", (Version 18). Hence RINA is able to certify that the emission reductions from the project activity "Wind power project at Theni by Powerica Limited", during the VCS monitoring period 01/01/2021 to 31/12/2021 (including both days) amount to 15,598 tons of CO_2e.

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1 INTRODUCTION

1.1 Objective

RINA has been commissioned by Powerica Limited, to perform an independent verification of its VCS project, "Wind power project at Theni by Powerica Limited", already registered under VCS with Project ID. 1830, for the reported GHG emission reductions for the given monitoring period 01/01/2021 to 31/12/2021 (both days inclusive). The VCS projects must undergo independent third-party verification and certification of emission reductions as the basis for issuance of Voluntary Emission Reductions (VERs/VCUs).

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

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

1.2 Scope and Criteria

The scope of the verification is to verify that:

The project activity has been implemented and operated in accordance with the registered PD or any approved revised PD;

- The monitoring plan, including compliance with any guidance provided by the VCS Board regarding deviations from the provisions of a registered plan and/or methodology;
- The data and calculation of GHG emission reductions have been assessed to correctly support the emission reductions being claimed.

The verification shall ensure that reported emission reductions are complete and accurate in order to be certified.

Verification is conducted using RINA procedures in line with the VCS Standard Version 4.1 and related rules and guidance available and applying standard auditing techniques. RINA has also reviewed the documents against the CDM VVS and PS for project activities version 3.0/22/

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

1.3 Level of Assurance

In line with Guidelines for Application of materiality in verifications /18/, a reasonable level of assurance is defined for the verification of the project by complete verification of all the values indicated in the emission reduction spreadsheet with source documents such as electricity generation records, invoices at the document review stage and during remote site visit. There are no material errors, omissions or misstatements.

The draft final verification report before being submitted to the client was subjected to an independent internal technical review to confirm that all verification activities had been completed according to the pertinent RINA instructions.

The technical review was performed by a technical reviewer(s) qualified in accordance with RINA's qualification scheme for VCS and CDM validation and verification. The verification team and the technical reviewers consist of the following personnel.

Role	Last Name	First Name	Country
Team Leader, Verifier & Technical Expert TA 1.2	Singh	Vinay	India
Technical Reviewer	Kudtarkar	Shruti	India

1.4 Summary Description of the Project

The purpose of the proposed project is to sufficiently utilize the wind energy to generate electricity, which is delivered to National grid. All the electricity supplied by the proposed project to the grid substitutes the equivalent electricity of the National grid, which is dominated by fossil-fuel fired power plants, to avoid GHG emissions.

The proposed project is a newly-built wind power project involves the installation of total capacity 9.9 MW consisting of 6 units of Vestas make V82 WTG. The project also contributes to sustainable development of the local community with environmental and economic benefits. The project is located in commissioned in villages, Beraja, Datrana and Samor of Khambaliya Taluka of Devbhoomi Dwaraka district of Gujarat.

Location/geographical coordinates were also confirmed in Google Earth application/21/. The WTGs have been commissioned on 13-September-2010. The same has been verified against the registered VCS PD/02/, previous verification report/03/ and commissioning certificate/10/.

The emission reductions from the project activity during the period 01/01/2021 to 31/12/2021 (both days inclusive) amount to 15,598 tCO_2e.

2 VERIFICATION PROCESS

2.1 Method and Criteria

Verification was conducted using RINA procedures in line with the requirements specified in the VCS Requirements, i.e. VCS Program Guide, VCS Version 4 (v4.0) of 19/09/2019 and VCS Standard, VCS Version 4.1 (v4.1) of 22/04/2021. The GHG emission reductions are on the basis of the approved baseline and monitoring methodology AMS –I.D "Grid connected renewable electricity generation", Version 18. The verification consisted of the following three phases,

- Document review;
- Remote audit including Interviews and video conferencing;
- Resolution of Any Material Discrepancy and the issuance of the final verification report and certification.

The following sections outline each step in more detail.

2.2 Document Review

The monitoring report, Version 01.0 of 12/04/2022, Version 02.0 of 20/05/2022, **/01/**, the emission reduction calculations provided in the form of a spreadsheet (ER Sheet version 1 (VCS 701)_12/04/2022.xlsx) /04/, were assessed as part of the verification. In addition, the VCS Project Description (VCS PD) /02/ in particular the baseline estimations and the monitoring plan and the validation report /01/ /02/ for the project were reviewed.

The following table lists the documentation that was reviewed during the verification

/01/	Powerica Limited,: VCS monitoring report for the project activity "Wind power project at Theni by Powerica Limited", Version 01.0 of 12/04/2022 and Version 02.0 of 20/05/2022 covering monitoring period 01/01/2021 to 31/12/2021 and version 03 of 20/06/2022 and version 03.1 of 05/12/2022
/02/	Powerica Limited,: VCS Project Description for project activity "Wind power project at Theni by Powerica Limited", in India, of 29/12/2018 & Validation report for project "Wind power project at Theni by Powerica Limited", in India, 08/03/2011 https://registry.verra.org/app/projectDetail/VCS/1830 Powerica Limited,: VCS RCP Project Description for project activity "Wind power project at Theni by Powerica Limited", in India, of 13-April-2021 Prepared
/03/	Powerica Limited,: Verification report for project activity "Wind power project at Theni by Powerica Limited", in India: KBS_Verification Report_VCS monitoring period from 01 January 2020 to 31 December 2020

/04/	Powerica Limited: Emission Reduction spread sheet titled “ER Sheet_version 1 (VCS 1830)_12/04/2022".
/05/	VCS: VCS Program Guide, VCS Version 4 (v4.0), Requirements Document of 19/09/2019
/06/	VCS: VCS Standard, VCS Version 4.1 (v4.1), Requirements Document of 22/04/2021
/07/	CDM Excutive Board: AMS –I.D “Grid connected renewable electricity generation”, Version 18, of 28/11/2014
/08/	(a) VCS: Monitoring report form (MONITORING REPORT: VCS Version 4) , version 4.0 dated 19/09/2019 (b) VCS: Monitoring report form (MONITORING REPORT: VCS Version 4.1) , version 4.1 dated 20/01/2022, Effective from 20 July 2022 for all new pipeline listing requests, https://verra.org/wp-content/uploads/2022/01/VCS-Summary-of-Effective-Dates-2022-Q1.pdf
/09/	Calibration Certificates for Main Meter and Check Meters, dated 17/05/2017
/10/	Tamil Nadu Electricity Board: Commissioning certificate issued to M/s Powerica Limited for 06 WTGs with total capacity 9.9 MW at Theni: 13/09/2010 and 17/09/2010
/11/	Powerica Limited,: Declaration confirming not to claim credits for same GHG emission reduction under CDM or any other GHG schemes except VCS for the current monitoring period i.e., 01/01/2021 to 31/12/2021
/12/	Power Purchase Agreement executed between Tamil Nadu Electricity Board and M/s Powerica Limited dated 13 September 2010
/13/	M/s Powerica Limited: Invoice raised for sale of power from 9.9 MW wind power project in Theni to Tamil Nadu Electricity Board, for the period; 01/01/2021 to 31/12/2021
/14/	Electricity generation statement by the wind farm for the period 01/01/2021 to 31/12/2021
/15/	Photographs and videos of remote site audit
/16/	Central Electricity Authority (CEA): CO_2 Baseline Database for the Indian Power Sector User Guide, Version 15, Dec. 2019
/17/	CEA: Central Electricity Authority (Installation and Operation of Meters) Amendment Regulations, 2019
/18/	UNFCCC Guideline: Application of materiality in verifications, Version 02 of 20/02/2015
/19/	VERRA: COVID-19 Travel Guidance for Projects dated 18/03/2020; and email communication with Programme office VERRA for exemption of site visit.
/20/	https://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1300097036.88/view
/21/	Google Earth application
/22/	CDM VVS version 3.0 dated 09 September 2021 and CDM PS, version 3.0 dated 09 September 2021
/23/	Public grievance register at the project site

2.3 Interviews

Interviews: Audit team has conducted the interview process via videoconference (Zoom call). The key personnel interviewed, and the main topics of the interviews are summarized in the table below

Sl. No.	Date	Name and Role	Organization	Topic
1	16/05/2022	Mr.Nilesh Parmar Site Incharge	Powerica Ltd.	Project description, evidences for proof of title, Monitoring plan, ownership of GHG emission reductions, Project Start Date, Commercially Sensitive Information, Other Programs.
2	16/05/2022	Shiwani Makkar Manager of carbon advisory	AWT Energy	Monitoring plan & QA/QC procedures, Meter Reading,
3	16/05/2022	Ishan Shinde Energy and environment analyst	AWT Energy	VCS documentation, requirements, VER ownership etc. Monitoring plan & QA/QC procedures. Day to day monitoring, O & M procedures, calibration of energy meter, JMR records etc.
4	16/05/2022	Samual James Director	AWT Energy	

2.4 Site Inspections

Audit team has conducted a remote site inspection via videoconference (Zoom) with PP on different topics as mentioned under section 2.3 of this report. The team has conducted a video call with the Mr. Nilesh Parmar and Mr. James Samual on 16/05/2022; who were at the project site. During the live video call using the software Zoom and what's app, team was able to check the WTG as well as the monitoring equipment i.e. energy meters. Based on the videoconference, MR review, as the review of VCS

requirements, RINA Verification team has proceeded to skip the presential site visit due to the COVID-19 pandemic/19/ Verification team has used the following alternative means for its assessment and to justify that they are sufficient for the purpose of verification.

- By review of MR;
- By taking follow up actions by conducting interview with PP, to gather information about knowledge of project design, current situation via videoconference. Cross-checked evaluation under the scope of all information and references provided in MR. Details of interviewees, topics covered and additional information presented in the below section "2.3 – Interviews".

The following justification is provided by the verification team for not conducting the site visit.

Conditions	Verification team justification
Verification techniques used to justify the lack of a site visit and additional evidence to demonstrate; how a reasonable level of assurance was attained.	Verification team has done the follow-up actions by: Team has carried out interviews with relevant personals to verify the implementation and operation of the registered VCS project activity as per the registered VCS PD. For the project 'Wind power project at Theni by Powerica Limited' main meters, check meters and WTGs were assessed during the remote site audit. The verification team has carried out interviews using Zoom and what's app application with video camera function, in order to assess the information on registered monitoring plan in the VCS PD. Team has reviewed the information flows for generating, aggregating and reporting the monitoring parameters. The ex-post parameters are sourced from monthly generation report, issued by GETCO (a public utility company). All the generation reports are provided and verified. PP presented during the videoconference all documents related to monitoring and equipment calibration. The calculations and assumptions made in determining the VERs were reviewed and discussed with PP by videoconference.
Alternative Measures relating to on-site visits for verification of the project activity	The site visit cannot be postponed since a delay on performing the on-site visit for the project activity VCS 1830, will impact on a delay in VERs delivery against the ERPA signed on 19/01/2022 and CERs delivery date on or before 30/06/2022.

2.5 Resolution of Findings

The objective of this phase of the verification is to resolve any outstanding issues which need to be clarified for RINA's positive conclusion on the project description. To guarantee transparency any findings raised regarding to the validation are incorporated in the Verification Protocol and Verification Protocol Tables in Appendix II to this report.

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

- Non-compliance with the monitoring plan, the methodology or the standardized baseline are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient;
- Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;
- Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants.

Clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable VCS requirements have been met. All CARs and CLs raised by RINA during verification shall be resolved prior to submitting a request for issuance.

FAR (Forward Action Request) is raised during verification if the monitoring and reporting require attention and/or adjustment for the next verification period.

During the current verification, 02 Clarification request (CLs), 00 Forward Action Request (FAR) and 00 CAR (Corrective Action Request) were raised and successfully closed.

2.5.1 Forward Action Requests

The project activity is undergoing fifth verification under VCS; there were no FARs raised during the validation or previous verification. Also, during the current verification no FAR is raised.

2.6 Eligibility for Validation Activities

Not applicable

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project was webhosted on under Clean Development Mechanism (CDM), UNFCCC website for global stakeholder consultation /20/. The project activity has also been registered with UNFCCC under Clean Development Mechanism (CDM) program, Registration reference number is 4572.

The monitoring period considered under VCS is: 01-January -2021 to 31- December-2021. PP is not claiming credits under CDM scheme, thus the VCS monitoring period does not overlap with the CDM Monitoring Period; and there is no double accounting of emission reductions by the project activity.

Steps considered by VVB to assess the eligibility to participate under the VCS program are as follows:

a) The PP has claimed CDM benefits till Dec. 2012 and claimed VCS benefits onwards till Dec. 2020 this was confirmed through CDM and VCS website and the same was confirmed from PP.

b) As the PP is not claiming credits under CDM scheme from 2013, thus the project is eligible under the VCS program and this was confirmed by PP in self-declaration letter submitted to VVB.

3.2 Methodology Deviations

Not applicable

3.3 Project Description Deviations

As per registered CDM PDD, the calibration frequency is once in every two years. 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 is requested for change in calibration frequency as once in five years. This calibration frequency is as per CEA notification.

This project deviation was approved during renewal of crediting period (Monitoring period from 01-January-2020 to 31-December-2020).

3.4 Grouped Project

The verification team confirms that the project is not a grouped project and hence this is not applicable to the project activity.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

On the basis of the remote audit and the reviewed project documentation, the verification team confirms that the project was implemented as described in the registered VCS PD /02/. All the physical components and project boundary are in conformity with the description in registered VCS PD. During the verification it is confirmed that, actual implementation of the project against the description in its registered VCS-PD /02/ and found that all 6 WTGs were in operation with a total installed capacity of 9.9 MW, which is in line with the registered VCS-PD /02/.

Each WTGs is of 1.65 MW capacity. Type and capacity of individual WTGs were confirmed from pervious verification reports /03/ and Generation Statement /14/. It was further assessed through the technical specifications of the WTGs i.e., V82_1.65 MW, total capacity of 9.9 MW. During the remote audit, no changes have been observed or identified which may impact the additionality as there was no change in the installed capacity, no addition of component nor extension of technology, no addition nor removal of project sites; no change has been observed or identified that may impact the scale of the project activity or applicability of baseline and monitoring methodology /07/. The monitoring of the project activity is found to be in accordance with the monitoring methodology described in AMS –I.D "Grid connected renewable electricity generation", Version 18, of 28/11/2014 /07/. The monitoring mechanism is effective and reliable. During the remote audit, the personnel involved in the operation of the project activity have been interviewed to confirm, that the plant personnel are conscious of the importance of the monitoring activities. The required monitoring systems have been installed and are operational. The meters comply with appropriate quality standards applicable for the used technology. The accuracy class of the meters installed for the project activity was verified against the registered VCS PD/02/; VCS MR/01/ and validation report for renewal crediting period /02/ and cross-checked against the previous verification report /03/. The description in MR /01/ is also consistent with the actual implementation confirmed as above. As this is fifth verification and the project is registered before 20 Jan 2023, thus SDG reporting is not applicable to this verification. Therefore RINA confirmed that there is no material discrepancy between the actual project information and the project description. The net electricity generation by the project from 01-January-2021 to 31-December-2021, is taken into consideration.

4.2 Safeguards

4.2.1 No Net Harm

The verification team confirms that during this verification no potential negative environmental and socio-economic impacts have been identified.

As per the Schedule 1 of Ministry of Environment and Forests (Government of India) notification dated January 27, 1994 and EIA Notification (S.O 1533) dated 14th September 2006, Environmental Impact Assessment for the wind projects is not required to be done. This project activity will not involve any negative environmental or socio-economic impacts, as the WTGs are installed for generation of power using wind which is a clean source of energy.

Hence no mitigation measures are required.

4.2.2 Local Stakeholder Consultation

Before starting of the VCS project activity, a stakeholders' consultation had been conducted in the project site. Local stakeholders are having a positive opinion about the project activity, the details of local stakeholders' consultation had been reported in the Appendix 2 of the registered VCS PD/02/. For this monitoring period local people were interviewed by phone. The main means of communication between the local people and the project owner is an open-door interaction mechanism. No complaints/negative comments received during the monitoring period. The same has been confirmed during the remote site visit. Apart from the GHG reduction, the project is contributing towards social, economic and environmental well being of society. Local employment generation and rural development happened because of these renewable energy wind projects.

4.3 AFOLU-Specific Safeguards

Not applicable.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

According to the applied methodology AMS –I.D "Grid connected renewable electricity generation", Version 18, of 28/11/2014 /07/, the emission reductions have been calculated based on the following formula:

$ER_y = BE_y - PE_y - L_y$

Where,

ER_y : Emission reductions in year y (tCO_2e/yr)

BE_y : Baseline emissions in year y (tCO_2e/yr)

PE_y : Project emissions in year y (tCO_2e/yr)

L_y : Leakage in year y (tCO_2e/yr)

The baseline emissions (BE y) for the project activity are calculated as follows:

$BE_y = EGP_{J,y} \times EF_{grid,CM,y}$

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

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

$EF_{grid,CM,y}$: Combined margin emission factor for grid connected power generation in year calculated ex-ante, as 0.9419 tCO_2 /MWh

Combined margin emission factor was fixed ex-ante at the time of validation. The value was cross checked with the registered PDD and found to be consistent.

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

$EG_{PJ,y} = EG_{facility,y}$ = 24,138 MWh (as projected in registered VCS PD)

However, during the monitoring period (01/01/2021 to 31/12/2021) the actual net generation achieved is 16,560.26 MWh which is confirmed from the share certificates issued to project participant /14/.

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

Hence $ER_y = BE_y$

i.e. ER_y = 24,138 MWh x 0.9419 tCO_2/MWh = = 22,735 tCO_2 (as projected in registered VCS PD)

However, during this monitoring period (01/01/2021 to 31/12/2021) the actual emission reduction achieved is:

ERy = 16,560.26 (MWh) * 0.9419 (tCO_2/MWh) = 15,598 tCO_2

The following parameters were available at validation as per the registered VCS PD and the validation report /02/:

DATA/PARAMETER	Source of data	Reported value for the project period	Assessment/Observation
Simple Operating Margin emission factor for NEWNE grid (EFgrid,OM,y)	CO_2 baseline database (Version 15) published by CEA in Dec. 2019	0.9622 t CO_2/MWh	The verification team has verified the value with the CEA database /16/ and registered VCS PD/02/ and found to be correct and consistent. Hence accepted.
Build Margin emission factor for NEWNE grid (EFgrid,BM,y)	CO_2 baseline database (Version 15) published by CEA in Dec. 2019	0.8811 t CO_2/MWh	The verification team has verified the value with the CEA database /16/ and VCS PD/02/ and found to be correct and consistent. Hence accepted.
Combined margin CO_2 emission factor for NEWNE grid (EFgrid,CM,y)	As per the "Tool to calculate the emission factor for an electricity system".	0.9419 t CO_2/MWh	The verification team has verified the value with the CEA database /16/ and registered VCS PD/02/ and found to be correct and consistent. Hence accepted.

<u>Data and parameters monitored ex-post:</u>

DATA/PARAMETER	EG_y

<table>
<tr><td>Data Unit</td><td>MWh/year</td></tr>
<tr><td>Description</td><td>Quantity of net electricity generation supplied by the project plant/unit to the grid during the current monitoring period</td></tr>
<tr><td>Source of data to be used</td><td>Certificate for share of electricity generated by Wind farm provided by Tamil Nadu Electricity Board (TNEB). The verification team has cross checked the TNEB share certificate for the monitoring period and found the values to be consistent /14/.</td></tr>
<tr><td>Value data for the monitoring period</td><td>16,560.26</td></tr>
<tr><td>Measuring frequency</td><td>Continuous measurement. The same is in line with the methodology requirement and is hence accepted.</td></tr>
<tr><td>Reporting frequency and recording procedure</td><td>Monthly recording. As per the monitoring report, version 02 of 20/05/2022 /01/ and the monitoring plan of the final VCS PD/02/, reading from both individual meter (WTG yard meter) and availability-based tariff (ABT) meter installed at sub-station are recorded on monthly basis. Based on monthly recording Tamil Nadu Electricity Board (TNEB) provides share certificate which gives the net electricity generation from the project activity. Invoices are raised by PP based on these share certificates and accordingly payment is done by state utility. During the site visit by the verification team the same has been checked and confirmed that the same procedure is followed at site.</td></tr>
<tr><td>Type of monitoring equipment</td><td>Electronic Tri-vector meter is used for monitoring electricity generation. Two main pairs of meters (main and check meter) are installed to record the generation data. These meters are seen at site and the details of the meters are as follows:

Accuracy: 0.5s

Make: HPL

Details of energy meters are given below:

<table>
<tr><th>WTG No.</th><th>Meter Serial No.</th></tr>
<tr><td>TGU 28 SS(T-139)</td><td>627560</td></tr>
<tr><td>TM 41 SS(T-145)</td><td>624763</td></tr>
<tr><td>TSSP 158 SS(T-142)</td><td>624852</td></tr>
<tr><td>TSSP 174 SS(T-143)</td><td>627558</td></tr>
<tr><td>TM 721 SS(T-141)</td><td>627555</td></tr>
<tr><td>TSSP 1225 SS(T-144)</td><td>627553</td></tr>
</table>
</td></tr>
<tr><td>Is accuracy of the monitoring equipment as stated in the PDD?</td><td>Electronic Tri-vector meter with accuracy class 0.5s. The same was confirmed by the verification team during the site visit.</td></tr>
<tr><td>Calibration frequency/interval</td><td>Meters will be calibrated at least once in five years as per CEA notification.</td></tr>
</table>

Is the calibration interval in line with the monitoring plan of the PDD?	As per the monitoring plan in the registered VCS PD /02/, the meters will be calibrated once in five years. The monitoring report also mention the calibration frequency as once in three years /01/.
How were the values in the monitoring report verified and cross-checked?	As per the registered VCS PD/02/, the electricity export should have been cross checked with the sales invoices. PP has submitted the sales invoices for the monitoring period /13/. The validation team has verified the document and found that the value mentioned in the document is matching with the values used for the calculation.
Does the data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	The remote audit of the project activity confirms that the necessary QA/QC procedures are in place and the data management system is effective and reliable.
If only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	Not Applicable.

Emission Reductions Achieved:

The emission reductions calculation reported in the VCS Monitoring Report /01/ and ER calculation spreadsheet /04/ have been verified to be correct and in line with VCS PD /02/. The emission reductions by the project activity for the monitoring period from 01/01/2021 to 31/12/2021 are equivalent to 15,598 tCO_2e, as reported in the VCS monitoring report /01/. The data presented in the VCS MR /01/ and in the ER worksheet /04/ was assessed by reviewing indetail project documentation, collection of monitored data, observation of established monitoringand reporting practices and assessment of the reliability of monitoring equipment. Sufficient evidence was presented and verified by RINA for the reported emission reductions as listed in the above.

RINA also compared the actual emission reductions with the estimates in the registered VCS PD/02/ as follows:

The estimated emission reductions are equivalent to 22,735 tCO_2e, however during the monitoring period from 01/01/2021 to 31/12/2021 the actual emission reductions achieved are 15,598 tCO_2e . The actual reported average emission reductions is 31.39% lower than the estimated average emission reductions.

Hence, RINA confirmed that the actual emission reductions reported during the monitoring period are more than the corresponding estimates in the registered VCS PD /02/.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

Quantity of net electricity generation supplied by the project plant/unit to the grid is measured with the help of tri-vector meter installed near to each WTG and also at the sub-station. Representatives from project proponent and state electricity department take down the monthly reading. Based on the monthly recordings share certificate is issued to each WTG owner which provides the net export to grid. Invoices are raised by PP based on these certificates and accordingly payment is done by state electricity department. Emission reduction is calculated based on the readings taken from the main meter (at sub-station) and recorded in the share certificate. Verification team has checked the same and found to be in order /04/. Hence it is confirmed that the calculation method is proper as the readings are sourced from a document provided by state electricity department (TNEB). Verification team has checked the ER calculation and confirmed that the values are correctly taken from the share certificates/14/.

CO_2 emission factor has been taken as 0.9419 tCO_2 /MWh. The verification team has verified the value with the report published by CEA /16/ and registered VCS PD /02/ and found to be correct and consistent. The baseline emission is calculated as 15,598 tCO_2.

As per the methodology and the registered PDD, the project does not need to consider project emissions and leakage. Thus the emission reduction is calculated to be 15,598 tCO_2e for this monitoring period /01/.

4.6 Non-Permanence Risk Analysis

Not applicable for the project activity.

5 VERIFICATION CONCLUSION

RINA Service S.p.A (RINA) has performed verification of the emission reductions reported for the project activity "Wind power project at Theni by Powerica Limited" in India, VCS Registration Reference No. 1830, for the period 01/01/2021 to 31/12/2021, with regard to the relevant requirements for VCS and CDM rules.

The project participant 'M/s Powerica Limited' of the project "Wind power project at Theni by Powerica Limited" is responsible for:

- The preparation of greenhouses gas emissions data and the reported greenhouse gas emission reductions from the project on the basis set out in the monitoring plan contained in the registered VCS PD document.

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

It is the responsibility of RINA to express an independent verification opinion about the project's conformity with the VCS requirements and procedures and on the reported greenhouse gas emission reductions from the project.

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

- The project has been implemented and operated as per the registered VCS PD;

- The monitoring plan in the registered VCS PD is as per the applied baseline and monitoring methodology.

- The monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable VCS and CDM requirements;

It is RINA's opinion that the GHG emission reduction stated in the VCS monitoring report version 03 of 20/06/2022 or the "Wind power project at Theni by Powerica Limited" in India for the period 01/01/2021 to 31/12/2021 are fairly stated. The

GHG emission reductions were calculated correctly on the basis of the baseline and monitoring methodology AMS –I.D "Grid connected renewable electricity generation", Version 18.

Hence RINA is able to certify that the emission reductions from the project during the monitoring period 01/01/2021 to 31/12/2021 amount to 15,598 tCO_2e.

Reporting period: From 01-January-2021 to 31-December-2021

Verified GHG emission reductions or removals in the above reporting period:

Verification period: From [01- January - 2021] to [31-December- 2021]

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

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions or removals (tCO_2e)
01-January-2021 to 31-December-2021	15,598	0	0	15,598
Total	15,598	0	0	15,598

APPENDIX I: ABBREVIATIONS

Abbreviations	Full texts
BE	Baseline Emissions
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER(s)	Certified Emission Reduction(s)
CL	Clarification Request
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DISCOM	Distribution Company
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EF	Emission Factor
ER	Emission Reductions
FAR	Forward Action Request
GHG(s)	Greenhouse gas(es)
GWP	Global Warming Potential
HTSC	High Tension Service Connection
IPCC	Intergovernmental Panel on Climate Change
MR	Monitoring Report
NABL	National Accreditation Board for Testing and Calibration
PD	Project Description
PE	Project Emission
CEA	Central Electricity Authority
PP(s)	Project Participant(s)
Ref.	Document Reference
RINA	RINA Services S.p.A.
SS(s)	Sectoral Scope(s)
TA(s)	Technical Area(s)
TNEB	Tamil Nadu Electricity Board
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard
VCU	Verified Carbon Unit
VER	Voluntary Emission Reductions
VVS	Validation and Verification Standard
WTG	Wind Turbine Generators

APPENDIX II: RESOLUTION OF CORRECTIVE ACTION REQUESTS AND CLARIFICATION REQUESTS

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

FAR ID	xx	**Section no.**	xx	**Date:** DD/MM/YYYY
Description of FAR				
No remaining FAR to be addressed.				
Project participant response				**Date:** DD/MM/YYYY
NA				
Documentation provided by project participant				
DOE assessment				**Date:** DD/MM/YYYY

Table 2. CL from this verification

CL ID	01	**Section no.**	1.1 & 1.9	**Date:** 20/05/2022
Description of CR				

PP is requested to provide the following documents: 1) Commissioning certificates of all WTGs 2) Energy generation report, PPA 3) Joint meter reading details 4) Invoices & Payment details 5) Letter of Undertaking for no claims of GHG credits from UNFCCC CDM mechanism 6) Local stakeholder consultation documentation

Project participant response	**Date:** 20/05/2022
1. Commissioning certificates of all WTGs are being provided. 2. Energy generation report and PPA are being provided. 3. Joint meter reading details are being provided. 4. Invoices are being provided. 5. Letter of Undertaking for no claims of GHG credits from UNFCCC CDM mechanism is being provided. 6. The stakeholder meeting was conducted on during registration of the project activity. PP took due care of the comments received during LSC. The process of local stakeholder consultation is continuous. During the current monitoring period, the project proponent has kept grievance register in plant site office and sought comments/grievances/suggestions from local stakeholders including local community, government agencies and NGOs. However, no comments/grievances/suggestions have been received from the aforementioned stakeholders during the current monitoring period.	

Documentation provided by project participant
1. Commissioning certificates 2. Energy generation report and PPA. 3. Joint meter readings 4. Invoices 5. Letter of undertaking 6. Grievance register

DOE assessment	**Date:** 25/05/2022
PP has provided the documents (CC, Energy generation report, JMR, invoices, letter of undertaking and local stakeholder grievance register), the same is found to be correct. Hence the CL is closed.	

CL ID	02	**Section no.**	4	**Date:** 20/05/2022
Description of CR				

PP is requested to provide the following documents/evidence that were verified during the remote site audit through video conference: 1) Photos of all WTGs 2) Photos of all main meter and check meter, sus-station 3) Videos of WTGs 4) Geographical co-ordinates/ Google mapping
Project participant response **Date:** 20/05/2022
1. Photos of all WTGs are being provided. 2. Photos of all main meter and check meter, sub-station are being provided. 3. Videos of WTGs are being provided. 4. Google map link is being provided in monitoring report.
Documentation provided by project participant
1) Photos of all WTGs 2) Photos of all main meter and check meter, sub-station 3) Videos of WTGs 4) MR version 02
DOE assessment **Date:** 25/05/2022
PP has provided the photos of WTGs, video of operational WTGs, meter details and revised MR. The documents and evidence are found to be correct, thus CL is closed.

RINA

CERTIFICATO DI QUALIFICA
QUALIFICATION CERTIFICATE

Si attesta che il sig./sig.ra: *We declare that Mr/Mrs/Ms:*	**Vinay SINGH**
è qualificato come[1]: *is qualified as:*	**TEC – VAL – VER – TL – ITRP - REG-EXP[3]**
nello schema[2]: *for the scheme:*	**CDM – VCS – SCS – JI - ISO14064-2**
per le seguenti aree tecniche: *for the following technical areas:*	**1.2 - 14.1**

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA *TECHNICAL AREA DESCRIPTION*	SCOPO SETTORIALE *SECTORAL SCOPE*
1.2	Renewables	1
14.1	Forestry	14

in accordo alle istruzioni dell'Unità responsabile (OU) per sostenibilità & cambiamenti climatici.
in accordance with the instructions of the responsible unit (OU) for the sustainability & climate change.

REVISIONE *REVISION*	DATA *DATE*	MOTIVAZIONI PER LA REVISIONE *REASON FOR THE REVISION*
0	04/05/2020	First Issue
2	11/03/2022	Updated form

Il Resp. OU
Head of OU

[1] **Legend:**

VAL:	Validator
VER:	Verifier
TEC:	Technical Expert
TL:	Team Leader
FIN-EXP:	Financial Expert
REG-EXP :	Regional Expert
ITR :	Independent Reviewer
DET:	Determiner

[2] **Legend:**

CDM:	Clean Development Mechanism
VCS:	Verified Carbon Standard
GS4GG:	Gold Standard for Global Goals
SCS:	SocialCarbon Standard
JI:	Joint Implementation
ISO14064-2 :	International standard 14064 part 2

[3] India, Kenya, Uganda, Sri Lanka, Thailand, Mauritius.

RINA Services S.p.A. è accreditato da UNFCCC, quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM, da VCSA per condurre la Validazione e la Verifica di Progetti VCS, da GS Foundation, per condurre la Validazione e la Verifica di Progetti GS, da Ecologics Institute per condurre la Validazione e la Verifica di rapporti SCS
RINA Services S.p.A. is accredited by the UNFCCC as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects, by the VCSA, to carry out Validation and Verification of VCS Projects, by the GS Foundation, to carry out Validation and Verification of GS4GG Projects and by the Ecologics Institute, to carry out Validation and Verification of SCS Reports

RINA

CERTIFICATO DI QUALIFICA
QUALIFICATION CERTIFICATE

Si attesta che il sig./sig.ra: *We declare that Mr/Mrs/Ms:*	**Shruti KUDTARKAR**
è qualificato come[1]: *is qualified as:*	**TL – VAL – VER – TEC – ITR**
nello schema[2]: *for the scheme:*	**CDM – VCS – GS4GG – JI – SCS – UER – CCB - ISO14064-2**
per le seguenti aree tecniche: *for the following technical areas:*	**1.2 - 13.1 - 13.2**

AREE TECNICHE *TECHNICAL AREAS*	DESCRIZIONE DELL'AREA TECNICA *TECHNICAL AREA DESCRIPTION*	SCOPO SETTORIALE *SECTORAL SCOPE*
1.2	Renewables	1
13.1	Solid Waste and wastewater	13
13.2	Manure	13

in accordo alle istruzioni dell'Unità responsabile (OU) per sostenibilità & cambiamenti climatici.
in accordance with the instructions of the responsible unit (OU) for the sustainability & climate change.

REVISIONE *REVISION*	DATA *DATE*	MOTIVAZIONI PER LA REVISIONE *REASON FOR THE REVISION*
0	03/12/2012	-
6	10/03/2022	Updated qualification as ITR

Il Resp. OU
Head of OU

[1] **Legend:**
VAL: Validator
VER: Verifier
TEC: Technical Expert
TL: Team Leader
FIN-EXP: Financial Expert
REG-EXP : Regional Expert
ITR : Independent Reviewer
DET: Determiner

[2] **Legend:**
CDM: Clean Development Mechanism
VCS: Verified Carbon Standard
GS4GG: Gold Standard for Global Goals
SCS: SocialCarbon Standard
JI: Joint Implementation
ISO14064-2 : International standard 14064 part 2
UER : Upstream Emission Reduction
CCB : The Climate, Community & Biodiversity Alliance

RINA Services S.p.A. è accreditato da UNFCCC, quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM, da VCSA per condurre la Validazione e la Verifica di Progetti VCS, da GS Foundation, per condurre la Validazione e la Verifica di Progetti GS, da Ecologica Institute per condurre la Validazione e la Verifica di rapporti SCS

RINA Services S.p.A. is accredited by the UNFCCC, as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects, by the VCSA, to carry out Validation and Verification of VCS Projects, by the GS Foundation, to carry out Validation and Verification of GS4GG Projects and by the Ecologica Institute, to carry out Validation and Verification of SCS Reports

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