



“BUNDLED WIND POWER PROJECT IN TAMIL NADU, INDIA, CO-ORDINATED BY TAMIL NADU SPINNING MILLS ASSOCIATION (TASMA-V1)”



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Summary:

LGAI Technological Center, S.A.(Applus+ Certification) has performed the verification of the project “Bundled Wind power project in Tamil Nadu, India, co-ordinated by Tamil Nadu Spinning Mills Association (TASMA-V1).” VCS ID 250, against VCS Standard Version 4.2. The scope of verification includes confirming the implementation of the monitoring plan of the registered VCS PD (version 1.0 dated 23/September/2009 and the application of the monitoring methodology “Consolidated Baseline Methodology for grid connected electricity generation from renewable sources”, ACM0002, Version 10.

The verification is consisted of three phases: i) desk review of the project; ii) remote visit and interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted following Applus+ certification internal quality procedures.

During the verification process 08 CARs, 00 CL and 00 FARs were raised. All the findings have been closed satisfactorily and the same has been discussed in Appendix 4.

Applus+ certification confirms that the monitoring system is in place and the emission reductions are calculated without material misstatements. The emission reductions from the project activity “Bundled Wind power project in Tamil Nadu, India, co-ordinated by Tamil Nadu Spinning Mills Association (TASMA-V1)” in India during the period 01-January-2015 to 31-March-2016(including both days) amount to 108,545 tones of CO₂e.

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1 INTRODUCTION

1.1 Objective

Tamilnadu Spinning Mills Association (TASMA) has contracted LGAI Technological Center, S.A. (Applus+ Certification) to perform the periodic verification of the 'Bundled Wind power project in Tamil Nadu, India, co-ordinated by Tamil Nadu Spinning Mills Association (TASMA-V1)' in India (hereafter called project). This project has already been registered as a VCS project (VCS ID 0250). The objective of this verification is a thorough and independent assessment of registered project activities against the applicable VCS requirement by the VVB. The verification process shall determine whether the proposed project activity complies with the requirements of latest VCS guidelines, applicability conditions of the selected methodology, relevant host country regulations and guidance issued by the VCS Board.

1.2 Scope and Criteria

The scope of verification is to assess the claims and assumptions made in the VCS monitoring report (MR) against the VCS criteria, including but not limited to, VCS standard, applied methodology and other relevant rules and requirements established for VCS project activities. The verification of this project was based on the registered project description & monitoring report /4/ and supporting documents submitted by the project proponent to the verification team. The documents were reviewed against the following guidance and protocols:

VCS standard Version 4.2, Issued: 19-September-2019; updated: 22-April-2021 /16/

Approved baseline and monitoring methodology ACM0002, Version 10: "Consolidated Baseline Methodology for grid connected electricity generation from renewable sources"/14/

VCS Program Guide, Version 4.1, dated 19-September-2019; updated: 22-April-2021 /17/

CDM VVS for project activities version 03.0 /22/

CDM PS for project activities version 03.0 /21/

The Verification is not meant to provide any consulting towards the project participants. However, stated requests for clarification and/or correction actions request may have provided inputs for improvement of the project design.

1.3 Level of Assurance

The verification team verified the complete monitoring data for all the parameters of the monitoring plan and confirms that the reported emission reductions are free from any type of material errors. Therefore, Applus+ certification confirms that the verification is conducted with reasonable level of assurance.

1.4 Summary Description of the Project

The project activity involves electricity generation by wind electric convertors and supplying the generated electricity to the state Grid. The project being a renewable energy generation activity, it leads to removal of fossil fuel dominated electricity generation. The project activity results in reductions of greenhouse gas (GHG) emissions that are real, measurable, and verifiable and also plays beneficial role in the mitigation of climate change.

During the time of registration the total the bundling of 109 Wind Turbine Generators (WTGs) sponsored by 50 individual investors aggregating to a total installed capacity of 51.595 MW. All these WTGs are spread in the entire State of Tamilnadu, India and the bundling activity is undertaken by Tamilnadu Spinning Mills Association (TASMA) that are connected to the Indian (NEWNE) grid. The details of the project are given below:

Project developer	Rated Power of WTG ¹	Installed capacity(MW)	Project Location	State
Tamilnadu Spinning Mills Association (TASMA).	-1.25 MW -0.225 MW -0.25 MW -0.6 MW -0.75 MW -0.5 MW	51.595	Project location address: Coimbatore,Tirunelveli and Kanyakumari Districts	Tamilnadu
-	Total	51.595		

This information was verified during remote assessment and found to be in line with the details provided in the registered PD /01/.

¹Project Details are provided in section 4.1 of this report.

NAME OF THE MILLS / COMPANIES	WTG NO	CAPACITY (in KW)	HTSC. NO	LATITUDE (N)			LONGITUDE (E)		
				Deg	Min	Sec	Deg	Min	Sec
Anugraha Valve Casting Ltd	1	1250	493	8	13	23	77	39	44
Arun Excello Urban Infrastructure Pvt. Ltd.,	1	225	546	8	12	37	77	34	42
Arun Excello Urban Infrastructure Pvt. Ltd.,	2	225	547	8	12	52	77	34	41
Arunachala Gounder Textile Mills Pvt. Ltd.,	1	600	597	10	53	56	77	14	56
Arunachala Gounder Textile Mills Pvt. Ltd.,	2	600	2496	8	14	45	77	44	47
Classic Spinning Mills Pvt. Ltd.,	1	225	314	10	54	35	77	18	2
Classic Spinning Mills Pvt. Ltd.,	2	225	314	10	55	4	77	18	0
Classic Spinning Mills Pvt. Ltd.,	3	225	314	10	55	11	77	18	4
Classic Spinning Mills Pvt. Ltd.,	4	225	314	10	54	58	77	17	54
Classic Spinning Mills Pvt. Ltd.,	5	225	314	10	55	4	77	17	53

Classic SpinningMillsPvt. Ltd.,	6	500	258	10	5 6	5 0	7 7	1 9	6
Classic SpinningMillsPvt. Ltd.,	7	500	625	10	5 6	5 0	7 7	1 9	6
Classic WindFarms	1	225	255	10	5 3	4 9	7 7	9	2 4
Classic WindFarms	2	225	255	10	5 3	3 8	7 7	9	2 2
Classic WindFarms	3	500	259	10	5 6	4 2	7 7	1 9	9
Classic WindFarms	4	500	627	10	5 3	3 8	7 7	9	2 2
Classic WindFarms	5	500	626	10	5 3	4 9	7 7	9	2 4
DeffreeEngineering (P)Ltd.,	1	800	1059	10	4 1	4 3	7 7	2 6	1 6
DhanalakshmiControls &Equipments	1	225	726	10	4 0	3 8	7 7	2 1	3 7
FrontierProcessingMills	1	500	1723	8	2 4	2 6	7 7	3 4	1 0
JayakrishnaFlourMillsPvt. Ltd.,	1	225	477	8	1 3	5 6	7 7	3 4	1 4
JayakrishnaFlourMillsPvt. Ltd.,	2	225	518	8	1 3	5 5	7 7	3 4	2 3

JayakrishnaFlourMillsPvt. Ltd.,	3	225	623	8	1 3	5 9	7 7	3 4	5 4
JayakrishnaFlourMillsPvt. Ltd.,	4	225	781	8	1 3	5 2	7 7	3 4	4 9
JayakrishnaFlourMillsPvt. Ltd.,	5	225	782	8	1 3	5 9	7 7	3 3	5 4
JayakrishnaFlourMillsPvt. Ltd.,	6	225	1463	8	1 4	1 3	7 7	3 3	5
JayakrishnaFlourMillsPvt. Ltd.,	7	225	1769	8	1 4	2 1	7 7	3 3	7
K.G. EntertainmentCompany(P)Ltd.,	1	350	1328	10	3 6	1 9	7 7	1 9	1 6
KaleesuwariRefineryPvt.Ltd.,	1	500	609	8	1 8	4	7 7	3 4	5 8
KaleesuwariRefineryPvt.Ltd.,	2	600	603	8	1 8	1 1	7 7	3 4	3 8
LakshmiNarayanGovrishankarE nterpriser Pvt.Ltd.,	1	500	561	10	5 6	3	7 7	1 5	4 6
LakshminarayanGourishankerE nterprises Pvt.Ltd.,	2	250	663	10	5 6	5 8	7 7	1 5	1 3
LakshminarayanGourishankerE nterprises Pvt.Ltd.,	3	250	664	1 0	5 6	5 9	7 7	1 5	5

LakshminarayanGourishankerEnterprises Pvt.Ltd.,	4	250	665	10	56	55	77	15	6
LakshminarayanGourishankerEnterprises Pvt.Ltd.,	5	250	666	10	56	4	77	15	58
LakshminarayanGourishankerEnterprises Pvt.Ltd.,	6	250	252	10	56	57	77	15	21
LakshminarayanGourishankerEnterprises Pvt.Ltd.,	7	250	252	10	56	2	77	15	20
LakshminarayanGourishankerEnterprises Pvt.Ltd.,	8	250	252	10	56	6	77	15	18
LakshminarayanGourishankerEnterprises Pvt.Ltd.,	9	250	260	10	56	3	77	15	12
LakshminarayanGourishankerEnterprises Pvt.Ltd.,	10	250	261	10	56	3	77	15	4
LakshminarayanGourishankerEnterprises Pvt.Ltd.,	11	250	444	10	56	10	77	15	15
LakshminarayanGourishankerEnterprises Pvt.Ltd.,	12	250	445	10	56	9	77	15	7

LakshminarayanGourishankerEnterprises Pvt.Ltd.,	13	500	516	10	5 6	5 8	7 7	1 5	5 1
LotusAgency	1	750	1956	9	2 8	1	7 7	1 8	2 0
M.S. Raja Transports(WindMillDivision)	1	800	1063	10	4 2	5 9	7 7	2 7	1 5
PoombukarProcess	1	225	592	10	4 0	1 6	7 7	1 9	4 8
PoomerHosieries	1	225	984	10	4 0	2 0	7 7	1 9	5 3
Power LinkSystemPvt.Ltd.,	1	230	281	7	5 5	4 0	1 1	4 7	4 9
PrimeTex	1	225	574	8	1 3	5 0	7 7	3 6	4 5
PrimeTex	2	225	574	8	1 3	4 6	7 7	3 6	4 1
PrimeTex	3	225	552	8	1 3	5 5	7 7	3 6	4 6
PrimeTex	4	225	552	8	1 3	5 3	7 7	3 6	3 4
PrimeTex	5	225	552	8	1 3	4 9	7 7	3 6	3 1

PrimeTex	6	225	320	10	4 0	4 6	7 7	2 0	1 1
PrimeTex	7	225	318	8	4 0	5 5	7 7	2 0	1 0
RangasayeeAlloyCastings	1	230	407	10	3 6	2 8	7 7	1 8	4 4
RangasayeeAlloyCastings	2	350	1203	10	3 6	2 8	7 7	1 8	4 4
S.N.Q.S. International	1	330	1180	10	3 6	1 9	7 7	2 4	3 5
S.S.K.Textiles	1	600	58	10	5 6	5 8	7 7	1 5	4 1
S.S.K.Textiles	2	250	446	8	1 4	2 7	7 7	3 5	5 3
Santhi CastingWorks	1	500	608	8	1 4	1 8	7 7	3 5	3 6
Seyad Home Industries Pvt.Ltd.,	1	500	607	8	1 2	4 4	7 7	3 3	5 1
Seyad ShariatFinanceLtd.,	1	225	645	8	1 3	0	7 7	3 4	2 7
Seyadu BeediCompany	1	500	417	8	1 3	0	7 7	3 4	2 7
ShanmugapriyaTextilesPvt.Ltd.,	1	750	536	8	1 5	3 5	7 7	3 9	1 2

Shriram City Union FinanceLtd.,	1	125 0	584	8	1 5	3 6	7 7	3 9	3 0
Shriram City Union FinanceLtd.,	2	125 0	585	8	1 5	4 6	7 7	3 9	1 0
Shriram City Union FinanceLtd.,	3	125 0	586	8	5 8	4 3	7 7	2 0	5 5
ShriramInvestmentsLtd.,	1	750	640	8	5 8	5 9	7 7	2 0	5 3
ShriramInvestmentsLtd.,	2	750	641	8	5 8	4 9	7 7	2 0	5 4
ShriramInvestmentsLtd.,	3	750	641	8	5 8	4 1	7 7	2 0	5 4
ShriramInvestmentsLtd.,	4	750	641	8	5 8	5 0	7 7	2 0	5 6
ShriramInvestmentsLtd.,	5	750	641	8	5 8	5 8	7 7	2 0	5 6
ShriramInvestmentsLtd.,	6	750	641	8	5 8	4 6	7 7	2 0	4 3
ShriramInvestmentsLtd.,	7	750	641	8	5 8	4 6	7 7	2 0	1 0
ShriramInvestmentsLtd.,	8	750	642	10	4 2	4 4	7 7	2 7	5 2
SNQS InternationalSocksPvt.Ltd.,	1	230	290	10	4 1	5 1	7 7	2 1	4 5

SoundararajaMillsLtd.,	1	125 0	862	8	1 0	1 5	7 7	3 9	4 5
SoundararajaMillsLtd.,	2	125 0	888	8	9	5 4	7 7	3 9	5
SoundararajaMillsLtd.,	3	125 0	889	8	9	5 3	7 7	3 9	2 2
SoundararajaMillsLtd.,	4	125 0	890	8	9	5 9	7 7	3 9	4 2
SRG ApparelsPrivateLtd.,	1	225	575	8	1 3	5 6	7 7	3 6	3 7
SRG ApparelsPrivateLtd.,	2	225	575	8	1 3	5 2	7 7	3 6	5 8
SRG ApparelsPrivateLtd.,	3	225	554	8	1 3	4 6	7 7	3 6	3 8
SRG ApparelsPrivateLtd.,	4	225	554	8	1 3	3 8	7 7	3 6	3 7
SRG ApparelsPrivateLtd.,	5	225	554	8	1 3	5 7	7 7	3 6	3 7
SRG ApparelsPrivateLtd.,	6	225	319	10	4 0	5 0	7 7	1 9	5 9
SRG ApparelsPrivateLtd.,	7	225	319	10	4 0	5 8	7 7	1 9	5 9
Sri AlameluAmmal Mills IndiaPvt.Ltd.,	1	600	63	<u>10</u>	<u>4</u> <u>9</u>	<u>0</u> <u>7</u>	<u>7</u> <u>7</u>	<u>2</u> <u>6</u>	<u>1</u> <u>5</u>

SriSenthilandavarCottonMillsPvt.Ltd.,	1	750	519	9	0	1 7	7 7	3 3	3 3
Sri VenkatramSpinnersPvt.Ltd.,	1	165 0	1683	8	1 2	7	7 7	4 0	3 3
SugavaneswaraSpinning MillsPvt.Ltd.,	1	125 0	2273	8	1 2	5 3	7 7	3 3	3 6
Super SpinningMillsLtd.,	1	125 0	611	8	1 3	7	7 7	3 4	1 7
SureshTextiles	1	250	613	10	5 5	4 9	7 7	1 9	5 9
T.E.S. FathuRabbani	1	225	447	8	1 8	7	7 7	3 3	1 8
T.E.S. NainaMohamed	1	225	754	10	4 5	1 1	7 7	2 1	5 4
ThePremDyeingWorks	1	500	424	8	2 4	4 2	7 7	3 4	8
TheUnitedYarnProcessors	1	500	1224	8	2 4	3 4	7 7	3 4	9
Thriveni EarthMoversPvt.Ltd.,	1	225	1470	10	5 6	3 9	7 7	3 0	4 7
UnifrontDriers	1	500	1715	10	4 1	2 1	7 7	2 3	2 1

UnifrontTextilesProcessorsPvt.Ltd.,	1	500	1763	10	4 1	1 4	7 7	2 3	3 0
V.R.Foundries	1	850	602	10	5 5	4 5	7 7	1 3	4 7
Veena FabricsPvt.Ltd.,	1	250	1257	10	5 5	5 9	7 7	1 3	4 1
Veena FabricsPvt.Ltd.,	2	250	1244	10	4 0	2 4	7 7	1 8	3 7
Vetal Hi-TechIndustries	1	250	267	10	3 6	3 0	7 7	1 9	2 8
VetalTextiles&ElectronicsPvt.Ltd.,	1	250	266	8	1 2	6	7 7	3 6	4 1
VictusDyeings	1	750	384	10	5 6	3 6	7 7	1 5	3 7
VigneshkumarSpinning MillsPvt.Ltd.,	1	350	2201	8	5 7	2 1	7 7	2 6	4 5
VigneshkumarSpinning MillsPvt.Ltd.,	2	350	1315	8	5 7	2 1	7 7	2 6	4 5

The WTGs have been commissioned on 2002 to 2007². The same was verified against the registered VCS PD/01/ and commissioning certificates/11/.The emission reductions from the project activity during the period 01-January-2015 to 31-March-2016(including both days) amount to 108,545tonnes of CO₂e.

²Project commissioning details are Project provided in section 4.1 of this report..

2 VERIFICATIONPROCESS

The registered VCS project is undergoing periodic verification under VCS, the approach adopted to ensure the quality of emission reductions is described in the following sections.

2.1 Method and Criteria

Verification was conducted using Applus+ Certification procedures in line with the requirements CDM validation and verification standard for project activities, Version 03.0 for the project activity and “VCS standard version 4.2 and program guideline 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. The project activity does not fall under category “grouped projects”, hence any sampling methods not to be employed by the validation/verification body for the verification of GHG emission reductions or removals generated by the project.

Applus+ certification assessed and determined whether the proposed implementation and operation of the project activity, and the steps taken to report emission reductions comply with the criteria and relevant guidance provided by the VCS Board. The validation/verification process consist of the following three phases;

- A desk review of the VCS PD and VCS MR
- Remote visit and follow up interviews with project stakeholders

The resolution of outstanding issues and issuance of final report and opinion.

2.2 Document Review

The verification is performed primarily as a document review of the approved revised VCS PD, previous MR and Verification report and associated documents as stated in detail in appendix 1 of this document. The assessment is performed by a verification team using a protocol. The cross checks between information provided in the Monitoring report, VCS PD and information from sources other than those used, if available, the team’s sectoral or local expertise and, if necessary, independent background investigations.

2.3 Interviews

Due to the current situation with the global COVID-19 pandemic scenario and country wide lock down in most of countries across the globe, an on-site inspection has not been performed by the assessment team. However, the representatives of the PPs and onsite staff of PP were interviewed online via Google Meet on 19-November-2021 i.e. personnel responsible for monitoring of the project activity, data collection and management, and QA/QC procedure. The details of the people interviewed are mentioned in the table below:

S N	Name	Organization
1	Mr. Bharathi Kannan	(Head –CDM/ VCSProjects//Tamilnadu Spinning Mills Association (TASMA)
2	Mr. Madhukar	CDM Consultant

The topics covered during interview ranges from general features and implementation of project to technical details of the project like calibration details, monitoring and measuring system and data collection, recording and archiving procedures. The assessment was drawn based on the feedback received during interview coupled with the documentation and remote observations.

2.4 Site Inspections

As discussed in the above section, physical site inspection is not done for the current verification. However, to achieve a reasonable level of assurance, the assessment team has followed the alternative means to substantiate the verification criteria as described in the below table –

Assessment Criteria	Means of verification/source documents	Assessment opinion
Description of project activity	i. Commissioning certificates /9/ ii. PPA signed with SEB/10/ iii. Latest VCS verification report /2.1/. iv. Interview with PP representatives on 19-November-2021	The information's with reference to project capacity, technology, plant equipment's and commissioning dates as provided in section 1.1 of MR are found consistent with the documents.
Compliance of the project implementation with the registered project design document	i. Monthly JMRs signed by TNEB/8/ ii. Geographical co-ordinates (Location of Project activity) verified through Google Map ³ as well as	Verified documents indicated the following information: • Serial number of energy meters (Main and Check) • Capacity of project

³<https://www.gps-coordinates.net/>

Assessment Criteria	Means of verification/source documents	Assessment opinion
	sharing of live location from PP representative onsite. iii. Latest VCS verification report /2.1/. iv. PPA signed with TNEB /10/ v. Interview with PP representatives on 19-November-2021 vi. Latest photographs of major project equipment's installed at site (i.e. Turbine, generators, energy meters, weir intake, penstock, tailrace etc.)/18/	Name of project participant (Ownership of the project activity) Location of power house is verified through Google Map. Daily generation records are verified on sample basis to check the operational status of project activity. Grid connectivity of the project is confirmed through the PPA. All the information's regarding the project implementation as discuss above are further verified through previous VCS verification report/2.1/ and found consistent.
Compliance of the registered monitoring plan with applied methodologies and standardized baselines	i. Interview with PP representatives on 19-November-2021 ii. PPA signed with TNEB /10/ iii. Monthly JMRs signed by TNEB/8/ iv. Invoices raised by project developer to SEB/7/ v. Photograph of all the WTGs, energy meters installed at site and screen shots of online monitoring system/18/	The organizational structure, responsibilities and competencies of the personnel confirmed through interview with PP representatives. Frequency of monitoring of parameters listed under approved monitoring plan is verified through JMRs /Invoices. The methods used for measuring, recording, storing, aggregating, and reporting the data on monitored parameters are verified though PPA and interactions with site personnel. Procedure for data uncertainty, emergency preparedness, roles and responsibility, operational

Assessment Criteria	Means of verification/source documents	Assessment opinion
		and management structure are mentioned in the MR is confirmed through interview with PP representatives and found satisfactory.
Compliance with the calibration frequency requirements for measuring instruments	i. Calibration certificates of energy meters/6/ ii. Monthly JMRs signed by TNEB/8/ iii. PPA signed with TNEB/10/	Calibration frequency and energy meter specifications (Sr.No., make, accuracy class) is verified through calibration certificates, photographs of energy meters and further verified through monthly JMRs and found consistent. Responsibility of calibration and maintenance of energy meters is solely under control of SEB; this is verified through the PPA.
Assessment of data and calculation of emission reductions or net removals	i. Monthly JMRs signed by TNEB/8/ ii. Invoices raised by project developer to SEB/7/ iii. Latest VCS verification report for last verification/2.1/	Monthly values of monitoring parameters used in ER calculation are verified through JMRs and cross verified with the invoices. Methods, formulae and emission factor for calculating baseline emissions have been followed are in accordance with the applied methodology /14/ and as described in the previous approved VCS verification report/2.1/.

It is noteworthy that no sampling plan for verification is applied as 100% data is verified for the current monitoring period. Most of the reference document referred by the assessment team (above table) are either issued /endorsed by grid utility (SEB) TNEB, a government agency, hence is deemed authentic.

The assessment team has also used documents such as validation report/2.2/ and verification reports/2.1/ available publicly. Furthermore, the project activity already verified under VCS previously and currently undergoing periodic VCS verification. Hence, based on the information's available through approved documents (VCS verifications), it can be confirmed that project is implemented and being operated as described in the registered PD/1.1/.

The assessment team has verified sufficient appropriate audit evidences, to reduce audit risk to an acceptably low level as requisite to achieve reasonable level of assurance for the current verification.

2.5 Resolution of Findings

The objective of this step is to identify, discuss and conclude on the issues related to the monitoring, implementation and operations of the registered project activity that could impair the capacity of the registered project activity to achieve emission reductions or influence the monitoring and reporting of emission reductions. This is done based on the desk review and remote assessment. The verification team prepares and/or updates a verification protocol (internal document) that records the conformities and non-conformities, which may be of following types;

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 CDM requirements have been met. All CARs and CLs raised by the Applus+ certification 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.

All the findings that are raised and communicated to project participant during the verification are included under Appendix 4. The section also includes the response, if provided, by the project participants and an assessment by the verification team if it was closed out or otherwise.

2.5.1 Forward Action Requests

The project activity is undergoing periodic verification under VCS; there were no FARs raised during the validation or previous verification/2.1/.

2.6 Eligibility for Validation Activities

Not applicable, as Applus+ holds the accreditation to perform validation activities in this Sectoral Scope.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project is not applied under any other GHG program like CDM, GS, hence not applicable. This was confirmed through a declaration/14/ submitted by the PP and hence accepted by the assessment team. Audit team checked the REC Mechanism database of India and found that the project activity is not accredited / registered under REC mechanism. Further, declaration for the same is checked and found correct by the assessment team. Also assessment team checked the following registries to confirm the same. The details of the registries checked are as follows:

1. <https://www.recregistryindia.nic.in/>
2. <http://cdm.unfccc.int/>
3. <http://www.goldstandard.org/>

Rejection by other GHG programs

The Project is not rejected by other GHG programs. A declaration/14/ for the same is checked and found correct by the assessment team. Also assessment team checked the following registries to confirm the same. The details of the registries checked are as follows:

1. <https://www.recregistryindia.nic.in/>
2. <http://cdm.unfccc.int/>
3. <http://www.goldstandard.org/>
4. <https://verra.org/verra-standards-and-programs/>

The Project has no intend to generate any other form of GHG-related environmental credit for GHG emission reductions or removals claimed under the VCS Program. Renewable energy certificates are available for trading in the host country However, the same is not availed by the Project Proponent. The undertaking regarding the same is submitted by the PP which is acceptable to the assessment team and assessment team also checked the REC web site (<https://recregistryindia.nic.in/>) and found the declaration/14/ to be correct.

3.2 Methodology Deviations

There is no methodology deviation identified during the current monitoring period. Also, there were no methodology deviations identified during the previous verification/2.1/.

3.3 Project Description Deviations

There are no project deviations either in the current monitoring period or in the previous monitoring periods.

3.4 Grouped Project

This is not a grouped project. Therefore, this section is Not Applicable.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

During the remote site visit audit with PP representative, it was concluded that the project is implemented as per the requirement of the registered VCS PD/CDM PDD and approved monitoring plan. During the current monitoring period, it was observed through breakdown log sheet records during remote onsite visit that no unforeseen incident/event evolved which can impact the operation of the project activity. The project underwent continuous operation and only scheduled maintenance as per the manufactures specification which is acceptable to the assessment team. Moreover, there is no unforeseen incident which can affect the applicability of the methodology and thus the same is acceptable to the assessment team.

Project location is confirmed by the assessment team through Google software. Moreover, assessment team confirm that the latitudes and longitudes as mentioned in the registered PD is correct. The WTG wise latitudes and longitudes are confirmed& provided below.

Starting date of the operation of the project activity is 05th March 2002 which is the date of commissioning/commercial operation of the 1st WTG/Assessment team checked the commissioning certificate and confirmed that the dates of Commission for the WTGs are correct. Assessment team also conform during the remote audit that there is no change in project design except deviation requested and the project is implemented as per the description provided in the registered PD.

Implementation dates/ Commissioning dates and Location of WTGs are provided below:

S.NO.	NAME OF THE MILLS / COMPANIES	CAPACITY in MW	HTSC. NO.	IMPLEMENTATION DATES /COMMISSIONING DATE
1	Anugragha Valve Castings Ltd	1.25	493	21-Mar-2003
2	ArunExcello Urban Infrastructure Pvt. Ltd.,	0.225	546	31-Mar-2003
3	ArunExcello Urban Infrastructure Pvt. Ltd.,	0.225	547	31-Mar-2003
4	Arunachala Gounder Textile Mills Pvt. Ltd.,	0.6	597	29-Sep-2006
5	Arunachala Gounder Textile Mills Pvt. Ltd.,	0.6	2496	30-Sep-2007
6	Classic Spinning Mills Pvt. Ltd.,	0.225	314	18-Nov-2004
7	Classic Spinning Mills Pvt. Ltd.,	0.225	314	5-Jan-2005
8	Classic Spinning Mills Pvt. Ltd.,	0.225	314	8-Aug-2005
9	Classic Spinning Mills Pvt. Ltd.,	0.225	314	8-Sep-2005
10	Classic Spinning Mills Pvt. Ltd.,	0.225	314	8-Sep-2005
11	Classic Spinning Mills Pvt. Ltd.,	0.5	258	27-Mar-2003
12	Classic Spinning Mills Pvt. Ltd.,	0.5	625	16-Mar-2007
13	Classic Wind Farms	0.225	255	28-Sep-2002
14	Classic Wind Farms	0.225	255	28-Sep-2002

S.NO.	NAME OF THE MILLS / COMPANIES	CAPACITY in MW	HTSC. NO.	IMPLEMENTATION DATES /COMMISSIONING DATE
15	Classic Wind Farms	0.5	259	27-Mar-2003
16	Classic Wind Farms	0.5	627	16-Mar-2007
17	Classic Wind Farms	0.5	626	16-Mar-2007
18	Deffree Engineering (P) Ltd.,	0.8	1059	30-Dec-2005
19	Dhanalakshmi Controls & Equipments	0.225	726	29-Mar-2005
20	Frontier Processing Mills	0.5	1723	29-Mar-2006
21	Jayakrishna Flour Mills Pvt. Ltd.,	0.225	477	5-Feb-2003
22	Jayakrishna Flour Mills Pvt. Ltd.,	0.225	518	28-Mar-2003
23	Jayakrishna Flour Mills Pvt. Ltd.,	0.225	623	29-Sep-2003
24	Jayakrishna Flour Mills Pvt. Ltd.,	0.225	781	31-Mar-2004
25	Jayakrishna Flour Mills Pvt. Ltd.,	0.225	782	31-Mar-2004
26	Jayakrishna Flour Mills Pvt. Ltd.,	0.225	1463	29-Sep-2005
27	Jayakrishna Flour Mills Pvt. Ltd.,	0.225	1769	30-Mar-2006
28	K.G. Entertainment Company (P) Ltd.,	0.35	1328	30-Sep-2006
29	Kaleesuwari Refinery Pvt. Ltd.,	0.5	609	25-Sep-2003
30	Kaleesuwari Refinery Pvt. Ltd.,	0.6	603	24-Sep-2003
31	Lakshmi Narayan Govrishankar Enterpriser Pvt. Ltd.,	0.5	561	3-Apr-2006
32	LakshminarayanGourishanker Enterprises Pvt. Ltd.,	0.25	663	10-Apr-2007
33	LakshminarayanGourishanker Enterprises Pvt. Ltd.,	0.25	664	10-Apr-2007

S.NO.	NAME OF THE MILLS / COMPANIES	CAPACITY in MW	HTSC. NO.	IMPLEMENTATION DATES /COMMISSIONING DATE
34	LakshminarayanGourishanker Enterprises Pvt. Ltd.,	0.25	665	10-Apr-2007
35	LakshminarayanGourishanker Enterprises Pvt. Ltd.,	0.25	666	10-Apr-2007
36	LakshminarayanGourishanker Enterprises Pvt. Ltd.,	0.25	252	28-Mar-2002
37	LakshminarayanGourishanker Enterprises Pvt. Ltd.,	0.25	252	28-Mar-2002
38	LakshminarayanGourishanker Enterprises Pvt. Ltd.,	0.25	252	23-Sep-2002
39	LakshminarayanGourishanker Enterprises Pvt. Ltd.,	0.25	260	29-Mar-2003
40	LakshminarayanGourishanker Enterprises Pvt. Ltd.,	0.25	261	29-Mar-2003
41	LakshminarayanGourishanker Enterprises Pvt. Ltd.,	0.25	444	4-Jun-2005
42	LakshminarayanGourishanker Enterprises Pvt. Ltd.,	0.25	445	4-Jun-2005
43	LakshminarayanGourishanker Enterprises Pvt. Ltd.,	0.5	516	22-Mar-2006
44	Lotus Agency	0.75	1956	24-Jul-2006
45	M.S. Raja Transports (Wind Mill Division)	0.8	1063	31-Dec-2005
46	Poombukar Process	0.225	592	15-Dec-2004
47	Poomer Hosieries	0.225	984	29-Sep-2005

S.NO.	NAME OF THE MILLS / COMPANIES	CAPACITY in MW	HTSC. NO.	IMPLEMENTATION DATES /COMMISSIONING DATE
48	Power Link System Pvt. Ltd.,	0.23	281	31-Mar-2003
49	Prime Tex	0.225	574	12-Sep-2003
50	Prime Tex	0.225	574	12-Sep-2003
51	Prime Tex	0.225	552	11-Aug-2003
52	Prime Tex	0.225	552	31-Mar-2003
53	Prime Tex	0.225	552	31-Mar-2003
54	Prime Tex	0.225	320	30-Sep-2003
55	Prime Tex	0.225	318	30-Sep-2003
56	Rangasayee Alloy Castings	0.23	407	30-Mar-2004
57	Rangasayee Alloy Castings	0.35	1203	31-Mar-2006
58	S.N.Q.S. International	0.33	1180	29-Mar-2006
59	S.S.K. Textiles	0.6	58	26-Mar-2007
60	S.S.K. Textiles	0.25	446	17-Jun-2005
61	Santhi Casting Works	0.5	608	25-Sep-2003
62	Seyad Home Industries Pvt. Ltd.,	0.5	607	25-Sep-2003
63	SeyadShariat Finance Ltd.,	0.225	645	18-Oct-2003
64	SeyaduBeedi Company	0.5	417	5-Mar-2002
65	Shanmugapriya Textiles Pvt. Ltd.,	0.75	536	31-Mar-2003
66	Shriram City Union Finance Ltd.,	1.25	584	21-Sep-2003
67	Shriram City Union Finance Ltd.,	1.25	585	21-Sep-2003
68	Shriram City Union Finance Ltd.,	1.25	586	21-Sep-2003

S.NO.	NAME OF THE MILLS / COMPANIES	CAPACITY in MW	HTSC. NO.	IMPLEMENTATION DATES / COMMISSIONING DATE
69	Shriram Investments Ltd.,	0.75	640	30-Sep-2003
70	Shriram Investments Ltd.,	0.75	641	30-Sep-2003
71	Shriram Investments Ltd.,	0.75	641	30-Sep-2003
72	Shriram Investments Ltd.,	0.75	641	30-Sep-2003
73	Shriram Investments Ltd.,	0.75	641	30-Sep-2003
74	Shriram Investments Ltd.,	0.75	641	30-Sep-2003
75	Shriram Investments Ltd.,	0.75	641	30-Sep-2003
76	Shriram Investments Ltd.,	0.75	642	30-Sep-2003
77	SNQS International Socks Pvt. Ltd.,	0.23	290	26-Sep-2003
78	Soundararaja Mills Ltd.,	1.25	862	12-Aug-2004
79	Soundararaja Mills Ltd.,	1.25	888	2-Sep-2004
80	Soundararaja Mills Ltd.,	1.25	889	2-Sep-2004
81	Soundararaja Mills Ltd.,	1.25	890	2-Sep-2004
82	SRG Apparels Private Ltd.,	0.225	575	12-Sep-2003
83	SRG Apparels Private Ltd.,	0.225	575	12-Sep-2003
84	SRG Apparels Private Ltd.,	0.225	554	23-Jul-2003
85	SRG Apparels Private Ltd.,	0.225	554	31-Mar-2003
86	SRG Apparels Private Ltd.,	0.225	554	31-Mar-2003
87	SRG Apparels Private Ltd.,	0.225	319	30-Sep-2003
88	SRG Apparels Private Ltd.,	0.225	319	30-Sep-2003
89	Sri AlameluAmmal Mills India Pvt.	0.6	63	28-Mar-2007

S.NO.	NAME OF THE MILLS / COMPANIES	CAPACITY in MW	HTSC. NO.	IMPLEMENTATION DATES /COMMISSIONING DATE
	Ltd.,			
90	Sri Senthilandavar Cotton Mills Pvt. Ltd.,	0.75	519	29-Mar-2003
91	Sri Venkatram Spinners Pvt. Ltd.,	1.65	1683	25-Mar-2006
92	Sugavaneswara Spinning Mills Pvt. Ltd.,	1.25	2273	29-Mar-2007
93	Super Spinning Mills Ltd.,	1.25	611	26-Sep-2003
94	Suresh Textiles	0.25	613	6-Feb-2007
95	T.E.S. Fathu Rabbani	0.225	447	27-Sep-2002
96	T.E.S. Naina Mohamed	0.225	754	29-Mar-2004
97	The Prem Dyeing Works	0.5	424	31-Mar-2005
98	The United Yarn Processors	0.5	1224	29-Mar-2005
99	Thriveni Earth Movers Pvt. Ltd.,	0.225	1470	6-Sep-2007
100	Unifront Driers	0.5	1715	29-Mar-2006
101	Unifront Textiles Processors Pvt. Ltd.,	0.5	1763	30-Mar-2006
102	V.R. Foundries	0.85	602	23-Dec-2006
103	Veena Fabrics Pvt. Ltd.,	0.25	1257	28-Apr-2006
104	Veena Fabrics Pvt. Ltd.,	0.25	1244	31-Mar-2006
105	Vetal Hi-Tech Industries	0.25	267	12-Sep-2003
106	Vetal Textiles & Electronics Pvt. Ltd.,	0.25	266	12-Sep-2003
107	VictusDyeings	0.75	384	27-Mar-2004

S.NO.	NAME OF THE MILLS / COMPANIES	CAPACITY in MW	HTSC. NO.	IMPLEMENTATION DATES /COMMISSIONING DATE
108	Vigneshkumar Spinning Mills Pvt. Ltd.,	0.35	2201	20-Mar-2007
109	Vigneshkumar Spinning Mills Pvt. Ltd.,	0.35	1315	29-Sep-2006

The technical parameters have been verified with the name plates as well as with the technical specifications of WTGs and also cross checked from the technical manual of the Manufactures. Assessment team confirms that the technical parameters are consistent with the registered VCS PD/01/. The assessment team confirmed through onsite visit with PP representative that there is no proposed or actual change to the project design during this monitoring period. It was observed that the monitoring plan was implemented as per the registered VCS PD and applied methodology ACM0002. Version 10. The organisational role and responsibility as mentioned in the registered VCS PD is followed onsite. Meters are not calibrated as per calibration frequency in registered VCS PD, further details has been discussed under section 4.5 of this verification report. All the emergency preparedness as mentioned in the registered VCS PD is followed onsite and no discrepancies were found regarding the same.

Assessment team concludes the following:

- There is no material discrepancies between project implementation and the project description provided in the registered PD/04/.
- The monitoring plan is implemented completely and monitoring system (i.e., process and schedule for obtaining, recording, compiling and analysing the monitored data and parameters) is appropriate.
- There is no material discrepancies between the actual monitoring system, and the monitoring plan set out in the project description and the applied methodology/08/.
- The GHG emission reductions or removals generated by the project have not included in an emissions trading program or any other mechanism that includes GHG allowance trading/16/.
- The project has not received or sought any other form of environmental credit, or has become eligible to do so since validation or previous verification.
- The project is registered under VCS only.

In view of the information's as verified above the assessment team is able to conclude that the project has been implemented as described in the project description.

4.2 Safeguards

4.2.1 No Net Harm

Being bundled renewable wind power generation project there is no negative environmental and socio-economic impacts in fact project activity contributes positively by providing environment friendly power generation leading to sustainable development of the region. Also, the generation of employment supports upliftment of socio-economic status of region. As per the EIA notification dated 14th September 2006, the wind power projects are exempted from environmental clearance. Hence, Environmental impact assessment is not required for this project activity. The report on "Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects" prepared by MNRE dated September 2013 also confirms that wind power project activity operations do not result in direct air pollution, noise pollution. Hence verification team confirms that there are no any significant impacts due to implementation of project activity on air, water, soil quality and ambience are envisaged due to the project activity.

4.2.2 Local Stakeholder Consultation

The Project is already registered with VCS and registered VCS Project Description; sections 6 describe the Local Stakeholder Consultation Process as in-line with VCS requirement.

As a part of continuous feedback from stakeholders, there were no other major comments or protest raised by the stakeholders and they were totally in support for setting up of these kinds of projects in the region.

For ongoing communication, the PP has also placed a grievance register onsite where in the stakeholder can put down his/her complain and the same if found genuine will be addressed immediately. However, being renewable wind power generation project there is no feedback/grievance has been reported within this monitoring period verified from the photos provided by the Project participant.

4.3 AFOLU-Specific Safeguards

Not applicable for this verification.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The project monitoring has been carried in accordance with the registered VCS PD/01/ and the monitoring report/04/. The monitoring plan laid in the registered PD is being followed at the site/18/. The assessment team has verified the information flow (from data generation, aggregation, to recording, calculation and reporting for these parameters including the values) in the MR/04/.The emission reductions are purely based on the net electricity generated and exported from the machines. PP has provided all the sufficient data for current monitoring period. The values of the parameter net electricity generation supplied to the grid by each phase used in deriving the GHG emission reduction could be very well correlated between the data sets and ER spreadsheet/05/ provided by PP. the verification of each monitoring parameter has been discussed later in section 4.5.

The calculation method and formulae used in calculating baseline emission is in compliance to the methodology used i.e. ACM0002.Version 10/09/. Since project activity is a wind power project, leakage emission and project emission has been considered as zero.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

The below tables describe how the parameter, that is to be measured according to the monitoring plan, has been verified to confirm that the actual monitoring complies with the monitoring plan, monitoring data has been thoroughly assessed and that the calibration requirements are met.

Parameter	Net electricity supplied to the grid by the Project, EG _y (MWh)	
Means of verification	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	The parameter is calculated and recorded on monthly basis. The ER sheet mentioned yearly data for simplicity of ER calculation; monthly data has been verified from monthly details provided by the PP. Quantity of net electricity generation supplied by the project plant/unit to the grid in year y, is calculated as: $EG_{p,j,y} = (\sum EG_{JMR, project, export,y} - \sum EG_{JMR, project, import,y})$ Where, $EG_{JMR, project, export,y}$ = Quantity of Electricity exported by the Project WTGs connected to the feeder i to the grid during the year y. $EG_{JMR, project, import,y}$ = Quantity of Electricity imported by the Project WTGs connected to the feeder i from the grid during the year y.
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The reporting frequency is in line with the monitoring plan as outlined in the registered PD/01/ and monitoring methodology/09/.
	Monitoring equipment	No monitoring equipment is used as this parameter (EG _y (MWh)) is calculated.

		However the parameter $EG_{JMR,project,export,y}$ and $EG_{JMR,project,import,y}$ using measured values, are continuously monitored, hourly measured and monthly recorded⁴. The details of meters are provided in Appendix 2 of the MR by the PP. The value of import and export is measured by 0.5 Class Meter – (accuracy $\pm 0.5\%$). The same has been checked and found to be correct.
	Is accuracy of the monitoring equipment as stated in the monitoring plan? If the monitoring plan does not specify the accuracy of the monitoring equipment, does the accuracy of the monitoring equipment comply with local/national standards, or as per the manufacturer's specification?	The accuracy of the monitoring equipment used to measure the input values used to calculate $EG_{JMR,project,export,y}$ and $EG_{JMR,project,import,y}$ is 0.5s, which is as per the registered PD/01/ which is as per the norm defined in the PPA/12/.
	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	Yes. The accuracy of monitoring equipment's is valid for the entire range.
	Calibration frequency /interval:	Main meter is to be calibrated by the TNEB as per guidelines provided by CEA/TNERC, which refers at least once in five

		years. However, calibration frequency is once in 3 years is as per the registered PD monitoring plan.
	Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring plan does not specify the frequency of calibration, is the selected frequency in accordance with the local/national standards, or as per the manufacturer's specifications?	Main meter is to be calibrated by the TNEB as per guidelines provided by CEA/TNERC, which refers at least once in five years. However, calibration frequency is once in 3 years is as per the registered PD monitoring plan.
	Is the calibration of measuring equipment carried out by an accredited person or institution?	Previous calibration of the measuring equipment's is carried out by an accredited entity. There is delay in calibration of meters for the current monitoring period.
	Is(are) calibration(s) valid for the whole reporting period?	There is delay in calibration of meters for the current monitoring period.
	Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	There is delay in calibration of meters for the current monitoring period.
	How were the values in the monitoring report verified?	Cumulative value of EG _y for entire monitoring period is reported in the monitoring report/04/, and monthly values in the ER calculation sheet/05/. The monthly values were verified from the credit notes issued by state utility and found to be consistent. Value of this parameter for the current monitoring period was verified as 117,098.58MWh.

	If applicable, has the reported data been cross-checked with other available data?	The monthly reported values of EG _y were further cross checked with the monthly invoices raised by the PP /07/ to state utility and found to be consistent.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Remote assessment of the project activity confirms that the necessary QA/QC procedures are in place and the data management system is effective and reliable.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues.
Findings	CAR#7&8 was raised and resolved	
Conclusion	The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied) and applied methodology. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan. The emission reduction calculation for the project activity is estimated based on the electricity supplied by the WTGs. Since 100% data was verified, the team can ascertain that the values taken for emission reduction calculation are free from material errors.	

Parameters fixed ex ante:

$EF_{grid,OM,simple,y}$; tCO_{2e}/MWh : it is the operating margin emission factor of NEWNE grid fixed at the time of project registration the mentioned value of $=0.998157296tCO_{2e}/GWh$ is consistent with the registered PD/01/.

$EF_{grid,BM,y}$; tCO_{2e}/MWh : it is build margin emission factor of NEWNE grid fixed at the time of project registration the mentioned value of $=0.71331778tCO_{2e}/GWh$ is consistent with the registered PD/01/.

$EF_{grid,CM,y}$; tCO_{2e}/MWh : it is the combined margin emission factor of NEWNE grid fixed at the time of project registration the mentioned value of $=0.92694742tCO_{2e}/GWh$ is consistent with the registered PD/01/.

Calibration of meters:

During the verification assessment of the project activity, accuracy of all the metering have been checked and found appropriate. In the registered PD, the PP has given the calibration frequency will be as per the CEA guidelines which insists for a calibration/ testing frequency of once in 5 years only. The installation and working conditions of the meters were checked during the remote inspection and were found to be satisfactory.

The assessment team has verified the monthly credit notes issued by the state utility and confirmed that only the data recorded through main meters is used to calculate net electricity supplied to the grid consequently for ER calculations.

Assessment on delay in calibration:

There is delay found in meter calibration as the meter calibration frequency is once in 5 years and as Main meter is to be calibrated by the TNEB as per guidelines provided by CEA/TNERC, which refers at least once in five years. However, the calibration was not carried out by TNEB, since it not preview of the PP and no control on process of calibration of energy meters. The meters are working properly throughout the monitoring period and the bills are based on value monitoring by these meters and all are in control of TNEB (Govt. of India). The VVB has discussed the current status of energy meters and confirm the meters are continuously working at the time of remote audit on video conference with plant side meter location. So, the PP has considered delay in calibration for throughout monitoring period. PP has applied error of twice the error to get conservative value. This is found to be more appropriate as meters are properly working and the PP has appropriately applied error being more conservatively, hence accepted. The after monitoring period calibration was conducted and details of energy meters are provided in revised MR. he Appendix-1 in the MR reflects the last date of calibration with the heading "Calibration Date". It is evident through the spreadsheet shared by the PP that except 23 machines, all the other machines are having calibration validity till the end of the current monitoring period. For the remaining 23 machines, the calibration has been done within the due date itself without any gap. Hence, the PP has given only the latest date of calibration in Appendix-1. Based on review of calibration certificates ; if is confirm that meters are working properly throughout the monitoring period. The PP has provided the calibration details in separate excel sheet "TASMA-V1_CALIBRATION DETAILS_01022023"/21/. The same has been verified and found to be correct based on cross –check of calibration certificates.

The PP has provided initial calibration details in MR and same has been verified by the assessment team based on certificate provided by the PP and found to be acceptable.

The verification team has remotely checked all the meters and confirmed that the meters were working satisfactorily. Also the calibration of meters is completely under preview of state utility and PP has no control over the same as confirmed through interviews of site personnel and PPA signed by the PP with state utility/12/.

Hence it can be concluded that the approach followed by the PP is conservative and in line with the guidelines provided under paragraph 366(a) of VVS version 03.

The registered VCS PD/01/ & MR /04/ and remote audit observations confirm that the metering equipment are sealed and maintained by the state utility.

In view of the above discussion the assessment team is able to confirm that evidence used to determine the GHG reductions and removals are sufficient and appropriate with respect to quality and quantity.

GHG Calculations

The emission reduction as per the applied methodology equals the baseline emissions (project emissions and leakage emissions for such project activities is considered zero). The formula provided for the calculation of baseline emissions is:

$$BE_y = EG_y * EF_y$$

Where:

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

EG_y : Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the project activity in year y (MWh/yr)

EF_y : Combined Margin (CM) Emission Factor of NEWNE (tCO₂/MWh)

Since the project activity is the installation of a new grid-connected renewable power plant/unit at a site where no renewable power plant was operated prior to the implementation of the project activity, hence:

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

Where,

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

$$\text{Thus, } BE_y = EG_{facility,y} * EF_{grid, CM, y}$$

$$\text{Thus, } BE_y = 117,098.58 * 0.92694742 \text{ tCO}_2/\text{MWh}$$

$$= 108,545 \text{ tCO}_2\text{e (rounded down value)}$$

The verification team confirms that appropriate methods and formulae for calculating baseline emissions have been followed. The assumptions, emission factors and default values that were applied in the calculations are justified. The verification team confirms that appropriate methods and formulae for calculating baseline emissions have been followed. The assumptions, emission factors and default values that were applied in the calculations are

justified. Hence the assessment team has concluded the decrease in emission reduction of the project activity is justified and acceptable.

All the data were made available and have monitored as per required monitoring frequency. The means of verification for the values of parameters, used for baseline emission calculation, is described above. The emission reduction calculation for the project activity is estimated based on the electricity supplied by the WTG sets installed at site. Monthly values of electricity generated inserted in the ER sheet was verified with the Joint Meter Reading Report and Invoices provided by the project proponent. Since 100% data was verified, the team can ascertain that the values taken for emission reduction calculation are free from material errors. Therefore, the assessment team confirms that the emission reductions are free from any omissions, misstatement and material errors.

4.6 Non-Permanence Risk Analysis

Not applicable for the project activity. This section is not applicable for non-AFOLU projects.

5 VERIFICATION CONCLUSION

Applus+ certification, contracted by Tamilnadu Spinning Mills Association (TASMA), has performed the independent verification of the emission reductions for the VCS project activity (VCS ID- 250) “Bundled Wind power project in Tamil Nadu, India, co-ordinated by Tamil Nadu Spinning Mills Association (TASMA-V1)” in India for the monitoring period 01-January-2015 to 31-March-2016 as reported in the Monitoring Report Version 02.2 dated 07-02-2023. The Tamilnadu Spinning Mills Association (TASMA) is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity.

It is our responsibility to express an independent verification statement on the reported GHG emission reductions from the project activity

Applus+ certification commenced the verification on the basis of the baseline and monitoring methodology ACM0002. / Version 10, the monitoring plan contained in the registered VCS PD Version 01, dated 23/September/2009 and VCS guidelines version 4.1, Monitoring Report Version 02.2 dated 07/02/2023 as per the process described under Section 2 of this report.

Applus+ certification verification approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. Applus+ certification planned and performed the verification by obtaining evidence and other information and explanations that Applus+ certification considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

In our opinion the GHG emissions reductions reported for the project activity for the period 01-January-2015 to 31-March-2016 are fairly stated in the Monitoring Report Version 02.2 dated 07/02/2023. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology ACM0002. / Version 10, and the VCS standard 4.2.

Verification period: From 01-January-2015 to 31-March-2016 (including both days)

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)
Year 2015	86,972	0	0	86,972
01 January 2016- 31 March 2016	21,573	0	0	21,573
Total	108,545	0	0	108,545

APPENDIX 1: < REFERENCES >

S.No	Title of Document	Version	Date
1.	Registered VCS PD/CDM PDD	01	23/09/2009
2.	VCS Validation Report	N/A	N/A
3.	VCS Monitoring Report	1	09/03/2021
	VCS Monitoring Report	02.1	21/10/2022
4.	VCS Monitoring Report (Final)	02.2	07/02/2023
5.	ER spread sheet (corresponding to the final monitoring report)	02	11/03/2022
6	Certificates of Calibration for all the meters belongs to project activity	-	01/01/2015 to 31/03/2016
7.	Invoice issued by PP to state DISCOM	-	For the period 01/01/2015 to 31/03/2016
8.	Monthly JMR and Credit notes issued by TNEB for the current verification period.	-	For the period 01/01/2015 to 31/03/2016
9.	"Consolidated Baseline Methodology for grid connected electricity generation from renewable sources", ACM0002.	10.0	-
10.	CEA Database	Version 04	-
11.	Commissioning certificate for all the WTGs of the project activity issued by state electricity authority	-	
12.	Power Purchase Agreements signed between respective Project developer and state electricity authority	-	-
13.	VCS webpage for the project, VCS ID 250; https://www.vcsprojectdatabase.org/#/project_details/250	-	Last accessed on

S.No	Title of Document	Version	Date
			16/03/2022
14.	Letter of declaration dated from PP regarding not having created or sought any other form of environmental credit for the same period	-	08/12/2021
15.	Central Electricity Authority (Installation and Operation of Meters) Regulations Notified on 17/03/2006 <u>No. 502/70/CEA/DP&D</u> Amendments Notified on 26/06/2010 <u>No. 502/6/2009/DP&D/D-I</u>	-	Dated 17/03/2006
16.	VCS Standard	Version 4.2	Issued:19-09-2019 Updated: 22-04-2021
17.	VCS Program Guide	Version 4.1	19/09/2019
18.	Remote assessment –interviews of staff personnel, physical inspection of monitoring system	-	19/11/2021 Updated: 22-04-2021
19.	Monthly generation reports issued by O&M contractor	-	For the period 01/01/2021 to 31/06/2021
20.	Clean Development Mechanism Validation and Verification Standard for Project Activity (CDM-VVS for PA),	3.0	-
21.	The calibration details in separate excel sheet “TASMA-V1_CALIBRATION DETAILS_01022023”.	1.0	-

APPENDIX 2: <COMPETENCY STATEMENT>

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

The composition of audit team shall be approved by the 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	Qualification	Coverage of scope	Coverage of technical Area	Financial aspect	Host country Experience	Attendance to the Remote-Site Assessment
Vivek Kumar Ahirwar	Lead Auditor (LA) & Technical Expert (TE)	Yes (1)	Yes (1.2)	N/A	Yes	Yes
Simon Shen	Technical Reviewer (TR)	Yes (1)	Yes (1.2)	N/A	N/A	N/A

The curriculum vitae of the DOE's team members are provided below:

Vivek Kumar Ahirwar is a BEE-Certified Energy Auditor by Govt of India with over eight years of relevant experience in energy efficiency, energy audit, thermal and electrical energy generation technology from renewable source and energy conservation in energy intensive industries, designated consumers and commercial buildings, implementation of energy conservation building codes, research, process and green building projects. He is a certified lead auditor for ISO 14001 EMS and 14064. He has experience under various categories of projects stating from renewable to waste to supercritical projects and WCD. He has successfully audited more than 100 GHG (CDM/VCS/GS) projects in different states across the India. He has done Master in Technology (Energy Management) from a premier institute, School of Energy & Environmental Studies, DAVV, Indore (M.P.), India and Bachelor of Engineering (Mechanical Engineering) from Govt. Engineering college, Rewa, RGPV, India.

Simon Shen (Master Degree in Thermal Energy Engineering, Bachelor Degree in Environmental Engineering) is a Lead Auditor appointed by Applus+ LGAI for the GHG project assessment. He is based

in Shanghai. He has several years of work experience in environmental protection field. Before he joined Applus+ LGAI, he had been worked for TÜV SÜD as a GHG Validator/Verifier and ISO 9001/14001 Lead Auditor for 3.5 Years.

APPENDIX 3: <ABBREVIATIONS>

ABT	Availability Based Tariff
BEF	Baseline Emission Factor
BM	Build Margin
CAR	Corrective Action Request
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CL	Clarification Request
CMS	Central Monitoring System
CMP	Conference of Parties Serving as Meeting of Parties
CO2	Carbon dioxide
DISCOM	Distribution Company
EB	Executive Board
EPC	Engineering, Procurement and Construction
FAR	Forward Action Request
GHG	Green House Gas
ISO	International Standards Organization
JMR	Joint Meter Reading
kW	Kilowatt
kWh	Kilowatt hour
MEDA	Maharashtra Energy Development Agency

MFR	Multi-Function Relay
MR	Monitoring Report
TNEB	Maharashtra State Electricity Distribution Company Limited
MW	Megawatt
MWh	Megawatt-hour
NEWNE	Northern Eastern Western Northern-Eastern
O&M	Operation and Maintenance
PD	Project Description
PLF	Plant Load Factor
PP	Project Proponent
PPA	Power Purchase Agreement
QA/QC	Quality Assurance and Quality Control
TOD	Time of the Day
UNFCCC	United Nations Framework Convention on Climate Change
WEC	Wind Energy Convertor
WEG	Wind Energy Generator
WTG	Wind Turbine Generator
VCS	Voluntary Carbon Standard
VCSA	Voluntary Carbon Standard Association
VCS PD	VCS Project Description
VCUs	Voluntary Carbon Units

APPENDIX 4: <FINDINGS OVERVIEW>

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

FAR ID	Section no.	NA	Date :DD/MM/YYYY
Description of FAR			
N/A			
Project participant response			Date :DD/MM/YYYY
NA			
Documentation provided by project participant			
NA			
VVB assessment			Date: DD/MM/YYYY
NA			

Table 2. CL from this verification

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

Table 3. CAR from this verification

CAR ID	01	Section no.	Page 2 of the MR	Date 22/11/2021
Description of CAR				

Finding are below:

1. On page no 2 of the MR, Contents is not correct and as per the template of the VCS MR.
2. Date format is not as per standard guideline in entire monitoring report
3. In section 1.1 of the MR, current project status are missing.

Hence CAR#1 is raised for the same.

Project participant response	Date : 11/03/2022
1. The content in the MR is updated. 2. Date format is updated in the MR. 3. Section 1.1 of the MR is revised as per the current project status.	
Documentation provided by project participant	
MR version 02, 11/03/2022	
VVB assessment	Date: 15/03/2022
PP has updated the MR with respective of findings and same are found in line with the requirement. Hence CAR#01 is closed	

CAR ID	02	Section no.	1.7	Date : 22/11/2021
Description of CAR				
1. In section 1.5 of the MR, Start date of the project is provided but reference has not given. 2. In section 1.6 of the MR, project crediting period is provided but not as per the standard requirement. 3. PP has not provided the location of the project in section 1.7 of the MR. PP is requested to provide the same as per requirement.				
Project participant response				Date : 11/03/2022
1. The start date reference is included in the revised MR 2. Section 1.6 of the MR is updated. 3. Location map is included in the revised MR.				
Documentation provided by project participant				
MR version 02, 11/03/2022				
VVB assessment				Date: 15/03/2022
PP has updated the MR with respective of findings and same are found in line with the requirement. Hence CAR#02 is closed				

CAR ID	03	Section no.	1.9, 1.10& 2.2	Date :22/11/2021
Description of CAR				

2. PP is requested to submit the deceleration letter to avoid the double counting.	
2. Grievances/ LSC register are not submitted to auditor for assessment.	
Project participant response	Date :11/03/2022
1. Declaration letter is submitted to VVB 2. Grievances/ LSC register is submitted.	
Documentation provided by project participant	
Declaration letter	
VVB assessment	Date: 15/03/2022
PP has provided the declaration letter dated 08/12/2021 along with the updated the MR and same are found in line with the requirement. Hence CAR#03 is closed	

CAR ID	04	Section no.	1.11 and 2	Date :22/11/2021
Description of CAR				
PP has not provided the in details as per template/ guidance of the VCS i.e. Social well being • Economic well being • Environmental well being • Technological well being and also refer the comment in MR.				
Project participant response				Date : 11/03/2022
The MR is updated as per the template requirement.				
Documentation provided by project participant				
MR version 02, 11/03/2022				
VVB assessment				Date: 15/03/2022
PP has updated the section 2 of the revised MR. Hence CAR#04 is closed				

CAR ID	05	Section no.	4.1	Date : 22/11/2021
Description of CAR				
CEA date version is not provided in the MR and also guidance statement is not deleted in from the MR. Hence CAR#5 is raised.				
Project participant response				Date :
The CEA version 4 is mentioned in the revised MR.				
Documentation provided by project participant				
MR version 02, 11/03/2022				

VVB assessment	Date: 15/03/2022
PP has updated the MR along with the CEA database version no and format is corrected. Hence CAR #05 is closed.	

CAR ID	06	Section no.	4.2	Date : 22/11/2021
Description of CAR				
The details of monitoring meters and its calibration are provided in the MR. However, the latest calibration certificates for the complete monitoring period are not provided. However, it is not clear that the meter has not changed in this MP. Corrective action is raised for the same.				
Project participant response				Date :
There is no meter change in this monitoring period. The same has been updated in the revised MR and evidence is submitted.				
Documentation provided by project participant				
MR version 02, 11/03/2022				
VVB assessment				Date: 15/03/2022
PP has provided the details in the updated MR and found inline and correct. Hence, CAR#06 is closed.				

CAR ID	07	Section no.	D.2	Date : 22/11/2021
Description of CAR				
PP is requested to provide the JMR and Invoice to verify the values in ER sheet for entire monitoring period.				
Project participant response				Date : 11/03/2022
JMR and Invoice is submitted for VVB review.				
Documentation provided by project participant				
JMRs and Invoices				
VVB assessment				Date: 15/03/2022
PP has provided the JMR and Invoices for the entire monitoring period. Hence CAR#07 is closed.				

CAR ID	08	Section no.	D.2	Date :22/11/2021
Description of CAR				

PP is requested to provide the proper ER sheet to verify the same along with the evidence.	
Project participant response	Date : 11/03/2022
ER sheet with evidence is submitted to VVB for review	
Documentation provided by project participant	
ER sheet version 02 11/03/2022	
VVB assessment	Date: 15/03/2022
PP has provided the updated ER sheet and MR along with the supporting evidence. Hence CAR#08 is closed.	

Table 4. FAR from this verification

FAR ID	XX	Section No.	XX	Date :
Description of FAR				
NA				
Project participant response				Date : DD/MM/YYYY
NA				
Documentation provided by project participant				
NA				
VVB assessment				Date: DD/MM/YYYY
NA				