



13.75 MW WIND POWER PROJECT IN DAVANGERE, KARNATAKA, INDIA

Document Prepared By



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Summary:

M/s VKU Certification Pvt. Ltd. (hereafter referred as VKU) was commissioned by M/s EKI Energy Services Limited, has verified the greenhouse gas emission reductions reported for the project activity “13.75 MW wind power project in Davangere, Karnataka, India” (VCS ID 927¹) in India, covering monitoring period from 01-July-2021 to 31-March-2022 (Inclusive of both start and end dates) with regard to the relevant requirements for VCS activities.

The objective of the verification is to have an independent review ex-post determination of the monitored reductions in GHG emission reductions, Verification was conducted using VKU’s procedures in line with the requirements specified in the VCS program guide version 4.2 /6/, VCS standard Version 4.3 /7/, VCS validation and verification manual version 3.2 /8/, CDM M&P, the latest version of the CDM Validation and Verification Standard /9/, and relevant decisions of the COP/MOP and the CDM EB and applying standard auditing techniques. The verification consisted of desk review, on-site assessment and the resolution of outstanding issues and the issuance of the final verification report and certification.

The verification shall ensure that reported emission reductions are complete and accurate in accordance with applicable VCS / CDM requirements in order to be certified.

The GHG emission reductions were calculated on the basis of the approved methodology AMS I.D “Grid Connected Renewable Electricity Generation” (version 18) /11/ and the monitoring plan included in the registered VCS RCP PD (version 03) dated 26-February-2021/5/

During this verification, 3 Corrective Action Request (CAR) and 2 Clarification Requests (CLs) were identified related to operation, monitoring and GHG emission reduction calculation of the VCS project activity in relation to all relevant VCS requirements for the project activity and the applied baseline and monitoring methodology, and these CARs and CLs are successfully closed after necessary corrections/clarifications by the client. The same has been discussed in Appendix B of this verification report.

In conclusion, it is VKU’s opinion that the project activity “13.75 MW wind power project in Davangere, Karnataka, India” (VCS ID 927) in India meets all relevant requirements for VCS standard version 4.3 /7/and guidelines and correctly applies the baseline and monitoring methodology AMS I.D “Grid Connected Renewable Electricity Generation” (version 18) /11/. The monitoring system is in place and the emission reductions are calculated without material misstatement. Hence, VKU is able to certify that the emission reductions from the project during the monitoring period from 01-July-2021 to 31-March-2022 (Inclusive of both start and end dates) under 2nd crediting period (31-March-2019 to 30-March-2029) amount to 18,520 tCO₂e.

¹<https://registry.verra.org/app/projectDetail/VCS/927>

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1 INTRODUCTION

1.1 Objective

M/s EKI Energy Services Limited Commissioned M/s VKU Certification to carry out second verification of the project “13.75 MW wind power project in Davangere, Karnataka, India” (VCS ID 927) project in India for the period from 01-July-2022 to 31-March-2022 (Inclusive of both start and end dates).

This report summarizes the findings of the verification of the project, performed on the basis of VCS Requirements and UNFCCC criteria for CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The objective of the verification is to have an independent evaluation of a project activity by an accredited validation and verification body against the requirements of the VCS Program Guide Version 4.2 /6/, VCS standard version 4.3 /7/ and GHG program applied, on the basis of the registered project design document.

This is the second verification of second crediting period ² (31-March-2019 to 30-March-2029) for a period of nine months from 01-July-2022 to 31-March-2022 (Inclusive of both start and end dates). The project activity adopts renewable crediting period of 10 years period which can be renewed for maximum 2 times as mentioned in section 1.9 of RCP VCS PD version 03 dated 26-February-2021 /5/.

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 (RCP PD) /5/ & MR /1/ 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 Verified Carbon Units (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.

² The previous crediting period for the project activity was from 31-March-2009 to 30-March-2019.

1.2 Scope and Criteria

The verification scope is:

- to verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan;
- to evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement;
- to verify that reported GHG emission data is sufficiently supported by evidence.

The project is assessed against the requirements of VCS standard version 4.3 /7/, VCS program guide version 4.2 /6/, VCS validation and verification manual version 3.2 /8/ and related rules and guidance. VKU has, based on the recommendations in the latest version of CDM Validation and Verification Standard/9/, VCS validation and verification manual and employed a rule-based approach (as criteria) in the verification, focusing on the identification of significant reporting rules and the reliability of project monitoring.

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

1.3 Level of Assurance

All the revisions of the verification report before being submitted to the client were subjected to an independent internal technical review to confirm that all verification activities had been completed according to the pertinent VKU's procedure, with a **reasonable level of assurance**.

The technical review was performed by a technical reviewer(s) qualified in accordance with VKU's qualification procedure. The verification team and the technical reviewers consist of the following personnel:

Role/Qualification	Last Name	First Name
VCS Team Leader, VCS Verifier & Technical Expert TA 1.2	Ahirwar	Vivek Kumar
Technical Reviewer & Technical Expert TE 1.2	Kumar	Sanjay

1.4 Summary Description of the Project

The project activity involves electricity generation by Wind Turbine Generators (WTGs) and supplying the generated electricity to the Karnataka Power Transmission Company Limited (KPTCL). The project being a renewable energy generation activity, leads to removal of fossil fuel dominated electricity generation. The project employs wind energy for generating electricity which would have been otherwise generated through substitute fuels (most likely - fossil fuel) based power plants thus, contributing to reduction in specific emissions (emissions of pollutant) including GHG emissions. 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.

This project activity is a bundled wind power project located in the Davangere, district in the state of Karnataka respectively. M/s. Sargam Retails Private Limited (SRPL) is the owner and developer of the project activity. The project activity consists of 10 Wind Turbine Generators (WTGs) of total generating capacity of 13.75 MW (5 nos of Suzlon make S 82 WTGs each having generating capacity of 1500 kW & 5 nos of Suzlon make S 64 WTGs each having generating capacity of 1250 kW), installed at Davangere district of Karnataka state of India.

The purpose of the project activity is generation of clean electricity by utilizing kinetic energy of wind which is converted into mechanical energy and subsequently into electrical energy. As per MR/1/, the electricity generated from the project is supplied to the Karnataka Power Transmission Company Limited (KPTCL) which is confirmed from registered VCS RCP PD version 03 dated 26-February-2021/5/, last verification report/22/ and interview with PP/30/. The starting date of the operation of the project activity is 31-March-2009, which is the earliest date of commissioning of the wind mill of the project activity and 29-May-2009 which is date of the commissioning of the last WTG of the project activity and dates are verified against registered VCS RCP PD (version 03) dated 26-February-2021/5/ and commissioning certificates/17/.

This information was verified during on site assessment and found to be in line with the details provided in the registered VCS RCP PD (version 03) dated 26-February-2021/5/. The total emission reductions achieved in this monitoring period i.e., from 01-July-2021 to 31-March-2022 (first and last days included) is 18,520 tCO₂e

2 VERIFICATION PROCESS

2.1 Method and Criteria

Verification was conducted using VKU's procedures in line with the requirements specified in the VCS Requirements, i.e., VCS Program Guide, VCS Program Guide Version 4.2 /6/, VCS standard document version 4.3 /7/. The GHG emission reductions are on the basis of the approved Baseline and monitoring methodology AMS I.D. Small-scale Consolidated Methodology /11/

Scope: 01 Energy Industries (renewable- and non-renewable sources) Title: "Grid Connected Renewable Electricity Generation" (version 18) /11/.

The verification consisted of the following three phases

- Document review;
- On-site assessment including Interviews and actual project scenario;
- Resolution of any Material Discrepancy and the issuance of the final verification report and certification.

2.2 Document Review

The following sections outline each step in more detail.

The VCS monitoring report for "13.75 MW wind power project in Davangere, Karnataka, India" version 01 of 13-May-2022, version 2.0 of 23-August-2022 version 3.0 of 09-September-2022 & version 04 of 14-September-2022, version 05 on 21-September-2022 & version 06 on 19-October-2022 the emission reduction calculations spreadsheet version 01 of 13-May-2022 & Version 02 of 20-October-2022, were assessed as part of the verification. In addition, registered VCS PD version 01 /3/, the registered CDM PDD version 02 /4/, registered VCS RCP PD (version 03) dated 26-February-2021/5/ in particular the baseline estimations and the monitoring plan for the project was reviewed. The following table lists the documentation that was reviewed during the verification:

/1/	EKI: VCS monitoring report for "13.75 MW wind power project in Davangere, Karnataka, India" in India, Version 01 of 13-May-2022, Version 02 of 23-August-2022 Version 03 of 09-September-2022 Version 04 of 14-September-2022
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	Version 05 on 21-September-2022 Version 06 on 19-October-2022 Version 07 on 03-November-2022
/2/	EKI: Emission Reduction Calculation Spreadsheet, Version 01 of 13-May-2022 Version 02 of 20-October-2022
/3/	Registered VCS PD version 1 dated 22-July-2011
/4/	Registered CDM PDD version 2 dated 02-December-2009
/5/	EKI: Registered VCS RCP PD for the project '13.75 MW wind power project in Davangere, Karnataka, India' version 3.0 dated 26-February-2021
/6/	VCS: VCS Program Guide, version 4.2 of 22-June-2022
/7/	VCS: VCS Standard, version 4.3 of 22-June-2022
/8/	Validation and verification manual version 3.2 dated 19-October-2016
/9/	CDM Validation and Verification Standard version 3.0 dated 09-September-2021
/10/	VCS: Monitoring report Template VCS Version 4.1
/11/	CDM Executive Board: Baseline and Monitoring Methodology "AMS I.D", "Grid Connected Renewable Electricity Generation" version 18.0
/12/	UNFCCC: Project search: https://cdm.unfccc.int/Projects/projsearch.html
/13/	Gold Standard Foundation: https://registry.goldstandard.org/projects?q=&page=1
/14/	Monthly B-Form issued by KPTCL/BESCOM for Karnataka for the current verification period.
/15/	Certificates of Calibration for all the meters belongs to project activity
/16/	Invoice issued by PP to state BESCOM (Bangalore Electricity Supply Company Limited)
/17/	Commissioning certificate of all the WTGs of the project activity issued by state electricity authority
/18/	Power Purchase Agreements signed between Project Proponent and state electricity authority

	• M/s Sargam Retails Private Limited and Bangalore Electricity Supply Company Limited (7.5MWs Windmill Power Project at Yaraganahalli Village, Kudurekonda area, Honnali Taluk, Davangere District, Karnataka State dated 25-July-2009 • M/s Sargam Retails Private Limited and Bangalore Electricity Supply Company Limited (6.25MWs Windmill Power Project at Yaraganahalli Village, Kudurekonda area, Honnali Taluk, Davangere District, Karnataka State dated 25-July-2009
/19/	Letter of declaration dated from PP regarding not having created or sought any other form of environmental credit for the same period
/20/	Monthly generation reports issued by O&M contractor M/s. Suzlon Global Services Ltd.
/21/	Central Electricity Authority (Installation and Operation of Meters) Regulations Notified on 17-March-2006 No. 502/70/CEA/DP&D Amendments Notified on 26-June-2010 No. 502/6/2009/DP&D/D-I
/22/	LGAI Technological Center, S.A (Applus+ Certification): VCS Verification Report “13.75 MW wind power project in Davangere, Karnataka, India” for monitoring period: 31-March-2019 to 30-June-2021, Version 02 of 20-December-2021 https://registry.terra.org/mymodule/ProjectDoc/Project_ViewFile.asp?FileID=64728&IDK EY=kkjalskif098234kj28098sfkjl098098kl32lasjdfkij909089259912
/23/	VERRA: https://registry.terra.org/app/projectDetail/VCS/927
/24/	Site visit photographs and attendance sheet
/25/	CDM Reference ID: 3700 CDM: 13.75 MW wind power project in Davangere, Karnataka, India. (unfccc.int)r
/26/	Breakdown Details
/27/	Technical Specifications of WTGs
/28/	Grievance Register present on-site
/29/	GPS Google software used for Location
/30/	Onsite personnel interviews
/31/	REC website Renewable Energy Certificate Registry of INDIA (Renewable Energy Certificate Registry of INDIA - Registered RE Generator List (recregistryindia.nic.in))
/32/	EIA NOTIFICATION dated 14-September-2006; https://moef.gov.in/wp-content/uploads/2018/03/so1533.pdf
/33/	TÜV SÜD South Asia Pvt. Ltd: Validation Report: 13.75 MW wind power project in Davangere, Karnataka, India, Version 02, dated 03-March-2021

https://registry.terra.org/mymodule/ProjectDoc/Project_ViewFile.asp?FileID=56840&IDK EY=fiquwesdfmnk0iei23nnm435oiojnc909dsflk9809adlkmlkf78382360

2.3 Interviews

An on-site inspection has been performed by the assessment team. However, the representatives of the PP and O&M contractors were interviewed personally by assessment team on **30-June-2022** 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.

Location: District- Davangere, Karnataka in India

S. no	Name	Designation	Topic of Discussion
1	A Rajasekar	Suzlon Area Lead	JMR & invoicing procedure, calibration, grievance mechanism, Management practices, data storage, QA/QC
2	Raghvendra PG	Suzlon Site Lead	Implementation of the project, Baseline emission, Emission reduction calculation, technical description of the project and Monitoring.
3	Shinneiy B.C.	Suzlon Site BOP Lead	Breakdown details and maintenance of generation records Data recording, management and archiving procedure

S.no	Name	Designation	Category	Topic of Discussion
1	Vijaykumar	Driver	Local Stakeholder	Execution of Project activity and its impact on the economic, social and environmental parameters on the local people
2	Kranthikumar	Helper		

3	K.G. Jagadish	Technician		of the area & around the situated project activity - The ongoing communication procedure and the address of their grievance mechanism followed by the project proponent - Scope and generation of employment in the locality due to the implementation of said project activity in the area.
4	B Rangtha	Office Boy		
5	Shamkarappa	Security		

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 telephonic interview coupled with the documentation. There were no negative comments received during the stakeholder consultation interview conducted on site and more detail is enlisted in the section 4.2.2 below.

2.4 Site Inspections

Site Location visited:

Location: District- Yaraganahalli Village, Kudurekonda area, Honnali Taluk, Davangere, Karnataka state in India. Further the individual location of each WTGs along with longitude and latitude is mentioned in section 4.1 of this report.

An On-site visit was undertaken by the verification team to the project location identified in the MR/1/ at Yaraganahalli Village, Kudurekonda area, Honnali Taluk, Davangere, Karnataka state in India on **30-June-2022** to carry out the following:

- An assessment of the implementation and operation of the registered project activity as per the registered VCS RCP PD version 03 dated 26-February-2021 /5/ and VCS MR/1/;
- A review of information flows for generating, aggregating and reporting the monitoring parameters;
- Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the PD;
- A cross check between information provided in the monitoring report and data from other sources such as plant logbooks, inventories, purchase records or similar data sources;
- A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the PD, the applied methodology including applicable tool(s), and, where applicable, the applied standardized baseline;

- f) A review of calculations and assumptions made in determining the GHG data and emission reductions;
- g) An identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

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 VKU's positive conclusion on the project description. To guarantee transparency a verification protocol has been customized for the project. The protocol shows in a transparent manner the requirements, means of verification and the results from verifying the identified criteria. The verification protocol consists of three tables; the different columns in these tables are described below.

A corrective action request (CAR) is raised if one of the following occurs:

- Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impair the estimate of emission reductions;
- Issues identified in a FAR during validation to be verified during verification have not been resolved by the project proponents.

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

In summary, 2 CLs and 3 CARs were raised during this verification which were closed successfully and details are given under Appendix B of this report.

2.5.1 Forward Action Requests

Based on the review of the previous VCS Verification Report /22/ no FAR was raised which needs to be closed during this verification and based on the review of the validation report /33/, no FAR was raised during validation/33/ which needs to be closed during the current verification & No FAR has been raised during current verification.

2.6 Eligibility for Validation Activities

The project activity is registered under VCS registration reference Number 927; hence this section is not applicable.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project is not applied under any other GHG program except CDM. The project is registered under CDM on date 07-January-2011 with registration ID 3700³ /25/. To support this Project Proponent submitted a declaration/19/in which they have mentioned that they will not claim same GHG emission reductions of the project from CDM thus confirming emission reductions generated from the project activity will not be double counted. This was confirmed through a declaration/19/ 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. Which was verified from the REC website Renewable Energy Certificate Registry of INDIA ([Renewable Energy Certificate Registry of INDIA - Registered RE Generator List \(recregistryindia.nic.in\)/31/](#)). Further, declaration/19/ 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/>.

Rejection by other GHG programs

The Project is not rejected by other GHG programs. A declaration/19/ for the same is checked and found correct by the assessment team. Also, assessment team independently verified with the following registries and checked projects from the PP matching the same project design and found that no such project either exists or were rejected by the registries. 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/>

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/22/.

³ CDM: 13.75 MW wind power project in Davangere, Karnataka, India. ([unfccc.int](http://cdm.unfccc.int/))

3.3 Project Description Deviations

There is no project description deviation identified during the current monitoring period. However, there was a deviation identified during the previous verification/22/

Project Description Deviations in the previous monitoring period:

Deviation 1:

In the previous monitoring period (31-March-2019 to 30-June-2021), change in the calibration frequency has been sought. As per the Section 5.2 of the registered VCS RCP PD version 03 dated 26-February-2021/5/, the calibration of energy meters /15/ (including both main meter and check meter) would be carried on an annual basis. However, according to the Power Purchase Agreement (PPA) /18/ with Bangalore Electricity Supply Company Limited (BESCOM) - to which electricity generated by the project activity is supplied, calibration should ideally be carried out on every calendar quarter basis. Therefore, to maintain the practice expected by BESCOM Standard, the PP has done every calendar quarter calibration. quarterly as mentioned in the clause 7.5 of PPA. The meters are deemed to be working satisfactorily if the errors are within specifications for meters of 0.2% accuracy class. The consumption registered by the main meters alone holds good for the purpose of billing as long as the error in the main meter is within the permissible limits. However there has been delays in meter calibration during the monitoring period for which, an error factor of 0.2% has been applied, since the accuracy class of the meter is 0.2s and even in case of delayed calibration, meters have been found to be working satisfactorily i.e. errors were within the permissible limits of 0.2%.

Hence the delay in calibration has been accepted as per CDM Validation and verification standard for project activities Version 07.0 section 9.4.4.2 paragraph 283 and 284, the delay in calibration is accepted applying the maximum permissible error of the instrument to the measured values taken during the periods between the scheduled date and actual date of calibration. So, in a conservative manner, such that the adjusted measured values of the delayed calibration results in fewer claimed emissions reductions it is concluded that, here the monitoring plan is in line with the applied methodology and no deviation is applied.

The change in the calibration frequency in the previous monitoring period /22/ (31-March-2019 to 30- June-2021) will not have any impact on the ER calculations. Both parties, the PP and the state electricity board - BESCOM accepts the meter reading and PP raise the invoice /16/ to BESCOM based on monthly JMR reading. Due to the financial obligations for the PP and the state electricity board - BESCOM, both parties ensure that the meters are running accurately. This project deviation requested in previous verification /22/ is conservative and was acceptable to VVB during previous verification /22/. Further, PP requested project description deviation for the same in Section 3.2.2 during previous verification /22/ The deviation is appropriately described in previous monitoring report. The deviation doesn't impact the applicability of the methodology, additionality of the project activity and is in accordance with the VCS standard version 4.3./7/ As the applied deviation is valid and do not have impact on the scale, methodology, additionality, monitoring &

emission reductions of the project activity and this deviation elaborated above was verified during previous verification /22/.

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 onsite audit with PP representative, it was concluded that the project is implemented as per the requirement of the registered VCS RCP PD version 03 dated 26-February-2021 /5/ and approved monitoring plan. During the current monitoring period, it was observed through breakdown log sheet records onsite /26/ that no unforeseen incident/event was involved 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 as verified during the interview with PP personnel/30/ field engineers/Suzlon Lead present at site during onsite visit /30/. Moreover, there is no unforeseen incident which can affect the applicability of the methodology and thus the same is acceptable to the assessment team.

All of the WTGs were in operation throughout the current monitoring period, and the project activity generated 19,663.48 MWh of energy, resulting in 18,520 tCO₂e GHG reductions. The estimated emission reduction for the present monitoring period is 20,193 tCO₂e, however the achieved emission reductions are 18,520 tCO₂e (round down value), or around 8.3% less than the estimated emission reductions.

This variation is majorly due to low plant load factor (PLF). Other causes for this include variations in the wind flow pattern, grid accessibility, breakdown due to various causes, and other factors over which the project proponent has no influence.

In Appendix 2 of the monitoring report/1/, breakdown information for the current monitoring period is provided.

Project location is confirmed by the assessment team through the GPS Google software/29/. Moreover, assessment team confirmed that the latitudes and longitudes as mentioned in the registered VCS PD /5/ are correct. The WTG wise latitudes and longitudes are confirmed below:

Latitude & Longitude: (Davangere, Karnataka):

Capacity (MW)	Location No.	R.S. No.	Village	Taluka	District	Latitude (N)	Longitude (E)
1.5	K-543	111	Yaraganal	Honnali	Davangere	14°09'17.4'	75°30'11.9"
1.5	K-544	111	Yaraganal	Honnali	Davangere	14°09'10.4'	75°30'17.6"
1.5	K-549	28	Kudurekonda	Honnali	Davangere	14°09'03.2'	75°30'23.1"
1.5	K-550	28	Kudurekonda	Honnali	Davangere	14°08'57.2'	75°30'29.9"
1.5	K-551	28	Kudurekonda	Honnali	Davangere	14°08'51.2'	75°30'36.7"
1.25	W K-538	111	Yaraganal	Honnali	Davangere	14°08'45.3'	75°30'43.7"
1.25	W K-539	111	Yaraganal	Honnali	Davangere	14°08'39.5"	75°30'50.9"
1.25	W K-540	111	Yaraganal	Honnali	Davangere	14°08'13.3"	75°31'32.4"
1.25	W K-541	111	Yaraganal	Honnali	Davangere	14°08'07.4"	75°31'38.8"
1.25	W K-542	111	Yaraganal	Honnali	Davangere	14°07'59.5"	75°31'44.1"

Starting date of the operation of the project activity is commissioned on 31-March-2009 which is the date of commissioning/commercial operation of the 1st WTG. Assessment team checked the commissioning certificate /17/ and confirmed that the Dates of Commission for the WTGs are correct. Assessment team also confirmed during the onsite audit/24/ that there is no change in project design except deviation requested which has been elaborated with reference to previous verification/22/and VCS standard version 4.3 /7/ in section 3.3 of the report. The project is implemented as per the description provided in the registered VCS RCP PD version 03 dated 26-February-2021 /5/.

Commissioning dates of WTGs are given below:

WTG ID	Capacity and Number of WTGs	Date of Commissioning
K-543, K-544, K-549, K-550, K-551	1.5 MW x 05 Nos	31-March-2009
K-538, K-539, K-541, K-542	1.25 MW x 04 Nos	31-March-2009
K-540	1.25 MW x 01 No.	29-May-2009

The power rating of the WTGs has 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 Manufacturer/27/. Assessment team confirms that the technical parameters are consistent with the registered VCS RCP PD version 03 dated 26-February-2021 /5/. For the project activity, SRPL has placed the purchase order/ / to procure Wind Turbine Generators (WTGs) from M/S Suzlon Energy Limited (SEL) and it's associate companies for supply of 5 nos. S-82 1500 kW capacity and 5 nos. S 64 1250 kW capacity.

The salient features of the technology are:

S-82 1.5 MW 50Hz:

Rated Power	1500 kW
Rotor diameter	82 m
Swept area	5,281 m ²
No. of blades	3
Cut in wind speed	4 m/s
Cut out wind speed	20 m/s
Rotor speed	20.3 rpm
Regulation	Pitch
Hub height	78.5 m
Generator Type	Asynchronous
Insulation	Class H

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 RCP PD version 03 dated 26-February-2021 /5/ and applied methodology AMS I.D., Version 18.0 /11/. The organizational role and responsibility as mentioned in the registered VCS PD/5/ is followed onsite. There was a delay in calibration for which error factor of 0.2% has been appropriately applied in the months of July-2021; August-2021; September-2021; December-2021 & then from 01-January-2022 to

31-March-2022. As per CDM Validation and verification standard for project activities Version 07.0 section 9.4.4.2 paragraph 283 and 284, the delay in calibration is accepted applying the maximum permissible error of the instrument to the measured values taken during the periods between the scheduled date and actual date of calibration. So, In a conservative manner, such that the adjusted measured values of the delayed calibration results in fewer claimed emissions reductions it is concluded that, here the monitoring plan is in line with the applied methodology. All the emergency preparedness as mentioned in the registered RCP PD version 03 dated 26-February-2021 /5/ is followed onsite as discussed with PP during the onsite visit and no discrepancies were found regarding the same although the required action for delay in calibration has been taken by applying the error factor of 0.2% appropriately.

Assessment team concludes the following:

- a) There are no material discrepancies between project implementation and the project description provided in the registered VCS RCP PD version 03 dated 26-February-2021 /5/.
- b) 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. However, there was a delay in calibration for which error factor of 0.2% has been appropriately applied in the months July-2021; August-2021; September-2021; December-2021 & then from 01-January-2022 to 31-March-2022.
- c) There are no material discrepancies between the actual monitoring system, and the monitoring plan set out in the project description and the applied methodology /11/.
- d) The GHG emission reductions or removals generated by the project have not been included in any emissions trading program or any other mechanism that includes GHG allowance trading/19/.
- e) 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/22/.
- f) The project is registered under VCS ⁴ and CDM ⁵, however PP has submitted the declaration/19/stating, they will not claim same GHG emission reductions of the project from CDM for the current monitoring period when project is seeking to get GHG emission reduction from VCS. Audit team also checked the REC Mechanism database of India and found that the project activity is not accredited / registered under REC mechanism which was verified from the REC website Renewable Energy Certificate Registry of INDIA ([Renewable Energy Certificate Registry of INDIA - Registered RE Generator List \(recregistryindia.nic.in\)/31/](http://recregistryindia.nic.in/)

The project activity complies with indicators for **sustainable development** in the interim approval guidelines for Clean Development Mechanism (CDM) projects from India as discussed under **section 1.11 of MR**. In which SDG indicator taken by PP are

⁴ <https://registry.terra.org/app/projectDetail/VCS/927>

⁵ CDM: 13.75 MW wind power project in Davangere, Karnataka, India. (unfccc.int)

1. **7.2 i.e. (Renewable energy share in the total final energy consumption)** As a part of this project activity lifetime, 398,135.676 MWh renewable electricity has been supplied to Indian grid that helps to strengthen the renewable energy share in the energy mix. VVB has referred previous verification reports and thus found the above claimed renewable electricity supplied to Indian grid correct which have also been verified during previous verifications.
2. **13.0 i.e. (Tons of greenhouse gas emissions avoided or removed)** Due to installation of this project activity PP has prevented the release of 370,352tCO₂ into the atmosphere. Thus proving that the project generates eco-friendly, GHG free power which contributes to sustainable development of the region

In view of the information 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 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. According to Indian regulation, the implementation of the wind park does not require an environmental impact assessment. The Ministry of Environment, Forests and Climate Change (MoEFCC), Government of India EIA notification dated 14th September 2006 /32/, regarding the requirement of Environment Impact Assessment (EIA) studies as per the Environment Protection Rule, 1986 (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii) Ministry of Environment, Forests and Climate Change, Government of India) states that any project developer in India needs to file an application to the Ministry of Environment and Forests (including a public hearing and an EIA) Wind parks are not included in this list and thus 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 ([Draft report on use of non-conventional energy resources for Simhastha 2016 \(odishainnovationcell.nic.in\)](#)) 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

⁶ The previous electricity generation values have been updated from the corresponding monitoring reports present in: <https://registry.terra.org/app/projectDetail/VCS/927> , <https://cdm.unfccc.int/Projects/DB/SGS-UKL1273659698.37/view?cp=1>

⁷ The previous GHG removal values have been updated from the corresponding monitoring reports present in: <https://registry.terra.org/app/projectDetail/VCS/927>; <https://cdm.unfccc.int/Projects/DB/SGS-UKL1273659698.37/view?cp=1>

of project activity on air, water, soil quality and ambience are envisaged due to the project activity. PP has also highlighted in MR/1/ that during operational and maintenance phase there was no impact on air, water or ecology of the location where project is located. PP has also underlined in MR/1/that the project activity contributes to the improvement of the region's skilled and unskilled labour force. Both during construction and throughout the duration of operation, the project generated employment possibilities. The project activity raises the employment rate and standard of living for local residents nearby, this was verified during on-site interview /30/ which has improved socio-economic impacts in the project area. Therefore, there is no net harm from the project activity.

4.2.2 Local Stakeholder Consultation

The Project is already registered with VCS and approved VCS RCP PD /5/ sections 2.2 describe the Local Stakeholder Consultation Process as in-line with VCS requirement.

For local stakeholder consultation PP has engaged a number of local NGOs by applying various strategies to engage local stakeholder in project and taking care of their complaints/grievances/suggestions.

As a part of continuous feedback from stakeholders, there were no other major comments or protest raised by the stakeholders during the current monitoring period. For ongoing communication, the PP has also placed a grievance register/28 / in plant site office and sought comments/grievances/suggestions from local stakeholders including local community, government agencies and NGOs. Besides, the PP has also kept provision for submitting comments/grievances/suggestions from local stakeholders through direct mail/grievance register kept in the site office at Yaraganahalli Village, Kudurekonda area, Honnali Taluk, Davangere district, Karnataka state in India 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 proponent.

The verification team has interacted with local stakeholders during on-site assessment and details are summarized in section 2.3 of this report. There was no negative comment or feedback from local stakeholders as recorded by the verification team

4.3 AFOLU-Specific Safeguards

As the project comes under the category of NON-AFOLU projects therefore this section does not apply for this verification. Hence Not Applicable.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The project monitoring has been carried in accordance with the registered VCS RCP PD version 03 dated 26-February-2021 /5/ and the monitoring report/1/. The monitoring plan laid in the

registered VCS RCP PD version 03 dated 26-February-2021 /5/ is being followed at the site/24/. 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/1/. 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/2/ provided by PP. The verification of each monitoring parameter has been discussed later in section 4.5.

All of the WTGs were in operation throughout the current monitoring period, and the project activity generated 19,663.48 MWh of energy, resulting in 18,520 tCO₂e GHG reductions.

The estimated emission reduction for the present monitoring period is 20,193 tCO₂e, however the achieved emission reductions are 18,520 tCO₂e (round down value), or around 8.3% less than the estimated emission reductions. In section 4.5 of this report and section 5.4 of MR/1/ calculations has been stated. Which can be further compiled in ER/2/ which has been verified by the assessment team from Monthly B-Forms issued to PP by BESCOM/14/& invoices issued by PP to state electricity authority/16/ submitted to VVB by PP. Hence VVB can state that the calculation method and formulae used in calculating baseline emission is in compliance with the methodology used i. e. AMS I.D “Grid Connected Renewable Electricity Generation” version 18 /11/. Since project activity is a wind power project, and no other kind of fossil fuel has been used in the current monitoring period on site thus leakage emission and project emission have been considered as zero.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

During the verification, all relevant documents were checked to assess the correctness and quality of data submitted by the project proponents, which are used to determine emission reductions.

All records needed for monitoring are archived in line with the requirements of the registered monitoring plan. No significant, lack of evidence and missing data were detected during verification. Hence, the verification team confirms that the monitoring system ensures required quality of the monitoring system to ensure the quality of the monitored data. All internal data are subjected to QA/QC measures.

The parameters in the project activity are “Net electricity supplied to the grid by the project activity EG_{PJ, facility, y} (MWh), Electricity exported by the WTGs of the project activity EG_{exported}

⁸(MWh), Electricity imported from the grid by the WTGs of the project activity EG_{import} (MWh), Electricity Losses in Transmission ($EG_{Transmission Losses}$)(MWh).

Apportioning Procedure:

The following apportioning procedure is followed, if the monitoring period date of the project activity falls in – between the billing cycles of KPTCL/BESCOM:

Partial days generation of the Month at Controller by the WTGs of the project activity (kWh): X
Total generation at Controller (kWh) for the same month by the WTGs of the project activity: Y
kWh % Generation for partial days of generation (%): $Z = (X/Y) * 100$

Electricity export to the grid by the WTGs of the project activity as per credit report (KPTCL/BESCOM from B) for the month: G kWh

Electricity export to the grid by the WTGs of the project activity for the partial days: $(G * Z / 100)$.

Form B, which contains the electricity data, is certified by the Site-in-Charge (O&M contractor) of SEL and also by the Asst. Executive Engineer of KPTCL/BESCOM. The monthly Net Electricity supplied is derived from Form B and the same is used in monitoring report during verification. Head – Wind power projects of SRPL is responsible for keeping the copies of Form B sent to SRPL from KPTCL.

The below tables describe how the parameter ‘Net electricity supplied to the grid by the project activity $EG_{PJ, facility, y}$ (MWh)’, 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	Quantity of net electricity generation supplied by the project (Wind) plant/unit to the grid in year y, $EG_{PJ, facility, y}$ (MWh)	
Means of verification	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	Net Electricity supplied to the grid is in kWh. However, for the calculation purpose Net electricity supplied is converted in MWh. The Net electricity supplied to the grid by the project activity will be calculated

⁸ In case of apportioning of electricity for any month (When billing cycle and crediting period years or monitoring period not matches) as per the procedures provided under “Apportioning Procedure” of monitoring plan (B.7.3), $EG_{Exported}$ (i.e. Sum of G for each group of WTGs of the project activity) and G for any month are same only

		as a difference of electricity exported to the grid, electricity imported from the grid and the transmission losses obtained from credit reports provided by KPTCL/BESCOM as per below equation: $(EG_{PJ, facility, y} - (EG_{Exported} - EG_{Import} - EG_{Transmission Losses}))$ (calculated separately for both sets of WTGs of PP) This is a calculated value Frequency of monitoring/recording: Continuous monitoring and monthly recording
	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 VCS RCP PD version 03 dated 26-February-2021/5/ and monitoring methodology/11/. However there has been delay in calibration of energy meters. Hence error factor has been applied i.e., 0.2% on net electricity generation on respective month i.e. July-2021, August-21, September-21, December-2021 & then from 01-January-2022 to 31-March 2022. This error factor applied is the accuracy class of the meter and the procedure to apply this factor is as per the registered monitoring plan. Further elaboration regarding application of error factor as per

		CDM VVS and VCS VVS is mentioned in section 4.1 of the report. Thus, there is no deviation from the stated procedures in the registered monitoring plan
	Monitoring equipment	No monitoring equipment is used as this parameter is calculated. However, the parameter export and import, transmission losses values are calculated using measured values, are continuously measured, and recorded monthly.
	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 such as import and export to calculate net electricity generation value is 0.2s which is as per the registered VCS RCP PD version 03 dated 26-February-2021 /5/which is as per the norm defined in the PPA/18/.
	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 is valid for the entire range.
	Calibration frequency /interval:	Meters used for the monitoring of export, import and transmission losses shall be calibrated on every calendar quarter basis as per PPA/18/
	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	Yes. The calibration frequency is every calendar quarter basis as per PPA/18/ and also outlined in the registered VCS PD/5/ is in accordance with the national standards i.e Clause 18 of Central Electricity Authority

	selected frequency in accordance with the local/national standards, or as per the manufacturer's specifications?	(Installation and Operation of Meters) ⁹ /21/. In the PPA itself the accepted calibration frequency is every calendar quarter basis/18/ verified through the calibration certificates /15/ and onsite present field staff, which is in line with VCS Standard version 4.3 /7/ calibrations requirements as well as per the registered monitoring plan.
	Is the calibration of measuring equipment carried out by an accredited person or institution?	Calibration/15/ of the measuring equipment's is carried by NABL accredited agency through state utility BESCOM/KPTCL as per PPA./18/ which was confirmed during onsite visit while interviewing/30/ the site personnel/Suzlon Site lead at Karnataka site/PP/Consultant
	Is(are) calibration(s) valid for the whole reporting period?	No, the calibration is not valid for the whole reporting period due to delays in the calibration as per registered monitoring plan. PP applied an error factor of 0.2% for the month July-2021, August-2021, September-2021, December-2021, January-2022 to March 2022 has been applied which are the months on the delays in calibration occurred and the error factor thus applied is as per the registered monitoring plan. Since the procedures are as per the registered monitoring

⁹ Regulations Notified on 17-March-2006 No. 502/70/CEA/DP&D

Amendments Notified on 26-June-2010 No. 502/6/2009/DP&D/D-I/

		plan, there is no deviation applied.
	Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	Yes. The calibration is carried out appropriately for three months i.e 18 September to 17 December. For the rest of month error factor of 0.2% is applied by the PP. Further elaboration regarding application of error factor as per CDM/VCS VVS is mentioned in section 4.1 of the report.
	How were the values in the monitoring report verified?	Cumulative value of $EG_{PJ, facility, y}$ for entire monitoring period is reported in the monitoring report/1/, and monthly values in the ER calculation sheet/2/. The monthly values were verified from the credit notes issued by state utility and found to be consistent/14/ Value of this parameter for the current monitoring period was verified as 19,663.48 MWh.
	If applicable, has the reported data been cross-checked with other available data?	The monthly reported values of $EG_{PJ, facility, y}$ were further cross checked with the monthly invoices raised by the PP /16/ 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?	On site personnel interview /30/ with the project stakeholder 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 proponents 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	CL#02 & CAR#02 & CAR#03 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 adopted for emission reduction calculation are free from material errors.	

Parameter	Quantity of Electricity exported by the WTGs of the project activity y,EG exported (MWh)	
Means of verification	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	Measuring Frequency: Continuously measured & monthly recording. Data Type: Measured Archiving Policy: Paper & Electronic Sourced from Credit report Sheets. (KPTCL/ BESCO Form B)
	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 VCS RCP PD version 03 dated 26-February-2021/5/ and monitoring methodology/11/. However there has been delay in calibration of energy meters. Hence error factor has been applied i.e. 0.2% on net electricity generation on respective

		month i.e. July-2021, August-21, September-21, December-2021 & then from 01-January-2022 to 31-March2022.This error factor applied is the accuracy class of the meter and the procedure to apply this factor is as per the registered monitoring plan. Further elaboration regarding application of error factor as per CDM/VCSVVS is mentioned in section 4.1 of the report. Thus there is no deviation from the stated procedures in the registered monitoring plan
	Monitoring equipment	Bi-directional Trivector meters (main and check meter at 33 kV metering point) are used for monitoring of electricity exported by WTGs of the project activity.
	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 value of export to calculate net electricity generation value is 0.2s, which is as per the registered VCS PD /5/which is as per the norm defined in the PPA/18/.
	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 for which the calibration is done and shall remain applicable as per the validity of calibration notified in PPA/18/
	Calibration frequency /interval:	Meters used for the monitoring of export shall be calibrated on every calendar quarter basis as per

		PPA/18/ which is acceptable to the assesment team.	
	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?	Yes. The calibration frequency is every calendar quarter basis as outlined in the registered VCS PD /5/ is in accordance with the national standards i.e clause 18 of Central Electricity Authority (Installation and Operation of Meters) /21/. In the PPA /18/ itself the accepted calibration frequency is every calendar quarter basis verified through the calibration certificates /15/ and onsite present field staff, which is acceptable as per VCS Standard calibrations requirements and thus by the assessment team	
	Is the calibration of measuring equipment carried out by an accredited person or institution?	Calibration /15/ of the measuring equipment's is carried out by an NABL accredited agency through state utility BESCO which is a regional electricity authority which was confirmed during onsite visit while interviewing/30/ the site personnel/Suzlon Site lead at Karnataka site/PP/Consultant.	
	Is(are) calibration(s) valid for the whole reporting period?	No, the calibration is not valid for the whole reporting period PP applied error factor for the months of July-2022, August-2021, September-2021, December-2021, January-2022, February-2022, March-2022, as per the procedures of the registered or approved monitoring plan	
		Month	Error factor applied (Yes/no)
		July 21	Yes

		August 21	Yes
		September 21	Yes
		October-21	No
		November-21	No
		December-21	Yes
		January-22	Yes
		February-22	Yes
		March-22	Yes
	Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	Yes, the calibration is carried out appropriately for three months i.e 18-September-2021 to 17-December-2021 For the rest of months error factor of 0.2% is applied by the PP. Further elaboration regarding application of error factor as per CDM/VCS VVS is mentioned in section 4.1 of the report.	
How were the values in the monitoring report verified?	Cumulative value ofEG exported for entire monitoring period is reported in the monitoring report/1/, and monthly values in the ER calculation sheet/2/. The monthly values were verified from the credit notes issued by state utility and found to be consistent/14 /. Value of this parameter for the current monitoring period was verified as 20.037.93 MWh.		
If applicable, has the reported data been cross-checked with other available data?	The monthly reported values of EG exportedWere further cross checked with the monthly invoices raised by		

		the PP /16/ to state utility and found to be consistent. It is to further note that as per the provision of the State utility an increase of 115% has to be applied on the import value for billing purpose. This results in a higher import value than that in the credit note thus resulting in a lesser value of the net electricity supplied to the grid in the invoice/16/
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	On site personnel interview/30/ with the project stakeholder 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 proponents 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	CL#02 & CAR#02 & CAR#03 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.	
Parameter	Quantity of Electricity imported from the grid by the WTGs of the project activity in year y,EG_{Import} (MWh)	

Means of verification	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	Measuring Frequency: Continuously measured & monthly recording Data Type: Measured Archiving Policy: Paper & Electronic
	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 VCS RCP PD version 03 dated 26-February-2021/5/ and monitoring methodology/11/. However there has been delay in calibration of energy meters. Hence error factor has been applied i.e. 0.2% on net electricity generation on respective month i.e. July-2021, August-21, September-21, December-2021 & then from 01-January-2022 to 31-March2022.This error factor applied is the accuracy class of the meter and the procedure to apply this factor is as per the registered monitoring plan. Further elaboration regarding application of error factor as per CDM/VCS VVS is mentioned in section 4.1 of the report. Thus there is no deviation from the stated procedures in the registered monitoring plan
	Monitoring equipment	Bi-directional Trivector meters (main and check meter at 33 kV metering point) will be used for

		monitoring of electricity exported by WTGs of the project activity. The meters are of 0.2s accuracy class. Electricity imported is in kWh. However for the calculation purpose electricity exported is converted in MWh.
	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 value of import to calculate net electricity generation value is 0.2s, which is as per the registered VCS RCP PD version 03 Dated 26-February-2021/5/which is as per the norm defined in the PPA/18/.
	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 for which the calibration is done and shall remain applicable as per the validity of calibration notified in PPA/18/
	Calibration frequency /interval:	Meters used for the monitoring of import are calibrated on every calendar quarter basis as per PPA/18/
	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?	Yes. The calibration frequency is every calendar quarter basis as outlined in the registered VCS PD /5/ is in accordance with the national standards i.e., clause 18 of Central Electricity Authority (Installation and Operation of Meters) /21/. In the PPA /18/ itself the accepted calibration frequency is every calendar quarter basis verified through

		the calibration certificates /15/ and onsite present field staff, which is acceptable as per VCS Standard calibrations requirements and thus by the assessment team													
	Is the calibration of measuring equipment carried out by an accredited person or institution?	Calibration of the measuring equipment's is carried out by an NABL accredited agency through state utility BESCO which is a regional electricity authority, which was confirmed during onsite visit while interviewing/30/ the site personnel/Suzlon Site lead at Karnataka site/PP/Consultant													
	Is(are) calibration(s) valid for the whole reporting period?	No, the calibration is not valid for the whole reporting period as there has been delay in calibration of energy meters. Hence error factor has been applied i.e., 0.2% on net electricity generation on respective months. This is in line with procedures mention in the registered monitoring plan <table><tr><th>Month</th><th>Error factor applied (Yes/no)</th></tr><tr><td>July-21</td><td>Yes</td></tr><tr><td>August-21</td><td>Yes</td></tr><tr><td>September - 21</td><td>Yes</td></tr><tr><td>October-21</td><td>No</td></tr><tr><td>November-21</td><td>No</td></tr><tr><td>December-21</td><td></td></tr></table>	Month	Error factor applied (Yes/no)	July-21	Yes	August-21	Yes	September - 21	Yes	October-21	No	November-21	No	December-21
Month	Error factor applied (Yes/no)														
July-21	Yes														
August-21	Yes														
September - 21	Yes														
October-21	No														
November-21	No														
December-21															

		January-22	Yes
		February-22	Yes
		March-22	Yes
	Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	Yes, the calibration is carried out appropriately for three months i.e 18-September-2021 to 17-December-2021 For the rest of months error factor of 0.2% is applied by the PP. Further elaboration regarding application of error factor as per CDM/VCS VWS is mentioned in section 4.1 of the report.	
	How were the values in the monitoring report verified?	Cumulative value of EG _{import} for entire monitoring period is reported in the monitoring report/1/, and monthly values in the ER calculation sheet/2/. The monthly values were verified from the credit notes issued by state utility and found to be consistent. /14/ Value of this parameter for the current monitoring period was verified as 74.05 MWh.	
If applicable, has the reported data been cross-checked with other available data?		The monthly reported values of EG _{import} were further cross checked with the monthly invoices raised by the PP /16/ to state utility BESCO 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?		Onsite personnel interview/ 30/ with the project stakeholder 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 proponents 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	CL#02 & CAR#03 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.	

Parameter	Electricity Losses in Transmission, EG Transmission Losses	
Means of verification	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	This is a calculated parameter, based on the measurement results of the meters installed at 33 kV metering point and 220 kV sub-station.The electricity losses in transmission is records on monthly basis.
	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 VCS PD /5/ and monitoring methodology/11/.
	Monitoring equipment	Monitoring: This is a calculated parameter, based on the

		measurement results of the meters installed at 33 kV metering point and 220 kV sub-station. Bi- directional Trivector meters (main and check meter at 33 kV metering point and 220 kV sub-station (SS) will be used for monitoring of electricity. The meters will be of 0.2s accuracy class
	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?	This is not applicable as the parameter is calculated by regional electricity authority i.e. state utility BESCO.
	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	This is not applicable as the parameter is calculated by regional electricity authority i.e. state utility BESCO.
	Calibration frequency /interval:	This is not applicable as the parameter is calculated by regional electricity authority i.e., state utility BESCO.
	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?	This is not applicable as the parameter is calculated by regional electricity authority i.e. state utility BESCO.

	Is the calibration of measuring equipment carried out by an accredited person or institution?	This is not applicable as the parameter is calculated by regional electricity authority i.e. state utility BESCO.
	Is(are) calibration(s) valid for the whole reporting period?	This is not applicable as the parameter is calculated by regional electricity authority i.e., state utility BESCO.
	Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	This is not applicable as the parameter is calculated by regional electricity authority i.e., state utility BESCO.
	How were the values in the monitoring report verified?	Cumulative value of EG transmission losses for entire monitoring period is reported in the monitoring report/1/, and monthly values in the ER calculation sheet/2/. The monthly values were verified from the Monthly B-Forms/credit notes issued by state utility BESCO/KPTCL and were found to be consistent./14/ Value of this parameter for the current monitoring period was verified as 296.69 MWh.
	If applicable, has the reported data been cross-checked with other available data?	The monthly reported values of EG transmission losses were further cross checked with the monthly invoices raised by the PP /16/ 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?	On site personnel interview/30/ with the project stakeholder of the project activity confirms that the necessary QA/QC procedures are in place and the data management system is effective and reliable. The monthly reported values of EG transmission losses were further cross checked with the monthly invoices raised by the PP /16/ to state utility and found to be consistent. The monthly values were verified from the Monthly B-Forms issued by state utility (BESCOM) and found to be consistent/14/
	In case project proponents 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#02 & CAR#03 was raised and resolved	
Conclusion	The parameter is a calculated parameter and the verification of the same has been done 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:

Calibration of meters /13/

Parameter	Unit	Description	Value ¹⁰
EFgrid,OM,y	tCO2/MWh	Operating Margin CO2 Emission Factor in year y	0.9622 tCO2/MWh is consistent with the registered VCS PD/5/.
EFgrid,BM,y;	tCO2/MWh	Build Margin CO2 Emission Factor in year y	0.8811 tCO2/MWh is consistent with the registered VCS PD /5/.
EFgrid,CM,y	tCO2/MWh	Combined Margin CO2 Emission Factor in year y	0.9419 tCO2/MWh is consistent with the registered VCS PD /5/.

During the verification assessment of the project activity, accuracy of all the metering have been checked and found appropriate. The installation and working conditions of the meters were checked during the site inspection and were found to be satisfactory. Details of meters are provided in below table: Calibration details of meters for Karnataka location:

WTG Location No.	Meter. No.	Meter Make	Meter Type	Meter Accuracy Class	Calibration Dates	Validity of Calibration	Delay in Calibration ¹¹
K-538, K-539, K-540, K-541, K-542	0800 1351	L & T	Main Meter	0.2ss	16-March-2021 18-September-2021 17-April-2022	15-June-2021 17-December-2021 16-July-2022	16-June-2021 to 17-September - 2021 (93 days), 18-December-2021 to 31-March-2022 (103 days) i.e. (93 + 103 = 196 days)
	0800 1352	L & T	Check Meter	0.2s	16-March-2021 18-September-2021	15-June-2021 17-December-2021	16-June-2021 to 17-September - 2021(93 days),

¹⁰ ¹⁰ https://cea.nic.in/wp-content/uploads/baseline/2020/07/database_15.zip

¹¹ Error Factor 0.2% has been applied where delay in monitoring meter calibration happened.

					17-April-2022	16-July-2022	18-December-2021 to 31-March-2022 (103 days) i.e. (93 + 103 = 196 days)
K-543, K-544, K-549, K-550, K-551	0800 1358	L & T	Main Meter	0.2s	16-March-2021 18-September-2021 17-April-2022	15-June-2021 17-December-2021 16-July-2022	16-June-2021 to 17-September - 2021 (93 days), 18-December-2021 to 31-March-2022 (103 days) i.e. (93 + 103 = 196 days)
	0800 1371	L & T	Check Meter	0.2s ¹²	16-March-2021 18-September-2021 17-April-2022	15-June-2021 17-December-2021 16-July-2022	16-June-2021 to 17-September - 2021 (93 days), 18-December-2021 to 31-March-2022 (103 days) i.e. (93 + 103 = 196 days)

Since the main meter and check meter is calibrated once in three months, there is delay in calibration. To incorporate the delay, error factor of 0.2% is applied for July-2021, August-2021, September-2021, December-2021, January-2022 to March-2022. Further elaboration regarding application of error factor as per CDM/VCS VVS is mentioned in section 4.1 of the report.

The verification team has checked all the meters during the onsite visit/24/ and confirmed that the meters were working satisfactorily. Also, the calibration /15/of meters is completely under purview of state utility i.e. KPTCL/BESCOM at site and PP has no control over the same as confirmed through interviews of site personnel.

¹² The meter accuracy class is as per registered monitoring plan and meters present on-site is 0.2s which is acceptable by assessment team. The calibration certificate refers accuracy class of 0.2 which is a typo error.

Hence it can be concluded that the approach followed by the PP is conservative¹³ and in line with the guidelines provided under paragraph 3.4.2 of VVS version 3.2./8/

The registered VCS RCP PD version/5/ & MR /1/ and site audit observations confirm that the metering equipment are sealed and maintained by the state utility.

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.

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:

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

Where:

BE_y	=	Baseline emissions in year y (tCO ₂)
$EG_{PJ,y}$ ¹⁴	=	Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh)
$EF_{grid,y}$	=	Combined margin CO ₂ emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (t CO ₂ /MWh)

¹³ The values of Export, import and transmission losses can be cross checked from the invoice/16/. However as per the provision of the State utility i.e. BESCOM/KPTCL an increase of 115% has to be applied on the import value for billing purpose. This results in a higher import value than that in the credit note thus resulting in a lesser value of the net electricity supplied to the grid in the invoice. Hence assessment team accepts this as per PPA /18/ TL is applied for billing purpose while JMR records/14/ the actual import and is as per RMP.

¹⁴ The net electricity supplied by the set of WTGs of the project activity is calculated by following formula: Net electricity supplied to the grid by the project activity i.e. $EG_{PJ, facility, y}$ = Net electricity supplied to the grid by the set 1 (5* 1.25 MW) WTGs { $EG_{PJ, facility, y}$ for set 1 WTGs} + Net electricity supplied to the grid by the set 2 (5* 1.5 MW) WTGs { $EG_{PJ, facility, y}$ for set 2 WTGs}

In the present monitoring period,

$$EG_{PJ,y} = 19,633.48 \text{ MWh}$$

$$EF_{grid,y} = 0.9419 \text{ tCO}_2/\text{MWh}$$

$$BE_y = 19,633.48 \text{ MWh} * 0.9419 \text{ tCO}_2/\text{MWh}$$

$$BE_y = 18,520 \text{ tCO}_2 \text{ (Round down value)}$$

Emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y - LE_y$$

Where,

$$ER_y = \text{Emission reductions in year } y \text{ (tCO}_2\text{e)}$$

$$BE_y = \text{Baseline emissions in year } y \text{ (tCO}_2\text{e)}$$

$$PE_y = \text{Project emissions in year } y \text{ (tCO}_2\text{e)}$$

$$LE_y = \text{Leakage emissions in year } y \text{ (tCO}_2\text{e)}$$

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. The estimated emission reduction to be achieved from the project activity for the current monitoring period is 20,193 tCO₂e, whereas actual emission reductions achieved are 18,520 tCO₂e (round down value), thus the actual emission reduction achieved is 8.3% less than the estimated figure to match the monitoring period as per registered VCS RCP PD version 03 dated 26-February-2021.

This is due to lower electricity generation compared to estimated generation in registered VCS RCP PD version 03 dated 26-February-2021/5/ (for the equivalent period) during the monitoring period which is due to low plant load factor (PLF) achieved. Some other reasons for this are the disparities in the wind flow pattern, grid availability, breakdown due to various reasons, and other parameters and same is beyond the PP's control.

All the data were made available and are monitored as per required monitoring frequency. The means of verification for the values of parameters, used for baseline emission calculation, is described above.

VKU is of the opinion that this method of calculation of emission reductions is accurate and results in conservative estimation of emission reduction and is line with the applicable VCS requirements.

4.6 Non-Permanence Risk Analysis

There is no non-permanence risk rating identified by the project proponent for the project activity hence not applicable.

5 VERIFICATION CONCLUSION

VKU Certification Pvt. Ltd. has performed second verification of second crediting period (31-March-2019 to 30-March-2029) the emission reductions reported for the project activity “13.75 MW wind power project in Davangere, Karnataka, India” in India, VCS Registry Project ID 927, for the period 01-July-2021 to 31-March-2022 (Inclusive of both start and end dates) is 18,520 tCO₂e, with regard to the relevant requirements for VCS activities. The project proponents of the “13.75 MW wind power project in Davangere, Karnataka, India” Bundled Wind Power Project by M/s. Sargam Retails Pvt Limited” project 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 RCP PD/5/ (version 03) dated 26-February-2021.

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 VKU to express an independent verification opinion about the project’s conformity with the requirements of VCS Standard version 4.3 /7/ and GHG program applied, on the reported greenhouse gas emission reductions from the project

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

- the project has been implemented and operated as per the registered VCS-PD /5/;
- the monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable VCS Standard version 4.3/7/ requirements;
- the monitoring is in place as per the applied baseline and monitoring methodology;
- the monitoring plan in the registered VCS-PD/5/ is as per the applied baseline and monitoring methodology.

VKU 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. VKU Certification planned and performed the verification by obtaining evidence and other information and explanations that VKU Certification considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated. It is VKU’s opinion that the GHG emission

reduction stated in the monitoring report version 07 of 03-November-2022 for the “13.75 MW wind power project in Davangere, Karnataka, India” in India for the period 01-July-2021 to 31-March-2022 (Inclusive of both start and end dates) are fairly stated. The GHG emission reductions are calculated on the basis of approved methodology AMS I.D “Grid Connected Renewable Electricity Generation” (version 18) /11/ and the monitoring plan included in the registered VCS RCP PD /5/ (version 03) dated 26-February-2021.

Hence VKU is able to certify that the emission reduction from the project during the monitoring period 01-July-2021 to 31-March-2022 (Inclusive of both start and end dates) amounts to 18,520 tCO₂e. The following table shows the Net Emission Reduction from 1-July-2021 to 31-March-2022 (Inclusive of both start and end dates) of second crediting 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 2021 (01-July-2021 to 31-December-2021)	14,824	0	0	14,824
Year 2022 (01-January-2022 to 31-March -2022)	3,696	0	0	3,696
Total	18,520	0	0	18,520

APPENDIX A: ABBREVIATIONS

Abbreviations	Full texts
BE	Baseline Emissions
BESCOM	Bangalore Electricity Supply Company Limited
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM M&P	Modalities and Procedures CDM
CER(s)	Certified Emission Reduction(s)
CH ₄	Methane
CL	Clarification Request
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
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
IPCC	Intergovernmental Panel on Climate Change
KPTCL	Karnataka Power Transmission Corporation Limited
MoV	Means of Verification
MR	Monitoring Report
NGO	Non-governmental Organization
ODA	Official Development Assistance
PDD	Project Design Document
PE	Project Emission
PP(s)	Project Proponent(s)
Ref.	Document Reference
SLDC	State Load Dispatch Centre
SS(s)	Sectoral Scope(s)
TA(s)	Technical Area(s)
UNFCCC	United Nations Framework Convention on Climate Change
VCU	Verified Carbon Unit
VKU	VKU Certification Ltd.
VVS	Validation and Verification Standard
VVB	Validation and verification body

APPENDIX B: AUDIT FINDINGS

Type	Date	20-August-2022		
CL#01	Reference	Section of Ver protocol: 3/DR		
Description of the Non Conformance				
1. PP is requested to submit a copy of grievance register for verification of section 2.2 of the Monitoring Period.				
1 st Response from PP	Date	23-August-2022		
1 The grievance register has been submitted for review.				
1 st Assessment by Audit Team	Status	Closed	Date	08-September-2022
PP has submitted the grievance register to the VVB and assessment team has verified the submitted document. CL#01 closed				
Hence CL#01 Closed				

Type	Date	08-September-2022
CL#02	Reference	Section of Ver protocol: Section 1/DR& 4/DR
Description of the Non Conformance		
PP is requested to specify the nature of crediting period viz Renewable or Fixed as per registered PD along with exemplification (Section 1.6 of MR)		
PP is requested to provide supporting documents i.e. Previous MRs/FVRs as evidence to the VVB for verification (in SDG Contributions Table 01 of section 1.11 of MR)		
PP is requested to submit the sample logbook to verify the data of breakdown details as provided to the VVB.		
1 st Response from PP	Date	09-September-2022
The project activity adopts a renewable crediting period of 10 years which can be renewed for maximum 2 times. Same has been updated in the section 1.6 of MR.		
Previous MRs and FVRs have been submitted for review. Also find the Verra page link for VCS 927 below:		
https://registry.terra.org/app/projectDetail/VCS/927		
Breakdown details excel sheet has been submitted for review.		

1 st Assessment by Audit Team	Status	OPEN	Date	12-September-2022
1. PP mentioned about adopting a renewable crediting period of 10 years which can be renewed for maximum 2 times which is also mentioned in PD. However As per VCS standard 4.3, for non-AFLOU project RCP allowed is 7 years twice renewable. Please clarify how this is consistent with the clause 3.8.1 of the VCS standard 4.3. [OPEN] 2. PP has submitted previous MRs/FVRs to verify section 1.11 of MR, as it was not available on CDM/VCS website from period 07/01/2011 to 30/09/2016. Now that PP has submitted the evidence documents it is verified. 3. PP has successfully submitted the breakdown details and have also incorporated the same in the MR in appendix. Assessment team verified the same with records provided and by interviewing the responsible personnel present on site during visit. Hence verified.				
2 nd Response from PP			Date	19-October-2022
The project activity adopts renewal crediting period of 10 years and can be renewed maximum for two times as per Registered VCS RCP PD version 03 dated 26-02-2021. Also to support the above justification, VCS standard v 4.3 page no 66 mentions and thus allows that the registered projects and projects that complete validation on or before 19 March 2020 remain eligible to apply the crediting period requirements under VCS version 03.				
2 nd Assessment by Audit Team	Status	Closed	Date	19-October-2022
Assessment team confirms that the justification provided by the PP with respect to adopting a renewable crediting period of 10 years which can be renewed for maximum 2 times which is also mentioned in PD, is accepted by the VVB. As the PP has underlined VCS standard v 4.3 page no 66 that allows that the registered projects and projects that complete validation on or before 19 March 2020 remain eligible to apply the crediting period requirements under VCS version 03. So the validation performed for the project activity was dated 08-October-2010, version 01 by SGS United Kingdom limited. Thus this justification is accepted by the VVB.				
Hence CL#02 closed				

Type	Date	20-August-2022
CAR#01	Reference	Section of Ver protocol: 3& 5/DR
Description of the Non Conformance		

1 PP is requested to correct the Swept area of the S-64 1.25 MW 50Hz .PP is requested to correct the CutOut speed as it is inconsistent with the data as mentioned in PD version 03 dated 26/02/2021 2 PP is requested to add section 5 as per MR template version 4.1 which seems to have been deleted. Please correct the same.				
1 st Response from PP		Date	23-August-2022	
1 The Swept area and cut out speed of the S-64 1.25 MW 50Hz has been corrected in line with PD version 03 dated 26/02/2021. 2 Section 5 has been added as per MR template version 4.1				
1 st Assessment by Audit Team	Status	Closed	Date	08-September-2022
PP has successfully corrected the Swept area in accordance with the registered PD and also updated the MR for section 05 as per Monitoring version template 4.1 Hence CAR#01 closed				

Type	Date	14-September-2022		
CAR#02	Reference	Section of Ver protocol: 1/DR		
Description of the Non Conformance				
1. PP is requested to mention in the MR that if this project has applied under REC mechanism, as it was not mentioned in PD and which is as per guidance to fill MR, If Yes then provide details, If No then provide justification in the MR in section 1.10				
1 st Response from PP		Date	14-September-2022	
1. The PP has not applied under REC mechanism and will not claim any REC benefits for the current monitoring period. The same is mentioned in the undertaking provided to VVB.				
1 st Assessment by Audit Team	Status	Open/Closed	Date	20-September-2022
Assessment Team has accepted the declaration however verified the same from <u>Renewable Energy Certificate Registry of INDIA - Registered RE Generator List (recregistryindia.nic.in)</u> and confirmed that PP has not claimed any benefits for the project activity. Hence Verified!				
PP is further requested to address some comments				
1. The project webpage in CDM website does not show any issuances regarding project number 3700 Please clarifv in section 1.9 of MR				

2. Please provide references in the footnotes to renewable energy/ER stated in section 1.11 of MR 3. PP is requested to clarify the name if the accredited entity involved in calibration as per VCS standard version 4.3 in section 4.2 of MR				
2 nd Response from PP			Date	21-September-2022
1. The webpage link for CDM 3700 has been updated in the footnote in section 1.9 of the MR. 2. The values have been updated from previous monitoring reports which can be found on the VCS and CDM pages of the project. The reference link for the same have been provided in the footnote in section 1.11 of MR. 3. For the current monitoring period, the meter calibration is done by NABL accredited agency through BESCOM i.e. the regional electricity authority.				
2 nd Assessment by Audit Team	Status	Closed	Date	29-September-2022
1. Assessment Team confirms that PP has updated the webpage link for CDM 3700 has been updated in the footnote in section 1.9 of the MR which was further verified and was found correct and in line with VCS template version 4.1 requirements. 2. It is to verify that PP has added the reference link for the renewable energy generated/ER stated values in the sustainable development contributions table in section 1.11 of MR. The Links were found to be working and thus provide reference for the stated values in the MR. 3. Assessment team confirmed with PP regarding the meter calibration which is through the state entity BESCOM (i.e. the regional electricity authority) by some third party NABL accredited Laboratory which is fully under the purview of State utility BESCOM. Hence it is verified that the Calibration performed is by NABL accredited agency through BESCOM.				
Hence CAR#02 is closed				

Type	Date	09-October-2022
CAR#03	Reference	Section of Ver protocol: 01, 03, 04 & Section 5
Description of the Non Conformance		
1. The project is a RCP. Please include this critical information in the project description section 1.1 of MR 2. PP is requested to lease use the same reference/phrases referred as mentioned in the PPA regarding the calibration frequency in the Monitoring report 3. PP is requested to please elaborate in section 3.3 of MR if the delayed calibration is within the accuracy class of meter, or above it then how the error factor is applied. Please justify the same as per VCS VVS 4.3 4. In section 3.3 of MR please mention the monitoring period number as well as the crediting period to make the references less ambiguous. Since this project is the 2nd renewable crediting period, it is important to mention the monitoring period number along with the dates of the MP		

5. PP is requested to clarify the inconsistency of accuracy class of meters as mentioned in PD & MR is 0.2s which is a higher accuracy class and what is mentioned in Calibration certificate is 0.2. Please clarify the same in MR 6. Please mention the meter make and type in the Meter calibration table as mentioned in the appendix and also requested to mention the number of days or months missed				
1 st Response from PP		Date	19-October-2022	
1. The necessary information has been included. 2. The necessary corrections have been done in the MR. 3. The error factor is applied wherever there has been a delay in calibration from the calendar quarterly calibration as mentioned in PPA. An error factor of 0.2% has been applied since the meter has as accuracy class of 0.2s. 4. The monitoring period number along with crediting period has been updated. 5. The accuracy class of meter has been corrected in line with the calibration certificate. 6. The meter make has been updated in the table. The meter type has already been mentioned. The no. of days for which calibration was missed has also been updated in the table.				
1 st Assessment by Audit Team	Status	Closed	Date	19-October-2022
1. Assessment Team confirms that PP has incorporated the information about RCP in the project description 2. PP has used the same reference/phrases referred as mentioned in the PPA regarding the calibration frequency in the Monitoring report. 3. PP has justified the application of 0.2% error factor in the MR and it has been accepted by the assessment team. 4. PP has updated the monitoring period number along with crediting period in the MR which is verified by the assessment team. 5. PP has justified that the calibration certificate refers accuracy class of 0.2 is a typo error as the meters present onsite and in RMP has a better accuracy class of 0.2s. which was verified by the Team leader during the site visit. 6. PP has incorporated the meter make & type details in the MR along with the no. of days for which calibration was missed has also been updated in the table., which is acceptable and in line with the Registered VCS RCP PD and meters present onsite. PP to please correct the import data column in the ER sheet which directly uses the value, instead of denoting the value as calculated value.				
2 nd Response from PP		Date	20-October-2022	
The import data column in ER sheet has been updated and relevant formula has been applied.				
2 nd Assessment by Audit Team	Status	Closed	Date	20-October-2022

Assessment team confirms that PP has updated the import data column in ER sheet with application of relevant formula.

Hence CAR#03 closed

Type		Date	DD-MM-YYYY	
FAR		Reference	Section of VAL/VER	
Description of the Non Conformance				
1stResponse from PP		Date	DD/MM/YYYY	
1stAssessment by Audit Team	Status	Open/Closed	Date	DD/MM/YYYY

APPENDIX C: COMPETENCE STATEMENTS

Team Leader



Certification Pvt. Ltd.

VKU.F50W. Competence Statement

COMPETENCE STATEMENT

Name	Vivek Kumar Ahirwar
Nationality	Indian
Countries of Experience	India, Madagascar, Thailand, Indonesia, Bangladesh, Nepal, Ghana, Uganda, Kenya etc
Education Qualification	B.E. (Mechanical Engineering) M. Tech (Energy Management)
Year of Experience	10 Years +
Area of Expertise	Climate Change & Environment
Eligible Sectoral Scope	TA 1.1 - Thermal energy generation and Renewables TA 1.2 - Renewables TA 2.1 - Process GHG Emission Expert TA 3.1 - Energy Demand TA 13.1 - Solid waste and wastewater

Roles

Team Leader	YES
Validator	YES
Verifier	YES
Financial Expert	YES
Technical Reviewer	YES
TA Expert (1.1, 1.2, 2.1, 3.1, 13.1)	YES

Technical reviewer



Certification Pvt. Ltd.

VKU.F50W. Competence Statement

COMPETENCE STATEMENT

Name	Sanjay Kumar
Nationality	Indian
Countries of Experience	India
Education Qualification	B.E. (Civil Engineering) M. Tech (Environmental Engineering)
Year of Experience	20 Years +
Area of Expertise	Climate Change & Environment Sustainable Development GHG Footprints
Eligible Sectoral Scope	TA 1.1 - Thermal energy generation and Renewables TA 1.2 - Renewables TA 3.1 - Energy Demand TA 6.1 - Construction TA 13.1 - Solid waste and wastewater TA 13.2 - Manure

Roles

Team Leader	YES
Validator	YES
Verifier	YES
Financial Expert	YES
Technical Reviewer	YES
TA Expert (1.1, 1.2, 3.1, 6.1, 13.1, 13.2)	YES