



**Verified Carbon
Standard**

VERIFICATION REPORT FOR
“WIND POWER PROJECT IN
MAHARASHTRA, INDIA – ANDHRA LAKE
PHASE - II”



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Summary:

Earthood Services Private Limited (hereafter referred to as ESPL) has been contracted by CLP Wind Farms (India) Private Limited to conduct the verification of the project “Wind power project in Maharashtra, India – Andhra Lake Phase - II”, VCS ID 1481 regarding the relevant requirements of VCS programme guidelines and standard (VCS standard version 4.1, & VCS program guide version 04.0). Relevant requirements of the UNFCCC for CDM project activities, as well as criteria for consistent project operations, monitoring and reporting has been applied for verification.

The monitoring period covers under this verification are from 01/02/2020 to 18/08/2021 (both days included).

The verification includes confirming the implementation of the monitoring plan of the registered VCS PD and MR (Project ID 1481) and the application of the monitoring methodology as per ACM0002, Version 12.3.0 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”.

The project activity involves generation of electricity by using the renewable energy source (wind) supplying to the Indian electricity grid. Thus, the project aims to displace electricity produced by fossil fuel power plants harnessing wind energy. Therefore, the project reduces greenhouse gas emissions and thereby contributes to sustainable development.

A risk-based approach has been followed to perform this verification. During verification, 03 Corrective Action request (CARs), 00 Forward Action Request (FAR) and 01 Clarification request (CLs) were raised and successfully closed.

The review of the project design documentation, monitoring report and additional documents related to baseline and monitoring methodology; the subsequent background investigation, telephonic interviews and stakeholders have provided ESPL with sufficient evidence to validate the fulfillment of the stated criteria.

ESPL confirms that the project is implemented in accordance with the registered VCS PD. The monitoring system is in place and the emission reductions are calculated without material misstatements. Our opinion relates to the project's GHG emissions, and the resulting GHG emission reductions reported and related to the valid and registered project baseline and monitoring and its associated documents. Based on the information seen and evaluated we confirm that the emission reductions from the project activity "Wind power project in Maharashtra, India – Andhra Lake Phase - II " in India during the period 01/02/2020 – 18/08/2021 (including both days) amount to 129,184 tons of CO₂e.

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1 INTRODUCTION

1.1 Objective

Earthood Services Private Limited (ESPL) has been contracted by CLP Wind Farms (India) Private Limited (project proponent), to undertake the verification of the renewable energy project titled “Wind power project in Maharashtra, India – Andhra Lake Phase - II ”(VCS ID-1481) The verifiers have reviewed the GHG data collected to date for the monitoring period from 01/02/2020 to 18/08/2021 (both days included) covered in this verification. The objective of this verification is a thorough and independent assessment of registered project activities against the applicable VCS requirement by the VVB. The verification process shall determine whether the proposed project activity complies with the requirements of latest VCS guidelines, applicability conditions of the selected methodology, relevant host country regulations and guidance issued by the VCS Board.

1.2 Scope and Criteria

The scope of verification is to assess the claims and assumptions made in the VCS monitoring report (MR) against the VCS criteria, including but not limited to, VCS standard, applied methodology and other relevant rules and requirements established for VCS project activities.

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

1.3 Level of Assurance

The level of assurance of the verification report falls under reasonable assurance engagements. Reasonable assurance is a high level of assurance regarding material misstatements, but not an absolute one.

Reasonable assurance includes the understanding that there is a remote likelihood that material misstatements will not be prevented or detected on a timely basis. To achieve reasonable assurance, the auditor needs to obtain sufficient appropriate audit evidence to reduce audit risk to an acceptably low level. This means that there is some uncertainty arising from the use of sampling, since it is possible that a material misstatement will be missed.

The evidence used to achieve a reasonable level of assurance is specified in section 2.3 and 2.4 of this report.

1.4 Summary Description of the Project

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

The project activity consists of 63 WTGs (800 kW capacity each), making the total installed capacity to be 50.4 MW in Khed and Maval taluk of Pune district of Maharashtra state in India.

Location of the project was verified through Google Map (<https://www.gps-coordinates.net/>) and found consistent with the data provided in the registered PD /01/. The WTGs generate 3-phase power at 400 V ($\pm 12.5\%$) in the frequency range of 47.5 – 51.5 Hz. It is further stepped up to 33 kV for further distribution by the state utility. This information was verified through photographs indicating name plate details and found to be in line with the details provided in the registered PD /01/.

The WTGs have been commissioned between 19/08/2011 and 22/03/2012. The same was verified against the registered VCS PD/01/ and commissioning certificates/11/. The emission reductions from the project activity during the period 01/02/2020 – 18/08/2021 (including both days) amount to 129,184 tonnes of CO₂e.

2 VERIFICATION PROCESS

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

2.1 Method and Criteria

The verification approach consists of two phases.

In the first phase, ESPL completed a strategic review and risk assessment of the project's activities and processes in order to gain a full understanding of:

- Activities associated with all the sources contributing to the project emissions and emission reductions, including leakage if relevant;
- Protocols used to estimate or measure GHG emissions from these sources;
- Collection and handling of data;
- Controls on the collection and handling of data;
- Means of verifying reported data; and

- Compilation of the verification Report.

At the end of this phase, ESPL produced a Verification Checklist which, based on the risk assessment of the parameters and data collection and handling processes for each of those parameters, describes the verification approach and the sampling plan.

In the second phase using the Verification checklist, ESPL verified the implementation of the monitoring plan and the data presented in the VCS MR/04/ for the period in question. This involved telephonic interviews of project proponent representative's and a desk review of the Monitoring Report. This verification report describes the findings of this assessment.

2.2 Document Review

The verification is performed primarily as a document review of the registered VCS PD/01/, previous MR and Verification report/2.1/ and associated documents as stated in detail in appendix 1 of this document. The assessment is performed by a verification team referring the ESPL internal procedures in line with latest VCS requirements. The cross checks between information provided in the Monitoring report, VCS PD and information from sources other than those used, if available, the team's sectoral or local expertise and, if necessary, independent background investigations.

2.3 Interviews

Due to the current situation with the global COVID-19 pandemic scenario physical site inspection is not done for the verification. Although domestic travel has resumed in India, it is still not recommended until necessary and considering health and safety a top priority, physical site visit for verification audit is not conducted. Furthermore, as per the Section 4.1.2 of the VCS Standard, v4.1, it is not mandatory to conduct the on-site visit by VVB for verification. However the representatives of the PP were interviewed through the video conferencing (via Microsoft Teams app) on 15/10/2021 i.e., personnel responsible for monitoring of the project activity, data collection and management, and QA/QC procedure. The details of the people interviewed are mentioned in the table below:

Name	Organization	Topic covered
Mr. Varun Shah	CLP Wind Farms (India) Private Limited (Asset Manager)	Project implementation, start date as per the VCS requirements. Electricity Generation Records (monthly energy statements, Invoices) Reliability & accuracy of readings considered for emission reduction calculations, Calibration procedure Monitoring and measuring system Collection of measurements Observations of established practices Data Verification of monitoring parameters QA/QC procedures, data management, internal audits to maintain data quality & reliability, maintenance Practices.
Mr. Sandip Saha	CLP Wind Farms (India) Private Limited (Manager, corporate office)	Consideration of monitoring period, monitoring methodology, project documentation and emission reduction calculations.

2.4 Site Inspections

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

Assessment Criteria	Means of verification/source documents	Assessment opinion
Description of project activity	i. Commissioning certificates /11/ ii. PPA signed with state utility (MSEDCL) /12/ iii. Latest VCS verification report /2.1/.	The information's with reference to project capacity, technology, plant equipment's and commissioning dates as provided in section 1.1 of MR are found consistent with the documents.

Assessment Criteria	Means of verification/source documents	Assessment opinion
	iv. Virtual meeting with site personnel on 15/10/2021	
Compliance of the project implementation with the registered project design document	i. Monthly JMRs and generation reports issued by MSEDCL /08/ ii. Geographical co-ordinates (Location of WTGs) verified through Google Map ¹ iii. Latest VCS verification report /2.1/. iv. PPA signed with state utility (MSEDCL) /12/ v. Virtual meeting with site personnel on 15/10/2021 vi. Photograph of all the WTGs, energy meters installed at site and screen shots of online monitoring system /18/	JMRs and generation reports issued by MSEDCL indicate the following information: - Commissioning date - Feeder identification to which the WTGs are connected - Serial number of energy meters - Capacity of project - Name of project participant Location of each WTG is verified through Google Map. Daily generation records are verified to check the operational status of project activity. Grid connectivity of the project is confirmed through the PPA. All the information's regarding the project implementation as discuss above are further verified through VCS verification report along with latest and found consistent.
Compliance of the registered monitoring plan with applied methodologies and standardized baselines	i. Virtual meeting with site personnel on 15/10/2021 ii. PPA signed with state utility (MSEDCL) /12/	The organizational structure, responsibilities and competencies of the personnel confirmed through telephonic interview. Frequency of monitoring of parameters listed under approved monitoring plan is

¹ <https://www.gps-coordinates.net/>

Assessment Criteria	Means of verification/source documents	Assessment opinion
	iii. Monthly JMRs and generation reports issued by MSEDCL /08/ iv. Invoices raised by project developer to state utility/07/ v. ISO 9001:2008 Certification for WWIL /20/ vi. Quality Policy WWIL /20/ vii. SHE (Safety, Health and Environment) Policy WWIL /20/ viii. Photograph of all the WTGs, energy meters installed at site and screen shots of online monitoring system /18/	verified through JMRs /Invoices. The methods used for measuring, recording, storing, aggregating, and reporting the data on monitored parameters are verified through PPA and interactions with site personnel. Procedure for data uncertainty, emergency preparedness, roles and responsibility, operational and management structure are mentioned in the MR is confirmed through policy documents and found satisfactory.
Compliance with the calibration frequency requirements for measuring instruments	i. Calibration certificates of instruments/06/ ii. Monthly JMRs and generation reports issued by MSEDCL /08/ iii. PPA signed with state utility (MSEDCL) /12/ iv. Central Electricity Authority(Installation and Operation of Meters) Regulations/15/	Calibration frequency and energy meter specifications (Sr.No, make accuracy class) is verified through calibration certificates and further verified through monthly JMRs and found consistent. Responsibility of calibration and maintenance of energy meters is solely under control of MSEDCL; this is verified through the PPA.

Assessment Criteria	Means of verification/source documents	Assessment opinion
Assessment of data and calculation of emission reductions or net removals	i. Monthly JMRs and generation reports issued by MSEDCL /08/ ii. Invoices raised by project developer to state utility/07/ iii. CEA CO₂ Baseline Database for the Indian Power Sector /10/ iv. Latest VCS verification report /2.1/	Monthly values of monitoring parameters used in ER calculation are verified through JMRs and cross verified with the invoices. Methods, formulae and emission factor for calculating baseline emissions have been followed are in accordance with the applied methodology and as described in the approved VCS verification report.

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

The assessment team has also used documents such as approved CDM validation report available/19/ publicly at UNFCCC project webpage (UN ref.No-7491).Furthermore the project activity already verified under VCS previously and currently undergoing 4th verification, hence based on the information's available through approved documents (VCS verifications), it can be confirmed that project is implemented and being operated as described in the registered PD.

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

2.5 Resolution of Findings

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

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

- Non-compliance with the monitoring plan, the methodology or the standardized baseline are found in monitoring and reporting and has not been sufficiently documented by the project participants, or if the evidence provided to prove conformity is insufficient;
- Modifications to the implementation, operation and monitoring of the registered project activity has not been sufficiently documented by the project participants;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;
- Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project participants. Clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met. All CARs and CLs raised by the ESPL during verification shall be resolved prior to submitting a request for issuance. FAR (Forward Action Request) is raised during verification if the monitoring and reporting require attention and/or adjustment for the next verification period.

During the current verification, 03 Corrective Action request (CARs), 00 Forward Action Request (FAR) and 01 Clarification request (CLs) were raised and successfully closed.

All the findings that are raised and communicated to project participant during the verification are included under Appendix 3. The section also includes the response, if provided, by the project participants and an assessment by the verification team if it was closed out or otherwise.

2.5.1 Forward Action Requests

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

2.6 Eligibility for Validation Activities

Not applicable.

3 VALIDATION FINDINGS

Use this section to provide details of all validation activities that took place during the verification, such as gap validation, validation of methodology deviations and project description deviations, and the inclusion of new project activity instances into grouped projects.

3.1 Participation under Other GHG Programs

- The project has been registered under Clean Development Mechanism (CDM) on 04/10/2012 with reference number 7491 /19/. The crediting period of the project activity under CDM is from 30/09/2013 to 29/09/2020 (renewable) as verified through the information available at UNFCCC project web page. It is also verified that there are no credits issued under CDM, however monitoring report for the period starting from 30/09/2013 to 01/08/2016 is published at UNFCCC project webpage/19/. The project proponent has sent an email/21/ to verifying DoE requesting termination of contract for the monitoring period (30/09/2013 to 01/08/2016).
- This project is also registered under VCS (Project ID-1481) with 10 years crediting period (renewable twice) from 19/08/2011 to 18/08/2021 /01/. As verified through the records available at VCS registry, VERs for the first monitoring period (19/08/2011 to 29/09/2013) and second monitoring period (30/09/2013 to 31/05/2017), third monitoring period (01/06/2017 to 31/01/2020) are already issued.
- Even though the project has been registered under the CDM and crediting periods under both programme (CDM & VCS) overlaps, but credits for the same GHG emission reductions under the VCS and the CDM shall not be claimed. This was confirmed through a declaration/14/ submitted by the PP and hence accepted by the assessment team.

3.2 Methodology Deviations

There is no methodology deviation identified during the current monitoring period

3.3 Project Description Deviations

There is no project deviation identified during the current monitoring period.

3.4 Grouped Project

Not applicable. The project activity is not a grouped project

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The project activity consists of 63 WTGs installed at Khed and Maval taluk in Pune district in Maharashtra. The first and last machine under the project activity was commissioned on 19/08/2011 and 22/03/2012 respectively. The WTGs are of E-53 model with an individual capacity of 0.8 MW, summing up to 50.4 MW of total installation capacity. The commissioning has been duly validated in the CDM validation report of the project activity/02/. There was no major breakdown or shut downs during the monitoring period which might affect the applicability of methodology or might cause material errors in emission reductions.

The power generated through the proposed project activity being supplied to NEWNE grid (now part of Indian grid) through a contractual arrangement (PPA). The technical specification of the project activity WTGs have been checked through the photographs of the WTGs installed at site, commissioning certificates and are found to be consistent with the mentioned under section 3.1 of MR. The current status of the project activity is verified through the screen shots of SCADA system/18/, indicating the real-time generation data and hence it is confirmed that the project is fully functioning.

The monitoring plan of registered VCS PD/01/ includes the parameter

- i) Quantity of net electricity generation supplied by the project plant/unit to the grid in year y ($EG_{\text{facility},y}$)
- ii) Quantity of electricity exported by the Project to the grid in year y ($EG_{\text{export},y}$)
- iii) Quantity of electricity imported by the Project from the grid in year y ($EG_{\text{import},y}$)
- iv) Sum of Electricity generation measured by controllers of project and non-project WTGs connected to feeder i during period y ($EG_{\text{All_controller},i,y}$)

- v) Sum of Electricity generation measured by controllers of all the project WTGs that are connected to feeder i during period y ($EG_{WTG_controller,i,y}$)

It is to be noted that the parameter $EG_{All_controller,i,y}$ and $EG_{WTG_controller,i,y}$ directly not used in calculation of emission reductions, however used to calculate value of $EG_{facility,y}$ in following conditions:

1. For apportioning of electricity supplied if the project and non-project WTGs connected to the same feeder
2. If the monitoring period dates do not match with the billing cycle dates indicated in the JMRs / Credit reports issued by MSEDCL.

It is confirmed that no such instance observed during the current monitoring period.

Quantity of net electricity generation supplied by the project plant/unit to the grid in year y, is calculated as:

$$EG_{facility,y} = (EG_{export,y} - EG_{import,y})$$

Electricity exported and imported by the project activity being measured by energy meters of accuracy class 0.2s located at the Andhra Lake substation. These parameters are measured continuously and follows at least monthly recording. This is in line with methodology and is accepted.

Monthly values of $EG_{facility,y}$ is obtained directly from the monthly JMRs and generation reports issued by state utility (MSEDCL)/08/. The invoicing being done against electricity supplied by the project plant to the grid. The measurement results are cross checked with records of invoices, and it is in line with applied methodology. Thus, this parameter is considered in emission reduction calculations.

As verified through the calibration certificates and recent photographs of energy meters that there are 10 energy meters installed at site and are under control of state utility (MSEDCL), sealed in presence of both the state utility official & representative of PP.

Joint Meter Reading is being taken jointly by the officials of state utility and project participant's representative on monthly basis and accordingly monthly JMRs/ generation reports is being prepared. The monitoring methodology applies consistently the choice of the option selected for monitoring of baseline emissions. The monitoring plan provide procedures for the collection and archiving of all relevant data necessary for estimation or measuring the emission reductions within the project boundary during the crediting period. This is checked through discussion with consultant and the project participant during the virtual interview.

The VCS MR/04/ has been reviewed to check that the procedure for data uncertainty, emergency preparedness, roles and responsibility, operational and management structure are mentioned in the MR. The monitoring plan completely describes all measures to be implemented for monitoring all parameters required. The monitoring plan described the positioning of the

equipment. The information relating to the project implementation, provided in the Monitoring Report /04/ is consistent with that stated in the registered PD /01/. The data and variables provided in the monitoring report are the same as stated in the registered PD/01/. Total emission reductions achieved under this monitoring period 01/02/2020 to 18/08/2021 (including both days) is 129,184 tCO₂e.

- a) Assessment team concludes the following: There is no material discrepancies between project implementation and the project description provided in the registered PD/01/.
- 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.
- c) There is no material discrepancies between the actual monitoring system, and the monitoring plan set out in the project description and the applied methodology/09/.
- d) The GHG emission reductions or removals generated by the project have not included in an emissions trading program or any other mechanism that includes GHG allowance trading/18/.
- 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/14/.
- f) The project is registered under VCS program as well as CDM.
- g) The project activity is complying 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 view of the information's as verified above the assessment team is able to conclude that the project has been implemented as described in the project description.

4.2 Safeguards

4.2.1 No Net Harm

There is no negative impact to any socio-economic conditions of the region due to the project activity. The type of project activities require to conduct EIA assessment are categorized under the schedule 1 of Ministry of Environment and Forest notification dated 14/09/2006² and further notification number 3067 from MoEF dated 01/12/2009³. The proposed project activity does not fall under the listed categories and hence not required an EIA to be done. This project activity will not involve any negative environmental or socio-economic impacts, as the project activity involves generation of power using wind energy which is a clean source of energy. Hence no mitigation measures are required.

4.2.2 Local Stakeholder Consultation

The project activity undergoing fourth verification and local stakeholder consultation was appropriately conducted prior to validation to inform the design of the project and maximize participation from stakeholders during the validation.

The project proponent has implemented mechanism for ongoing communication with local stakeholders to allow stakeholders to raise concerns about potential negative impacts during implementation and operation of the project activity. The project proponent has placed a grievance register and a grievance box at site office/23/, where the local villagers can register their concerns.

The assessment team has checked the photographs of the grievance register maintained at site office/23/ and confirmed that no formal complaints were received during the current monitoring period

4.3 AFOLU-Specific Safeguards

Not applicable.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The project monitoring has been carried in accordance with the registered VCS PD/01/ and the monitoring report/04/. The monitoring plan laid in the registered PD/01/ is being followed at the site/18/. The assessment team has verified the information flow (from data generation, aggregation, to recording, calculation and reporting for these parameters including the values) in the MR/04/.

² <http://envfor.nic.in/legis/eia/so1533.pdf>

³ <http://moef.nic.in/downloads/rules-and-regulations/3067.pdf>

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 $EG_{\text{facility},y}$ used in deriving the GHG emission reduction could be very well correlated between the data sets and ER spreadsheet/05/ provided by PP. The net electricity to the grid ($EG_{\text{facility},y}$) by the project activity measured by state utility on monthly basis through dedicated metering system installed at site and recorded in the monthly generation reports provided to project proponent. Verification team has verified the monthly values of parameter ($EG_{\text{facility},y}$) as reported in the ER sheet with the source document (generation reports) and no discrepancy is observed, hence it can be confirmed that no manual transposition errors between data sets have been occurred. The verification of each monitoring parameter has been discussed later in section 4.5.

The calculation method and formulae used in calculating baseline emission is in compliance to the methodology used i.e. ACM0002 version 12.3.0 /09/. Since project activity is a wind power project, leakage emission and project emission has been considered as zero.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

All the data recorded is following the registered VCS PD and Monitoring Report. The assessment team has checked the monthly credit reports for electricity generated and supplied by project activity/08/ for the current monitoring period to verify the values of monitoring parameters reported in ER calculation sheet and found to be consistent. Since the monthly JMRs prepared and issued by state utility, they are found to be reliable and authentic.

The Wind World Limited (WWIL) is responsible for the operations, maintenance and monitoring of the project activity, whose operation and maintenance activities are ISO 9001:2008 (Quality Management System) certified/20/. Hence it is confirmed that the management system of the VCS project is in place; with the responsibilities properly identified. The same was also verified during the telephonic interview of site personnel.

The monitoring of the project activity is found to be in accordance with the monitoring methodology described in ACM0002, Version 12.3.0 /09/. The monitoring mechanism is effective and reliable. During the phone-call, personnel involved at various levels of the operation of the project activity have been interviewed to confirm that the plant personnel are conscious of the importance of the monitoring activities. The verification of the plant records and latest photographs are also substantiating consistency in recording and reporting of monitored data.

The screen shots of SCADA system/18/ confirms that the monitoring systems have been installed and are operational. The meters comply with appropriate quality standards applicable for the used technology. The accuracy class of the meters installed for the project activity was verified through the registered VCS PD/01/, MR /04/, and calibration certificates, latest

photographs of meters and cross-checked against the PPAs/12/ signed for the project activity, found to be consistent.

The supporting records of monthly credit reports /08/ issued by the O&M contractors and invoices raised to MSEDCL for the entire monitoring period were checked and found to be sufficient to enable verification of emission reductions.

The following parameter has been verified for current monitoring period:

Parameter	Quantity of electricity exported by the Project to the grid in year y $EG_{\text{export},y}$ (MWh)	
Means of verification	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	The project WTGs are connected to 5 different feeders at substation. This parameter is measured by the energy meters installed at each feeder. The parameter is reported on monthly basis in the credit note, which is prepared for each feeder separately.
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The reporting frequency is in line with the monitoring plan as outlined in the registered PD/01/ and monitoring methodology/09/.
	Monitoring equipment	There is one set of dedicated energy meters (main & check meter) provided for each feeder at substation .
	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	All the energy meters are two-way tri-vector meters of accuracy class 0.2s. Accuracy of the monitoring equipment's is in accordance with the monitoring plan as outlined in the registered PD.

	local/national standards, or as per the manufacturer's specification?	
	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	Yes. The accuracy of monitoring equipment's is valid for the entire range.
	Calibration frequency /interval:	Calibration frequency of the meters is once in 5 years.
	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 once in 5 years as outlined in the registered PD/01/ is in accordance with the national standards/15/.
	Is the calibration of measuring equipment carried out by an accredited person or institution?	Yes the calibration is conducted by state utility which is NABL Accredited entity/06/.
	Is(are) calibration(s) valid for the whole reporting period?	Calibration of energy meters recording energy exported is valid for whole reporting period.
	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.
	How were the values in the monitoring report verified?	Monthly values of $EG_{\text{export},y}$ for entire monitoring period is reported in the monitoring report and in ER calculation sheet/05/. The monthly values were verified from the generation reports/08/ issued by state utility and found to be consistent. Value of this parameter for the current monitoring period was verified as 136,251.63 MWh

	If applicable, has the reported data been cross-checked with other available data?	The monthly reported values of $EG_{\text{export},y}$ were further cross checked with the monthly invoices raised by the PP /07/ to state utility and found to be consistent.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Desk review of the policy documents, telephonic interview with site personnel confirms that the necessary QA/QC procedures are in place and the data management system is effective and reliable.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues.
Findings	CL #1, CAR #1, CAR #2 and CAR #3 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.	

Parameter	Quantity of electricity imported by the Project from the grid in year y $EG_{\text{import},y}$ (MWh)	
Means of verification		
	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	The project WTGs are connected to 5 different feeders at substation. This parameter is measured by the energy meters installed at each feeder. The parameter is reported on monthly basis in the credit note,

		which is prepared for each feeder separately.
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The reporting frequency is in line with the monitoring plan as outlined in the registered PD/01/ and monitoring methodology/09/.
	Monitoring equipment	There is one set of dedicated energy meters (main & check meter) provided for each feeder at substation .
	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?	All the energy meters are two-way tri-vector meters of accuracy class 0.2s. Accuracy of the monitoring equipment's is in accordance with the monitoring plan as outlined in the registered PD.
	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	Yes. The accuracy of monitoring equipment's is valid for the entire range.
	Calibration frequency /interval:	Calibration frequency of the meters is once in 5 years.
	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 once in 5 years as outlined in the registered PD/01/ is in accordance with the national standards/15/.
	Is the calibration of measuring equipment carried out by an accredited person or institution?	Yes the calibration is conducted by state utility which is NABL Accredited entity/06/.

	Is(are) calibration(s) valid for the whole reporting period?	Calibration of energy meters recording energy imported is valid for whole reporting period.
	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.
	How were the values in the monitoring report verified?	Monthly values of $EG_{import,y}$ for entire monitoring period is reported in the monitoring report and in the ER calculation sheet/05/. The monthly values were verified from the generation reports/08/ issued by state utility and found to be consistent. Value of this parameter for the current monitoring period was verified as 81.09 MWh
	If applicable, has the reported data been cross-checked with other available data?	The monthly reported values of $EG_{import,y}$ were further cross checked with the monthly invoices raised by the PP /07/ to state utility and found to be consistent.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Desk review of the policy documents, telephonic interview with site personnel confirms that the necessary QA/QC procedures are in place and the data management system is effective and reliable.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues.
Findings	CL #1 ,CAR #1,CAR #2 and CAR #3 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.
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Parameter	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y EG _{facility} (MWh)	
Means of verification	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	The parameter is calculated and recorded on monthly basis. Quantity of net electricity generation supplied by the project plant/unit to the grid in year y, is calculated as: EG _{facility,y} =(EG _{export,y} – EG _{import,y}) Where, EG _{export,y} = Quantity of electricity exported by the Project to the grid in year y EG _{import,y} = Quantity of electricity imported by the Project from the grid in year y
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes. The reporting frequency is in line with the monitoring plan as outlined in the registered PD/01/ and monitoring methodology/09/.
	Monitoring equipment	No monitoring equipment is used as this parameter is calculated.However the parameter EG _{export,y} and EG _{import,y} are measured values, continuously monitored, hourly measured and monthly recorded.

	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 ($EG_{\text{export}, y}$ and $EG_{\text{import}, y}$) is 0.2s, which is as per the registered PD/01/ which is as per the norm defined in the PPA/12/.
	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	Yes. The accuracy of monitoring equipment's is valid for the entire range.
	Calibration frequency /interval:	Calibration frequency of the meters is once in 5 years.
	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 once in 5 years as outlined in the registered PD/01/ is in accordance with the national standards/15/.
	Is the calibration of measuring equipment carried out by an accredited person or institution?	Yes the calibration is conducted by state utility which is NABL Accredited entity/06/.
	Is(are) calibration(s) valid for the whole reporting period?	Calibration of energy meters recording the export and import is valid for whole reporting period.
	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.

	How were the values in the monitoring report verified?	Monthly values of $EG_{\text{facility},y}$ for entire monitoring period is reported in the monitoring report/04/, and in the ER calculation sheet/05/. The monthly values were verified from the generation reports issued by state utility and found to be consistent. Value of this parameter for the current monitoring period was verified as 136,170.54 MWh
	If applicable, has the reported data been cross-checked with other available data?	The monthly reported values of $EG_{\text{facility},y}$ were further cross checked with the monthly invoices raised by the PP /07/ to state utility and found to be consistent.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Desk review of the policy documents, telephonic interview with site personnel confirms that the necessary QA/QC procedures are in place and the data management system is effective and reliable.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues.
Findings	CL #1 ,CAR #1, CAR #2 and CAR #3 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.	

Parameter	Sum of Electricity generation measured by controllers of project and non-project WTGs connected to feeder I during period y $EG_{All_controller,i,y}$ (MWh)	
Means of verification		
	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	The parameter is directly measured and recorded 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 PD/01/ and monitoring methodology/09/.
	Monitoring equipment	Parameter is continuously measured by the inbuilt LCS meters located in each WTGs.
	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?	Not applicable
	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	Not applicable
	Calibration frequency /interval:	These LCS meters do not require calibration as the energy readings of electricity generated at the LCS meter is cross verified by the energy calculated by inverting system installed in the WTGs.
	Is the calibration interval in line with the monitoring plan and/or methodology? If the monitoring	Not applicable.

	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?	
	Is the calibration of measuring equipment carried out by an accredited person or institution?	Not applicable.
	Is(are) calibration(s) valid for the whole reporting period?	Not applicable.
	Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	Not applicable.
	How were the values in the monitoring report verified?	Monthly values of $EG_{All_controller,i,y}$ for entire monitoring period is reported in the monitoring report/04/, and in the ER calculation sheet/05/. The values were verified from the monthly generation reports issued by O&M contractor and found to be consistent. Value of this parameter for the current monitoring period was verified as 5,034.30 MWh
	If applicable, has the reported data been cross-checked with other available data?	No crosscheck is required since it is automatically crosschecked by Inverting system.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	The data is generated and recorded in the CMS system automatically. The O&M contractor, based on recorded data in the CMS system, prepares reports. These daily generation reports are used to prepare monthly generation reports. The monitoring procedures were

		sufficiently robust to enable accurate transmission of data.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues.
Findings	CL #1 ,CAR #1,CAR #2 and CAR #3 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.	

Parameter	Sum of Electricity generation measured by controllers of all the project WTGs that are connected to feeder i during period y $EG_{controller,i,y}$ (MWh)	
Means of verification		
	Criteria/Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	The parameter is directly measured and recorded 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 PD/01/ and monitoring methodology/09/.
	Monitoring equipment	Parameter is continuously measured by the inbuilt LCS meters located in each WTGs.

	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?	Not applicable
	Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different measuring ranges?	Not applicable
	Calibration frequency /interval:	These LCS meters do not require calibration as the energy readings of electricity generated at the LCS meter is cross verified by the energy calculated by inverting system installed in the WTGs.
	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?	Not applicable.
	Is the calibration of measuring equipment carried out by an accredited person or institution?	Not applicable.
	Is(are) calibration(s) valid for the whole reporting period?	Not applicable.
	Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	Not applicable.

	How were the values in the monitoring report verified?	Monthly values of EG_{controller,i,y} for entire monitoring period is reported in the monitoring report/04/, and in the ER calculation sheet/05/. The values were verified from the monthly generation reports issued by O&M contractor and found to be consistent. Value of this parameter for the current monitoring period was verified as 36,916.70 MWh
	If applicable, has the reported data been cross-checked with other available data?	No crosscheck is required since it is automatically crosschecked by Inverting system.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	The data is generated and recorded in the CMS system automatically. The O&M contractor, based on recorded data in the CMS system, prepares reports. These daily generation reports are used to prepare monthly generation reports. The monitoring procedures were sufficiently robust to enable accurate transmission of data.
	In case project participants have temporarily not monitored the parameter, has either i) a deviation been approved by the CDM EB or ii) has the parameter been estimated as stipulated by Appendix 1 to the CDM Project Standard?	No such issues.
Findings	CL #1 ,CAR #1,CAR #2 and CAR #3 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.	

Parameters fixed ex ante:

$EF_{OM,y}$; tCO₂e/MWh: it is the operating margin emission factor of NEWNE grid fixed at the time of project registration the mentioned value of 0.9942 tCO₂e/MWh is consistent with the registered PD/01/.

$EF_{BM,y}$; tCO₂e/MWh: it is build margin emission factor of NEWNE grid fixed at the time of project registration the mentioned value of 0.8123 tCO₂e/MWh is consistent with the registered PD/01/.

$EF_{grid,CM,y}$; tCO₂e/MWh: it is the combined margin emission factor of NEWNE grid fixed at the time of project registration the mentioned value of 0.9487 tCO₂e/MWh is consistent with the registered PD/01/.

Calibration of meters:

During the verification assessment of the project activity, accuracy of all the metering have been checked and found appropriate. The installation and working conditions of the meters checked through latest photographs, calibration certificates and were found to be satisfactory. Details of meters are provided in below table:

Meter Location	Meter Serial No	Meter Type	Calibration Date(s)	Calibration validity till Date
Feeder -01	13099002	Main Meter	17/02/2017	16/02/2022
	13099006	Check meter		
Feeder -02	13098999	Main Meter	17/02/2017	16/02/2022
	13099007	Check meter		
Feeder -03	13099003	Main Meter	17/02/2017	16/02/2022
	13099000	Check meter		
Feeder -05	13098998	Main Meter	17/02/2017	16/02/2022
	13099001	Check meter		
Feeder -08	13098996	Main Meter	17/02/2017	16/02/2022
	13098997	Check Meter		

Meters used to measure the parameters are of accuracy class 0.2s, as verified through calibration certificates/06/ and the photographs indicating the accuracy, make. The CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006 and its amendments Notified on 26/06/2010 No. 502/6/2009/DP&D/D-I /15/ which is considered as national standard, mentions that for voltage of 650 V up to 33 Kv, 0.5s accuracy class or above is recommended. Hence, the accuracy classes of 0.2s for the energy meters installed at the project activity site are found to be appropriate.

The details of monitoring equipment are involved in the project activity and their calibration details/06/ are mentioned in the table under Appendix-1 of the VCS MR/04/. The monitoring equipment for each feeder consists of a main and check meter at 132/100/33 kV Andhra Lake substation. The CEA Notification No. 502/70/CEA/DP&D dated 17/03/2006/15/ which is considered as national standard mentions that “All interface meters shall be tested at least once in five years.” Hence, the stipulated calibration frequency once in 5 years is appropriate.

The assessment team has verified the monthly JMRs/generation reports issued by state utility and confirmed that only the data recorded through main meters is used to calculate net electricity supplied to the grid for all four feeders and consequently for ER calculations. As verified through the calibration certificates, there is no delay in calibration of main meters identified during the current monitoring period, hence it can be concluded that meters were working satisfactorily during the current monitoring period. The registered VCS PD/01/ & MR /04/ and meter photographs confirm that the metering equipment are sealed and maintained by the state utility.

In view of the above discussion the assessment team 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:

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

Where:

BE_y: Baseline emissions in year y (tCO₂e/yr)

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

EF_{grid, CM, y} : Combined Margin (CM) Emission Factor of NEWNE (tCO₂e/MWh)

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

$$\begin{aligned} \text{Thus, } BE_y &= 136,170.54 \text{ MWh} * 0.9487 \text{ tCO}_2/\text{MWh} \\ &= 129,184.00 \text{ tCO}_2 \end{aligned}$$

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 actual emission reduction achieved during the current monitoring period are 9.79% higher than the estimated amount of emission reductions at the time of validation, which is due to the high PLF achieved by the project activity during the monitoring period. It is to be noted that PLF is completely governed by the availability of wind, which is natural phenomenon and same is beyond the control of PP.

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

4.6 Non-Permanence Risk Analysis

Not applicable for the project activity.

5 VERIFICATION CONCLUSION

Earthood Services Private Limited (also referred to as ESPL), contracted by CLP Wind Farms (India) Private Limited, has performed the independent verification of the emission reductions for the VCS project activity (VCS ID- 1481) “Wind power project in Maharashtra, India – Andhra Lake Phase – II ” in India for the monitoring period 01/02/2020 – 18/08/2021 as reported in the Monitoring Report Version 02 dated 10/10/2021. The CLP Wind Farms (India) Private Limited is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity.

It is our responsibility to express an independent verification statement on the reported GHG emission reductions from the project activity. ESPL commenced the verification on the basis of the baseline and monitoring methodology ACM0002 version 12.3.0, the monitoring plan contained in the registered VCS PD Version 02, dated 10/09/2015 and VCS guidelines version 4.0, Monitoring Report Version 02 dated 10/10/2021 as per the process described under Section 2 of this report.

ESPL 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. ESPL planned and performed the verification by obtaining evidence and other information and explanations that ESPL considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

In our opinion the GHG emissions reductions reported for the project activity for the period 01/02/2020 – 18/08/2021 are fairly stated in the Monitoring Report Version 02 dated 10/10/2021. The GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology ACM0002 version 12.3.0, and the VCS standard.

Verification period: From 01/02/2020 – 18/08/2021 (including both days)

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

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
2020 (from 01/02/2020 to 31/12/2020)	74,799.00	0	0	74,799.00
2021 (from 01/01/2021 to 18/08/2021)	54,385.00	0	0	54,385.00
129,184.00129,184.0074,799.00129,184.0074,799.0074,799.00Total	129,184.00	0	0	129,184.00

Approved by

Dr. Kaviraj Singh



Managing Director

Earthood Services Privated Limited

Date: 23-November-2021

Place: Gurugram, Haryana

APPENDIX 1: DOCUMENT REFERENCES

S.No	Title of Document	Version	Date
1.	Registered VCS PD (Revised version available at VCS registry webpage)	2.1	19/09/2015
2.	CDM Validation Report,(Report id – CDM-MUM-0061739)	04.1	24/09/2012
2.1	VCS Verification Report (For third monitoring period from 01/06/2017 – 31/01/2020)	01	28/04/2020
3.	VCS Monitoring Report	01	22/09/2021
4.	VCS Monitoring Report (Final)	02	10/10/2021
5.	ER spread sheet (corresponding to the final monitoring report)	01	25/09/2021
6	Certificates of Calibration for all the meters belongs to project activity	-	-
7.	Invoice issued by PP to state DISCOM	for the period 01/02/2020 to 18/08/2021	-
8.	Monthly JMR and Generation reports issued by MSEDCL for the current verification period.	for the period 01/02/2020 to 18/08/2021	-
9.	“Consolidated baseline methodology for grid-connected electricity generation from renewable sources”, ACM0002,	12.3.0	-
10.	CEA Database	version 06	-
11.	Commissioning certificate for all the WTGs of the project activity issued by respective state electricity authority	-	-
12.	Power Purchase Agreements signed between Project Proponent and state electricity authority	-	-
13.	VCS webpage for the project, VCS ID 1481; https://registry.terra.org/app/projectDetail/VCS/1481	-	Last accessed on 20/10/2021
14.	Letter of declaration dated from PP regarding not having created or sought any other form of environmental credit for the same period	-	Dated 22/10/2021
15.	Central Electricity Authority (Installation and Operation of Meters) Regulations Notified on 17/03/2006 No. 502/70/CEA/DP&D Amendments Notified on 26/06/2010 No. 502/6/2009/DP&D/D-I	-	-
16.	VCS Standard	Version 4.1	22/04/2021
17.	VCS Program Guide	Version 4.0	19/09/2019
18.	Latest photographs of SCADA system, WTGs, transformers and energy meters installed at site	-	-
19.	UNFCCC project page project title “Wind power project in Maharashtra, India – Andhra Lake Phase -- II” https://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1348755977.79/view	-	-
20.	- ISO 9001:2008 Certification for WWIL - Quality Policy WWIL - SHE (Safety, Health and Environment) Policy WWIL	-	-
21.	Email sent to DOE regarding termination of CDM verification contract for monitoring period (30/09/2013 to 01/08/2016)		Dated 17/08/2017

APPENDIX 2: ABBREVIATIONS

Abbreviations	Full texts
ABT	Availability Based Tariff
BEF	Baseline Emission Factor
BM	Build Margin
CAR	Corrective Action Request
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CL	Clarification Request
CMS	Central Monitoring System
CMP	Conference of Parties Serving as Meeting of Parties
CO2	Carbon dioxide
DISCOM	Distribution Company
EB	Executive Board
EPC	Engineering, Procurement and Construction
FAR	Forward Action Request
GHG	Green House Gas
ISO	International Standards Organization
JMR	Joint Meter Reading
kW	Kilowatt
kWh	Kilowatt hour
MEDA	Maharashtra Energy Development Agency
MFR	Multi-Function Relay
MR	Monitoring Report
MSEDCL	Maharashtra State Electricity Distribution Company Limited
MW	Megawatt
MWh	Megawatt-hour
NEWNE	Northern Eastern Western Northern-Eastern
O&M	Operation and Maintenance
PD	Project Description
PLF	Plant Load Factor
PP	Project Proponent
PPA	Power Purchase Agreement
QA/QC	Quality Assurance and Quality Control

TOD	Time of the Day
UNFCCC	United Nations Framework Convention on Climate Change
WEC	Wind Energy Convertor
WEG	Wind Energy Generator
WTG	Wind Turbine Generator
VCS	Voluntary Carbon Standard
VCSA	Voluntary Carbon Standard Association
VCS PD	VCS Project Description
VCUs	Voluntary Carbon Units

APPENDIX 3: FINDINGS OVERVIEW

Remaining FAR from validation and/or previous verification

FAR ID	NA	Section no.	NA	Date :DD/MM/YYYY
Description of FAR				
No FAR from validation or verification				
Project participant response				Date :DD/MM/YYYY
NA				
Documentation provided by project participant				
NA				
DOE assessment				Date: DD/MM/YYYY
NA				

Table 1. CL from this verification

CL ID	01	Section no.	2.2	Date : 09/10/2021
Description of CL				
1. Please submit the JMRs, credit notes and Invoices for the current monitoring period 2. MR section 2.2: Monitoring period number (3rd verification) is not correct. 3. It is noted the monitoring report for the period starting from 30/09/2013 to 01/08/2016 is published at UNFCCC project webpage. However, in section 1.9 of the MR, it is stated that has not claimed any CERs from the CDM project activity from project registration to till date, please clarify how the double counting of credits avoided in this case.				
Project participant response				Date : 10/10/2021
1) JMRs, credit notes and Invoices for the current monitoring period are now submitted with this submission 2) This verification is 4th periodic verification. Thus, section 2.2 of the Monitoring report is now revised appropriately 3) Initially, CLP had decided to issue CERs for the period starting from 30/09/2013 to 01/08/2016 and necessary steps were taken. However, due to less price realization, CLP has decided to cancel the project and proceed with issuance of VCUs. Same has also mentioned in VCS verification report no. VCS.VER.17.23 by Earthood Services Private Limited. Further, CLP is also provided the declaration that there would not be any double counting.				

Documentation provided by project participant	
1) JMRs, credit notes and Invoices for the current monitoring period 2) Revised monitoring report	
DOE assessment	Date: 20/10/2021
1. The PP has submitted the JMRs, credit notes and invoices for the current monitoring period and monthly values of the parameter EG _{facility,y} as reported in the ER sheet are verified with the credit notes/invoices and found to be consistent. 2. The PP has corrected the monitoring period number under section 2.2 of the MR. 3. The PP has not claimed CERs for the period from 30/09/2013 to 01/08/2016 and sent an email/21/ to verifying DoE requesting termination of contract for the monitoring period, hence chances of any double counting can be ruled out.	
CL #1 is closed.	

Table 2. CAR from this verification

CAR ID	01	Section no.	4.2	Date : 09/10/2021
Description of CAR				
Section 2.2 of MR: Please clarify why the mechanism for on-going communication with local stakeholders is not described.				
Project participant response				Date : 10/10/2021
Mechanism for on-going communication with local stakeholders is now described in the revised MR				
Documentation provided by project participant				
Revised MR				
DOE assessment				Date: 20/10/2021
The PP has appropriately described the mechanism for on-going communication with local stakeholders under section 2.2 of the revised MR.				
CAR #1 is closed.				

CAR ID	02	Section no.	4.4	Date : 09/10/2021
Description of CAR				
Please submit declaration confirming that the GHG Emission reductions or removals generated by the project activity will not be used for compliance with an emission trading program or to meet binding limits on GHG Emissions.				
Project participant response				Date : 10/10/2021
Declaration confirming that the GHG Emission reductions or removals generated by the project activity will not be used for compliance with an emission trading program or to meet binding limits on GHG Emissions is not submitted along with this submission				
Documentation provided by project participant				
Declaration of confirmation				
DOE assessment				Date: 20/10/2021
Declaration confirming that the GHG Emission reductions or removals generated by the project activity will not be used for compliance with an emission trading program or to meet binding limits on GHG Emissions is provided and found to be satisfactory.				
CAR #2 is closed.				

CAR ID	03	Section no.	4.5	Date : 09/10/2021
Description of CAR				
It is observed that the actual ERs achieved in the current monitoring period are 9.79% higher than the estimated ERs for the comparable period. Please clarify the reason for the same.				

Project participant response	Date : 10/10/2021
The actual emission reductions for the current monitoring period are 9.79% higher than estimated emission reductions which are mainly due better availability of wind at site. In registered PD PLF considered was 18.15% and in this monitoring period project achieved PLF of 19.92% which is ~ 9.78% higher than registered PD. Wind availability is a natural phenomenon which is beyond the control of CLP. Further, sensitivity analysis mentioned in registered project document shows that the equity IRR would cross the benchmark at 43.8% increase in PLF. Thus, same increase in generation for this periodic verification is in line with registered project document.	
Documentation provided by project participant	
<i>Revised MR</i>	
DOE assessment	Date: 20/10/2021
The actual emission reduction achieved during the current monitoring period are 9.79% higher than the estimated amount of emission reductions at the time of validation, which is due to the high PLF achieved by the project activity during the monitoring period. It is to be noted that PLF is completely governed by the availability of wind, which is natural phenomenon and same is beyond the control of PP. Furthermore, the assessment team checked the registered PD and verified that in the sensitivity analysis, increase in PLF is well within the threshold limit (+43.8%) as demonstrated under sensitivity analysis and does not have any impact on additionality, hence the assessment team has concluded the increase in emission reduction of the project activity is justified and acceptable. CAR #3 is closed.	

Table 3. FAR from this verification

FAR ID	N/A	Section No.	N/A	Date: N/A
Description of FAR				
N/A				
Project participant response				Date: N/A
N/A				
Documentation provided by project participant				
N/A				
DOE assessment				Date: N/A
N/A				

APPENDIX 4: COMPETENCY STATEMENT

Name	Deepika Mahala
Country	India
Education	M. Sc. (Environmental Management), GGSIP University B.Sc. Hons. (Chemistry), Sri Venkateshwar College, DU
Experience	3 Years +
Field	Climate Change

Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	ACM0002, AMS.I.D., AMS.I.A, AMS.III.AV, AMS.II.G		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.2 & TA 3.1)		
Reviewed by	Shreya Garg	Date	14/09/2018
Approved by	Anshika Gupta	Date	14/09/2018

Competence Statement			
Name	Shifali Guleria		
Education	M.Sc. (Environmental Studies and Resource Management), TERI University		
Experience	2+ year		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	YES (AMS-I.A., AMS-II.G., AMS-III.A.V., AMS-I.D, ACM0002)		
Local expert	YES		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (1.2, 3.1)		
Reviewed by	Shreya Garg	Date	09/07/2020
Approved by	Ashok Gautam	Date	09/07/2020