



**Verified Carbon
Standard**

VERIFICATION REPORT FOR DENİZLİ WIND POWER PROJECT



Document Prepared by Earthood Services Private Limited

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Summary:

Earthood Services Private Limited has been contracted by Korda Enerji Üretim Pazarlama İthalat ve İhracat A.Ş. to perform the first verification of the project "Denizli Wind Power Project in Turkey," (VCS ID:1908) with respect to the relevant requirements of VCS programme guidelines and standard.

The project is a greenfield activity which involves electricity generation through the installation of 22 wind turbines of 3 MW each in Babadag district of Denizli Province, with some parts of plant lying in the adjacent Karacasu district of Aydın Province, Turkey. The electricity produced is fed into the grid Tavas TM, thus displacing an equivalent amount of electricity from the grid, which is predominantly fossil fuel based, thereby reducing the GHG emissions.

During the current monitoring period (13/09/2019 to 31/05/2022), the plant has successfully delivered 519,710 MWh of clean energy to the grid, and the emission reduction are calculated as 294,987 tCO₂e.

The scope of the verification includes conformance of the project activity to the monitoring plan in accordance with the registered VCS PD and the monitoring methodology as per ACM0002 Version 19 "Large-scale Consolidated baseline methodology for grid-connected electricity generation from renewable sources" and the requirements as per VCS standard, version.4.3

The verification of the project activity was undertaken in the following manner

- Desk/Document review of the project,
- Resolution of outstanding issues,
- The issuance of the final verification report.

During the verification, a total of 05 findings were raised, which included 02 Corrective Action request, 03 Clarification request. No Forward Action request was raised. All the findings have been successfully addressed by the Project Proponent and subsequently closed by the verification team. There are no uncertainties associated with the verification of the project activity and reasonable level of assurance has been obtained.

Earthood Services Private Limited is of the opinion that the project activity is implemented in congruence with the registered VCS PD/1/ and the applied methodology ACM0002 Version 19 /6/.The monitoring system in place ensures the emission reductions are calculated without material misstatements and the resulting GHG emission reductions are reported accurately, the assessment team confirms that the emission reductions from the project activity “Denizli Wind Power Project,Turkey” during the period 13/09/2019 to 31/05/2022 (including both days) amounts to 294,987 tonnes of CO₂e.

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1. INTRODUCTION

Objective

Korda Enerji Üretim Pazarlama İthalat ve İhracat A.Ş. (hereafter referred to as “Korda”) has contracted Earthood Services Private Limited (ESPL) to perform first VCS Verification of the “Denizli Wind Power Project”, against the requirement of VCS standard version 4.3/8/.

The verifiers have reviewed the GHG data collected to date for the monitoring period from 13/09/2019 to 31/05/2022 (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 requirements. The verification process shall determine whether the 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.

Scope and Criteria

The verification scope of this assignment is defined as an independent and objective review by the assessment team to establish that.

- The project meets all applicable VCS requirements, including those specified in the VCS standard, relevant methodologies, tools, and guidelines and processing the same with VCS Program Guide.
- Asses the accuracy, conservativeness, relevance, completeness, consistency, and transparency, as well as reliability and credibility of the information provided in the monitoring report.
- Adhere to the principles of independence, ethical conduct, fair presentation, and due professional care in assessment process.

Level of Assurance

☒ Reasonable Level of Assurance

☐ Limited Level of Assurance

The approach used by VVB for verification of the project activity is built on a thorough understanding of the risks associated with reporting data on GHG emissions and the controls used to mitigate them. The verification is performed in conformance with the internal quality management standards to ensure that any opinion/conclusion is reached in an objective manner.

To achieve reasonable assurance, the assessment team has obtained sufficient and appropriate audit evidence to reduce audit risk to an acceptably low level. Reasonable level of assurance is met in spite of no site visit being conducted, by using credible and reliable alternate means of verification (explained in detail in section 4.5 below). All documentary evidence were checked, and remote audit was conducted with PP representatives, site personnel and consultants to arrive at a verification opinion by the assessment team. The evidence used to achieve a reasonable level of assurance are listed under Appendix 1 of this document.

In our opinion, project is carried out with in conformity of all above mentioned details and we confirm that all information provided is accurate and estimated GHG emissions reductions were calculated correctly based on the approved baseline and monitoring methodology/6/ and VCS standard version 4.3/8/.

Summary Description of the Project

The Project activity involves the electricity generation by the installation and operation of 22 WTGs of Siemens SWT-3.4-108 make. The power plant is supplying the generated electricity to the grid Tavas TM, thus displacing the electricity that would have otherwise been generated through the fossil fuel-based power plants, and thereby reducing the associated GHG emissions. The project activity envisaged a net electricity generation of 186,100 MWh per year by the efficient utilization of the available wind energy and thereby leading to a total emission reduction of 105,622 tonnes of CO₂e/year.

The verification team based on the assessment of the documents, site-photographs, remote interview with the PP and the plant personnel was able to confirm that the project activity is fully functional and is implemented in accordance with the description in the registered VCS PD/1/.

The first monitoring period covers the duration from 13/09/2019 to 31/05/2022 (both days included), the net electricity achieved during this monitoring period is 519,710 MWh, and total actual emission reduction achieved by the project activity is verified as 294,987 tonnes of CO₂e.

2. VERIFICATION PROCESS

2.1 Method and Criteria

Korda Enerji Üretim Pazarlama İthalat ve İhracat A.Ş. has appointed the VVB, Earthood Services Private Limited, to carry out the first verification of the project activity “Denizli Wind Power Project, Turkey”. The monitoring period under verification is from 13/09/2019 to 31/05/2022.

The overall verification was conducted as per the internal quality management procedures, in the following manner.

- Desk review of the VCS Monitoring report and the ER sheet.
- Remote site visit and follow up interviews with the PP and local stakeholders.
- Reporting and closure of findings and preparation of the draft verification report.

- Independent technical review of the draft report and the revised/final documents.
- Issuance of the final verification report.

No sampling plan has been adopted by the verification team as all the data related to the wind power plant was appropriately presented in the MR and ER sheet and was verified by the assessment team.

2.2 Document Review

The verification is performed primarily as a review of the documents submitted at various stages of assessments. The review is performed by assessment team using dedicated protocols. The assessment team cross checks the information provided in the documents (Project Description, MR & ER calculation sheet), the supporting documents/studies provided by PP, and information from sources other than those used, if available, and conducts independent background investigations. The assessment team conducted a desk review as under:

- A review of the data and information presented to verify their completeness.
- A review of the monitoring plan, the monitoring methodology including applicable tool(s) and, where applicable, the frequency of measurement/recording of parameters, and the quality assurance and quality control procedures.
- An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions

The documents reviewed during the verification are listed under Appendix 1 of this report.

2.3 Interviews

The remote interviews were conducted on 21/07/2022 as per the requirements of standard. The details of the interviews have been summarized in the table below.

No.	Interviewee			Date	Subject	Verification Team member
	Last name	First name	Affiliation			
1.	Ercan	Ertan	Plant Manager	21/07/2022	Operation and Maintenance of Facility, Monitoring practices, Data collection, data storage, QA/QC Project Development, Roles, and responsibilities Project Implementation,	Deepika Mahala, Anjali Chaudhary, Fikriye Seda Atabek

					No Net harms measures	
2.	Ozturk	Hazal	Project Consultants	21/07/2022	Monitoring practices, Calibration requirements, GHG calculations, MR, and ER preparation Project Management	Deepika Mahala, Anjali Chaudhary, Fikriye Seda Atabek
3.	Emin uysal-	Mehmet	Local stakeholder	21/07/2022	No Net harms measures	Deepika Mahala, Anjali Chaudhary, Fikriye Seda Atabek

2.4 Site Inspections

According to the Section 4.1.2 of the VCS Standard, v4.3 "The validation/verification body shall select samples of data and information to be validated or verified to provide a reasonable level of assurance and to meet the materiality requirements of the specific project". It is important to note that the VCS Program does not explicitly mandate site visits as part of the verification process, accordingly a physical site visit was not conducted however a reasonable level of assurance has been maintained through the alternative means used for the purpose of verification in the following manner:

- An assessment of the implementation and operation of the project activity through remote interviews with the representatives of project proponent, and local stakeholders.
- Confirmation of the applicability of the methodology and monitoring and controlling instruments and operational arrangements.
- A virtual tour of the project site.

The assessment team has verified sufficient appropriate audit evidence, to reduce audit risk to a low level as it is 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 interaction with site personnel over video calls. 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.

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.

A total of 02 CAR, 03 CL were raised and closed successfully. All the findings that are raised and communicated to project participant during the verification are included under Appendix 3.

2.5.1. Forward Action Requests

No FAR was raised during the verification.

2.6 Eligibility for Validation Activities

Not applicable since the validation/verification body has not undertaken validation activities as part of the verification.

3. VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project is registered under VCS only (VCS ID:1908)/7/. The same has been confirmed from the declaration/15/ provided by the PP that the net GHG emissions reductions generated by the project activity will not be used for compliance with any other emissions trading program or to meet binding limits on GHG emissions for the same monitoring period.

3.2 Methodology Deviations

No methodology deviation is identified during the current monitoring period. Therefore, this section is not applicable.

3.3 Project Description Deviations

The project activity undergoes no deviations during the current monitoring period. Therefore, this section is not applicable.

3.4 Grouped Project

Not applicable since the project activity is not a grouped project.

4. VERIFICATION FINDINGS

4.1 Project Implementation Status

The project activity consists of installation of wind power plant of total installed capacity of 66MW in Denizli Province of Turkey, with some parts of the plant lying in the adjacent Aydin province, as verified from the generation licences/18/. The project has been commissioned in two phases, Phase one(T1 to T14) was commissioned and started to feed electricity to grid from 13/09/2019 and the Phase two(T15 to T22) become operational from 10/10/2019, the same has been verified from the provisional acceptance documents/19/ and the revised connection agreement with TEIAS/20/. Therefore, no

material discrepancies existed between the project implementation and project description in registered VCS PD/1/ and the MR/4/.

The crediting period of the activity as verified from the registered PD is from 13/09/2019 to 12/09/2029, therefore the current monitoring period is well within the crediting period. The project activity has delivered 519,710 MWh of electricity during the current monitoring period(13/09/2019 to 31/05/2022) as verified from the monthly EPIAS records and cross-checked with TEIAS records/11,12/. The total emission reduction achieved during the current monitoring period is 294,987 tonnes of CO₂e/5/.

The assessment team has verified that 22 turbines of Siemens SWT-3.4-108 model were installed, during the remote site visit and their location was further cross-checked using the google earth/36/, the technical specifications were verified from the manufacturer's specifications and photographs of the site/23/ shared by the PP, the details were found to be consistent with the description under section 1.1 of the MR/4/.

The assessment team conducted the remote site visit and interviews via video calls to verify the implementation of the monitoring plan/1/ to verify the following parameters.

- Quantity of net electricity generation supplied by the project plant/unit to the grid in year y ($EG_{\text{facility},y}$) which is calculated as the difference between
 - Quantity of electricity exported by the Project to the grid in year y ($EG_{\text{export},y}$) verified through the TEIAS and EPIAS monthly records/11,12/
 - Quantity of electricity imported by the Project from the grid in year y ($EG_{\text{import},y}$) verified through the TEIAS and EPIAS monthly records/11,12/
- Meter test index protocols in place verified through the meter test reports and images of meters shared by the PP/21,22/.
- No net harms monitoring was verified through the literature shared by PP such as ornithology reports, grievance logbook screenshots and the interview with the local stakeholders.

The project activity (VCS ID: 1908) is not a part of any other GHG allowance trading program, the total emission reductions applied for the current monitoring period under VCS are 294,987 tCO₂e and it is not accounted in any other program. PP has provided is also an undertaking for no double counting/15/.

The project activity contributes to the sustainable development during the current monitoring period in the following manner:

SDG indicator	Contribution due to project activity
SDG 13.2.2	294,987 tCO ₂ e reduced due to electricity generation from Wind power plant as calculated based on EPIAS records/11/.
SDG 7.2	519,710 MWh of renewable energy generated due to project activity as verified from EPIAS records/11/.
SDG 8.5	Employment generation for 7 persons and training were provided as verified from employment and training records/16,29/.

SDG 6.3	Prevention of discharge of domestic and industrial wastewater and ensuring safe treatment and transfer as verified from wastewater transfer invoices/25/.
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Therefore, the assessment team concludes that

1. All physical features of the project activity in the registered PD/1/ are in place and the project participant has operated the project activity as per the registered PD /1/.
2. There are no material discrepancies between project implementation and the project description provided in the registered PD/01/.
3. The monitoring plan/6/ is implemented completely and monitoring system (i.e., process and schedule for obtaining, recording, compiling, and analysing the monitored data and parameters) is appropriate.
4. The project has not participated or been rejected under any other GHG programs since validation /15/.
5. The project has not received or sought any other form of environmental credit or has become eligible to do so since validation/15/.
6. 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.
7. The project activity is complying with indicators for sustainable development as discussed in detail under section 1.11 of MR/4/.

In view of the information's as verified above the assessment team can conclude that the project has been implemented in line with the description in the PD/1/.

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. This project activity will not involve any negative environmental or socio-economic impacts, as the project activity involves generation of power by harnessing wind power which is a clean source of energy. Hence no mitigation measures are required/14/.

The PP has promised to incorporate the potentially negative impacts concerns raised during the local stakeholders as the monitoring parameters during the first verification. The details are as follows

Parameter	MOV according to PDD	VVB assessment
Dust, Noise	Interview with locals	VVB has conducted interview with the local stakeholders and no negative comments were observed/24/
Status of Roads	Interview with locals	During consultation with local stakeholders, it was found that no damage is done to road during the construction phase, a letter of declaration from the neighbouring villages is also shared with the VVB/37/
Water Quality and Quantity	Records of transfer of wastewater by sewage truck	Wastewater records shared by the PP have been verified by the VVB and it is confirmed that no harm to ground water or discharge of wastewater is done due to project activity/25/
Biodiversity.	Photos or videos of the site	No carcasses have been observed near the site as confirmed during the interview with local stakeholders and through the site photographs /23/.

Thus, the VVB can confirm that no net harms have occurred due to the project activity and the monitoring has taken place as per the registered PDD/1/.

4.2.2. Local Stakeholder Consultation

The project activity is undergoing first verification and local stakeholder consultation was appropriately conducted prior to validation to inform the local stakeholders about the design of the project and seek their maximum participation during the validation.

Stakeholder engagement procedure was conducted at the Ataköy Village with the village head and the local stakeholders on 31/07/2019/2/.

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 same has been added under monitoring parameter and is discussed in detail under section 4.21. of this document.

The grievance logbook and a grievance box are placed at the respective site office, where the local villagers can register their concerns. Contact details of the of public relationships expert, project manager and assistant general director of the company have been shared with Mukhtar of the nearby villages/26,27/

The assessment team has checked the copy of grievance register maintained at the respective site offices and confirmed that no formal complaints were received during the current monitoring period/26/. The team also interviewed stakeholders during the remote audit however, no grievance was observed.

4.3 AFOLU-Specific Safeguards

Not applicable for the project activity. For non-AFOLU projects, this section is not required.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The emission reductions are based on the generation of renewable energy (wind power plant) by the project activity.

- The emission reduction calculation is accurate from the point of data collection, transfer and the formulas applied are in accordance with the applied methodology/6/and the registered PD/1/.
- The emission reduction calculations have been followed in accordance with the registered PD/1/ and applied methodology/6/.
- The default values applied for calculations were consistent with the registered PD/1/.
- The data transfer from the monthly generation sheets/11/ to final emission reduction calculation sheet/5/ has been transparently described and followed. The final values are reproducible, and all the calculation are linked and clearly presented in the emission reduction calculation sheet/5/.

The assessment team is of the opinion that the monitoring for the concerned period is done in accordance with the procedures laid in the registered documents and the resulting emission reductions are measurable and conservative.

The tables given below describe how each parameter has been verified to confirm that the actual monitoring complies with the monitoring plan fixed ex-ante, as well as the monitored data has been thoroughly assessed and it is confirmed that the sampling requirement are met.

Data and parameter fixed ex-ante

Means of verification	Data/Parameter	VVB assessment
	EG_y: Net electricity generated by power plant/unit m, k, or n (or in the project electricity system in case of EG _y) in year y or hour h	PP has applied the value of net electricity generated using official data published by TEIAS/31/ for all the power plants in turkey the value are correctly reflected under table 13, 14 and 15 of the PD/1/ , the value are fixed ex-ante and are found to be consistent in the MR/4/.
	HV_{i,y} : Heating Values of fuels consumed for electricity generation in the years of 2015, 2016 and 2017	The official data by the national authority TEIAS/32/ is used by the PP and is found to be consistent with PD/1/
	FC_{i,y} : Amount of fuel type i consumed in the project electricity system in year y	The official data by the national authority TEIAS/33/ is used by the PP and is found to be consistent with the PD/1/
	NCV_{i,y} : Net Calorific Value of fuel types in the years of 2015, 2016 and 2017	There is no official source in turkey for the Net Calorific Value of fuel types, therefore is value is calculated ex-ante using HV _{i,y} to FC _{i,y} , and the value in the MR is consistent with the table 7 and 8 of the ER ex-ante sheet /1/.
	Sample Group for BM emission factor	Energy Investments, Ministry of Energy and Natural Sources/34/ is the source of data fixed anted for determining the sample group, the source is correctly reflected in the MR/4/.
	EFCO_{2 i,y} : CO ₂ emission factor of fossil fuel type i in year y	PP has applied the IPCC default value of 0.5676 tCO ₂ is fixed ex-ante, the value mentioned in the MR/4/ and ER/5/ is found to be consistent with the PD/1/.
	η_{m,y} : Average energy conversion efficiency of power unit m in year y	PP has applied the default value using tool 09 v.2.0 /35/ . The value is fixed ex-ante and the is found to be consistently mentioned in the MR/4/.
Findings	No findings were raised.	
Conclusion	The ex-ante parameters mentioned in the MR/4/ are cross-checked with the registered VCS PD/1/ and are found to be consistent.	

Data/ Parameter monitored:

Parameter	EG _{m,y} (MWh/yr) Quantity of net electricity generation supplied to the grid in year y																													
Means of verification	Criteria/Requirements	Assessment/Observation																												
	Measuring /Reading /Recording frequency	The parameter is monitored continuously and recorded monthly for the estimation of GHG Emission Reductions.																												
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, the measuring and reporting frequency is in line with the monitoring plan as set out in VCS PD/1/ and the monitoring methodology/6/																												
	Monitoring equipment	<table><tr><th>Name</th><th>Serial Number</th><th>Brand Model</th><th>Accuracy Class</th><th>Calibration Date</th></tr><tr><td>Main Mete</td><td>84051056</td><td>ITRON & SL761W07</td><td>0.2S</td><td>13/09/2019</td></tr><tr><td>Main Mete</td><td>84051121</td><td>ITRON & SL761W07</td><td>0.2S</td><td>13/09/201</td></tr><tr><td>Back-up</td><td>84051120</td><td>ITRON & SL761W07</td><td>0.2S</td><td>13/09/201</td></tr><tr><td>Back-up</td><td>84051122</td><td>ITRON & SL761W07</td><td>0.2S</td><td>13/09/201</td></tr></table> Electricity meters of following specifications are installed. The details of the meter were verified during the remote site visit and through the pictures of meters with geo-location/21,22/.				Name	Serial Number	Brand Model	Accuracy Class	Calibration Date	Main Mete	84051056	ITRON & SL761W07	0.2S	13/09/2019	Main Mete	84051121	ITRON & SL761W07	0.2S	13/09/201	Back-up	84051120	ITRON & SL761W07	0.2S	13/09/201	Back-up	84051122	ITRON & SL761W07	0.2S	13/09/201
	Name	Serial Number	Brand Model	Accuracy Class	Calibration Date																									
Main Mete	84051056	ITRON & SL761W07	0.2S	13/09/2019																										
Main Mete	84051121	ITRON & SL761W07	0.2S	13/09/201																										
Back-up	84051120	ITRON & SL761W07	0.2S	13/09/201																										
Back-up	84051122	ITRON & SL761W07	0.2S	13/09/201																										
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	According to the Article 11 of the Communiqué of Meters in Electricity Sector ¹ : meters shall be in class of 0.5s. The meter installed are of 0.2s accuracy class, the same is verified from the first index protocol/22/ and during the remote site/24/which and are therefore found compliant as per the national regulations.																													

¹ See, <https://www.epdk.gov.tr/Detay/DownloadDocument?id=+6B2PMv4N4A=>

	with local/national standards, or as per the manufacturer's specification?	
	Calibration frequency /interval:	Periodic calibration is undertaken once in 10yrs
	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. Period calibration is to be conducted every 10 yrs. The first meter index protocol was carried out on:13/09/2019,/22/ therefore no calibration was required during this monitoring period. In accordance with the registered PD/1/, the national authority TEIAS carries out periodic tests every 2 years as per system usage agreement. The meter test protocol corresponding to this monitoring period was conducted on: 10/06/2021/21/. Therefore, it is noted that no gap is observed in the calibration requirements of the meters.
	Is the calibration of measuring equipment carried out by an accredited person or institution?	There was no calibration requirement during the current monitoring period, however the periodic meter test protocol/21/ was conducted by TEIAS, which is the national electricity transmission company.
	Is(are) calibration(s) valid for the whole reporting period?	Yes
	Is the calibration carried out for a measuring range comparable with the range for which measurements have been carried out?	Not applicable since no calibration was conducted during the current Monitoring period.
	How were the values in the monitoring report verified?	The cumulative values of EGm,y for the entire monitoring period is reported in the MR/4/ is 519,710 MWh, and the monthly values are reported in the ER calculation sheet/5/. These values are checked from the monthly invoices raised by EPIAS/11/ and cross-checked with TEIAS reciprocal agreement meter records/12/. The ER /5/ sheet was checked for application of formula, arithmetic consistency, faithful reproduction of data from the EPIAS records, and accordingly data was accepted as reliable.

	If applicable, has the reported data been cross-checked with other available data?	The main data source is the EPIAŞ data which is cross-checked with TEIAŞ reciprocal agreement meter records.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, adequate QA/QC procedures are implemented by the PP, the same has been verified during the remote audit through interview with the personnel responsible for maintaining data records. Meter is read by Denizli WPP staff monthly as well as the meter is read remotely at the end of every month and published through website of TEIAŞ, and the cross-check is conducted monthly.
	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 were identified during the current monitoring period.
Findings	CAR 01 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 generated by WTGs. Since 100% data was verified, the team can ascertain that the values taken for emission reduction calculation are free from material errors.	

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

The emission reduction calculations for this verification were verified against the supporting evidence and were found to be reliable and appropriate. The information was also cross checked through the interviews conducted and observations made during the remote site visit/24/ conducted by the assessment team.

The assessment 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 is 294,987 tCO₂ which is higher than the estimated amount of emission reductions at the time of validation, i.e., 286,771 tCO₂, thus CL 02 was raised. This difference is attributed to the uncertainty in wind patterns which is likely to impact the annual energy yield in a range of 10% according to the registered PD/1/ and the same was cross-checked with the site related wind potential and energy yield assessment at Babadag site (Denizli, Turkey) report/17/, provided by the PP. Therefore the 2.87% increase in the Emission reduction achieved was found to within the acceptable range.

4.6 Non-Permanence Risk Analysis

Not applicable for the project activity.

5 VERIFICATION CONCLUSION

Earthood Services Private Limited (ESPL) contracted by Korda Enerji Üretim Pazarlama İthalat ve İhracat A.Ş has performed the independent verification of the emission reduction for the VCS project activity (VCS ID 1908) “Denizli Wind Power Project, Turkey”, for the monitoring period 13/09/2019 – 31/05/2022 as reported in the Monitoring Report Version 02 dated 09/09/2022. The Korda Enerji Üretim Pazarlama İthalat ve İhracat A.Ş. 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 initiated the verification based on the baseline and monitoring methodology ACM0002 Version19, the monitoring plan included in the registered VCS PD Version 06, dated 13/10/2021, and Monitoring Report Version 02 dated 09/09/2022 as per the procedure described under Section 2 of this report. The verification approach is based on the understanding of the risks associated with reporting GHG emission data and the controls in place to mitigate these. The assessment team planned and performed the verification by collecting evidence and other information and explanations that were considered necessary to give reasonable assurance that the reported GHG emission reductions are fairly stated.

The verification team of the opinion, the GHG emissions reductions reported for the project activity for the period 13/09/2019 – 31/05/2022 (both days included) are fairly stated in the Monitoring Report Version 02 dated 09/09/2022. The GHG emission reductions were calculated correctly based on the approved baseline and monitoring methodology ACM0002, Version 19, and the VCS standard/8/

Verification period: From 13/09/ 2019 to 31/05/2022(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)
2019	23,027	0	0	23,027
2020	93,872	0	0	93,872
2021	128,650	0	0	128,650

2022	49,439	0	0	49,439
Total	294,987	0	0	294,987



Approved by

Kaviraj Singh

Managing Director

Earthood Services Private Limited

Date: 26/10/2022

Place: Gurgaon, Haryana

APPENDIX 1: DOCUMENT REFERENCES

S.No	Title of Document	Version	Date
1.	Registered VCS PD (Revised version available at VCS registry webpage) ER Sheet Ex-ante	Version 06	13/10/2021 (date of final issue)
2.	VCS Validation Report,	Version 04	17/12/2021 Date of First Issue: 08/08/2019
3.	VCS Monitoring Report	Version 01	Dated:27/06/2022
4.	VCS Monitoring Report (Final)	Version 02 For the period: (13/09/2019 – 31/05/2022)	Dated: 09/09/2022
5.	ER spread sheet (corresponding to the final monitoring report)	Version 1	Dated: 09/09/2022
6.	“Large- Scale Consolidated baseline methodology for grid-connected electricity generation from renewable sources,” ACM0002,	Version 19	-
7.	VCS webpage for the project, VCS ID 1908. https://registry.verra.org/app/projectDetail/VCS/1908	-	-
8.	VCS Standard	Version 4.3	20/01/2022
9.	VCS Program Guide	Version 4.2	10/09/2019
10.	Technical specification of turbines	SWT-3.4-108	-
11.	EPIAS records	-	13/09/2019 – 31/05/2022
12.	TEIAS records	-	13/09/2019 – 31/05/2022
13.	TEIAS mechanical power permission statement	-	12/05/2022
14.	EIA not required certificate	ID:1331712	15/07/2011
15.	No double counting declaration	-	-
16.	Employment social security records	-	Various
17.	Site related wind potential and energy yield assessment at Babadag site (Denizli, Turkey)	-	30/03/2018
18.	EPDK generation licence	-	18/08/2011
19.	Provisional acceptance	ID:4666695 ID:466704	10/10/2019 13/09/2019
20.	TEIAS revised connection agreement	-	17/05/2019
21.	Meter test protocol	-	10/06/2021
22.	First index protocol	-	13/09/2019

S.No	Title of Document	Version	Date
23.	Site photos of Denizli WPP	-	-
24.	VVB remote survey files	-	21/07/2022
25.	Wastewater records	-	13/09/2019 – 31/05/2022
26.	Grievance logbook photos	-	-
27.	Grievance mechanism photos	-	-
28.	Biodiversity training attendance sheet	-	24/06/2021
29.	HSE Training certificates and others	-	2020-21 2021-22
30.	Environment waste and other elements training attendance sheet and photographs	-	24/06/2021
31.	Annual Development of Turkey's Gross Electricity Generation by Primary Energy Sources (2000-2017) TEİAŞ https://www.teias.gov.tr/tr-TR/turkiye-elektrik-uretim-iletim-istatistikleri or https://webapi.teias.gov.tr/file/09f91243-aa67-48ec-b092-86f9a18f04cc?download	-	-
32.	Heating Values of Fuels Consumed in Thermal Power Plants in Turkey by The Electric Utilities, TEİAŞ https://webapi.teias.gov.tr/file/780b9f4b-7e97-4e64-a264-20669a820b79?download	-	-
33.	Heating Values of Fuels Consumed in Thermal Power Plants in Turkey by The Electric Utilities, TEİAŞ. See: https://webapi.teias.gov.tr/file/780b9f4b-7e97-4e64-a264-20669a820b79?download	-	-
34.	Energy Investments, Ministry of Energy and Natural Sources: https://enerji.gov.tr/eigm-raporlari	-	-
35.	https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-09-v2.0.pdf	-	-
36.	Google earth https://earth.google.com/web/search/Babada%20Karaa%20Fethiye%20Mu%20T%C3%BCrkiye%20@36.53103963,29.1797624,1928.14502861a,170.59196382d,35y,170.27603654h,44.97377674t,360r/data=CigiJgokCTTv6vw8GkJAEY9w6DhtGUJAGcaqV_IEFUJAISsa300gEOJA	-	-
37.	Declaration letter from Atakoy neighborhood on no net harms and road condition	-	25/06/2020 19/06/2021

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

APPENDIX 3: FINDINGS OVERVIEW

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

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

Table 2. CL from this verification

CL ID	01	Section no.	4.1	Date : 25/07/2022
Description of CL				
Please provide a clear description of the start date of the project, the provisional license for turbine no T1 to T14, indicates the date as 13/09/2019 whereas license for turbine no T-15 to T-22 indicates the date as 10/10/2019.				

Project participant response	Date : 09/09/2022
The project has been commissioned partially and this is normalcy for wind projects. The project has been commissioned in two phases. Commissioning date of first phase is 13/09/2019 and the second phase is commissioned on 10/10/2019. The project was commissioned and started to feed energy to the grid on 13/09/2019 firstly. Therefore, project start date has been determined as 13/09/2019, that is the first GHG emission reductions. Related explanation has been added in the MR.	
Documentation provided by project participant	
NA	
DOE assessment	Date: 26/09/2022
The explanation provided here is verified through the provisional acceptance documents provided by the PP, and was found acceptable, the same has been now explicitly mentioned under section 1.5 of the MR. The date of commission of first phase i.e., 13/09/2019 is considered as the start date of the project, since this is the earlier of the two therefore it is in accordance with the requirements of the methodology. <u>Thus, the finding is closed</u>	

CL ID	02	Section no.	4.5	Date : 25/07/2022
Description of CL				
The total actual emission reduction achieved during this monitoring period is 294,987 tonnes of CO ₂ e, whereas the estimated emission reduction for the same monitoring period is estimated as 286,771 tonnes of CO ₂ e, please substantiate the difference between the actual and estimated values.				
Project participant response				Date : 09/09/2022
<i>Estimated emission reduction is 286,771 tCO₂ for this monitoring period (13/09/2019-31/05/2022). And actual emission reduction achieved during this monitoring period is 294,987 tCO₂. When they are compared, actual emission reduction achieved during this monitoring period is more than the estimated figure. This situation is arisen from the unexpected wind trend in Denizli. Wind potential might have changed. However, when it is compared, actual emission reduction achieved during this monitoring period is acceptable. Because net difference between estimated and actual emission reduction for the project activity is 2.87 %.and difference between this two emission reduction values is lower than 10% range calculated in the registered PD.</i>				
Documentation provided by project participant				
Site related wind potential and energy yield assessment at Babadag site (Denizli, Turkey)				
DOE assessment				Date: 26/09/2022
The electricity generated during this monitoring period is found higher than that estimated ex-ante, leading to an increase of 1% in the PLF however in accordance with the registered PD and the documents shared by the PP the uncertainty in the annual energy production could be within the range of 10 % , therefore the difference due to wind patterns was found to be within the acceptable range. <u>Thus, the finding is closed</u>				

CL ID	03	Section no.	4.1	Date : 25/07/2022
Description of CL				

The coordinate for turbine no T1 mentioned in the generation license are inconsistent with the coordinate for T-1 mentioned in the PD as well as the MR, please clarify the difference in the values recorded across the documents.	
Project participant response	Date : 09/09/2022
The coordinates for turbines mentioned in the generation license are given as UTM. However, the coordinates for turbines mentioned in the PD as well as the MR are given as latitude and longitude coordinates (deg. min. sec.). In addition, it was verified by both VVB and VERRA during the VCS registration process that the turbine coordinates given in the PD are consistent with the generation license. For this reason, there is no difference between the coordinates given in PD, also MR and the coordinates given in the generation license.	
Documentation provided by project participant	
NA	
DOE assessment	Date: 26/09/2022
The justification provided by the PP that the difference observed in the geo-coordinates is due to different coordinate systems used in the MR and the generation license , therefore the difference is found acceptable, the same has also been verified during validation of the PD. <u>Thus, the finding is closed</u>	

Table 3. CAR from this verification

CAR ID	01	Section no.	4.4	Date : 25/07/2022
Description of CAR				
In the ER reduction calculation sheet, the table for TEIAS records, the values recorded under the column Electricity supplied to the grid Group2 (MWh) (2) and Electricity consumption from the grid Group1(MWh) (3) are inconsistent with the evidence provided for the year 2022, please refer to the cell range (D76:E80).				
Project participant response				Date : 09/09/2022
ER excel sheet has been now revised. The values of electricity supplied to grid have been now changed with that of electricity consumed. Electricity supplied to the grid Group2 (MWh) (2) and Electricity consumption from the grid Group1 (MWh) (3) are now consistent with the evidence provided for the year 2022 and EPIAS values.				
Documentation provided by project participant				
NA				
DOE assessment				Date: 26/09/2022
The revised excel sheet now mentions the value for grid group 1 and group 2 correctly, the same has been verified with the EPAIS and TEIAS data. <u>Thus, the finding is closed</u>				
CAR ID	02	Section no.	4.2.1	Date : 25/07/2022
Description of CAR				

1. Under section, titled as 'no net harm' please provide a detailed description of the parameters and mitigation measures undertaken this monitoring period in line with that in the PD. 2. Please update the template for the monitoring report to the latest version available.	
Project participant response	Date : 09/09/2022
1. Detailed information has been now provided in 'no net harm' section of the MR. 2. MR template is in line with the latest template of the monitoring report.	
Documentation provided by project participant	
Revised PD	
DOE assessment	Date: 26/09/2022
1. The details of the no net harms are now included under section 2.1 of the revised MR in line with PD. 2. The template of the MR is now updated to the latest version i.e., 4.1.	
Thus, the finding is closed	

Table 4. FAR from this verification

FAR ID		Section No.		Date : DD/MM/YYYY
Description of FAR				
<i>No FAR from this verification</i>				
Project participant response				Date : DD/MM/YYYY
Documentation provided by project participant				
DOE assessment				Date: DD/MM/YYYY

APPENDIX 4: COMPETENCY STATEMENTS

Competence Statement	
Name	Deepika Mahala
Country	India
Education	M. Sc. (Environment Management), GGSIP University B.Sc. Hons. (Chemistry), Sri Venkateshwar College, DU
Experience	6 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, AMS-II.C		
Local expert	YES (India, Bangladesh)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.2 & TA 3.1)		
Reviewed by	Shifali Guleria (QM)	Date	28/04/2022
Approved by	Kaviraj Singh (MD)	Date	28/04/2022

Competence Statement			
Name	Anjali Chaudhary		
Education	Bachelor of technology in Civil Engineering		
Experience	NA		
Field	Civil Engineering		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	NO		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	NO		
Trainee	YES		
Reviewed by	Shifali Guleria, Quality Manager	Date	25/05/2022
Approved by	Deepika Mahala, Technical Manager	Date	25/05/2022

Competence Statement	
Name	Fikriye Seda Atabek
Education	M.Sc. Energy Science and Technology B.Sc. Chemical Engineer
Experience	11 years
Field	Energy Science and Technology
Approved Roles	
Team Leader	NO
Validator	NO
Verifier	NO

Methodology Expert	NO		
Local expert	YES (Turkey)		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	NO		
Reviewed by	Deepika Mahala, Quality Manager	Date	22/12/2021
Approved by	Ashok Gautam, Technical Manager	Date	22/12/2021

Competence Statement			
Name	Shifali Guleria		
Education	M.Sc. (Environmental Studies and Resource Management), TERI University		
Experience	3+ year		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	YES (AMS-I.A., AMS-II.G., AMS-II.E., 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	Deepika Mahala	Date	16/02/2022
Approved by	Ashok Gautam	Date	18/02/2022