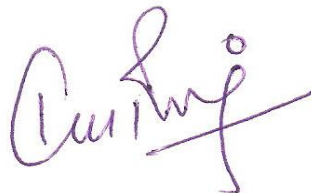


Verification report for GS4GG project activities (Gold Standard for the Global Goals)	
BASIC INFORMATION	
Title of the GS4GG Project Activity	Akbuk Wind Farm Project, Turkey
Reference number of the Project Activity	GS436
Version number of the verification and certification report	1.3
Completion date of the verification and certification report	23/11/2023
Monitoring period number and duration of this monitoring period	1st monitoring period (2 nd Crediting Period) 04/10/2021 to 18/03/2023 (inclusive of both dates)
Version number of the monitoring report to which this report applies	04 Dated: 22/11/2023
Crediting period of the project activity corresponding to this monitoring period	04/10/2021 to 18/03/2023
Project representative	Ayen Enerji A.Ş.
Host Party	Turkey
Applied methodologies and standardized baselines	ACM0002 – “Grid-connected electricity generation from renewable sources” Version 20
Activity requirements applied	<input type="checkbox"/> Community Services Activities <input checked="" type="checkbox"/> Renewable Energy Activities <input type="checkbox"/> Land Use and Forestry Activities/Risks & Capacities <input type="checkbox"/> N/A
Mandatory sectoral scopes	Sector 1: Energy industries (renewable - / non-renewable sources)
Product requirements applied	<input checked="" type="checkbox"/> GHG Emissions Reduction & Sequestration <input type="checkbox"/> Renewable Energy Label <input type="checkbox"/> N/A

Sustainable Development Goals Targeted	SDG Impact	Estimated amount of annual average certified SDG impact (as per approved PDD)	Total amount of certified SDG impact (as per approved methodology) achieved in this monitoring period	Units/Products
SDG 13 (Climate action)	Emission Reduction	115,482	94,543	tCO _{2e}
SDG 6 Clean water and sanitation	Avoidance wastewater discharge to the environment	3,033,100	3,616,069	m ³
SDG 7 (Affordable and clean energy)	clean energy	122,461.8	145,858.06	MWh
SDG 8 (Decent work and economic growth)	Trainings imparted	11 Employment opportunities	10 employed. 3 trainings each to every employee.	Numbers
Name of the Gold Standard approved auditor (VVB)		Earthood Services Private Limited		
Name, position, and signature of the approver of the verification and certification report		 Dr. Kaviraj Singh Managing Director		

SECTION A. Executive summary

The project activity is a large-scale wind power plant consists of 15, 2.1 MWm wind turbines with a total capacity of 31.5 MWm as was verified through the Generation License/25/. The generated electricity is fed to the national grid. The annual average estimated net electricity production is 122,461.8 MWh/yr and the average emission reductions were estimated to be 115,482 tCO₂e/1/.

The project activity intends to reduce the GHG emissions in Turkey by swapping fossil fuel-based power generation and contribute to the development of the renewable wind energy sector in Turkey, while uplifting the local economy by creating local employment (SDG 8) and providing numerous social benefits for the Denizköy town and Fevzipaşa town in the region of Aydın Province. The project activity is only registered under Gold Standard.

During the current monitoring period from 04/10/2021 to 18/03/2023 (inclusive of both dates), the plant has successfully delivered 1,45,858 MWh of electricity to the national grid under SDG 7, 3,616,069 m³ wastewater avoidance discharge to the environment under SDG 6, provided employment opportunities to a total of 10 employees under SDG 8 and resulted in a reduction of 94,543 tCO₂e GHG emissions under SDG 13/6,7/. The values for the SDG impacts achieved during the current monitoring period have been reported below:

SDG	Vintage				Units/ Products
	04/10/2021 to 31/12/2021	01/01/2022 to 31/12/2022	01/01/2023 to 18/03/2023	Total 04/10/2021 to 18/03/2023	
SDG 6 Clean water and sanitation	562,291.83 m ³	2,542,379.72	511,397.45	3,616,069	m ³
SDG 7 (Affordable and clean energy)	22,680.65	102,549.64	20,627.77	145,858.06	MWh
SDG 8 (Decent work and economic growth: Number of jobs created)	10	10	10	10	Number of employees`

SDG 13 (Climate action)	14,701	66,472	13,370	94,543	VERs
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Scope of verification

Ayen Enerji A.Ş. has contracted Earthood Services Private Limited (Earthood) to conduct the verification and certification of emission reductions reported for the GS project activity (GS 436) "Akbük Wind Farm Project, Turkey" in Turkey for the monitoring period 04/10/2021 to 18/03/2023 (including both days)/6/.

This verification is an independent and objective review and ex-post determination of the monitored SDG outcomes by the VVB. The verification addresses the implementation and operation of the GS PA and tests the data and assertions set out in the monitoring report based on the following:

- I. The registered renewed GS PDD and preliminary review feedback.
- II. The approved methodology mentioned in the PDD.
- III. The registered monitoring plan.
- IV. Latest GS4GG requirements.
- V. GS4GG Validation and Verification Standard (VVS).
- VI. Principles and Requirements for GS4GG.
- VII. Validation and Verification Body requirements, Product requirements and references relevant to the project activity's reported SDG outcomes.

The verification has considered both quantitative and qualitative aspects on stated/reported SDG outcomes achieved as part of GS4GG. The monitoring report (all versions) and corresponding supporting documentation was assessed in accordance with the rules defined by GS4GG, as appropriate to the PA. The verification is not meant to provide any consulting or recommendations to the PP/others. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the monitoring activities.

Verification process

The verification process is conducted as per internal GS Quality Manual, which includes the following steps:

- a) Contract with PD and appointment of verification team and technical review team (refer Section B.1 and B.2 of this report)
- b) Desk review (refer Section D.1 of this report) of Monitoring Report and corresponding ER sheet by verification team and planning of remote interviews (including sampling approach (refer Section D.4 of this report to be applied)).
- c) On-site visit and interviews (refer Section D.3 of this report) (physical implementation and interview with relevant stakeholders) by verification team.
- d) Reporting and closure of findings (CARs/CLs/FARs) and preparation of draft verification report (refer Section D.5 of this report).
- e) Independent technical review (refer Section D of this report) of the draft verification report and final/revised documentation (e.g., Monitoring Report, corresponding ER sheet and evidence).
- f) Reporting and closure of TR comments/findings (refer Section D.5 of this report) (CARs/CLs/FARs) and final approval for the decision made (refer Section E and F of this report).
- g) Issuance of final verification report to contracted PD (or authorized representatives) and submission of request for issuance, as appropriate.

Verification Conclusion

Based on the outcome of the verification process of the GS PA "Akbük Wind Farm Project, Turkey" for the current monitoring period 04/10/2021 to 18/03/2023 (including both dates), we confirm that the implementation of referenced registered PA is complying with applicable GS4GG rules and regulations as stated in the Monitoring Report (final) Version 04, dated 22/11/2023. The verification includes confirming the implementation of the project as per description in the revised PDD/6/, the monitoring plan of the PDD and the application of the monitoring methodology ACM0002 "Grid-connected electricity generation from renewable sources, version 20.0/3/

Earthood Services Private Limited is able to certify that the emission reductions from the registered PA (GS 436) "Akbük Wind Farm Project, Turkey" for the current monitoring period 04/10/2021 to 18/03/2023 (including both dates) amount to 94,543 tCO_{2e}. Therefore, this is being submitted for request for issuance, as per GS4GG procedures.

SECTION B. Verification team, technical reviewer and approver

B.1. Verification team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Validation findings
1.	Team Leader (GS Approved Auditor)	IR	Kalita	Jahnabi	Central office	Y	Y	Y	Y
2.	Verifier	IR	Kalita	Jahnabi	Central office	Y	Y	Y	Y
3.	Technical Expert (TA 1.2)	IR	Mahala	Deepika	Central office	Y	Y	Y	Y
4.	Local Expert	EI	Atabek	Fikriye Seda	Central office	Y	Y	Y	Y
5.	Trainee	IR	Singh	Aayukta	Central office	Y	N	N	Y

B.2. Technical reviewer and approver of the verification and certification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g., name of central or other office of VVB or outsourced entity)
1.	Technical reviewer	IR	Guleria	Shifali	Central Office
2.	TA expert to TR (TA 1.2)	IR	Guleria	Shifali	Central Office

3.	Approver	IR	Singh	Kaviraj	Central Office
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SECTION C. Application of materiality

C.1. Consideration of materiality in planning the verification

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
1.	Human Error caused due to recording monitored data in main meter tabular report sheets	Low	The tabular reports are generated from SCADA system and then finalized by an independent division.	All invoices and final tabular report issued by planification department were verified.
2.	Error in transferring the recorded data to ER sheet	Medium	The procedure for transferring in the final tabular report readings to the ER calculation sheet is manual, thus increasing the chances of error.	All invoices were cross-checked, and no such errors were identified.
3.	Error in applying the formulae in the emission reduction calculation sheet	Medium	The calculation method has been prescribed in the applied methodologies and further detailed in the registered PDD. The project involves large data and the final emission reduction are a result of complex mathematical equations.	The emission reduction calculation sheet has been reviewed in detail by the assessment team. Each step for the calculation has been thoroughly checked to confirm the final numbers.

C.2. Consideration of materiality in conducting the verification

Monitored Parameter	Reporting Frequency	Number of Discrete Data	Sample selected for verification	Type of error identified	Impact on ERs
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(Symbol / Description)		(Total)	Sample (%)		ERs Impacted (Sample)	ERs Impacted (Population based on extrapolation)
EGPJ,y	Monthly	18	18 (100%)	No error	No impact (100%)	No impact (100%)

SECTION D. Means of verification

D.1. Desk review

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

- a) A review of the data and information presented to verify their completeness.
- b) A review of the monitoring plan (as described in PDD) the monitoring methodology including applicable tool(s) and, where applicable, the applied standardized baseline, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures.
- c) A review of calculations and assumptions made in determining the SDG outcomes, GHG data and emission reductions.
- d) 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 SDG outcomes and emission reductions.

The list of documents reviewed during verification is provided under Appendix 3 of this report.

D.2. On-site inspection

Duration of on-site inspection: 09/06/2023					
No.	Activity performed on-site	Site location	Date	Team member	
1.	Opening Meeting: Introduction, scope and objective of work, roles and responsibilities of audit team, resources required, and timetable of the onsite audit including venue for closing meeting and any concerns from PP.	Denizköy town, Aydin province, Turkey	09/06/2023	Jahnabi Kalita, Deepika Mahala, Fikriye Seda Atabek	

2.	Implementation and operation of project activity (project boundary, technology, project equipment, monitoring and metering equipment) as per registered PDD/previous verification.	Denizköy town, Aydın province, Turkey	09/06/2023	Jahnabi Kalita, Deepika Mahala, Fikriye Seda Atabek
3.	Management and monitoring procedures followed at project site.	Denizköy town, Aydın province, Turkey	09/06/2023	Jahnabi Kalita, Deepika Mahala, Fikriye Seda Atabek
4.	Physical inspection of the project activity: Site visit and interview of monitoring personnel	Denizköy town, Aydın province, Turkey	09/06/2023	Jahnabi Kalita, Deepika Mahala, Fikriye Seda Atabek
5.	Management and operational system: Documentation, allocation of responsibilities, qualification and training, data recording & archiving, internal audit and management review and emergency procedures.	Denizköy town, Aydın province, Turkey	09/06/2023	Jahnabi Kalita, Deepika Mahala, Fikriye Seda Atabek
6.	Verification checklist: compliance of monitoring procedures followed at project site with registered PDD and monitoring methodology.	Denizköy town, Aydın province, Turkey	09/06/2023	Jahnabi Kalita, Deepika Mahala, Fikriye Seda Atabek
7.	Review of monitored data and relevant document in accordance with registered monitoring plan and applied monitoring methodology.	Denizköy town, Aydın province, Turkey	09/06/2023	Jahnabi Kalita, Deepika Mahala, Fikriye Seda Atabek
8.	Review of ER calculations in accordance with applied methodology and relevant tools.	Denizköy town, Aydın province, Turkey	09/06/2023	Jahnabi Kalita, Deepika Mahala, Fikriye Seda Atabek
9.	Compilation of the audit findings.	Denizköy town, Aydın province, Turkey	09/06/2023	Jahnabi Kalita, Deepika Mahala, Fikriye Seda Atabek
10.	Closing Meeting: Submission of the audit findings to the client and agreement on the issues raised and agreement on timelines.	Denizköy town, Aydın province, Turkey	09/06/2023	Jahnabi Kalita, Deepika Mahala, Fikriye Seda Atabek

D.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Arikan	Dogukan	Life Enerji	09/06/2023	Management and monitoring procedures followed at project site, Implementation and operation of project activity, QA/QC protocols, ER Calculations	Jahnabi Kalita, Deepika Mahala, Fikriye Seda Atabek
2.	Demir	Hakan	Ayen Enerji A.Ş. (Carbon Co-ordinator)			
3.	Akay	Erding	Ayen Enerji A.Ş. (Operation Manager)			
4.	Yarimkaya	Ahmet	Mukhtar of Akyeniköy Village	09/06/2023	Impacts due to the project activity, grievance mechanism.	Jahnabi Kalita, Deepika Mahala, Fikriye Seda Atabek

D.4 Sampling approach

The project did not require sampling plan and hence no Sampling approach was applied.

D.5 Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
Compliance of the monitoring report with the monitoring report form	-	-	-
Compliance of the project implementation and operation with the registered PDD	-	CAR#01, CAR#02	-
Post-registration changes	-	-	FAR#01
Compliance of the registered monitoring plan with the methodologies including applicable tools and standardized baselines	-	-	-
Compliance of monitoring activities with the registered monitoring plan	-	CAR#03, CAR#04	-
Compliance with the calibration frequency requirements for measuring instruments	-	-	-
Assessment of data and calculation of emission reductions or net removals	CL#03	-	-
Assessment of data and calculation of SDG impacts	CL#01	-	-
Assessment of reported sustainable development co-benefits	-	-	-
Local stakeholder consultation	-	-	-
Safeguarding Principles	-	-	-
Others	CL#02	-	-
Total	03	04	01

SECTION E. Verification findings

E.1. Compliance of the monitoring report with the monitoring report form

Means of verification	VVB checked from the Gold Standard website that the prescribed form has been used for preparing the Monitoring Report/6/. The PD used the Gold Standards for Global Goals latest MR template version 1.1 available on the GS webpage/4/ and all the details were filled as per the MR template guidelines.
Findings	None
Conclusion	The verification team confirms the compliance of the monitoring report with the latest version of the GS monitoring report template and the instructions therein for filling out the form.

E.2. Remaining forward action requests from validation and/or previous verifications

One FAR was raised during design review renewal/5/ which has been raised and resolved during the current verification. Please refer to Appendix 4.

E.3. Compliance of the project implementation and operation with the registered project design document

Means of verification	The Akbük Wind Farm Project (Akbük WFP) involves a 31.5 MWm onshore wind farm with 15 turbines in the region of Aydın Province, Didim District in Turkey, which was confirmed during the on-site audit. The purpose of the project activity is to generate electricity and to feed it into the public grid. It was verified during the site visit that the proposed project activity has been implemented and it is in operation in accordance with the project activity described in the registered PDD /1/.																																							
	The project boundary in the registered PDD /1/ is in line with the actual project boundary. The generated electricity is supplied to the National Electricity Transmission Grid of Turkey via Substation as confirmed from the Power purchase agreement/30/.																																							
	Project location viz., geo-coordinates of the turbines as mentioned in the table below was verified from the commissioning certificates and during the site visit /13,23/, which was found to be consistent with the information mentioned in the PDD/1/ and the MR/6/.																																							
	<table border="1"> <thead> <tr> <th>Turbine</th> <th>Latitude (N)</th> <th>Longitude (E)</th> </tr> </thead> <tbody> <tr><td>T1</td><td>37.45188916412236</td><td>27.376061227743467</td></tr> <tr><td>T2</td><td>37.45164850149274</td><td>27.37803858077886</td></tr> <tr><td>T3</td><td>37.45136277484733</td><td>27.380004387047652</td></tr> <tr><td>T4</td><td>37.45089689237578</td><td>27.38192403843467</td></tr> <tr><td>T5</td><td>37.450476082868605</td><td>27.38383259037231</td></tr> <tr><td>T6</td><td>37.45029834784256</td><td>27.385821509916195</td></tr> <tr><td>T7</td><td>37.450300848640936</td><td>27.387811350421966</td></tr> <tr><td>T8</td><td>37.45029587394949</td><td>27.392051013666386</td></tr> <tr><td>T9</td><td>37.45015259589335</td><td>27.39176762051417</td></tr> <tr><td>T10</td><td>37.45001070595952</td><td>27.39377931170909</td></tr> <tr><td>T11</td><td>37.44945465501276</td><td>27.395641838854797</td></tr> <tr><td>T12</td><td>37.44644367907704</td><td>27.398452295704157</td></tr> </tbody> </table>	Turbine	Latitude (N)	Longitude (E)	T1	37.45188916412236	27.376061227743467	T2	37.45164850149274	27.37803858077886	T3	37.45136277484733	27.380004387047652	T4	37.45089689237578	27.38192403843467	T5	37.450476082868605	27.38383259037231	T6	37.45029834784256	27.385821509916195	T7	37.450300848640936	27.387811350421966	T8	37.45029587394949	27.392051013666386	T9	37.45015259589335	27.39176762051417	T10	37.45001070595952	27.39377931170909	T11	37.44945465501276	27.395641838854797	T12	37.44644367907704	27.398452295704157
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T13	37.445833512419085	27.400303106283783
T14	37.44550246467628	27.402234516541533
T15	37.4450542105697	27.40416527917468

The technical specifications of the equipments installed at the project site is found to be in line with the registered PDD/1/ as confirmed during the onsite audit/25/.

Turbine details	
Model	Date of Index
Main Meter	
EMH LZQJ-XC	19/08/2015
SPARE meter	
EMH LZQJ-XC	19/08/2015

Electricity meter details		
Serial No.	Accuracy Class	Calibration dates
5271033 (Main Meter)	0.2 s	10/11/2022
5271034 (Spare Meter)	0.2 s	10/11/2022

Interview of the personnel during remote interviews revealed that all the QA/QC procedures listed in the registered PDD has been applied while operation of the project activity.

The second crediting period for the project activity is 19/03/2016-18/03/2023. However, the VERs are only being claimed for the period from 04/10/2021 to 18/03/2023 due to delay in the renewal of crediting period. It is clearly mentioned in section A.4 of the MR/6/. The assessment team confirms that the credits being claimed, and the crediting period opted is in-line with para 5.1.46 of GS4GG Principle and Requirements, version 1.2.

During the current monitoring period from 04/10/2021-18/03/2023, the following SDG goals have been targeted:

Sustainable Development Goals targeted	Amount achieved
SDG 13 Climate Change	94,543 tCO ₂ e
SDG 8 Decent work and economic growth	10
SDG 7 Affordable and clean energy	145,858.06 MWh
SDG 6 Clean water and Sanitation	3,616,069 m ³

Grievance Mechanism:

The Project Activity has an elaborate system for recording and processing any grievances that might arise at any stage of the Project Activity. There were no complaints made in person or conveyed via telephonic call. PP maintains a logbook/22/, diligently for any grievances received.

Findings	CAR#01 and CAR#02 were raised and resolved.
Conclusion	The verification team confirms that: a) The project activity was found completely implemented as per the description given in the registered PDD/1/. b) The actual operation conforms to the description in the registered PDD/1/. c) No operational parameter (information/data variable) was found deviating from the registered PDD. d) The SDG impacts for the monitoring period were found to be within the estimated quantity in the registered PDD/1/.

E.4. Post-registration change

E.4.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents

Not Applicable

E.4.2. Corrections

Not Applicable

E.4.3. Changes to the start date of the crediting period

The start date of the crediting period has been changed from 19/03/2009 to 04/10/2021 due to a delay in renewal of crediting period/5,6/.

E.4.4. Inclusion of monitoring plan

Not Applicable

E.4.5. Permanent changes from registered monitoring plan, monitoring methodology or standardized baselines

Not Applicable

E.4.6. Changes to the project design

Not Applicable.

E.4.7. Changes specific to afforestation and reforestation project activities

Not Applicable.

E.5. Compliance of the registered monitoring plan with the applied methodologies including applicable tool and standardized baseline

Means of verification	Based on this review it was found that the monitoring plan contained in the registered PDD/01/ includes all the required parameters to be monitored in the context of the PA design and description and allows proper determination of emission reductions in accordance with PDD/01/ and applied methodology ACM0002 "Grid-connected electricity generation from renewable sources", Version 20.0/3/
Findings	No findings were raised
Conclusion	The monitoring plan is in accordance with the approved methodology, ACM0002 "Grid-connected electricity generation from renewable sources", Version 20.0/3/ as included in the PDD/01/.

E.6. Compliance of monitoring activities with the registered monitoring plan

E.6.1. Data and parameters fixed ex ante or at renewal of crediting period.

Means of verification	The values of ex-ante parameter can be found in the table given below: Parameter(s) fixed ex-ante:			
	Relevant SDG Indicator	Parameter	Value in PDD	VVB Assessment
	SDG 13 Climate Action	EF _{grid,CM,y}	0.6482 tCO ₂ /MWh	This parameter is used for determining the combined margin CO ₂ emission factor that is used to calculate estimated emission reductions. The PP has applied the emission factor values from Turkey's National Electric Grid Emission Factor, 2019/31/ which was found to be appropriate. The parameter value has been consistently applied for the ER calculation which is evident from the ER calculation sheet/07/, which is consistent with MR/6/.
Findings	CAR#03 was raised and resolved.			
Conclusion	The value mentioned in the Monitoring Report /04/ and Emission Reduction Spreadsheet /07/ is consistent with the registered PDD/01/. The applied value is correct and justified.			

E.6.2. Data and parameters monitored.

Quantity of net electricity generation, supplied by the project plant/unit to the grid in year y (EGPJ,y), MWh/yr

Means of verification	Criteria/Requirements	Assessment/Observations
	Measuring /Reading /Recording frequency	Monitoring: Continuous Recording: Monthly

<p>Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)</p>	<p>Yes, the values are measured and reported accordance to monitoring plan. The electricity meters installed on the site record the values continuously and the values are reported in the JMR/14/ documents on a monthly basis. The recording frequency is in line with the registered PDD which requires the values to be reported on monthly basis /1/.</p>				
<p>Monitoring equipment</p>	<p>There are 2 meters installed at the substation for continuously monitor the energy exported.</p> <table border="1" data-bbox="687 551 1219 1104"> <tr> <td data-bbox="687 551 791 808"> <p>Meter 1</p> </td> <td data-bbox="791 551 1219 808"> <p>Meter no. 5271033 Accuracy Class: 0.2S Calibration Frequency: every 10 years Calibration date: 10/11/2022</p> </td> </tr> <tr> <td data-bbox="687 808 791 1104"> <p>Meter 2</p> </td> <td data-bbox="791 808 1219 1104"> <p>Meter no. 5271034 Accuracy Class: 0.2S Calibration Frequency: every 10 years Calibration date: 10/11/2022</p> </td> </tr> </table> <p>The average of readings generated by two meters is used for invoicing on monthly basis/14/.</p>	<p>Meter 1</p>	<p>Meter no. 5271033 Accuracy Class: 0.2S Calibration Frequency: every 10 years Calibration date: 10/11/2022</p>	<p>Meter 2</p>	<p>Meter no. 5271034 Accuracy Class: 0.2S Calibration Frequency: every 10 years Calibration date: 10/11/2022</p>
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<p>Meter 2</p>	<p>Meter no. 5271034 Accuracy Class: 0.2S Calibration Frequency: every 10 years Calibration date: 10/11/2022</p>				
<p>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 complies with local/national standards, or as per the manufacturer's specification?</p>	<p>Both the meters (main and check) are of 0.2 s accuracy class and the accuracy class of the meters is found in line with the registered monitoring plan.</p>				
<p>Is the accuracy valid for the entire measuring range or do different accuracy levels apply to different</p>	<p>The accuracy is valid for the entire measuring range of the meters.</p>				

measuring ranges?																
Calibration frequency	<p>The frequency of calibration has been defined once in 10 years in the registered PDD/1/. The meters (main and check) installed on site were found within calibration as verified below:</p> <table border="1" data-bbox="683 398 1364 981"> <thead> <tr> <th data-bbox="683 398 783 591">Name</th> <th data-bbox="790 398 906 591">Serial Number</th> <th data-bbox="912 398 1086 591">Brand & Model and Year of Manufacturing</th> <th data-bbox="1093 398 1209 591">Accuracy Class</th> <th data-bbox="1216 398 1364 591">Calibration Dates (from Test Report)</th> </tr> </thead> <tbody> <tr> <td data-bbox="683 600 783 786">Main Meters</td> <td data-bbox="790 600 906 786">5271033</td> <td data-bbox="912 600 1086 786">EMH LZQJ-XC (2015)</td> <td data-bbox="1093 600 1209 786">0.2 S</td> <td data-bbox="1216 600 1364 786">10/12/2018 22/10/2020 10/11/2022</td> </tr> <tr> <td data-bbox="683 795 783 981">Back-up Meters</td> <td data-bbox="790 795 906 981">5271034</td> <td data-bbox="912 795 1086 981">EMH LZQJ-XC (2015)</td> <td data-bbox="1093 795 1209 981">0.2 S</td> <td data-bbox="1216 795 1364 981">10/12/2018 22/10/2020 10/11/2022</td> </tr> </tbody> </table>	Name	Serial Number	Brand & Model and Year of Manufacturing	Accuracy Class	Calibration Dates (from Test Report)	Main Meters	5271033	EMH LZQJ-XC (2015)	0.2 S	10/12/2018 22/10/2020 10/11/2022	Back-up Meters	5271034	EMH LZQJ-XC (2015)	0.2 S	10/12/2018 22/10/2020 10/11/2022
Name	Serial Number	Brand & Model and Year of Manufacturing	Accuracy Class	Calibration Dates (from Test Report)												
Main Meters	5271033	EMH LZQJ-XC (2015)	0.2 S	10/12/2018 22/10/2020 10/11/2022												
Back-up Meters	5271034	EMH LZQJ-XC (2015)	0.2 S	10/12/2018 22/10/2020 10/11/2022												
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?	<p>The registered PDD/1/ defines that meter doesn't require regular calibration and frequency has been set is once in 10 years, inline to the Turkish laws. The meter testing and checking frequency is also defined in agreement signed between TEIA with Ayen Enerji A.S. as once in 10 years. Both meters were found to be in calibration duration in the current monitoring period.</p>															
Is the calibration of measuring equipment carried out by an accredited person or institution?	<p>The calibration/16/ is done by TEIAS.</p>															
Is(are) calibration(s) valid for the whole reporting period?	<p>The calibration was found valid for the entire monitoring period</p>															
Is the calibration carried out for a measuring range comparable with the range for which	<p>Calibration was found to be for the measuring range comparable with the range for which measurements have been carried out.</p>															

	measurements have been carried out?	
	How were the values in the monitoring report verified?	The electricity generation of the wind farm is monitored by both EPIAS and TEIAS which is recorded automatically as well as manually and remotely. The primary source of electricity generation monitoring is EPIAS. There have been slight differences in the values observed, however to minimise the error, PD has applied Round-down method when calculating the emission reductions and has taken a conservative approach, therefore, the net electricity exported by project activity to the grid was 145,858.06 MWh. It was also verified from SCADA system/17/during the onsite audit that records and reports the values of power exported and imported by all wind turbines on continuous basis.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	QA/QC were found to be reliable and appropriate.
Findings	CAR#04 was raised and resolved.	
Conclusion	<p>The verification team by onsite audit/8/ and review of documents concludes that:</p> <ul style="list-style-type: none"> • The equipment used for monitoring of parameter is calibrated by the PD at a frequency specified in the applied monitoring methodology/3/ and registered monitoring plan/1/. • Monitoring results are consistently recorded as per approved frequency. • QA/QC procedures have been applied in accordance with the registered monitoring plan. 	

Amount of CO₂ emission, ER_y, tons of CO₂e

Means of verification	Criteria /requirement	Assessment/Observation
	Measuring /Reading /Recording frequency	Annually
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, the values are measured and reported in accordance with the monitoring plan. Monthly meter readings taken.
	Value applied	94, 543 tCO ₂ e

	How were the values in the monitoring report verified?	The values reported in Monitoring were verified from emission reduction calculation sheet provided by PD and found consistent.
	If applicable, has the reported data been crosschecked with other available data?	Not applicable
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	QA/QC processes were found to be appropriate and reliable.
Findings	No findings were raised.	
Conclusion	<p>Through onsite audit and assessment of documents, it can conclude that:</p> <ul style="list-style-type: none"> • The equipment used for monitoring of parameter is calibrated by the PD at a frequency specified in the applied monitoring methodology and registered monitoring plan. • Monitoring results are consistently recorded as per approved frequency. • QA/QC procedures have been applied in accordance with the registered monitoring plan. 	

Number of training courses given to employees, Quality of employment.

Means of verification	Criteria /Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	The parameter has been monitored in each monitoring period.
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	According to GS PDD /1/ the project will monitor quality of employment in each monitoring period. The assessment team confirms that the monitoring of quality is being done in each monitoring period.
	How were the values in the monitoring report verified?	03 trainings (Health and safety trainings once a year) were provided to 10 personnel employed at the project site during the current monitoring period. The training certificates /18/ were checked to confirm the total number of trainings conducted during the PA implementation. The value was found to be consistently reported in MR/6/ and ER sheet/7/.
	If applicable, has the	The reported information was also cross-checked through onsite interviews/8/.

	reported data been crosschecked with other available data?	Information was found to be consistent which was given in the MR/6/.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	QA/QC processes were found to be appropriate and reliable.
Findings	No finding was raised	
Conclusion	The parameters have been monitored appropriately, in accordance with the monitoring plan. The monitoring result were recorded consistently as per the approved frequency in registered monitoring plan.	

The employment data has been monitored to indicate the contribution to the SDG 8, Quantitative employment and income generation.

Means of verification	Criteria /Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	The parameter has been monitored in each monitoring period.
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, the total number of persons employed as result of this project are monitored in each verification period which is in line to the requirement set in the PDD.
	How were the values in the monitoring report verified?	10 workers get hired during this verification period and VVB has confirmed the same from the Social Security Records submitted by the PD /21/.
	If applicable, has the reported data been crosschecked with other available data?	The reported information provided by PD is found to be consistent during on-site interview conducted on 09/06/2023.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	QA/QC processes were found to be appropriate and reliable.
Findings	No finding was raised.	
Conclusion	The parameters have been monitored appropriately, in accordance with the monitoring plan. The monitoring result were recorded consistently as per the approved frequency in monitoring plan.	

Water Quality and Quantity, Avoidance wastewater discharge to the environment, m3/year

Means of verification	Criteria /Requirements	Assessment/Observation
	Measuring /Reading /Recording frequency	The parameter has been monitored in annually.
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, the total amount of wastewater discharge avoidance as result of this project are monitored every year which is in line to the requirement set in the PDD. This parameter is measured as Coefficient for wastewater avoidance from potential cooling water operations calculated by taking Total Wastewater Discharged by Thermal Power Plants in the related year and Net Electricity Generation in the related year.
	How were the values in the monitoring report verified?	The total amount of cooling wastewater avoided was found to be 3,616,069 m3 in the current monitoring period and VVB has confirmed the same from the electricity generation Records submitted by the PD /14/.
	If applicable, has the reported data been crosschecked with other available data?	The reported information provided by PD is found to be consistent during on-site interview conducted on 09/06/2023.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	QA/QC processes were found to be appropriate and reliable.
Findings	No finding was raised.	
Conclusion	The parameters have been monitored appropriately, in accordance with the monitoring plan. The monitoring result were recorded consistently as per the approved frequency in monitoring plan.	

Safeguards Reporting

Safeguarding Principles	Mitigation Measures added to the Monitoring Plan	Assessment/Observation
Principle 9.4. Release of pollutants		
Solid Waste	Waste Oil: During the operation phase, hazardous waste from daily operations is disposed of properly as well as waste oil. Waste oil etc. (gearbox oil waste, oil filters etc.) is collected on site and disposed of by licensed	As verified from waste oil invoices/27/ provided by the PP, there is continuous monitoring of the principle. 920kg of hazardous waste has been generated during the current monitoring period and solid waste has been treated

	companies according to legal requirements. During monitoring, required documents (waste collection out-of-area letter and waste oil invoices) are regularly and completely provided.	and transferred 14 times. The evidence is found to be satisfactory.
Water quality and quantity	Disposal of wastewater generated during the implementation of the project activity. The wastewater is collected and disposed by sewage truck by municipality's Vacuum truck. Akbuk WFP performs verification process every regularly, Akbuk WFP carries out the 2nd verification of the 1st crediting period. During monitoring, required documents (waste collection out-of-area letter and waste oil invoices) are regularly and completely provided.	As verified from wastewater discharge records /27/ provided by the PP, there is continuous monitoring of the principle. Wastewater has been disposed 2 times during the current monitoring period by the municipality truck. The evidence is found to be satisfactory.

E.6.5: Implementation of sampling plan

Means of verification	Not Applicable
Findings	Not Applicable
Conclusion	Not Applicable

E.7. Compliance with the calibration frequency requirement for measuring instruments.

Means of verification	The parameter EG _{facility} , is monitored using two meters. Details of calibration and meters are mentioned below			
	Name	Serial Number	Accuracy Class	Calibration Dates (from Test Report)
	Main Meters	5271033	0.2 S	10/12/2018 22/10/2020 10/11/2022
	Back-up Meters	5271034	0.2 S	10/12/2018 22/10/2020 10/11/2022
	The verification team has verified the dates of calibration and accuracy class of the meters from the calibration certificates /16/ provided by the PP. According to the Article 9 of the 'Regulation of Metering and Testing of Metering Systems' of Turkish ministry, the periodic tests of meters of electricity, water, coal gas, natural gas and current and voltage			

	transformers are done every 10 years. Thus, the meters are calibrated every 10 years by TEIAS. The last calibrations conducted for test and main meters were conducted on – 10/12/2018, 22/10/2020 and 10/11/2022. Therefore, the verification team confirms that all the data procured from calibrated meters and the calibration cover the entire monitoring period.
Findings	No findings were raised.
Conclusion	The calibration of meters installed under the project activity has been done once in 10 years as per the frequency mentioned in registered PDD/1/.

E.8. Assessment of data and calculation of SDG impacts

E.8.1. Calculation and assessment of SDG outcomes

Means of verification	<p>The baseline emissions are calculated as per the applied methodology and in accordance to registered PDD/1/. It was found to be consistent in ER calculation sheet.</p> <p>$ER_y = BE_y - PE_y$ Where: ER_y = Emission reductions in year y (t CO₂/yr). BE_y = Baseline emissions in year y (t CO₂/yr). PE_y = Project emissions in year y (t CO₂/yr). PE_y; The project does not result in greenhouse gas emissions.</p> <p>Where: BE_y = Baseline emissions in year y (tCO₂/yr).</p> <p>$EGPJ, y$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr)</p> <p>$EF_{grid,CM,y}$ = Combined margin CO₂ emission factor for grid connected power generation in year y tco₂/MWh)</p> <p>The value of emission obtained after applying the formula mentioned in methodology is:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr style="background-color: #00BFC4; color: black;"> <th>From</th> <th>To</th> <th>ER(tCo₂e)</th> </tr> </thead> <tbody> <tr> <td>04-10-2021</td> <td>31-12-2021</td> <td>14,701</td> </tr> <tr> <td>01-01-2022</td> <td>31-12-2022</td> <td>66,472</td> </tr> <tr> <td>01-01-2023</td> <td>18-03-2023</td> <td>13,370</td> </tr> <tr style="font-weight: bold;"> <td colspan="2">Total</td> <td>94,543</td> </tr> </tbody> </table>	From	To	ER(tCo ₂ e)	04-10-2021	31-12-2021	14,701	01-01-2022	31-12-2022	66,472	01-01-2023	18-03-2023	13,370	Total		94,543
From	To	ER(tCo ₂ e)														
04-10-2021	31-12-2021	14,701														
01-01-2022	31-12-2022	66,472														
01-01-2023	18-03-2023	13,370														
Total		94,543														
Findings	CL#01 was raised and resolved.															
Conclusion	The assessment and calculation of baseline GHG emission is in line with applied methodology. The verification team confirms that: (a) Appropriate methods and formulae for calculating baseline GHG emissions or baseline net GHG removals were followed; (b) Appropriate emission factors and other reference values were correctly Applied. (c)The monitored data was available in accordance with the registered monitoring plan.															

	(d)The monthly reported data was cross-checked, as prescribed in the registered PDD/1/ with the invoices /14/ and was found consistent.
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E.8.2. Calculation of project GHG emissions or actual net anthropogenic GHG removal by sinks.

Means of verification	The PA is a wind project, which involves no project emission. This is found to be in line with the applied methodology ACM0002 version 20.0 /7/
Findings	CL#03 was raised and resolved.
Conclusion	No project emissions were required to be calculated.

E.8.3. Calculation of leakage GHG emissions

Means of verification	The PA is a wind project, which involves no leakage emission. As per the methodology ACM0002 version 20.0 "No leakage emissions are considered. The main emissions potentially giving rise to leakage in the context of electric sector projects are emissions arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g., extraction, processing, transport). These emissions sources are neglected." No potential or unaccounted source of such emission were identified during site visit.
Findings	No finding was raised.
Conclusion	No leakage emissions were required to be calculated.

E.8.4. Summary of calculation of GHG emission reductions or net anthropogenic GHG removals by sinks

Means of verification	As mentioned above, the entire emission reductions from the project activity were based on the baseline emissions. The calculations presented in this regard in the final monitoring report /4/ and corresponding ER calculations sheet were found in appropriate and in accordance with revised approved PDD/01/ and the applied methodology. The final value of net GHG emissions reduction obtained is 94,543 tCO ₂ e in this monitoring period.
Findings	No finding was raised
Conclusion	The assessment team confirms that appropriate methods and formulae for calculating baseline GHG emissions or baseline net GHG removals, project GHG emissions or actual net GHG removals emissions have been followed. The assumptions, emission factors and default values that were applied in the calculations have been justified.

E.8.5. Comparison of actual emission reductions or net GHG removals by sinks with estimates in registered PDD

Means of verification	The actual emission reduction achieved in this monitoring period were found to be 18% lesser than the estimated quantity in the registered PDD/1/ for comparable period.				
	<table border="1"> <thead> <tr> <th>Estimated ERs for comparable period as per PDD</th> <th>Actual ERs achieved in the current monitoring period.</th> </tr> </thead> <tbody> <tr> <td>115,482 tCO₂e</td> <td>94,543 tCO₂e</td> </tr> </tbody> </table>	Estimated ERs for comparable period as per PDD	Actual ERs achieved in the current monitoring period.	115,482 tCO ₂ e	94,543 tCO ₂ e
	Estimated ERs for comparable period as per PDD	Actual ERs achieved in the current monitoring period.			
115,482 tCO ₂ e	94,543 tCO ₂ e				
Findings	No finding was raised.				
Conclusion	The estimated ER for the project activity for comparable period is 115,482 tCO ₂ e while actual emission reduction achieved during the monitoring period are 95,543 tCO ₂ e. Actual emission reduction achieved 18% less than the estimated value for given period in registered PDD/1/ therefore, no further justification is required.				

E.8.6. Remarks on difference from actual SDG Impacts with estimates value in registered PDD

Means of verification	SDG	Values estimated in ex ante calculation of approved PDD for this monitoring period	Actual values achieved during this monitoring period
	13	Emission Reduction: 115,482 tCO ₂ e	Emission Reduction: 95,453 tCO ₂ e
	8	Quality of Employment: Health and safety training certificates are provided. Quantitative Employment and Income Generation: Current employment records	Quality of Employment: Health and safety training certificates are provided. The list of the certificates can be found directly under the table. Quantitative Employment and Income Generation: Current employment records are presented. 10 employees work at the WFP.
	7	Energy is generated by using renewable energy systems throughout the project. This generation amount was estimated as 178,156.76 MWh.	Energy (145,858.06 MWh) is generated by using renewable energy systems throughout the project.
	8	Estimated amount of wastewater avoidance discharge to the environment: 4,412,537 m ³	Actual amount of wastewater avoidance discharge to the environment: 3,616,069 m ³

	The estimated Emission Reductions for the project activity for comparable period is 115,482 tCO ₂ e while actual emission reduction achieved during the monitoring period are 95,543 tCO ₂ e. Actual emission reduction achieved 18% less than the estimated value for given period in registered PDD/1/ therefore, no further justification is required.
Findings	CL#01 was raised and resolved.
Conclusion	The Actual emission reductions are less than the estimated emission reductions for the monitoring period. The estimated emission reductions are calculated for the monitoring period in accordance with the estimated annual emission reduction value mentioned in the PDD/1/. Hence, the achieved emission reductions are 18 % lower than the estimated emission reduction.

Section F. Internal quality control

A draft verification report prepared by assessment team is reviewed by an independent Technical Review team to confirm if the internal procedures established and implemented by Earthood were duly complied with and such opinion/conclusion is reached in an objective manner that complies with the applicable GS4GG principles and requirements.

The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team are independent of the verification team. The report approved by Quality Manager is endorsed by Managing Director, who is overall responsible to ensure quality, before final release. The further details of applicable procedures and responsibilities about Earthood Quality Management System (QMS) are available on its website (www.earthood.in).

Section G. Verification opinion

Earthood Services Private Limited (Earthood), contracted by Ayen Enerji A.S. has performed the independent verification of the emission reductions for the GS Project ID GS436 "Akbük Wind Farm Project, Turkey" in "Turkey" for the monitoring period 04/10/2021 to 18/03/2023 (including both days) as reported in the Monitoring Report/6/, Version 04 dated 22/11/2023. Ayen Enerji A.S. is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity.

Earthood commenced the verification against the baseline and monitoring methodology/3/ ACM0002- "Grid-connected electricity generation from renewable sources" Version 20, the monitoring plan contained in the PDD/1/ Version 1.4 and Monitoring Report/6/.

Earthood’s verification approach is based on the understanding of the risks associated with reporting of SDG data and the controls in place to mitigate these. Earthood planned and performed the verification by obtaining evidence and other information and explanations that Earthood considered necessary to give reasonable assurance that reported SDG outcomes are fairly stated.

The assessment team confirms that:

- The project activity was found completely implemented as per the description given in the registered PDD.
- The actual operation conforms to the description in the registered PDD/1/.

Earthood confirms that the monitoring system is in place and the emission reductions are calculated without material misstatements. The verification activities were conducted in accordance with ESPL’s Quality Manual System as per the steps indicated under Section A of this report.

As a result, it is confirmed that the emission reductions from the GS PA (436) "Akbük Wind Farm Project, Turkey" are correctly reported in the Monitoring Report Version 04 (final) dated 22/11/2023 and corresponding ER sheet/5/ for the monitoring period 04/10/2021 to 18/03/2023 (including both dates) amounted as 94,543 tCO_{2e}.

Section H. Certification statement

ESPL’s 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 are fairly stated in the Monitoring Report (final) Version 04 dated 22/11/2023. ESPL, based on outcome of verification activities, certifies in writing that, during the monitoring period 04/10/2021 to 18/03/2023 (including both days), the registered GS PA "Akbuk Wind Farm Project, Turkey" achieved the verified amount of 94,543 tCO_{2e} reductions in anthropogenic emissions by sources of greenhouse gases that would not have occurred in the absence of the PA.

Verified and certified SDG outcomes as per commitment period:

Commitment period	Amount (tCO_{2e})
From 04/10/2021 - 31/12/2021	14,701
From 01/01/2023 - 31/12/2022	66,472
From 01/01/2023 - 18/03/2023	13,370
Total	94,543

Appendix-1. Abbreviations

Abbreviations	Full texts
CAR	Corrective Action Request
CL	Clarification Request
ESPL	Earthood Services Private Limited
ER	Emission Reductions
EI	External Individual
EPIAS	Enerji Piyasaları İşletme A.Ş.
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
GS	Gold Standard
IR	Internal Resource
IPCC	Intergovernmental Panel on Climate Change
MR	Monitoring Report
MWh	Mega Watt hour
PDD	Project Design Document
PD	Project Developer
PPA	Power Purchase Agreement
TEIAS	Türkiye Elektrik İletim A. Ş.
QA/QC	Quality Assurance / Quality Control
tCO ₂ e	tons of Carbon dioxide equivalent
VCR	Verification and Certification Report
VER	Verified Emission Reduction(s)
VVS	Clean Development Mechanism Validation and Verification Standard

Appendix 2. Competence of team member and technical reviewers

Competence Statement	
Name	Jahnabi Kalita
Education	M.Sc. Environment Management
Experience	1 year
Field	Environment, Climate change
Approved Roles	
Team Leader	Yes (VM)
Validator	Yes (VM)
Verifier	Yes (VM)
Local expert	Yes (India)
Financial Expert	NO
Technical Reviewer	NO
TA Expert (X.X)	Yes (TA 3.1)

Reviewed by	Shifali Guleria, Quality Manager	Date	02/06/2023
Approved by	Deepika Mahala, Technical Manager	Date	02/06/2023

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	Aayukta Singh		
Education	M.Sc (Plant Pathology) B.Sc (Agriculture)		
Experience	-		
Field	Agriculture		
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	28/10/2022
Approved by	Deepika Mahala (Technical Manager)	Date	31/10/2022

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	18/02/2022
Approved by	Ashok Gautam	Date	18/02/2022

Appendix 3. Documents reviewed or referenced

No.	Title	References to the document	Provider
1.	Registered PDD	Version 10, Dated 18/08/2022	Others
2.	GS4GG Principles and Requirements https://globalgoals.goldstandard.org/101-par-principles-requirements/	Version 1.2	Others
3.	Methodology ACM0002 – Grid-connected electricity generation from renewable sources.	Version 20.0	others
4.	Project location in webpage https://registry.goldstandard.org/projects/details/436	-	others
5.	GS Design Renewal Feedback Form	-	PD
6.	Monitoring Report, Version 3.0 (Final)	Version 04 22/11/2023	PD
	Monitoring Report, version 1.0 (Initial)	10/03/2022	
7.	ER Calculation Sheet	-	PD
8.	On Site Audit Plan	09/06/2023	Others

9.	GHG GHG Emissions Reduction & Sequestration Product Requirements	Version 2.1	Others
10.	GS4GG Renewable Energy Activity Requirements	Version 1.4	PD
11.	GS4GG VVS	Version 1.0	Others
12.	Technical specifications of wind turbines	-	-
13.	Provisional acceptance certificate	-	PD
14.	Electricity readings report/Invoices - TEIAS - EPIAS	For entire monitoring period	PD
15.	Meter specifications	-	PD
16.	Energy meter calibration certificate	For entire monitoring period	PD
17.	SCADA system record (installed at the wind farm)	For entire monitoring period	PD
18.	Training records	-	PD
19.	GS-MR-FORM	Version 1.1	Others
20.	Tool 1 - Tool for the demonstration and assessment of additionality http://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-01-v7.0.0.pdf	Version 0.7.0	Others
21.	Social Security Records	-	PD
22.	Grievance logbook – Register for reporting complaints received from local stakeholders	-	PD
23.	Commissioning Certificate	-	PD
24.	Tool to calculate the emission factor for an electricity system http://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-07-v7.pdf	Version 7.0	Others
25.	Generation License	-	PD
26.	Grid Connection Agreement with TEIAS	-	PD
27.	Waste Disposal Records a. waste oil b. domestic waste	-	PD
28.	OSV questionnaire	-	Others
29.	On-Site pictures	-	PD
30.	Power Purchase Agreement	-	PD
31.	Emission Factor Factsheet, 2019 https://enerjiapi.enerji.gov.tr/Media/Dizin/ETKB/D	-	PD

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Appendix 4. Clarification requests, corrective action requests and forward action requests

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

FAR ID	01	Section no.	E.4.3	Date : 19/06/2023
Description of FAR				
The monitoring of the second crediting period shall commence on 04/10/2021 and end 18/03/2023 due to the delay of submission of PDD for renewal of crediting period. VVB shall take into account that period during the next verification.				
Project participant response				Date : 22/06/2023
The Monitoring Period is in between 04/10/2021 and 18/03/2023 in order to satisfy the FAR.				
Documentation provided by project participant				
NA				
VVB assessment				Date: 27/06/2023
There was a delay in the revalidation of crediting period due to which the monitoring period has been reduced from 19/03/2016 – 18/03/2023 to 04/10/2021 – 18/03/2023. The VVB has reviewed the MR and ER sheet and confirms that the CME has accounted the VERs of the project for the monitoring period 04/10/2021 – 18/03/2023 which is in line with the GS requirements. Therefore, FAR 01 stands closed.				

Table 2. CL from this verification

CL ID	01	Section no.	E.8.1	Date : 02/05/2023
Description of CL				
According to the registered PDD, SDG 6 is also being targeted as part of the project activity. However, its contribution is missing from Table 1. The PD is requested to provide details on the amount achieved for SDG 6 as well in table 1 of the Monitoring report.				
Project participant response				Date : 15/06/2023
It has been added now.				
Documentation provided by project participant				
NA				
VVB assessment				Date: 19/06/2023
The VVB has reviewed the revised PDD and confirms that Table 1 of the PDD now includes details abouts SDG 6. However, it is unclear how the average amount of discharged wastewater is calculated. The PP shall clarify. OPEN				
Project participant response				Date : 22/06/2023
To calculate average discharged wastewater, amount of electricity produced by thermal power plant in a given year is divided by amount of wastewater discharged by thermal power plants in that year, and as a result a wastewater discharge factor is found in unit of m ³ /GWh. Then, this factor is multiplied with electricity generated by project activity and estimated amount of wastewater generated by project activity is extracted, and avoided wastewater discharge has been found. Details can be seen in section E.1 under SDG 6.				
Documentation provided by project participant				

NA	
VVB assessment	Date: 27/06/2023
<p>The quantity of electricity generated by thermal power plants in a given year is divided by the amount of wastewater discharged by thermal power plants in that year, and the resulting figure is the average released wastewater factor, which is measured in m³/GWh. The avoided wastewater discharge is then calculated by multiplying this factor by the quantity of power produced by the project activity and by the projected amount of wastewater produced by the project activity. The detailed calculation has been provided under section E.1 of the monitoring report which is found to be appropriate. Thus, CL 01 stands closed.</p>	

CL ID	02	Section no.	Others	Date : 02/05/2023
Description of CL				
<p>According to the registered PDD, the first crediting period has been from 19/03/2009 to 18/03/2016, however, it was found that on SustainCERT webpage, the monitoring report available is only till 31 December 2012. The PP is requested to clarify whether the continuous monitoring of the project activity has been conducted for the period 01/01/2013 to 18/03/2016.</p>				
Project participant response				Date : 15/06/2023
<p>In between 01/01/2013 and 18/03/2016, electricity generation was ongoing and continuous monitoring was done. However, at that time, VER prices were very low and was not feasible to generate VER due to cost of consultant, VVB and standard.</p>				
Documentation provided by project participant				
NA				
VVB assessment				Date: 19/06/2023
<p>Due to the VER prices being very low during the first crediting period, the cost of consultation, standard and a VVB would have put a financial strain on the project, however, the electricity generation was ongoing as well as continuously monitored. Therefore, the PD has not issued any GS-VER credits during that period. Hence, CL#02 stands closed.</p>				

CL ID	03	Section no.	E.8.2	Date : 24/07/2023
Description of CL				
<p>In the ER sheet, net electricity supply calculations are conducted by using the EPIAS data. However, difference has been noted between the EPIAS values and TEIAS values. It is not clear how the difference in the values has been accounted for in the ER calculations. The PP is requested to justify this difference.</p>				
Project participant response				Date : 02/08/2023
<p>EPIAS and TEIAS are two authorities in their field in which both institutions are audited regularly by the state. However, there may be slight deviations in between data sets of two institutions due to their employees' applications, reading methods or data storage techniques.</p> <p>To eliminate those minor differences, we prefer applying ROUNDDOWN methods while calculating emissions reductions. Accordingly, we get the same results for emission reduction amounts from EPIAS and TEIAS data sources for indicated years and in total value.</p>				
Documentation provided by project participant				
NA				
VVB assessment				Date: 03/08/2023

The electricity generation of the wind farm is monitored by both EPIAS and TEIAS which is recorded automatically as well as manually and remotely. The primary source of electricity generation monitoring is EPIAS. There have been slight differences in the values observed, however, to minimise the error, PD has applied Round-down method when calculating the emission reductions and has taken a conservative approach, therefore, the net electricity exported by project activity to the grid was 145,858 MWh.

Hence, CL#03 stands closed.

Table 3. CAR from this verification

CAR ID	01	Section no.	E.3	Date : 02/05/2023
Description of CAR				
The crediting period mentioned in section A.4 of the MR is the monitoring period (04/10/2021 – 18/03/2023). The PD shall add the correct duration of the second crediting period in this section.				
Project participant response				Date : 15/06/2023
It has been corrected now.				
Documentation provided by project participant				
NA				
VVB assessment				Date: 19/06/2023
The VVB has reviewed the revised PDD, and it is found that the second crediting period of the project is 19/03/2016 – 18/03/2023, however, due to the delay in renewal of the crediting period, the VERs for this project activity can only be claimed between 04/10/2021 – 18/03/2023. Therefore, the crediting period from 04/10/2021 to 18/03/2023 for this project activity is found to be appropriate.				
Hence, CAR#01 stands closed.				

CAR ID	02	Section no.	E.3	Date : 02/05/2023
Description of CAR				
The estimated amount of wastewater avoidance mentioned in section E.4 of the MR is 4,412,537 m ³ . However, this value is found to be inconsistent with the PDD. The PD is requested to revise this.				
Project participant response				Date : 15/06/2023
It has been corrected now. The value of 3,033.1*1000 is for 1 year(365 days). However our monitoring duration is 531 days. So 3,033,100*531/365 = 4,412,537				
Documentation provided by project participant				
NA				
VVB assessment				Date: 19/06/2023
The VVB has reviewed the revised MR and confirms that the value has now been corrected in the MR. Therefore, CAR#02 stands closed.				

CAR ID	03	Section no.	E.6	Date : 02/05/2023
Description of CAR				
The values estimated in ex ante calculation of approved PDD for this monitoring period mentioned under section E.5 are inconsistent with the registered PDD. The PD is requested to revise these values.				
Project participant response				Date : 15/06/2023
<i>Estimated amounts are for entire MP duration (531 days) and not for annual. So, this number can be found multiplying estimated value with 531/365.</i>				
Documentation provided by project participant				

VVB assessment		Date: 19/06/2023
The VVB has reviewed the ER sheet and the revised MR and the values applied are found to be appropriate.		
Hence, CAR#03 stands closed.		

CAR ID	04	Section no.	E.7	Date : 02/05/2023
Description of CAR				
It has been observed that in table 5 and section B.7.1 parameter 'EG _{Pj,y} ', the calibration dates of the energy meters is mentioned as 10/11/2022, which is doesn't cover the entire current monitoring period. PD shall add the previous calibration date. Also, periodic testing dates and the model of the meters installed in the MR.				
Project participant response				Date : 15/06/2023
<i>Calibration tests as to cover whole MP is added.</i>				
Documentation provided by project participant				
NA				
VVB assessment				Date: 19/06/2023
According to Article 9 of Turkey's "Regulation of Metering and Testing of Metering Systems" of Ministry states that: 'b) Periodic tests of meters of electricity, water, coal gas, natural gas and current and voltage transformers are done every 10 years.' The last calibration of the main and test meters was conducted on 22/10/2020 and the latest calibration of the meters has been conducted on 10/11/2022. Therefore, the calibration of the meters is found to be appropriate for the current monitoring period.				
Hence, CAR#04 stands closed.				

Table 4. FAR from this verification

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