Validation report form for renewal of crediting period for GS project activities

VALIDATION REPORT FOR RENEWAL OF CREDITING PERIOD (RCP)	
Title of the project activity	Kuyucak 25.6 MW Wind Farm Project, Turkey
GS Reference number of the project activity	GS 576
Number and duration of the next crediting period	3rd crediting period 7 years
Version number of the validation report for RCP	3.0Aa
Completion date of the validation report for RCP	10/09/2024
Version number of PDD to which this report applies	0.4 of 02/09/2024
Project participant(s)	Alize Enerji Elektrik Üretim A.Ş
Host Party	Türkiye
Sectoral scope(s), selected methodology(ies)	Sectoral scope 1: Energy Industries (Renewable-/non-renewable sources) ACM0002, Consolidated baseline methodology for grid-connected electricity from renewable sources - Version 21.0
Estimated annual average GHG emission reductions or net anthropogenic GHG removals in the next crediting period	48,116 tCO_2
Name of VVB	RINA Services S.p.A. (RINA)
Name, position and signature of the approver of the validation report for RCP	**Giovanni D'Angelo** (Authorized officer signing for the VVB) Sustainability & Food Certification Compliance Unit

SECTION A. Executive summary

Purpose and general description of the project

The project activity is a wind power plant consisting of 12 turbines with 2.0 MWe capacities and 2 turbines with 0.8 MWe capacities making the total installed capacity of 25.6 Mwe thus qualifies under large scale projects. The generated electricity is fed to the national grid. The estimated net electricity production is 74,163.059 MWh/year and the annual emission reductions are estimated to be 48,116 tCO2 /1/. Estimated annual average electricity generation is calculated by the average of previous crediting period actual values /2/.

The proposed project activity comprises of renewable energy generation from wind utilization to generate and deliver electricity to the national grid without thermal energy production. The project type is wind power plant which is an eligible project type as it is in accordance with Eligible Project Types & Scope under Renewable Energy Activity Requirements. GHG Emissions Reduction & Sequestration product requirements are applied. The project is located in Türkiye. Türkiye is upper middle income economy where the penetration level of the proposed Renewable Energy Technology type is less than %5 of the total grid installed capacity, at the time of the first submission to Gold Standard (eligibility clause will come into effect from 24 Jan 2020). The project activity aims to reduce the greenhouse gas emissions in Türkiye by replacing fossil fuel power generation and contributing to the development of the waste energy sector in Türkiye, as well as aims to support the local economy by creating local employment and providing equipment locally.

The GHG benefit of the project activity was only accounted under Gold Standard. There are not any other RECs such as VERRA, GCC or Social Carbon were being issued for the project activity. Furthermore, as a host country in Türkiye such any programme like a government-regulated system or programme for the constraint and monetisation of GHG emissions (such as emissions trading scheme, cap and trade or carbon tax mechanisms) has not been implemented.

Location

The project is located in Demirtaş Village, Kırkağaç-Kuyucak District of Manisa Province in Türkiye.

Scope of Validation

The validation scope is to review the updated PDD against the GS principles and requirements. The validation of the renewal of crediting period is also to be seen in conjunction with the validation report at the time of requesting registration of the project (re-carbon – re-validation report N° 887, version 0.2 issued on 05/10/2022) /26/. Validation of the renewal of crediting period is a requirement and it is seen as necessary to assure about:

(a) the impact of new relevant national and/or sectoral policies and circumstances on the baseline;
(b) the correctness of the application of an approved baseline methodology for the determination of the continued validity of the baseline or its update, and the estimation of emission reductions for the applicable crediting period.

Validation process

Validation is conducted using RINA procedures in line with the GS requirements and principles and applying standard auditing techniques. The validation assessment involved a document review of relevant documentation, the interview and/or online audit, and the reporting. Validation is not meant to provide any consultancy of the project participants. However, stated requests, clarifications and/or corrective actions may have provided input for improvement of the project design.

Conclusion

RINA commissioned by Alize Enerji Elektrik Üretim A.Ş has performed the validation of the renewal of crediting period of the project activity “Kuyucak 25.6 MW Wind Farm Project, Turkey”, about the relevant GS requirements and principles for project activities.

In conclusion, it is RINA’s opinion that the project activity “Kuyucak 25.6 MW Wind Farm Project, Turkey“ as described in the PDD version 0.4 of 02/09/2024 /1/ and previous versions, meets all relevant GS requirements and principles, and correctly applied the baseline and monitoring methodology ACM0002, Grid-connected electricity generation from renewable sources - version 21.0 of 02/11/2022.

SECTION B. Validation team, technical reviewer and approver

B.1. Validation team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader, Validator, Technical Expert TA 1.2	IR	ERDOĞAN	Mehmet	RINA Türkiye	✓	✓	✓	✓

B.2. Technical reviewer and approver of the validation report for RCP

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	Carvalho	Thaís	RINA Brazil
2	Approver	IR	D'Angelo	Giovanni	RINA HO

SECTION C. Means of validation

C.1. Desk review

The latest PDD version 0.4 of 02/09/2024 and/or previous versions /1/, in particular the applicability of the methodology, the baseline determination, the emission reductions calculation, the sustainability indicators, were assessed as part of the validation. All documents reviewed or referenced during the validation are listed in Appendix 3.

C.2. On-site inspection

Duration of On Site Audit: 20/03/2024				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	-Implementation and operation of the proposed project activity. - Baseline and Additionality (Financial Ongoing) - Emission reductions calculations - Interviewed key personnel of the plant to confirm the operational and data collection procedures, QA QC procedures - GS4GG Sustainable Indicators - Local stakeholder consultation - Grievance & Input mechanism	Kırkağaç-Kuyucak District of Manisa Province in Türkiye	20/03/2024	Mehmet ERDOĞAN

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	E.	Çağla B.	Consultant	20/03/2024	Implementation status of the project Monitoring equipment and operation Generated Electricity Monitoring of Gold Standard for Global Goal Parameters	Mehmet ERDOĞAN
2	S.	Mustafa	Employee of Alize Energy			
3	E.	Ömer	Employee of Alize Energy			
4	A.	Yalçın	Employee of Alize Energy			
5	K.	Vefa	Employee of Alize Energy			
6	A.	Nihat	Employee of Alize Energy			
7	B.	İlyas	Employee of Alize Energy			
8	G.	Ahmet	Employee of Alize Energy			
9	Ç.	Dursun	Demirtaş Village Stakeholder	20/03/2024	Local Employment Receiving General Opinion of the local stakeholder about the project Benefit of the project to the village Bird carcasses Grievance Process	Mehmet ERDOĞAN
10	A.	Mustafa	Demirtaş Village Stakeholder			
11	A.	Nagihan	Demirtaş Village Stakeholder			
12	K.	Ayşe	Demirtaş Village Stakeholder			
13	B.	Hatice	Demirtaş Village Stakeholder			

The project activity area was visited on 20/03/2024 with the PP and by the VVB. The project employees were interviewed about the implementation status of the project, monitoring equipment and operation, generated electricity of the project activity.

During on-site audit it was confirmed that no negative feedbacks or comments were received related to project activity during grievance mechanism and continuous inputs for the monitoring period. There was also no grievance about the impact such as noise and flickering that reached the VVB during the stakeholders' interviews. In addition to this, the VVB assessed that whether a comment book available at the most appropriate and publicly accessible location (Demirtaş Village – Mukhtar's office, the nearest residential area) so that stakeholders can provide feedback on the project. The continuous input/grievance mechanism has been verified through interview with the headman of village and the logbook /11/. have been checked. There isn't any positive or negative comment written on them.

In addition to this during interview, it is asked to the stakeholders and project employees if any legal contests or disputes have arisen during the monitoring period and they confirmed that there is no legal contest or disputes have arisen.

C.4. Clarification requests, corrective action requests and forward action requests raised

Area of validation findings	No. of CR	No. of CAR	No. of FAR
Compliance with PDD form			
Compliance with GS Passport form			
Application of baseline and monitoring methodology and standardized baseline	1		
Validity of original baseline or its update			
Do No Harm assessment			
Impact assessment – Sustainable Development Matrix			
Estimated GHG emission reductions or net anthropogenic GHG removals			
Validity of monitoring plan			
Validity of sustainable monitoring plan			
Project participants			
Local stakeholder consultation process			
Others (GS Issuance Review)		1	
Total	1	1	-

SECTION D. Validation findings

D.1. Compliance with PDD form

Means of validation	The title of the project activity is defined as “Kuyucak 25.6 MW Wind Farm Project, Turkey” in the PDD version 0.4 of 02/09/2024 /1/ which is in line with the GS4GG Registry. The version and the completion date of the report are available at the cover page of the PDD. “GS4GG Project Design Document Template /5/, version 1.5” which is the latest version is applied with the PDD /1/.
Findings	NA
Conclusion	RINA confirms that the PDD is based on the currently valid GS4GG Project Design Document Template /5/, version 1.5.

D.2. Compliance with GS Passport form

Means of validation	No GS Passport is available under GS4GG.
Findings	**NA**
Conclusion	No GS Passport is available under GS4GG.

D.3. Application of baseline and monitoring methodology and standardized baseline

Means of validation	The project correctly applies the approved baseline and monitoring methodologies “ACM0002”, “Grid-connected electricity generation from renewable sources”, version 21.0 of 02/11/2022 /6/. The applied methodologies are approved by CDM and the applied versions are the latest version at the time of PDD submission. In addition, the following methodological tools are applied in this PDD: • TOOL07 “Tool to calculate the emission factor for an electricity system” Version 07.0 /7/. • TOOL01 “Tool for the demonstration and assessment of additionality”, Version 07.0 /8/. • TOOL03“Tool to calculate project or leakage CO2 emissions from fossil fuel combustion”, Version 03.0 /9/. • TOOL05 “Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation” version 03.0 /29/. • Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period”, Version 03.0.1 /10/. The project activity is a greenfield, grid connected renewable electricity generation project. • The project activity is the installation of wind power plant. • The project does not involve capacity addition, a retrofit of (an) existing plant(s) or a replacement of (an) existing plant(s). • The project does not involve Integrate BESS with a Greenfield power plant; BESS + capacity addition to existing plant(s); BESS with no other changes to the existing plant(s) and BESS + retrofit to existing plant(s). • Project activity does not involve switching from fossil fuels to renewable energy sources at the site of project activity. • Project activity does not involve biomass fired power plants/units. • The project does not involve combined heat and power generation activity. • The geographic and system boundaries for the relevant electricity grid can be clearly identified and information on the characteristics of the grid is available. According to applicability conditions given in the tools; • Tool 01 Tool for the demonstration and assessment of additionality: The project uses relevant tool together with ACM0002 methodology. No new methodology is used. • Tool 07 Tool to calculate the emission factor for an electricity system: This tool is applicable and used for the calculation of OM, CM and CM since the project activity includes grid power plants and supplies electricity to the grid.

Findings	NA
Conclusion	RINA confirms that the selected baseline and monitoring methodologies have been previously approved by the CDM Executive Board and are applicable to the project, which complies with all the applicability conditions therein the selected versions are valid at the time of submission of crediting period. It is also confirmed that the methodologies are correctly applied by comparing them with the actual text of the applicable versions.

D.4. Validity of original baseline or its update

Means of validation	The project applies for a renewal of the crediting period under the requirements of The Gold Standard Foundation so the Methodological Tool "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period", Version 03.0.1 /10/ is applied to demonstrate that the conditions used to determine the baseline emissions in the previous crediting period still valid. The validity of the current baseline is assessed using the following Sub-steps: ***Step 1.1: Assess compliance of the current baseline with relevant mandatory national and/or sectoral policies*** It is validated that the project activity baseline is the "Grid-connected electricity generation from renewable sources". It is still in compliance with the current legal framework as stated in the generation license /12/. There are no additional laws that came into force that has an impact on the project activity and the project activity is still in line with the available law and regulations. In addition to this since 2019 Turkish Ministry of Energy and Natural Resources calculates and presents the Türkiye National Electricity Generation Grid Emission Factor /14/. ***Step 1.2: Assess the impact of circumstances*** It is assessed that the conditions used to determine the baseline emissions in the previous crediting period are still valid. There is no need any of new fuels or raw materials and the impact of electricity or fuel prices in the identification of the current practice for the baseline emissions. As stated earlier the new national circumstances have an impact on the EF /14/ of the grid and thus on the project's current baseline emissions. ***Step 1.3: Assess whether the continuation of use of current baseline equipment(s) or an investment is the most likely scenario for the crediting period for which renewal is requested.*** It is assessed that the remaining technical lifetime of the equipment that would have continued to be used in the absence of the project activity. In general the technical lifetime of the project activity (including wind turbines) is defined as 25 years /30/ but in real case scenario it seems to be higher than the 25 years thanks to regular maintenance and new technical upgrades. So the equipment's lifetime exceeds the crediting period for which renewal is requested. Equipment only requires regular maintenance. The baseline scenario identified at the validation of the project activity was the continuation of grid-connected electricity generation from renewable sources. Under this scenario, no investment from the project's proponent or third party (or parties) has been envisioned later specifically for the project. ***Step 1.4: Assessment of the validity of the data and parameters*** The data and parameters that were only determined at the start of the crediting period and not monitored during the crediting period are still valid have been assessed. For baseline calculation there are two main parameters: the electricity generation and the grid emission factor. In line with the tool and methodology /6/ /29/, only the grid emission factor has been updated during the third crediting period renewal.

	According to the tool /29/, the application of Steps 1.1, 1.2, 1.3 and 1.4 confirmed that the current baseline as well as data and parameters are still valid for the 3rd and last crediting period, then this baseline, data and parameters can be used for the renewed crediting period. The project activity is in its 3rd crediting period. During the previous crediting periods, the project has not missed or skipped neither timeline of verification nor CP renewal process. The ongoing financial need for carbon revenue continues for the last crediting period. Since the increased maintenance and repair costs, exchange rate effect and also the system usage and operation fees that need to be paid by the project activity to Turkish Electricity Transmission Corporation (TEİAŞ) is another important factor contributing to the project's expenditure. It is validated that the Kuyucak 25.6 MW Wind Farm Project, Turkey needs the supporting income derived from carbon credits since the electricity generation market has challenges due to the Regulator intends to keep electricity prices at minimum. The high maintenance costs.
Findings	**NA**
Conclusion	RINA verified that the baseline was updated assessed according to the tool "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period" /10/. The conclusion is that the baseline of the type I component of the project activity complies and will continue to comply with the laws and regulations in the sector for the next crediting period. It can be concluded that the conditions used to determine the baseline emissions in the previous crediting period are still valid.

D.5. Do No Harm Assessment

Means of validation	As per GS4GG Safeguarding principles and requirements version 1.2, all projects shall conform to the Gold Standard for the Global Goals Safeguarding Principles & Requirements. SDG Impact tool has been also implemented as required by GS4GG and verified through the assessment tool by VVB /3/ /25/. The assessment is done as follows: Principle 1- Human Rights: The Project is not in conflict with the economic livelihood or other issue of the local community. Thus, the Project VVBs not cause any human rights abuse and respects internationally proclaimed human rights issue. Türkiye has ratified European Convention on Human Right /18/ on 10/03/1954. Therefore, the project is not expected to violate the rules regarding human rights. Principle 2 – Gender Equality and Women's Rights: Türkiye has ratified ILO convention 100, 111, 122 and 142, which provides gender equality and promotes women's employment /19/. The project outputs serve everyone without regarding gender. It provides electricity for all. Principle 3 – Community Health, Safety and Working Conditions: Türkiye has ratified ILO convention 155 /24/ and about work safety and precautions. Staff will be trained during operation phases. Principle 4 – Cultural Heritage, Indigenous Peoples, Displacement and Resettlement: According to the registered PDD /13/ and Validation Report /26/ of Kuyucak 25.6 MW Wind Farm Project, Türkiye, no sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture were observed in the project area. Principle 5 – Corruption: Türkiye has ratified several conventions on bribery and corruption /20/ including OECD and UN conventions.

	Principle 6 – Economic Impacts: Türkiye has ratified ILO 87 and 98 conventions. All employee are recruited according to the national legislations. Türkiye is a party of IPEC /22/, /23/ since 1992 and ratified ILO convention 138 and 182. Alize Enerji Elektrik Üretim A.Ş and appointed subcontractors do not involve in any form forced or compulsory labour Türkiye has ratified ILO 29 Forced Labour Convention /21/. **ENVIRONMENTAL & ECOLOGICAL SAFEGUARDING PRINCIPLES:** Principle 1 – Climate and Energy: The project reduces greenhouse gas emissions and fossil fuel use compared to the baseline scenario. On the contrary the project generates renewable energy and supplies to the grid. Principle 2 – Water: The project is wind power project thus there is no directly impact of water resources due to the project. Staffs produce the insignificant amount of waste waters and this waste water has been collected in an impermeable septic tank and collected via vacuum trucks by municipality and disposed according to Regulation on Control of Water Contamination as confirmed through the registered PDD /1/. Principle 3 – Environment, ecology and land use: The Land for the project has been approved by all relevant local Authorities. The project is susceptible to decreased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme conditions. Kuyucak 25.6 MW Wind Farm Project, Turkey systems do not affect the herbal life negatively. Furthermore, Kuyucak 25.6 MW Wind Farm Project, Turkey project not affect negatively organism, flora, fauna or GMOs as confirmed through the previous registered PDD /13/ The project takes a precautionary approach in regard to environmental challenges and is not complicit in practices contrary to the precautionary principle. The environment is protected by several Laws and Regulations in Türkiye. The purpose of the "Law on Environmental Protection" is to protect the environment with principles of sustainable development and environment. The project owner also follows necessary procedures for environmental safety at the project site at international standard (such as Bern Convention). All wastes are disposed of according to related regulations. The methods are categorized for all materials. Waste oil produced have been collected appropriately and disposed via accredited abatement companies in line with the legal regulations as confirmed through the registered PDD /13/. The same processes apply for this crediting period.
Findings	NA
Conclusion	RINA confirms that conservative approach has been applied by PP to demonstrate sustainable development of the project activity which is in line with GS4GG requirements and SDG Tool Impact Requirements /3/.

D.6. Impact assessment – Sustainable Development Matrix

Means of validation	As per GS4GG, Sustainable Developments Goals are discussed under Section D.9 of this report.
Findings	NA
Conclusion	As per GS4GG, Sustainable Developments Goals are discussed under Section D.9 of this report.

D.7. Estimated GHG emission reductions or net anthropogenic GHG removals

Means of validation	***Baseline Emissions*** The calculation of baseline emission reductions is carried out in a conservative manner providing documentation and references to data sources. An approved CDM methodology, ACM0002 /6/ and methodological tool "Tool to calculate the emission factor for an electricity system /7/ is applied. The official published data, Turkish Ministry of Energy and Natural Resources /14/ are used to determine the

	emission factor of the grid. The emission factor is calculated as a combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the tool. ***OM Calculation*** Option (a) simple OM is selected to calculate the operating margin (OM) emission factor of the grid as per the tool since the average share of electricity generation by low-cost/must-run plants for five most recent years is found to be less than 50%. ***BM Calculation*** The build margin (BM) emission factor calculation is in line with the latest version of methodological tool "Tool to calculate the emission factor for an electricity system /6/. ***CM Calculation*** The combined Margin is calculated for wind and solar power generation project activities: w_{OM} = 0.75 and w_{BM} = 0.25 for the first crediting period and for subsequent crediting periods. ***Project Emissions*** Project emissions are neglected since the project activity is a wind power plant in line with the ACM0002 /6/. ***Leakage*** The leakage emissions are neglected as per ACM0002 /6/. ***Emission Reduction*** The ex-ante emission reduction has been calculated as the following equation in line with the ACM0002 /6/: $ERy = BE_y - PE_y$ The project emission and leakage is neglected for the project activity. Therefore, the emission reduction equals to baseline emissions. All the assumptions and data used by the project participants are listed in the PDD including their references and sources. All the documentation used by the project participants as the basis for assumptions and source of data are quoted and interpreted in the PDD and the Emission Reduction Calculation Spread Sheet /2/.
Findings	**NA**
Conclusion	It is RINA's opinion: (a) All assumptions and data used by the PP are listed in the PDD; (b) All documentation used by the PP as the basis for assumption and source of data is correctly quoted and interpreted in the PDD (c) All values used in the PDD and ERs spreadsheet including GWPs are considered reasonable in the context of the proposed project activity (d) The baseline methodology and methodological tools have been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions; All estimates of the baseline and project emissions can be replicated using the data and parameters values provided in the PDD and ERs spreadsheet. Simple OM is used because renewable energy generation is below %50 in Host Country.

D.8. Validity of monitoring plan

Means of validation

The monitoring plan (data and parameters fixed ex ante) includes all data and parameters fixed ex ante required by the applied methodology /6/.

Parameters ex-ante:

	Data/ parameter	Unit	Value applied	Assessment
/1/	Operating Margin of Türkiye National Grid (OM)	tCO_2/ MWh	0.7424	The data used to determine the OM emission factor of the grid is obtained from "Turkish Ministry of Energy and Natural Resources" /14/. The re-validation team has confirmed that this is

				the most updated data at the time for submission for re- validation, which is considered as appropriate.
/2/	Build Margin of Türkiye National Grid (BM)	tCO_2/ MWh	0.368	According to Tool07 "Tool to calculate the emission factor for an electricity system" the data used to determine the BM emission factor of the grid is obtained from last-registered PDD (previous re-validation), which is considered as appropriate.
/3/	Combined Margin of Türkiye National Grid (CM)	tCO_2/ MWh	0.6488	The emission factor is calculated as a combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the tool /7/.

Parameters ex-post:

	Parameter	Description/Assessment
/1/	$EG_{PJ,grid,y}$ (MWh)	Quantity of electricity generation supplied by the project plant to the grid in year y The quantity of electricity supplied by the project plants/units to the grid and the quantity of electricity delivered to the project plant/unit from the grid will be measured. Net generation will be calculated via subtracting energy delivered by the project activity to the grid for internal consumption from electricity fed to the grid. The electricity generation of the plant will be calculated based on meter readings and crosschecked with EPIAS records that are the basis of sold electricity. The net electricity will be measured continuously and recorded at least monthly. For this crediting period the value of the parameter is defined as 74,163.059 MWh/y /2/. Net electricity generation will be measured by two meters which will be sealed by TEIAS. The meters will comply with EMRA (Energy Market Regulatory Authority) regulation /15/. The accuracy class of the meters defined and confirmed as 0.5s are in line with the "Communiqué for Measurement Devices used in the Electricity Market" /16/ as explained in the PDD /1/. The maintenance and calibration of meters are under TEIAS responsibility. If any major discrepancy occurs between the two meters, TEIAS performs necessary calibration.

	Electricity Meter(Primary)	Electricity Meter (Secondary)
Manufacturer	EMH	EMH
Model	LZQJ-XC-P2FB	LZQJ-XC-P2FB
Serial number	8923676	8923677
Date of installation	27/10/2019	14/12/2019
Date of initial calibration	20/08/2019	20/08/2019
Date of last test by TEIAS	07/08/2021	07/08/2021
The accuracy of meters	0.2s	0.2s

The meters have the accuracy of 0.2 s as confirmed through first index protocol /17/. The accuracy class of the meters complies with the "Communiqué for Measurement Devices used in the Electricity Market" /17/ and given information in the PDD /1/. The electricity meters are sealed by TEIAS as confirmed during the site visit.

The meters were calibrated on 2019 as confirmed through first index protocol /17/ performed by TEİAŞ. The recalibration of these meters will be done in line with the equipment requirements and through

				the period defined by national metrology institutes country by country and for Türkiye this period is defined as 10 years. The calibration of meters is deemed appropriate and in compliance with the national regulation /15-16/. In addition protocol between company and TEİAŞ; It is stated that the periodic inspection and testing of the meters should be done every 2 years. The last periodic control of the electricity meters have been done at: 07/08/2022.
Findings	NA			
Conclusion	It is RINA's opinion that the monitoring plan is in accordance with the monitoring methodology; the monitoring plan will give opportunity for real measurement of achieved emission reductions. RINA has checked all the parameters presented in the monitoring plan against the requirements of the methodology and methodological tools. RINA confirms that the monitoring arrangements described in the monitoring plan, including the data management and quality assurance and quality control procedures, are feasible within the project design, and the means of implementation of the monitoring plan are sufficient to ensure the emission reductions achieved by/resulting from the proposed GS4GG project activity can be reported ex post and verified.			

D.9. Validity of the sustainability monitoring plan

Means of validation

The Sustainability Monitoring Plan includes the way of monitoring for each GS4GG indicator.

	Parameter	Description/Assessment
1	$EG_{PJ,grid,y}$	**SDG 7** - Indicator 7.2.1 – "renewable energy share in the total final energy consumption": The electricity generation supplied to the grid will be monitored by EPIAS records. It is expected that the project generates 74,163.059 MWh/y /2/.
2	Quantitative employment and income generation	**SDG 8:** Decent Work and Economic Growth: Number of employment generation will be monitored once for each monitoring period by employment SGK records (Social insurance registries of employees). The project provides at least 8 permanent employments.
3	Quality of employment	**SDG 8:** Decent Work and Economic Growth: HSE trainings will be provided to all employees. Attendance records or training certificates of Health and Safety trainings will be provided to all employees.
4	ERy	**SDG 13** - Indicator 13.3.1 – Baseline emissions correspond to emission reductions and are calculated as the net electricity generated by the project activity, multiplied with combined margin CO2 emission factor for grid connected power generation in year y. Both measured and calculated Emission reductions will be calculated as considering the EPIAS records for the net electricity generated and the emission factor for the grid, which is calculated and published by The Ministry of Energy and Natural Resources of Türkiye /14/. According to EF and net electricity generation emission reduction is applied as 48,116 tCO_2.
5	Release of pollutants	Safeguarding Principle 9.4 Release of pollutants a) Water quality and quantity Wastewater generated will be collected in tanks/containers, and these waters will be transported and disposed of by the local municipality.
6	Biodiversity	Principle 9.10 High Conservation Value Areas and Critical Habitats Interviews with local people will be conducted at each monitoring period. The appointed employee will complete an assessment form regarding the bird deaths around the site to record the monitoring outcome.

Findings	NA
Conclusion	RINA confirms that sustainability monitoring plan and indicators included in the PDD confirm to the sustainable development requirements of GS4GG.

D.10. Crediting period

Means of validation	The third and last crediting starting date is 11/11/2024 /1/. The length of crediting period is defined as 7 years so end date of CP is 10/11/2031.
Findings	**NA**
Conclusion	RINA confirmed that this is the third crediting period of the registered GS4GG project activity.

D.11. Project participants

Means of validation	Project Participant of the project activity is Alize Enerji Elektrik Üretim A.Ş who is authorized to benefit from carbon income.
Findings	NA
Conclusion	Project Participant of the project activity is Alize Enerji Elektrik Üretim A.Ş who is authorized to benefit from carbon income.

D.12. Local stakeholder consultation process

Means of validation	The project validated via onsite audit on 20/03/2024 for re-validation. Based on the interviews, there are no complaints from the local community regarding the project implementation &operation /11/. The project participants applied a local stakeholder consultation (LSC) process on 22/05/2008 line with the regular requirements of GS. Also a stakeholder feedback round has been realized in compliance with the GS procedures governing the issue 60 days by sending the project summary and environmental and socioeconomic questionnaire by courier for initial validation of project. The feedback request for renewal crediting period has started on 12/03/2024. The beginning of Complementary Stakeholder Feedback Round had been announced from the headman of the villages. The general outcome of the stakeholder consultation interview was positive verbally and headman of the villages have given their comment until 12/04/2024. For the Kuyucak 25.6 MW Wind Farm Project, Turkey, stakeholder engagement procedure was conducted at the muhktar of Demirtaş village head and the local stakeholders from same villages face to face on 20/03/2024. During the meeting, the stakeholders stated that they had no complaints. In addition, logbook was checked to see whether there has been any complaints from the local stakeholders and it is seen that there were no negative comments from the local stakeholders until 20/03/2024 as corrected by logbook. Because Complementary Stakeholder Feedback Round has not been finalized yet when site visit was conducted logbook is shared by PP with VVB and it is verified that there is no any feedback about the project.
Findings	**NA**
Conclusion	RINA verified that no negative feedback is received during the CP renewal process on 20/03/2024.

D.13. Post-registration changes

Type of post-registration changes (PRCs)	**Confirmation** (Y/N)
Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline	N
Corrections	N
Inclusion of a monitoring plan to a registered project activity	N
Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline	N
Changes to the project design of a registered project activity	N
Types of changes specific to afforestation and reforestation project activities	N

SECTION E. Internal quality control

The draft final validation report before being submitted to the client is subjected to an independent technical review to confirm that all validation activities has been completed according to the pertinent RINA's procedures. The technical review is performed by a technical reviewer(s) qualified in accordance with the RINA's qualification procedure.

SECTION F. Validation opinion

RINA has performed the validation of the updated PDD version 0.4 of 02/09/2024 for the project activity "Kuyucak 25.6 MW Wind Farm Project, Turkey" in Türkiye, GS Registration Reference No. 576; the validation is performed for the 3rd renewal crediting (from 11/11/2024 to 10/11/2031) and is based on the information available to us.

The review of the PDD version 0.2 and the subsequent follow-up interview have provided RINA with sufficient evidence to determine the validity of the original baseline and the sustainable indicators; the project correctly applied the baseline and monitoring methodologies ACM0002, Grid-connected electricity generation from renewable sources - version 21.0 of 02/11/2022.
In conclusion it is RINA's opinion that the project activity meets all the relevant GS requirements (GS VERs) for the renewal of the 3rd renewal crediting period.

Appendix 1. Abbreviations

Abbreviations	Full texts
BE	Baseline Emissions
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM M&P	Modalities and Procedures CDM
CER(s)	Certified Emission Reduction(s)
CH_4	Methane
CL	Clarification Request
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
CRT	Coordination and Technical Control Staff
DCI	Certification Division of RINA Services Spa
DNA	Designated National Authority
VVB	Validation Verification Body
EB	Executive Board
ER	Emission Reductions
FAR	Forward Action Request
GHG(s)	Greenhouse gas(es)
GS4GG	Gold Standard for Global Goal
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
LoA	Letter of Approval
MoV	Means of Verification
MR	Monitoring Report
NGO	Non-governmental Organization
ODA	Official Development Assistance
PDD	Project Design Document
PE	Project Emission
PP(s)	Project Participant(s)
Ref.	Document Reference
RINA	RINA Services Spa
SS(s)	Sectoral Scope(s)
TA(s)	Technical Area(s)
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard

Appendix 2. Competence of team members and technical reviewers

CERTIFICATO DI QUALIFICA
QUALIFICATION CERTIFICATE

Si attesta che il sig.: *We declare that Mr:*	**Mehmet ERDOGAN**
è qualificato come[1]: *is qualified as:*	**TL – VAL[4] – VER – TEC – REG-EXP[3]- ITR**
nello schema[2]: *for the scheme:*	**VCS – CCB – GS4GG**
per le seguenti aree tecniche: *for the following technical areas:*	**1.1 – 1.2 – 9.2 – 13.1 – 13.2**

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA *TECHNICAL AREA DESCRIPTION*	SCOPO SETTORIALE *SECTORAL SCOPE*
1.1	Thermal energy generation	1
1.2	Renewables	1
3.1	Energy demand	3
9.2	Iron, steel and Ferro-alloy production	9
13.1	Waste handling and disposal	13
13.2	Manure	13

in accordo alle istruzioni dell'Unità responsabile (OU) per sostenibilità & cambiamenti climatici.
in accordance with the instructions of the responsible unit (OU) for the sustainability & climate change.

REVISIONE *REVISION*	DATA *DATE*	MOTIVAZIONI PER LA REVISIONE *REASON FOR THE REVISION*
0	24.03.2023	First Issue
1	12/04/2023	GS4GG extension
2	24/07/2023	GS4GG VAL extension
3	10/12/2023	TEC SS3 extension
4	31/01/2024	ITR extension

Il Responsabile di schema
Scheme Manager

[1]

VAL:	Validator
VER:	Verifier
TEC:	Technical Expert
TL:	Team Leader
FIN-EXP:	Financial Expert
REG-EXP :	Regional Expert
ITR :	Independent Reviewer
DET:	Déterminer

[2]

CDM:	Clean Development Mechanism
VCS:	Verified Carbon Standard
GS4GG:	Gold Standard for Global Goals
SCS:	SocialCarbon Standard
JI:	Joint Implementation
ISO14064-2 :	International standard 14064 part 2
UER :	Upstream Emission Reduction
CCB :	The Climate, Community & Biodiversity Alliance

[3] Turkey

[4] For GS4GG only

RINA SERVICES

classification, certification, inspection & testing

CERTIFICATO DI QUALIFICA PER GLI SCHEMI VOLONTARI*
*QUALIFICATION CERTIFICATE FOR VOLUNTARY SCHEMES**

Si attesta che il sig./sig.ra:
We declare that Mr/Mrs/Ms:

Thais De Lima Carvalho

è qualificato come:
is qualified as:

TEC, VAL, VER, TL, ITRP

per le seguenti aree tecniche:
for the following technical areas:

AREE TECNICHE *TECHNICAL AREAS*	DESCRIZIONE DELL'AREA TECNICA *TECHNICAL AREA DESCRIPTION*	SCOPO SETTORIALE *SECTORAL SCOPE*
1.1	Thermal energy generation	1
1.2	Renewables	1
2.1	Electricity distribution	2
13.1	Solid waste and wastewater	13

REVISIONE *REVISION*	DATA *DATE*	MOTIVAZIONI PER LA REVISIONE *REASON FOR THE REVISION*
0	19/07/2016	First issue with new template (this certificate is linked to CDM qualification)

Responsabile di schema
Scheme Leader
Rita Valoroso

*SCHEMI VOLONTARI/ VOLUNTARY SCHEMES: ACR American Carbon Registry, CCB The Climate, Community & Biodiversity Alliance, GS Gold Standard, JI Joint Implementation, SCS Social Carbon Standard, VCS Verified Carbon Standard.

TEC: Technical expert; VAL: Validator; VER: Verifier; TL: Team leader; FIN EXP: Financial Expert; ITRP: Independent technical reviewer

RINA Services S.p.A. è accreditato/riconosciuto da
RINA Services S.p.A. Is accredited /recognized by

UNFCCC	quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM *as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects*
VCSA	per condurre la Validazione e la Verifica di Progetti VCS *to carry out Validation and Verification of VCS Projects*
GS Foundation	per condurre la Validazione e la Verifica di Progetti GS *to carry out Validation and Verification of GS Projects*
Ecologica Institute	per condurre la Validazione e la Verifica di rapporti SCS *to carry out Validation and Verification of SCS Reports*
American Carbon Registry ACR	per condurre la Validazione e la Verifica di Progetti ACR *to carry out Validation and Verification of ACR projects*
The Climate, Community & Biodiversity Alliance CCB	per condurre la Validazione e la Verifica di Progetti co-benefit CCB *to carry out Validation and Verification of co-benefit CCB projects*

Appendix 3. Documents reviewed or referenced

No	Author	Title	References to the document	Provider
1	Alize Enerji Elektrik Üretim A.Ş	PDD for "Kuyucak 25.6 MW Wind Farm Project, Turkey"	Version 0.1 of 13/03/2024 Version 0.2 of 29/05/2024 Version 0.3 of 24/07/2024 Version 0.4 of 02/09/2024	Project Participant
2	Alize Enerji Elektrik Üretim A.Ş	Baseline Study_Kuyucak_v0.4	Version 0.1 of 13/03/2024 Version 0.2 of 29/05/2024 Version 0.3 of 24/07/2024 Version 0.4 of 02/09/2024	Project Participant
3	Gold Standard Foundation	GS4GG Standard Requirements	version 1.2 of 23/10/2019	Publicly available
4	CDM Executive Board	CDM Validation and Verification Standard for Project Activities	version 03 of 09/09/2021	Publicly Available
5	Gold Standard Foundation	GS4GG PDD Report Form	version 1.5 of 29/06/2023	Publicly available
6	CDM Executive Board	"ACM0002", "Grid-connected electricity generation from renewable sources"	version 21.0 of 02/11/2022	Publicly Available
7	CDM Executive Board	Methodological Tool: Tool to calculate the emission factor for an electricity system	version 07.0 of 31/08/2018	Publicly Available
8	CDM Executive Board	Methodological Tool: Tool for the demonstration and assessment of additionality	version 07.0 of 23/11/2012	Publicly Available
9	CDM Executive Board	Methodological Tool: Tool to calculate project or leakage CO2 emissions from fossil fuel combustion	version 03.0 of 22/09/2017	Publicly Available
10	CDM Executive Board	Methodological Tool: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period	version 03.0.1 of 02/03/2012	Publicly Available
11	Demirtaş Village	Logbook	seen on 12/04/2024	Project Participant
12	Energy Market Regulatory Authority	Generation License EU/1309-3/945	date of 12/09/2007	Project participant
13	Alize Enerji Elektrik Üretim A.Ş	Registered PDD of 2nd crediting period	version 0.4 of 26/09/2022	Project participant
14	Turkish Ministry of Energy and Natural Resources	Türkiye National Electricity Grid Emission Factor Information Form	version 02 of 02/09/2022	Project Participant
15	The Ministry of Trade and Industry	Regulation of Metering and Testing of Metering Systems	of 24/07/1994	Project Participant
16	Turkish Energy Market Regulatory Authority	Communiqué for Measurement Devices used in the Electricity Market	of 22/03/2003	Project Participant
17	TEIAS	1st Index Protocol of the Electricity Meters	date of 27/09/2019	Project participant

18	Website: Argument: Language:	https://www.mevzuat.gov.tr/MevzuatMetin/1.5.6701. pdf Human Rights Turkish	Retrieved on 29/05/2024	Publicly Available
19	Website: Argument: Language:	http://www.ilo.org/ankara/areas-of-work/equality- discrimination/lang--tr/index.htm Gender Equality and Women's Rights Turkish	Retrieved on 29/05/2024	Publicly Available
20	Website: Argument: Language:	https://www.mevzuat.gov.tr/MevzuatMetin/1.5.3628.pdf Bribery and Corruption Turkish	Retrieved on 29/05/2024	Publicly Available
21	Website: Argument: Language:	http://www.ilo.org/ipec/programme/lang--en/index.htm Elimination of Child Labour English	Retrieved on 29/05/2024	Publicly Available
22	Website: Argument: Language:	http://www.ilo.org/ipec/Regionsandcountries/lang-- en/index.htm Regions and Countries English	Retrieved on 29/05/2024	Publicly Available
23	Website: Argument: Language:	http://www.ilo.org/dyn/normlex/en/f?p=1000:11200:0::NO::P11200_COUNTRY_ID:102893 Regions and Countries English	Retrieved on 29/05/2024	Publicly Available
24	Website: Argument: Language:	https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C155 Occupational Safety and Health Convention English	Retrieved on 29/05/2024	Publicly Available
25	Alize Enerji Elektrik Üretim A.Ş	SDG Impact Tool version	Version 02 of 14/06/2024 Version 01 of 13/03/2024	Project participant
26	Re-carbon	Validation report N° 887	Version 0.2 of 05/10/2022	Project Participant
27	Verra	https://registry.verra.org/app/search/VCS/All%20Projects, Argument: VERRA Database	Retrieved on 29/05/2024	Other
28	GCC	https://projects.globalcarboncouncil.com/pages/submitted_projects	Retrieved on 29/05/2024	Other
29	CDM Executive Board	Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation	version 03.0 of 22/09/2017	Publicly Available
30	CDM Executive Board	Tool to determine the remaining lifetime of equipment	version 01.0 of 16/10/2009	Publicly Available

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

Table 1. Remaining FAR from previous verification

FAR ID	1	**Section no.**		**Date:**
Description of FAR				
Project participant response				**Date:**
Documentation provided by project participant				
VVB assessment				**Date:**

Table 2. CR from this verification

CR ID	1	**Section no.**		**Date:** 29/05/2024
Description of CR				
1- Please share no double accounting commitment, ODA declaration and cover letter with VVB.				
Project participant response				**Date:** 29/05/2024
No double accounting commitment, ODA declaration and cover letter has been provided to the VVB				
Documentation provided by project participant				
DOE assessment				**Date:** 06/06/2024
1- All related documents has been provided. **Hence CR ID 1 is closed.**				

Table 3. CAR from this verification

CAR ID	1	**Section no.**	1.11	**Date:** 29/05/2024
Description of CAR				
1- Please review and revise emission factors and share OM-BM and CM separately according to Tool 07. Step 5: Calculate the build margin (BM) emission factor 72. In terms of vintage of data, project participants can choose between one of the following two options: (a) Option 1 - for the first crediting period, calculate the build margin emission factor ex ante based on the most recent information available on units already built for sample group m at the time of CDM-PDD submission to the DOE for validation. For the second crediting period, the build margin emission factor should be updated based on the most recent information available on units already built at the time of submission of the request for renewal of the crediting period to the DOE. **For the third crediting period, the build margin emission factor calculated for the second crediting period should be used. This option does not require monitoring the emission factor during the crediting period;** The following default values should be used for wOM and wBM: (a) Wind and solar power generation project activities: wOM = 0.75 and wBM = 0.25 (owing to their intermittent and non-dispatchable nature) for the first crediting period and for subsequent crediting periods; **(b) All other projects: wOM = 0.5 and wBM = 0.5 for the first crediting period, and wOM = 0.25 and wBM = 0.75 for the second and third crediting period**,8 unless otherwise specified in the approved methodology which refers to this tool. So please revise EF and ER for all report. 2- Please revise date of design certification for CP2. 3- ER value in pg.3 is not in line with Table 1 and excel sheet 4- Please add test frequency under parameter EGPJ,grid,y 5- Template version 1.5 must be used for the project.				
Project participant response				**Date:** 29/05/2024
1. It has been revised accordingly. 2. PP has added the date of design certification for CP2. 3. ER value in pg.3 has been changed 48,993 instead of 48,110. It is in line with Table 1 and excel sheet. 4. Test frequency has been added as 2 years under parameter EGPJ,grid. 5. Template version 1.5 has been used for the project				
Documentation provided by project participant				
VVB assessment				**Date:** 06/06/2024
1- EF calculation is verified. 2- OK 3- Verified 4- MR is verified and test frequency has been added. 5- OK **Hence CAR ID 1 is closed.**				

Table 4. FAR from this verification

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

Document information

Version	*Date*	*Description*
01.0	10/06/2016	Initial publication.