Verification and certification report form for GS project activities

VERICATION AND CERTIFICATION REPORT	
Title of the project activity	Corum Solar Power Plant Project
GS Reference number of the project activity	GS6566
Version number of the verification and certification report	4.0Aa
Completion date of the verification and certification report	14/10/2024
Monitoring period number and duration of this monitoring period	1th Monitoring Period of 2nd Crediting Period 19/12/2022-31/03/2024 (both days included)
Version number of monitoring report to which this report applies	Version 0.4 of 22/07/2024
Crediting period of the project activity corresponding to this monitoring period	19/12/2022-18/12/2027
Project participant(s)	Galata Wind Enerji A.Ş. (Private Entity, Project Owner)
Host Party	Türkiye
Sectoral scope(s), selected methodology(ies)	Sectoral scope 1: Energy Industries (Renewable-/non-renewable sources) AMS I.D., Consolidated baseline methodology for grid-connected electricity from renewable sources - Version 18.0
Estimated GHG emission reductions or net anthropogenic GHG removals for this monitoring period in the egistered PDD	11,721 tCO_2 (GS-VERs)
Certified GHG emission reductions or net anthropogenic GHG removals for this monitoring period	10,532 tCO_2 (GS-VERs)
Name of VVB	RINA Services S.p.A. (RINA)
Name, position and signature of the approver of the verification and certification report	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

This is the 2nd crediting period. The project started to electricity generation on 19/12/2017 and the project activity is a solar hybrid power plant consists of 8 unlicensed project creates the Corum SPP which is invested by Galata Wind Enerji A.Ş. The project names are Deniz SPP, Doğanay SPP, Hilalay SPP, Karagül SPP, Kızıl SPP, Maviay SPP, Portakal SPP and Şenay SPP are registered under the Galata Wind Enerji A.Ş. 8 unlicensed project creates Corum Solar Power Plant projects belong to same entity (Galata Wind Enerji A.Ş.) The projects are newly built grid-connected solar power plant project. All project capacities are same a 1 MWe and total capacity is 8 MWe AC as confirmed through the EPDK Desicion /12/ hence project is small scale. The generated electricity is fed to the Türkiye national grid. The estimated net electricity production of the project is 14,060 MWh and the annual emission reductions are estimated to be 9,122 tCO_2 per year as confirmed through the revised registered PDD /1/ and validation report /2/.

The proposed project activity comprises of renewable energy generation from solar to energy to generate and deliver electricity to the national grid without thermal energy production. The project type is solar which is an eligible project type as it is in accordance with Eligible Project Types & Scope under Renewable Energy Activity Requirements. 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 solar 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 at Tatar village, Merkez district in Çorum Province. The nearest residential area is Tatar village.

Scope of verification

Verification is the periodic independent review and ex-post determination by a VVB of the monitored reductions in GHG emissions that have occurred as a result of the registered GS project activity during a defined monitoring period. Certification is the written assurance by a VVB that, during a specific period in time, a project activity achieved the emission reductions as verified. The objective of this verification is to verify and certify emission reductions reported for the Corum Solar Power Plant Project for the period 19/12/2022 - 31/03/2024.

The scope of the verification is to verify that:

- The project activity has been implemented and operated in accordance with the revised registered PDD or any approved revised PDD /1/;
- The monitoring plan, including compliance with any guidance provided by the Board regarding deviations from the provisions of a registered plan and/or methodology;
- The data and calculation of GHG emission reductions have been assessed to correctly support the emission reductions being claimed.

The verification shall ensure that reported emission reductions are complete and accurate in order to be certified.

Verification process

Verification is conducted using RINA procedures in line with the GS requirements and requirements specified in the CDM Validation and Verification Standard available at the time of the verification starts and applying standard auditing techniques. RINA assess and determines that the implementation and operation of the project activity, and steps taken to report emission reductions comply with the GS criteria. The verification assessment involved a document review of relevant documentation and the onsite site audit.

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

Conclusion

RINA commissioned by Galata Wind Enerji A.Ş.has performed the verification of the emission reductions reported for the project activity Corum Solar Power Plant Project, GS Registration Reference No. 6566 for the monitoring period 19/12/2022-31/03/2024 with regard to the relevant GS requirements and principles for project activities. The project was re-validated by Re Carbon Ltd. (issued on 0.5 12/05/2023) /2/.

The GHG emission reductions are calculated on the basis of the approved methodology AMS I.D., Consolidated baseline methodology for grid-connected electricity from renewable sources - Version 18.0.0 /7/ and the monitoring plan included in the registered PDD version 0.4 of 18/04/2023 /1/. In our opinion the GHG emission reductions reported for the project in the monitoring report Version 0.4 of 22/07/2024 /3/ are fairly stated.

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 VVB or outsourced entity)	Involvement in			
						Desk review	Onsite inspection	Interview(s)	Verification findings
1.	Team Leader, Verifier, Technical Expert TA 1.2	IR	ERDOĞAN	Mehmet	RINA Türkiye	✓	✓	✓	✓

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	Rachev	Konstantin	RINA Bulgaria
2	Approver	**IR**	**D'Angelo**	**Giovanni**	**RINA HO**

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 in the quantification of emissions (which may be more likely to occur if personnel are unfamiliar with, or not well trained regarding, emissions processes or data recording).	Low	Being 1st verification of the 2nd crediting period, the project proponent is familiar with monitoring procedures and data reporting in line with the revised registered PDD and previous verification and certification reports. The prime monitoring parameter is net export to grid which is as per monthly generation report as recorded in calibrated energy meters. Hence, the risk level is low.	During the onsite audit, the verification team will interview the staffs of the GS team and check all records to confirm whether the monitoring plan has been well implemented. The major parameters used for determining the project's baseline emissions are the measurement of net electricity generation according to the monitoring plan is recorded monthly. The team will review the whole data set of the monthly report and crosschecked against invoice raised. The verification team will check the relevant records to confirm whether the data collection procedure and QA/QC procedure have been well implemented.
2.	Undue reliance on a poorly designed information system, which may have few effective quality controls.	Low	Being 1st verification of the 2nd crediting period, the project proponent has already established a well organized monitoring team, monitoring plan, including data collection procedure and QA/QC procedure consistent with registered monitoring plan. Monitoring equipments are calibrated at defined frequency. Hence, the risk level is low.	
3.	Manual adjustment of otherwise automatically recorded activity levels.	Low	As detailed in section C.2 below, the data of the main monitoring parameters are taken from calibrated meters (energy meter) and can be verified from totalizer values. The monitoring equipment's are calibrated according to national standards and rules. Hence, the risk level is low.	
4	An omission, misstatement, or erroneous reporting of information is material if it might lead, at an aggregated level, to an overestimation of the total GHG emission reductions or net anthropogenic GHG removals achieve by a registered GS project activity equal to or higher than the following thresholds:	Low	2 per cent of the emission reductions/removals for large-scale project activities achieving a total emission reduction of 300,000 tonnes of carbon dioxide equivalent per year or less	

C.2. Consideration of materiality in conducting the verification

The project activity happens at a single site and export to grid from the plant is monitored and recorded using calibrated energy meter and 100% data is available for verification. The data which directly affect emission reduction calculations being net electricity generation is monitored and measured by calibrated electricity meters, 100% verifiable. Hence, in line with paragraph 329 and section 9.1.2.3.1 of the CDM Validation and Verification standard /5/ no significant reporting risks to the materiality of the verification were envisaged while planning for the verification and were not identified during the verification process. During the course of the verification, the team reviewed the whole data set of monthly records for net electricity /14/ without any sampling. The data reported in the monitoring report are consistent with the monthly records, and the emission reductions are correctly calculated. In conclusion, the verification team confirms the data set to be free from material error.

SECTION D. Means of verification

D.1. Desk review

The monitoring report Version 0.4 of 22/07/2024 3/, the emission reduction calculations provided in the form of a spreadsheet version 0.1, of 20/03/2024 /8/, the approved baseline and monitoring methodology AMS I.D., Version 18.0.0 of 28/11/2014 /7/ and all the documentation provided to support the monitoring period /1 – 24/, was assessed as part of the verification. In addition, the Project Design Document (PDD) version 0.4 of 18/04/2023 /1/, in particular as regards the baseline estimations and the monitoring plan and the Validation Report version /2/ for the project, were reviewed. The list of all documents reviewed are referenced during the verification is available in Appendix 3 below.

D.2. Onsite Audit/Online Audit

Duration of onsite audit: 19/03/2024 & **Duration of online audit:**				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	Implementation and operation of the proposed project activity. Checked the monitoring equipment, interviewed key personnel of the plant to confirm the operational and data collection procedures, cross-checked between information provided in the monitoring report and data plant	Çorum Tatar, Türkiye	19/03/2024 03/04/2024 (online)	Mehmet ERDOĞAN
2.	Reviewed the information flows for generating, aggregating and reporting the monitoring parameters			
3.	Checked calibration performance, reviewed calculations and assumptions made in determining the GHG data and emission reductions			
4.	Checked the quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters			
5.	Cross-checked between information provided in the monitoring report and data evidence, including the Gold Standard parameters			

According to the GS, the latest version of the “Site Visit and Remote Audit Requirements” (v.2.0) is being used, it is not mandatory to the “Audit Techniques Template”. Site visit has been carried out on 19/03/2024 and also video call has been used as remote audit techniques to verify 19/03/2024 to 31/03/2024 period. As per VVB’s internal audit risk assessment, there is no risk and inconsistency related to Gs requirements for performing remote audit.

D.3. Interviews

No.	**Interviewee**			**Date**	**Subject**	**Team member**
	Last name	**First name**	**Affiliation**			
1.	B.E.	Çağla	Project Cons.	19/03/2024 03/04/2024	Implementation status of the project Monitoring equipment and operation Generated Electricity Monitoring of Gold Standard for Global Goal Parameters	Mehmet ERDOĞAN
2.	K.	Emre	Çorum SPP *Elec. Tech.*			
3.	Ö.	Semih	Çorum SPP Business Devl.			
4.	A.	Özgür	Çorum SPP *Env. Eng.*			
5.	B.	Taha	Tatar Village *Mukhtar*	19/03/2024 03/04/2024	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
6	B.	Esma	Tatar Village Stakeholder			
7	F.	Tuba	Tatar Village Stakeholder			
8	A.	Murat	Çorum Stakeholder			

The project employees were interviewed about the implementation status of the project, monitoring equipment and operation, generated electricity of the project activity.

During onsite 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 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 (Tatar Village, 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 /23/. have been checked. There isn't any positive or negative comment written on them. Because the monitoring period has not been ended when the verification activity occurs, a call organized with Tatar village Mukhtar on 03/04/2024. It is verified that there is no complaint during all MP.

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.

D.4. Sampling approach

Not applicable.

D.5. Clarification requests, corrective action requests and forward action requests raised

Areas of verification findings	No. of CR	No. of CAR	No. of FAR
Compliance of the monitoring report with the monitoring report form			
Compliance of the project implementation with the revised registered PDD	1		
Post-registration changes			
Compliance of the monitoring plan with the monitoring methodology including applicable tool and standardized baseline			
Compliance of monitoring activities with the registered monitoring plan		1	
Compliance with the calibration frequency requirements for measuring instruments			
Assessment of data and calculation of emission reductions or net removals			
Assessment of the sustainability parameters			
Total	1	1	-

SECTION E. Verification findings

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

Means of verification	The monitoring report latest version /3/ submitted by the PP have been the basis for starting the verification process. RINA confirms that the Monitoring report is based on the currently valid GS4GG MR template /9/.
Findings	NA
Conclusion	RINA verified that the monitoring report was completed in accordance with the GS4GG-MR-FORM - Monitoring report form, including its Attachment: Instructions for filling out the monitoring report form, version 1.1 /9/.

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

Based on the review of the Gold Standard Foundation /24/ validation report /2/, and previous verification report /19/ there is 1 FAR.

FAR #1: Refer rule update VALIDATION AND VERIFICATION BY SAME VVB (RU 2020 PR – PR V1.2) §2.2.1 shall apply. The VVB entire audit team shall be changed for the next verification.

Response # 1: . The Re-carbon has already changed to RINA SPA which means audit

team is already different for the first MP pf CP2.

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

Means of verification	The Monitoring Report for the project activity “Corum Solar Power Plant Project”, /3/ submitted by the Galata Wind Enerji A.Ş.have been the basis for the verification process. It was verified during onsite audit that the proposed project activity has been implemented and it is in operation in accordance with the project activity described in the revised registered PDD /1/. The starting date of operation and 1st crediting period is 19/12/2017. According to the revised registered PDD /1/ and previous verification report /19/. This is the 2nd crediting period which is started on 19/12/2022 and the project activity is a solar hybrid power plant consists of 8 unlicensed project creates the Corum SPP which is invested by Galata Wind Enerji A.Ş. The project names are Deniz SPP, Doğanay SPP, Hilalay SPP, Karagül SPP, Kızıl SPP, Maviay SPP, Portakal SPP and Şenay SPP are registered under the Galata Wind Enerji A.Ş. 8 unlicensed project creates Corum Solar Power Plant projects belong to same entity (Galata Wind Enerji A.Ş.). The projects are newly built grid-connected solar power plant project. All project capacities are same a 1 MWe and total capacity is 8 MWe AC as confirmed through the EPDK Desicion /12/ hence project is small scale. The generated electricity is fed to the Türkiye national grid. The estimated net electricity production of the project is 14,060 MWh and the annual emission reductions are estimated to be 9,122 tCO_2 per year as confirmed through the revised registered PDD /1/ and validation report /2/.
Findings	NA
Conclusion	RINA confirms that the above MR is based on the currently valid MR template /9/ and is completed in accordance with the applicable guidance document /9/. Based on the onsite audit and checking the above documents, RINA confirms that the project activity has been implemented and it is in operation as described above in accordance with the project activity in the revised registered PDD /1/.

E.4. Post-registration changes

E.4.1. Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline

Not available.

E.4.2. Corrections

Not available.

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

Not available

E.4.4. Inclusion of a monitoring plan to a registered project activity

Not available

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

Not available.

E.4.6. Changes to the project design of a registered project activity

Not available

E.4.7. Types of changes specific to afforestation and reforestation project activities

Not available

E.5. Compliance of monitoring plan with the monitoring methodology including applicable tool and standardized baseline

Means of verification	The project applies the approved methodologies AMS I.D., Consolidated baseline methodology for grid-connected electricity from renewable sources - Version 18.0.0 of 28/11/2014 /7/. The following tools are also applicable to the project activity: Tool to calculate the emission factor for an electricity system, version 05.0 /10/; "Tool for the demonstration and assessment of additionality", version 07.0.0 of 23/11/2012 /11/.
Findings	NA
Conclusion	The monitoring plan in the revised registered PDD /1/ is in accordance with the monitoring methodology AMS I.D., Consolidated baseline methodology for grid-connected electricity from renewable sources - Version 18.0.0 /7/.

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 parameters were available at the validation stage, which do not need to monitor during the crediting period, as per the revised registered PDD:

DATA/ PARAMETER	Source of data	Reported value for the project period	Assessment/ Observation
Combined Margin Emission Factor	Calculation	0.6488 tCO_2/MWh	As per the approved methodology AMS I.D version 18.0, the combined emission factor has been determined using the ex-ante option and so it is not requested to monitor and recalculate the emission factors during the crediting period. The combined emission factor is determined to be 0.6488 tCO_2/MWh in the revised registered PDD /1/ and validation report /2/.

Findings	**NA**
Conclusion	Data and parameters fixed ex-ante are in accordance with the registered revised PDD /1/.

E.6.2. Data and parameters monitored

Means of verification

The following parameters are monitored in accordance with the revised registered PDD /1/. The only monitoring parameter is "Quantity of net electricity generation supplied by the project plant to the grid in year y ($EG_{facility,y}$)" as per the registered monitoring plan presented in the revised registered PDD /1/. The parameter is monitored continuously as "MWh" by 16 electricity meters that are located at the project area. The 8 of them are main and the remaining 8 of them back up meters as follows:

Please see details for electricity meters below:

Doğanay SPP	**Electricity Meter (Main)**	**Electricity Meter (Back-up)**
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001349	65003325
Date of Calibration	15/05/2016	31/10/2017

Portakal SPP	**Electricity Meter (Main)**	**Electricity Meter (Back-up)**
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001148	65003416
Date of Calibration	08/09/2016	31/10/2017

Hilalay SPP	**Electricity Meter (Main)**	**Electricity Meter (Back-up)**
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001374	65003370
Date of Calibration	08/09/2016	14/12/2017

Şenay SPP	**Electricity Meter (Main)**	**Electricity Meter (Back-up)**
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001237	65003389
Date of Calibration	07/09/2016	31/10/2017

Deniz SPP	**Electricity Meter (Main)**	**Electricity Meter (Back-up)**
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001094	65003361
Date of Calibration	08/09/2016	31/10/2017

Maviay SPP	**Electricity Meter (Main)**	**Electricity Meter (Back-up)**
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001333	65003363
Date of Calibration	07/09/2016	31/10/2017

Kızıl SPP	**Electricity Meter (Main)**	**Electricity Meter (Back-up)**
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001047	65003339

Date of Calibration	07/09/2016	31/10/2017

Karagül SPP	**Electricity Meter (Main)**	**Electricity Meter (Back-up)**
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65000979	6503351
Date of Calibration	15/05/2016	31/10/2017

Net electricity generation will be measured by two meters for all locations which are sealed by Distribution Company. The meters will comply with EMRA (Energy Market Regulatory Authority) regulation /16/. 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" /15/ as explained in the PDD /1/. The maintenance and calibration of meters are under Distribution Company responsibility. If any major discrepancy occurs between the two meters, Distribution Company performs necessary calibration. The electricity meters are sealed by TEIAS as confirmed during the online audit with the pictures of electricity meters. Periodical calibration or maintenance has been fixed as once in 10 years. Since meters are sealed by Distribution Company, the project proponent cannot intervene with the devices. Because the project is not licensed small scale solar power project no need to conduct periodical tests for electricity meters, however, TEIAS can change this period depending on their timeline.

The all meters have the accuracy of 0.5s as confirmed through onsite audit and calibration performed by producer and examined via first index protocol /17/. The accuracy class of the meters complies with the "Communiqué for Measurement Devices used in the Electricity Market" /15/. The electricity meters are sealed by Distribution Company as confirmed via onsite audit.

According to the monitoring plan in the registered PDD /1/ and in the monitoring report, estimated $EG_{facility,y}$ and the following sustainability parameters (SDGs) are monitored.

$EG_{facility,y}$ Quantity of net electricity generation supplied by the project plant to the grid (starting from 19/12/2022-31/03/2024) as follows;

$EG_{facility,2022}$= 196,343 MWh

$EG_{facility,2023}$= 13,655.305 MWh

$EG_{facility,2024}$= 2,372.185 MWh

Total = 16,233.,833 MWh for MP.

The details of verified calculation are provided by the PP via calculation spreadsheet /8/.

Actual SDGs :

SDG 13: Emission Reduction: 10,532 tCO2 for MP total.

SDG 7: Affordable and Clean Energy: 16,233.833 MWh MP total.

SDG 8: Decent Work and Economic Growth:

Quantitative Employment: 5 people working in the plant.

Quality Employment: 5 employees work at the plant. All employees at the plant are provided health and safety issues in the monitoring period.

The following parameters have been monitored in accordance with the monitoring plan in the registered PDD /1/ and the monitoring report /3/.

Actual values of SDGs achieved during this monitoring period have been presented for the following sections of this report.

All data collected as part of monitoring will be archived electronically by the project

	owner and be kept at least for 2 years after the end of the last crediting period
Findings	**NA**
Conclusion	RINA's opinion that the monitoring of the project activity has been carried out in accordance with the monitoring plan in the revised PDD /1/.

E.6.3. Implementation of sampling plan

Means of verification	N/A
Findings	N/A
Conclusion	N/A

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

Means of verification

Distribution Company is responsible for calibration and maintenance of the devices as per the revised registered PDD. The project owner has no control on the meters since the meters are sealed by the Distribution Company. If any major discrepancy occurs between the two meters, TEIAS performs necessary calibration. During this monitoring period no discrepancy was occurred.

The meters (main and spare) were controlled by Distribution Company confirmed through first index protocol /17/. The periodical controls 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/. Because the project is not licensed small scale solar power project no need to conduct periodical tests for electricity meters, however, TEIAS can change this period depending on their timeline.

During onsite audit assessment, it was confirmed that the meters are in place and functions well and no breakdown has been recorded. The specification and calibration report details of electricity meters is provided below:

Please see details for electricity meters below:

Doğanay SPP	**Electricity Meter (Main)**	**Electricity Meter (Back-up)**
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001349	65003325
Date of Calibration	15/05/2016	31/10/2017

Portakal SPP	**Electricity Meter (Main)**	**Electricity Meter (Back-up)**
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001148	65003416
Date of Calibration	08/09/2016	31/10/2017

Hilalay SPP	**Electricity Meter (Main)**	**Electricity Meter (Back-up)**
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001374	65003370
Date of Calibration	08/09/2016	14/12/2017

Şenay SPP	**Electricity Meter (Main)**	**Electricity Meter (Back-up)**
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001237	65003389
Date of Calibration	07/09/2016	31/10/2017

Deniz SPP	Electricity Meter (Main)	Electricity Meter (Back-up)
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001094	65003361
Date of Calibration	08/09/2016	31/10/2017

Maviay SPP	Electricity Meter (Main)	Electricity Meter (Back-up)
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001333	65003363
Date of Calibration	07/09/2016	31/10/2017

Kızıl SPP	Electricity Meter (Main)	Electricity Meter (Back-up)
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001047	65003339
Date of Calibration	07/09/2016	31/10/2017

Karagül SPP	Electricity Meter (Main)	Electricity Meter (Back-up)
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65000979	6503351
Date of Calibration	15/05/2016	31/10/2017

Findings	**NA**
Conclusion	RINA's opinion that the monitoring of the project activity has been carried out in accordance with the monitoring plan in the revised registered PDD /1/.

E.8. Assessment of data and calculation of emission reductions or net removals

E.8.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

Means of verification	The baseline emissions include the CO_2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity, multiplying the electricity supplied to the grid (MWh) with the combined margin CO_2 emission factor for grid connected power generation in year. $BEy = (EGy - EG_{baseline}) \times EF_{grid,CM,y}$ Where: BEy = Baseline emissions in tonnes CO_2e $EF_{grid, CM,y}$= Combined margin CO_2e emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" [tCO_2e/MWh]. EG_y = Net electricity supplied to the Grid in MWh y = Refers to a given period Baseline emission for this monitoring period= 16,233.833 MWh * 0.6488 tCO_2e/MWh = 10,532 tCO_2e. The details of verified calculation are provided by the PP via calculation spreadsheet /8/.
Findings	NA
Conclusion	RINA verified that the baseline emissions were calculated in accordance with the revised registered PDD and methodology "AMS I.D", "Grid-connected electricity generation from renewable sources", version 18.0 of 28/11/2014 /7/.

E.8.2. Calculation of project GHG emissions or actual net GHG removals by sinks

Means of verification	The project emissions are assumed to be zero as per the AMS I.D /7/ since the project is a renewable energy project as defined in the revised registered PDD /1/ and validation report /2/.
Findings	NA
Conclusion	RINA verified that the project emissions were assumed 0 in accordance with the revised registered PDD /1/ and methodology AMD I.D /7/

E.8.3. Calculation of leakage GHG emissions

Means of verification	The leakage emissions are assumed to be zero as per the AMS I.D /7/ as defined in the revised registered PDD /1/. Since the project and leakage emissions are zero, the emission reduction equals to baseline emissions.
Findings	NA
Conclusion	Leakage was considered as zero in accordance with the applied methodology /7/.

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

Means of verification	According to the applied methodology "AMD I.D", "Consolidated baseline methodology for grid-connected electricity from renewable sources" /7/, the emission reductions have been calculated based on the following formula: Emission reductions are calculated as follows /8/: $ERy = BEy - PEy - LEy$ Where: ERy = Emission reductions in year y (t CO_2/yr). BEy = Baseline emissions in year y (t CO_2/yr). PEy = Project emissions in year y (t CO_2/yr). LEy = Leakage emissions in year y (t CO_2/yr). Baseline emission for this monitoring period= 16,233.833 MWh * 0.6488 tCO_2e/MWh = 10,532 tCO_2e. The details of verified calculation are provided by the

	PP via calculation spreadsheet /8/.
Findings	NA
Conclusion	The emission reduction calculations provided in the spreadsheet /8/ have been verified to be correct and in line with the revised registered PDD /1/ and applied methodologies /7/.

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

Means of verification	The emission reductions from the project for the monitoring period as reported in the monitoring report is equivalent to 10,532 tCO_2. The reported emission reductions are approx. 10.1% lower than the estimated emission reduction of 11,721 tCO_2 for the period 19/12/2022-31/03/2024 (both days included) as per the registered PDD /1/ due to solar weather conditions. The calculation is verified through calculation spreadsheet /8/.
Findings	**NA**
Conclusion	The actual emission reduction is lower than the estimated reduction given in the registered PDD /1/. The reason of the difference between the actual and estimation emission reduction is explained related to solar weather conditions.

E.8.6. Remarks on difference from estimated value in revised registered PDD

Means of verification	The reported emission reductions are approx. 10.1% lower than the estimated emission reduction of 11,721 tCO_2 for the period 19/12/2022-31/03/2024 (both days included) as per the registered PDD /1/ due to solar weather conditions. The calculation is verified through calculation spreadsheet /8/.
Findings	NA
Conclusion	The actual emission reduction is lower than the estimated reduction given in the registered PDD /1/. The reason of the difference between the actual and estimation emission reduction is explained related to solar weather conditions.

E.8.7. Actual GHG emission reductions or net anthropogenic GHG removals by sinks during the first commitment period and the period from 1 January 2013 onwards

Means of verification	The emission reductions from the project for the monitoring period as reported in the monitoring report Version 0.4 of 22/07/2024 /3/ is equivalent to 10,532 tCO_2. The calculation is verified through calculation spreadsheet /8/.
Findings	NA
Conclusion	The actual emission reduction is lower than the estimated reduction given in the registered PDD /1/. The reason of the difference between the actual and estimation emission reduction is explained related to solar weather conditions.

E.8.8. Assessment of the sustainability parameters

Means of verification

The assessment of the monitored parameters is described in the tables below:

Data variable	Source of Data	Reported value for the project period
Climate Action (SDG 13) Amount of CO_2 emission	Electricity Generation Calculation Spreadsheet /8/ /14/	Emission reduction: 10,532 tCO_2 Combined Emission Factor: 0.6488 tCO_{2e}/MWh
Assessment		
<u>Amount of CO_2, emissions</u>: The parameter is monitored once a year during crediting period by calculation with the emission factor and electricity generation. The net electricity generation values were controlled by the evidence of Distribution Company screenshot records and invoices /14/. The values for the monitoring period are verified through supporting documents and calculations /8/.		

Data variable	Source of Data	Reported value for the project period
Quantity of net electricity	Electricity	16,233.833 MWh net electricity

generation supplied by the project plant to the grid in year y (SDG 7)	meters Electricity Generation and Calculation /8/	generation for MP.

Assessment

$EG_{facility,y}$: This parameter is monitored by electricity meters and in this monitoring period totally 16,233.833 MWh is measured /8/ /14/ and calculated for the net electricity generation. The net electricity generation values were controlled by the evidence of Distribution Company screenshot records and invoices /14/. The values for the monitoring period are verified through supporting documents and calculations /8/.

Data variable	Source of Data	Reported value for the project period
Decent Work and Economic Growth (SDG 8): 8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious 8.8.2 Increase in national compliance of labour rights (freedom of association and collective bargaining) based on International Labour Organization (ILO) textual sources and national legislation, by sex and migrant status	Certificates and attendance lists of the trainings. /18/	5 employees work at the plant. All employees at the plant are provided Health & Safety Trainings

Assessment

Trainings: The parameter is monitored on a year base by checking the Occupational Health & Safety training records/certificates of the trainings. All the trainings are provided to the verification team /18/ and the details are presented in the MR /3/.

Data variable	Source of Data	Reported value for the project period
Decent Work and Economic Growth (SDG 8) 8.5 By 2030 achieve full and productive employment and decent work for all 8.5.2 Unemployment rate, by sex, age and persons with disabilities	SGK Records and Recruitment Documents /13/	5 employees are hired

Assessment

Employment Contracts and Rate of Local People: This parameter is monitored on each verification by the Registration Document /13/ of employees. It was confirmed that 5 employees are hired by the project.

<table>
<tr><td></td><td>
<table>
<tr><td>Data variable</td><td>Source of Data</td><td>Reported value for the project period</td></tr>
<tr><td>Principle 9.4
Release of pollutants
Water Quality and Quantity (Disposal of the wastewater)</td><td>Invoices
Records of transfer of wastewater from power plant by vacuum truck</td><td>No discharge and removal during this MP.</td></tr>
<tr><td colspan="3">Assessment</td></tr>
<tr><td colspan="3"><u>Records of Vacuum Truck:</u> Invoices of vacuum truck are controlled during site visit.</td></tr>
</table>
</td></tr>
<tr><td>Findings</td><td>NA</td></tr>
<tr><td>Conclusion</td><td>RINA verified that the GS indicators described in the monitoring report /3/ are accurate and real. Data to cross check the monitored parameters are available at the office of the company. Also, the registers of the sustainability indicators were available during the onsite audit.</td></tr>
</table>

Internal quality control

The draft final verification 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 will be/is performed by a technical reviewer(s) qualified in accordance with the RINA's qualification procedure.

SECTION F. Verification opinion

RINA Services Spa (RINA) has performed verification of the emission reductions reported for the project activity Corum Solar Power Plant Project, GS Registration Reference No. 6566 for the period 19/12/2022-31/03/2024 (both days included), with regard to the relevant GS4GG requirements and principles /4/ /5/. The project participants are responsible for the preparation for the collection of data in accordance with the monitoring plan and the reporting emission reductions from the project. It is RINA's responsibility to express an independent verification opinion on the reported emission reductions from the project and VVBs not express any opinion on the selected baseline scenario or on the validated and revised registered PDD. Based on documented evidences and corroborated by an on-site assessment RINA can confirm that: (i) the project has been implemented and operated as per the revised registered PDD; (ii) the monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable GS requirements and principles; (iii) the monitoring is in place as per the applied baseline and monitoring methodology; (iv) the monitoring complies with the registered monitoring plan; (v) the monitoring plan in the revised registered PDD is as per the applied baseline and monitoring methodology.

SECTION G. Certification statement

It is RINA's opinion that the GHG emission reductions (GS VERs) stated in the latest version of monitoring report (Version 0.3 of 16/05/2024) /3/ for the project activity "Corum Solar Power Plant Project" for the period 19/12/2022-31/03/2024 (both days included) are fairly stated. The GHG emission reductions were calculated correctly on the basis of the approved monitoring methodology AMS I.D", "Grid-connected electricity generation from renewable sources", version 18.0 of 28/11/2014 /7/. Hence RINA is able to certify that the emission reductions from the project during the monitoring period 19/12/2022-31/03/2024 (both days included) amount to 10,532 tCO_2 (GS-VERs) totally. For 19/12/2022 to 31/12/2022 ER is 127 tCO_2 (GS-VERs); 01/01/2023 to 31/12/2023 ER is 8,866 tCO_2 (GS-VERs); 01/01/2024 to 31/03/2024 ER is 1,539 tCO_2 (GS-VERs).

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
EPIAS	Energy Market Operation Inc.
ER	Emission Reductions
FAR	Forward Action Request
GHG(s)	Greenhouse gas(es)
GS4GG	Gold Standard for Global Goals
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)
TEIAS	Turkish Electricity Transmission Company (Turkiye Elektrik Iletim A.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

CERTIFICATO DI QUALIFICA
QUALIFICATION CERTIFICATE

Si attesta che il sig./sig.ra: *We declare that Mr/Mrs/Ms:*	**Konstantin Dimitrov RACHEV**
è qualificato come[1]: *is qualified as:*	**TL – VAL – VER – TEC – ITR**
nello schema[2]: *for the scheme:*	**GS4GG – VCS – SCS – UER – CCB - ISO14064-2**
per le seguenti aree tecniche: *for the following technical areas:*	**1.2 – 3.1 – 5.1 – 13.1**

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA *TECHNICAL AREA DESCRIPTION*	SCOPO SETTORIALE *SECTORAL SCOPE*
1.2	Renewables	1
5.1	Chemical industry	5
13.1	Solid waste and wastewater	13
3.1	Energy demand	3

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	19/07/2016	-
1	20/03/2022	Update qualification as ITR
2	31/01/2024	Update to TA 3.1

Il Responsabile di schema
Scheme Manager

[1] **Legend:**

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

[2] **Legend:**

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

Appendix 3. Documents reviewed or referenced

No	Author	Title	References to the document	Provider
1	Galata Wind Enerji Anonim Şirketi	GS-PDD for "Corum Solar Power Plant Project"	version 0.4 of 18/04/2023	Project participant
2	Re Carbon Ltd.	Re-Validation report for GS project activities	version 05 issued on 12/05/2023	Project participant
3	Rüzgar Danışmanlık	GS4GG Monitoring Report for "Corum Solar Power Plant Project"	Version 0.1 of 20/03/2024 Version 0.2 of 26/04/2024 Version 0.3 of 16/05/2024 Version 0.4 of 22/07/2024	Project participant
4	Gold Standard Foundation	Gold Standard for Global Goals Principles & Requirements	version 1.2 of 23/10/2019	Publicly available
5	Gold Standard Foundation	Gold Standard for Global Goals Validation/Verification Body Requirements	Version 2.0 of 14/01/2021	Publicly available
6	CDM Executive Board	Clean Development Mechanism Validation and Verification Standard	version 03.0 of 09/09/2021	Publicly available
7	CDM Executive Board	AMS I.D, "Grid-connected electricity generation from renewable sources"	version 18.0 of 28/11/2014	Publicly Available
8	Rüzgar Danışmanlık	Corum Solar Power Plant Project_v01	Version 0.1 of 20/03/2024	Project participant
9	Gold Standard Foundation	Gold standard for the global goals Monitoring Report Template	version 1.1 of 14/10/2020	Publicly available
10	CDM Executive Board	Methodological Tool "Tool to calculate the emission factor for an electricity system"	version 07.0 of 31/08/2018	Publicly available
11	CDM Executive Board	Methodological Tool " Tool for the demonstration and assessment of additionality"	version 07.0 of 23/11/2012	Publicly available
12	Energy Market Regulatory Authority	Technical Evaluation Form	date of 15/05/2015	Project participant
13	Social Security Institution	Recruitment Document for Employees	Date of 05/03/2024	Project participant
14	Galata Wind Enerji A.Ş.	Invoices delivered to Distrubution Company for each month	MP	Project participant
15	Energy Market Regulatory Authority	Communiqué for Measurement Devices used in the Electricity Market	date of 22/03/2003	Publicly available
16	Energy Market Regulatory Authority	Regulation of Metering and Testing of Metering Systems	date of 24/07/1994	Publicly available
17	TEIAS	1st Index Protocol of the Electricity Meters	date of 12-13/12/2017 and 08/09/2021	Project participant
18	EkoGlobal ISG	Health and Safety Training for all Employees	Date of 21/02/2024; 09/03/2023,01/06/2023	Project participant

19	Re-carbon	3rd Verification Report (From 01/03/2022 to 18/12/2022 (both days included))	Version 0.5 of 20/10/2023	Project participant
20	GS4GG	Site Visit and Remote Audit Requirements (v.2.0)	Version 2.0 of 30/05/2023	Publicly available
21	VCS Website	https://registry.verra.org/app/search/VCS/All%20Projects	Retrieved on: 22/04/2024	Project participant
22	GCC Website	https://projects.globalcarboncouncil.com/pages/submitted_projects https://projects.globalcarboncouncil.com/pages/approved_projects	Retrieved on: 22/04/2024	Project participant
23	Galata Wind Enerji A.Ş.	Tatar Village	Logbook	seen on 19/03/2024
24	GS4GG	Performance Review under Gold Standard for the Global Goals	Submitted on 01/12/2023	Project participant

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

Table 1. Remaining FAR from previous verification/validation or GS Review.

FAR ID	1	**Section no.**		**Date:**
Description of FAR				
Refer rule update VALIDATION AND VERIFICATION BY SAME VVB (RU 2020 PR – PR V1.2) §2.2.1 shall apply. The VVB entire audit team shall be changed for the next verification.				
Project participant response				**Date:**
The VVB audit team has changed for the first MP pf CP2.				
Documentation provided by project participant				
VVB assessment				**Date:**
Re-Validation was conducted by Re-carbon so the rule is not applicable for RINA.				

Table 2. CR from this verification

CR ID		**Section no.**		**Date:** 26/04/2024
Description of CR				
1- Please share technical evaluation form to support coordinates and generation values. 2-Please share connection agreement. According to connection agreement if any test activity is not described please describe it in MR briefly. 3- Please share pic of logbook				
Project participant response				**Date: :** 26/04/2024
1-The technical evaluation form to support coordinates and generation values have been provided to the VVB 2-The connection agreements have been already shared with VVB. The test activity has been described in the MR. 3- The logbook picture has been already provided to the VVB also VVB has taken photograph by himself during the on-site visit.				
Documentation provided by project participant				
DOE assessment				**Date:** 13/05/2024
1- OK **2-** OK **3-** OK **Hence CR ID 1 closed.**				

Table 3. CAR from this verification

CAR ID		**Section no.**		**Date:** 26/04/2024
Description of CAR				
1- Please revise cover page methodology section. Menthodology name is not described. 2- PDD version in cover page is not true. Version number is 0.5.				
Project participant response				**Date:** 26/04/2024
1-The methodology section of cover page, menthodology name has been added. 2- PDD version in cover page is true. Version number is 0.5 with dated 15/02/2019 is CP1 one, CP2 one is 0.4 with dated 18/04/2023.				
Documentation provided by project participant				
DOE assessment				**Date:** 13/05/2024
1- OK **2-** OK **Hence CAR ID 1 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.