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for the Global Goals

TEMPLATE

MONITORING REPORT

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VERSION v. 1.1

RELATED SUPPORT - TEMPLATE GUIDE Monitoring Report v. 1.1

This document contains the following Sections

SECTION A - Description of project

SECTION B - Implementation of project

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KEY PROJECT INFORMATION

Key Project Information

GS ID (s) of Project (s)	GS6566
Title of the project (s) covered by monitoring report	Çorum Solar Power Plant Project
Version number of the PDD/VPA-DD (s) applicable to this monitoring report	0.4 18/04/2023
Version number of the monitoring report	0.3
Completion date of the monitoring report	22/07/2024
Date of project design certification	15/02/2019 CP1 19/05/2023 CP2
Date of Last Annual Report	31/03/2022
Monitoring period number	04
Duration of this monitoring period	19/12/2022 to 31/03/2024
Project Representative	Galata Wind Enerji A.Ş.
Host Country	Turkey
Activity Requirements applied	<input type="checkbox"/> Community Services Activities <input checked="" type="checkbox"/> Renewable Energy Activities <input type="checkbox"/> Land Use and Forestry Activities/Risks & Capacities <input type="checkbox"/> N/A
Methodology (ies) applied and version number	AMS I.D Grid connected renewable electricity generation Version 18 Sector 1(Energy industries (renewable - / non-renewable sources
Product Requirements applied	<input checked="" type="checkbox"/> GHG Emissions Reduction & Sequestration <input type="checkbox"/> Renewable Energy Label <input type="checkbox"/> N/A

Table 1 - Sustainable Development Contributions Achieved

Sustainable Development Goals Targeted	SDG Impact	Amount Achieved	Units/ Products
SDG 7 : Affordable and Clean Energy	T: 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix I: 7.2.1 "Renewable energy share in the total final energy consumption	19/12/2022 to 31/12/2022: 196.343 01/01/2023 to 31/12/2023: 13,665.305 01/01/2024 to 31/03/2024: 2,372.185 Total of 19/12/2022 to 31/03/2024: 16,233.833	MWh
SDG 8 : Decent Work and Economic Growth	T: 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	The project provides 5 employees	People
SDG 8 : Decent Work and Economic Growth	T: 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	All employee trained on health and safety training issues during this monitoring period	All
SDG 13: Climate Action	10,	19/12/2022 to 31/12/2022: 127 01/01/2023 to	VERs

		31/12/2023: 8,866	
		01/01/2024 to 31/03/2024: 1,539	
		Total of 19/12/2022 to 31/03/2024: 10,532	

Table 2 – Product Vintages

Start Dates	End Dates	VERs
19/12/2022	31/12/2022	127
01/01/2023	31/12/2023	8,866
01/01/2024	31/03/2024	1,539

SECTION A. DESCRIPTION OF PROJECT

A.1. General description of project

The project participant Galata Wind Enerji A.Ş. is the legal owner of the project and has the legal rights for the credits. But 8 unlicensed project creates the Çorum 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 Çorum 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. The project is locating in Merkez District, Tatar village of Çorum. The project started to electricity generation on 19/12/2017.

The estimated electricity generation is 14,060 MWh² and emission reduction is 9,122 tCO_{2e} per year by the project activity during the second crediting period.

The project has supplied the Turkish National Grid (hereafter referred to as „the Grid“) with zero emission energy, generated by the solar energy. Electricity currently generated by the grid is relatively carbon intensive, with a combined margin emission factor of 0.6488/MWh. The connection point of the project activity is Corum TM-2 TRA-DM 12/1A.

Through the estimated electricity generation total emission reduction is 45,564 tCO₂e for the second crediting period. The project operational lifetime is 25 years.

The actual electricity generation is 16,233.833 MWh and 10,532 tCO₂e emission reduction for this fourth monitoring period.

The Project aims to generate electricity from solar energy and feed it to the national electricity grid. The project helps reduce GHG emissions generated from the national grid, which is significantly based on fossil fuel electricity generation. The national electricity settlement centre manages supply of power plants such that the power generation of thermal power plant-dominated generation system is reduced at the same amount the Project activity exports power. This ensures that the emissions are decreased.

Relevant dates for the project activity:

Table 2: The project activity milestones are

Milestones	Dates
EIA Exempt Letters	04/06/2015
Zoning Approval Letter	12/01/2017
Board Decision(For Carbon Prior Consideration)	08/02/2017
EPC Agreement	06/07/2017
Construction Start Date	06/07/2017
Connection Opinion Letter	18/10/2017
Energy Transmission Line Provisional Acceptance	19/11/2017
Provisional Acceptance for 8 unlicensed projects	19/12/2017
Gold Standards registration of Project Activity	Equation (1)Date of GS Feedback Round I: 15/06/2018
First monitoring period	19/12/2017- 31/07/2019
Second monitoring period	01/08/2019- 28/02/2022
Third monitoring period	01/03/2022-18/12/2022
CP2 Renewal GS approval date	19/05/2023
Fourth monitoring period	19/12/2022-30/03/2024

A.2. Location of project

The project is located at Tatar village of Merkez district, in Çorum province. The nearest residential area is Tatar village. The coordinates of the project area as the following:

Northern Tip: 653025,31 / 4484695,69

Southern Tip: 652950,39 / 4484140,17

Eastern Tip: 653185,01 / 4484725,92

Western Tip: 652884,51 / 4484188,95

Please see below the maps showing the location of the project activity in Turkey and the locations of the project area:

Figure 1 Tatar Village of Turkey

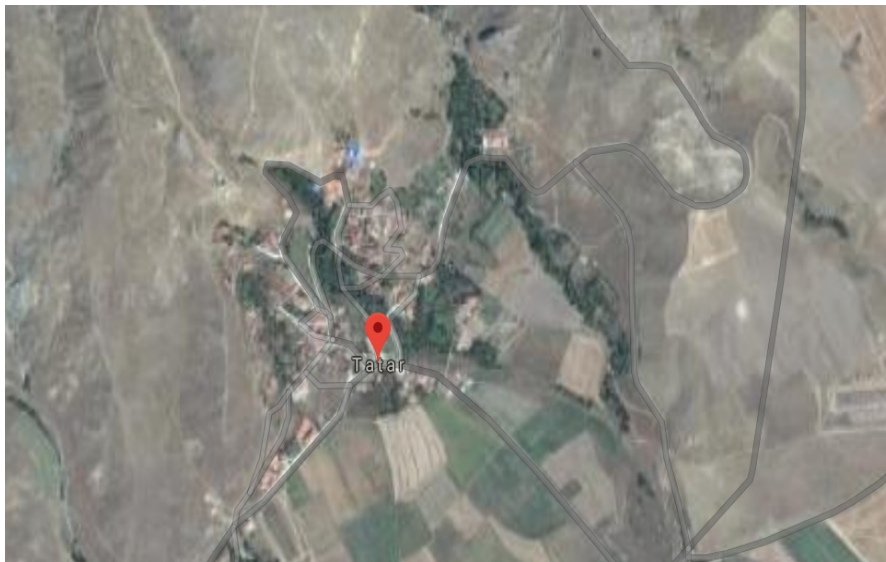


Figure 2 The location of the project activity



Table 3: The locations of the project area¹

Deniz SPP

	East	North
K1	652997,82	4484481,4
K2	653040,3	4484548,09
K3	653261,25	4484530,71
K4	653262,34	4484535,81
K5	653262,08	4484466,78
K6	653275,09	4484532,45
K7	653280,24	4484529,67
K8	653284,12	4484481,49
K9	653300,67	4484498,77

Doğanay SPP

	East	North
K1	652930,16	4484722,6
K2	652930,52	4484797,54
K3	652986,62	4484692,35
K4	652991,49	4484794,38
K5	653008,65	4484697,59
K6	653022,75	4484789,46
K7	653025,31	4484695,69
K8	653034,09	4484690,26
K9	653055,34	4484785,04
K10	653087,58	4484782,1
K11	653114,42	4484775,24
K12	653136,35	4484767,91
K13	653164,22	4484757,05
K14	653174,8	4484745,01
K15	653184,91	4484726,1
K16	653185,01	4484725,92

¹ Çorum SPP Technical Evaluation Forms

Hilalay SPP

	East	North
K1	652872,38	4484284,46
K2	652913,08	4484348,37
K3	653235,05	4484270,09
K4	653164,8	4484297,14
K5	653180,84	4484310,67
K6	653203,81	4484326,9
K7	653207,06	4484332,28

Karağül SPP

	East	North
K1	653044,66	4484341,06
K2	653126,09	4484396,5
K3	653126,92	4484400,66
K4	653128,97	4484410,92
K5	653130,98	4484398,08
K6	653131,4	4484474,09
K7	653138,24	4484385,96
K8	653138,73	4484421,36
K9	653055,34	4484785,04
K26	653244,87	4484384,53
K27	653248,64	4484447,01
K28	653261,04	4484454,17
K29	653263,6	4484465,63
K30	653265,08	4484466,78
K31	6532700,41	4484389,19
K32	653270,48	4484392,81

Kızıl SPP

	East	North
K1	653034,09	4484690,26
K2	653037,68	4484688,04
K3	653038	4484652,38
K4	653048,28	4484585,35
K5	653048,45	4484661,49
K6	653049,33	4484675,42
K7	653184,91	4484726,1

K8	653185,01	4484725,92
K9	653194,13	4484703,96
K10	653202,16	4484687,64
K11	653219,92	4484666,57
K12	653238,23	4484646,86
K13	653256,73	4484634,9

Maviay SPP

	East	North
K1	653034,09	4484690,26
K2	653037,68	4484688,04
K3	653038	4484652,38
K4	653048,28	4484585,35
K5	653048,45	4484661,49
K6	653049,33	4484675,42
K7	653184,91	4484726,1
K8	653185,01	4484725,92
K9	653194,13	4484703,96
K10	653202,16	4484687,64
K11	653219,92	4484666,57
K12	653238,23	4484646,86
K13	653256,73	4484634,9

Portakal SPP

	East	North
K1	652913,08	4484348,37
K2	652952,47	4484410,2
K3	652997,82	4484481,4
K4	653046,66	4484341,06
K5	653131,4	4484474,09

Senay SPP

	East	North
K1	652866,32	4484274,96
K2	652872,38	4484284,46
K3	652884,51	4484188,95
K4	652887,85	4484184,43
K5	652891,73	4484148,57

K28	653079,48	4484246,14
K29	653092,12	4484245,87
K30	653101,61	4484245,49
K31	653124,28	4484260,3
K32	653135,05	4484270,09

A.3. Reference of applied methodology

The project applies CDM-EB approved methodology AMS I.D., Version 18.0.0.² Sector 1 (Energy industries (renewable - / non-renewable sources which is an approved methodology under Gold Standard.

The methodology refers to:

- “Tool to calculate the emission factor for an electricity system”, Version 06.0.0³.
- Demonstration of additionality of small-scale project activities Version 10.0⁴
- Tool to determine the remaining lifetime of equipment”, Version 01.⁵

A.4. Crediting period of project

Type of crediting period: Renewable

Date of the crediting period:19/12/2022-18/12/2027⁶

Length: 5 years 0 months, this is planned to be renewed. (15 years totally)

This is second crediting period.

SECTION B. IMPLEMENTATION OF PROJECT

B.1. Description of implemented project

Çorum Solar Power Plant Project is invested by Galata Wind Enerji A.Ş. The 8 unlicensed project creates the Çorum 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. 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.

² <https://cdm.unfccc.int/methodologies/DB/W3TINZ7KKWCK7L8WTFQQOFQQH4SBK>

³ <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-07-v6.pdf>

⁴ <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-21-v1.pdf>

⁵ <http://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-10-v1.pdf>

⁶ [PP has been chosen this date for the full 2018 GSVERs. This date is between first and full capacity Acceptance Protocol by Ministry](#)

The project is in Merkez District, Tatar village of Çorum. The project started to electricity generation on 19/12/2017. Provisional acceptances are signed between TEDAŞ and 8 solar power plant legal entity. The estimated electricity generation is 14,060 MWh per year by the project activity.

The project has supplied the Turkish National Grid (hereafter referred to as „the Grid“) with zero emission energy, generated by the solar energy. Electricity currently generated by the grid is relatively carbon intensive, with a combined margin emission factor of 0.6488/MWh. The connection point of the project activity is Çorum TM-2 TRA-DM 12/1A. Through the estimated electricity generation total emission reduction will be 9,122 tCO₂e per year and 45,564 tCO₂e for the second crediting period. The project operational lifetime is 25 years.

The full commissioning date of the project activity was 19/12/2017 which means the project started to electricity generation on 19/12/2017. Provisional acceptances are signed between TEDAŞ and 8 solar power plant legal entity. The capacity of Corum Solar Power Plant Project is 8 MW and the amount of annual production is 16,233.833 MWh during this monitoring period. Solar Energy is an environment friendly technology.

The main equipment used in the Project are Photovoltaic Modules and Invertors with the following specifications.

Table 4 Technical specifications of the typical modules are as follows⁷

Module Type	JKM320PP-72
Type of Modules	Polycrystalline
Maximum Power (Pmax)	320 Wp
Maximum Voltage (Vmp)	37.4 V
Maximum Power Current (Imp)	8.56 A
Open Circuit Voltage (Voc)	46,4 V
Short Circuit Current (Isc)	9,05 A
Module Efficiency STC (%)	16,49 %
Maximum System Voltage (V)	1000 VDC (IEC)
Power Tolerance	0 / +3%
Maximum fuse rating	15 A

Table 5 Technical specifications of the typical invertors are as follows⁸

Model	SMA / MLX 60
Rated power at nominal voltage	60 kW
Maximum Input Voltage	1000 V
MPP voltage range	570 V to 800 V @400 Vac, 685 V to 800 V @480 Vac
Max. input voltage	565 V @400 Vac, 680 V @480 Vac

⁷ Jinko Solar Technical Data Sheet

⁸ SMA Technical Data Sheet

Max. DC short-circuit current	110 A / 150 A
Number of independent MPP inputs	1/1 (split up by external DC-Combiner Box)
Max. efficiency / European efficiency / CEC efficiency	98.6 % / 98.0 % / 98.0 %

The project activity has 29,376 Photovoltaic Modules and 135 invertors. Project technical lifetime is determined through "Tool to determine the remaining lifetime of equipment" (Version 01). The project option is selected as (a) as below:

- (a) Use manufacturer’s information on the technical lifetime of equipment and compare to the date of first commissioning.

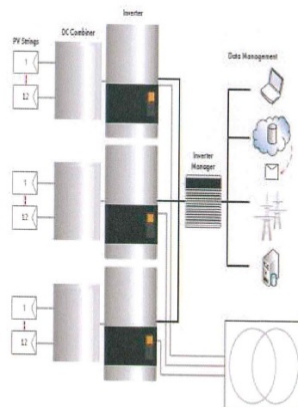
According to the equipment agreement, the system has 25 years linear pique power warranty. Also, the project activity is unlicensed power plant and government guarantees 10-year electricity purchasing so operational lifetime of the project is 25 years through linear piques power warranty.

Latest building technologies are used in the project. National and international standard values are based in used materials.

The project has been connected to Corum 2 TM that has 31,5 kV medium voltage. Latest building technologies has been used in the project. National and international standard values are based in used materials.

The following figure represents the line diagram of the project activity, including metering points:

Figure 3 Single Line Diagram



The scheme shows the connection points of Çorum Solar Power Project with the national grid. The Çorum Solar Farm has to be connected to the national grid via 31.5 kV Medium Voltage overhead transmission line. Solar System is connected to the meters through a step-up transformer 154/31.5 kV

In accordance with AMS-I.D., version 18.0 no project emissions are relevant for the project activity since these emissions are occurred because of the operation of geothermal power plants and water reservoirs of hydropower plants.

B.1.1 Forward Action Requests

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.

PP response # 1: The Re-carbon has already changed to RINA SPA which means audit team is already different for the first MP of CP2.

B.2. Post-Design Certification changes

B.2.1. Temporary deviations from the approved Monitoring & Reporting Plan, methodology or standardized baseline

There is no request for deviation applied during this monitoring period.

B.2.2. Corrections

There are no corrections applied during this monitoring period.

B.2.3. Changes to start date of crediting period

There are no changes to start date of crediting period.

B.2.4. Permanent changes from the Design Certified monitoring plan, applied methodology or applied standardized baseline.

B.2.5. Changes to project design of approved project

There are no changes in this third monitoring report.

SECTION C. DESCRIPTION OF MONITORING SYSTEM APPLIED BY THE PROJECT

According to the Turkish Law and Regulations, the methods of monitoring the net electricity fed to the grid and quality control and assures are explained below:

Data processing and archiving: Monitoring data is collected in accordance with the agreement done between the project owner and YEDAS Electricity Authorised Distribution Company which provides the infrastructure for the connection to the national grid. Connection Agreement has signed on 25/04/2016 with YEDAS Electricity Authorised Distribution Company. The metering system is defined in the agreement as two groups: main meter and spare meter. The design of the metering system is checked and approved by YEDAS before commissioning of the plant. The technical specifications of the power meters should be in line with Measure and Metering Devices Regulation by

Ministry of Industry and Trade. In addition, the Communiqué for Power Meters announced by Energy Market Regulations Authority (EMRA) requires all meters to be in line with either Turkish Standards Institution or International Electrotechnical Commissions Standards. The meters are placed at the point the electricity is fed to the grid and sealed on behalf of both parties. This prevents any intervention and assures the accuracy and quality of the measurements. All requirements and specifications of the meters have been done according to Communiqué on the counter to be used in the Electricity Market by Energy Market Regulatory Authority on 22/04/2011.

Data is stored electronically, during the crediting period and at least two years after the last issuance of credits for the solar power project activity in the concerning crediting period. The Project Participant is responsible for storage of data received from the measuring devices.

QA/QC procedures: The main and spare meter readings are recorded monthly and cross-checked whether calibration is required. The capacity of the transmission line connected is 34 kVA, the accuracy class for power meters have been defined in the Communiqué for Power Meters as 0.5 s class. The calibration is implemented in accordance with the related standard procedures. The periodical maintenance is under the responsibility of YEDAS and has been fixed as once in 10 years.⁹ It is under the responsibility of YEDAS. The net electricity export/supplied to a grid is the difference between the measured quantities of the grid electricity export and the import. The main and spare meter readings are recorded monthly and cross-checked whether calibration is required.

Roles and responsibilities: The Project aim to create local employment opportunities in the project region in a sustainable way. The Project proponent prefers to prioritize personnel from the project region, which is defined as a Gold Standard indicator to be verified each year. The proposed project provides local employment both during the construction and operational phases. It is 5 employees' permanent during the operation of the plant. Roles and responsibilities have been summarized in the following chart:

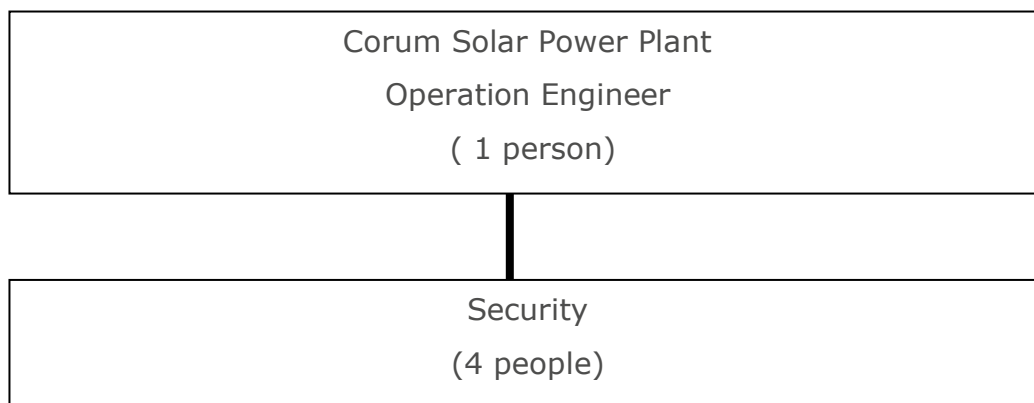
The internal control procedures maintain the reliability and accuracy in the data transfer and calculations. The plant personal records the data on regular basis from both meters and compares the values for consistency. The responsible engineer performs regular checks of this procedure each month and controls the monthly data of main and spare meters. If any difference occurs between the two meters, YEDAŞ has to be informed for further actions.

⁹ <https://www.resmigazete.gov.tr/eskiler/2016/06/20160629-22.htm>

Reliability and accuracy of monthly values is reached by comparative readings both from the project participant and YEDAŞ, where high accuracy is guaranteed and needed by the requirements of billing purposes.

There is not any equipment failure encountered during this monitoring period. There is negligible amount of domestic wastewater produced in this site. There is domestic solid waste produced, these are disposed of by the personnel themselves at the nearest Tatar village in the trash containers to be picked up municipality services. There is no hazardous waste has been occurred during this monitoring period.

Roles and responsibilities have been summarized in the following organisation chart:



SECTION D. DATA AND PARAMETERS

D.1. Data and parameters fixed ex ante or at renewal of crediting period

I: 7.2.1 "Renewable energy share in the total final energy consumption"

Data parameter	EF _{CO₂,grid,y}
Unit	tCO ₂ /MWh
Description	Combined margin CO ₂ emission factor for the project electricity system in year y
Source of data	Republic of Turkey Ministry of Energy in Emission Factor 2020
Value(s) applied	0.6488
Choice of data or Measurement methods and procedures	Calculate baseline emission
Purpose of data	Calculation of baseline emissions - to demonstrate contribution to SDG7- 7.2.1 Renewable energy share in the total final energy consumption

D.2 Data and parameters monitored

Relevant SDG Indicator/Safeguarding Principle	Safeguarding Principle 9.4: Release of pollutants
Data / Parameter	Water Quality and Quantity (Disposal of the wastewater)
Unit	N/A
Description	During the construction and operation phases, domestic wastewater produced by workers collected in impermeable septic tanks. This wastewater are collected by vacuum trucks of the Municipality of Çorum and disposed according to Regulation on Waste Water Control.
Source of data	Records of transfer of wastewater from power plant by vacuum truck
Value(s) applied	N/A
Measurement methods and procedures	N/A
Monitoring frequency	Once for each monitoring period
QA/QC procedures	N/A
Purpose of data	To monitor compliance to Safeguarding Principle 4.3.4 (Release of pollutants)
Additional comment	-

SDG 7: Affordable and Clean Energy

7.2.1 Renewable energy share in the total final energy consumption:

Data / Parameter	EGfacility,y
Unit	MWh/yr
Description	Quantity of net electricity supplied to the grid in year y
Source of data	Data measured by YEDAŞ
Value(s) applied	Net electricity generation between 19/12/2022-31/03/2024: 16,233.833 MWh
Measurement methods and procedures	The net electricity generation supplied to the grid will be measured continuously by meters (both main and spare) and recorded monthly. Please see B.7.3. for more detailed description of the monitoring plan.

Monitoring frequency

Continuous measurement and at least monthly recording. (Remote automatic meter reading system-OSOS).

Information of the meters are listed as followed:

Doğanay SPP	Electricity Meter	Electricity Meter (Secondary)
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001349	65003325
Date of installation	12/12/2017	14/12/2017
Date of initial calibration	07/09/2016	31/10/2017

Portakal SPP	Electricity Meter	Electricity Meter (Secondary)
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001148	65003416
Date of installation	13/12/2017	14/12/2017
Date of initial calibration	08/09/2016	31/10/2017

Hilalay SPP	Electricity Meter	Electricity Meter (Secondary)
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001374	65003370
Date of installation	13/12/2017	14/12/2017
Date of initial calibration	08/09/2016	31/10/2017

Şenay SPP	Electricity Meter	Electricity Meter (Secondary)
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001237	65003389
Date of installation	13/12/2017	14/12/2017
Date of initial calibration	07/09/2016	31/10/2017

Deniz SPP	Electricity Meter	Electricity Meter (Secondary)
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001094	65003361
Date of installation	13/12/2017	14/12/2017
Date of initial calibration	08/09/2016	31/10/2017

Maviay SPP	Electricity Meter	Electricity Meter (Secondary)
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001333	65003363
Date of installation	12/12/2017	14/12/2017
Date of initial calibration	07/09/2016	31/10/2017

Kızıl SPP	Electricity Meter	Electricity Meter (Secondary)
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65001047	65003339
Date of installation	08/09/2021	14/12/2017
Date of initial calibration	07/09/2016	31/10/2017

Karagül SPP	Electricity Meter	Electricity Meter (Secondary)
Manufacturer	MAKEL	MAKEL
Model	C510.AMT.5851	C510.AMT.5851
Serial number	65000979	6503351
Date of installation	12/12/2017	14/12/2017
Date of initial calibration	15/05/2016	31/10/2017

The accuracy of meters is given as 0.5s class

QA/QC procedures	<ul style="list-style-type: none"> • Measurements are undertaken using energy meters. • Concerning metering system accuracy, project participants have to comply with relevant national legislation. The project must ensure that the metering devices are in line with the technical requirements which are set out by the Communiqué for Metering Devices to be used in the Electricity Market, which describes the minimum accuracy requirement the metering devices have to fulfil, which are categorized according to the installed capacity. Maintenance and calibration of YEDAŞ meters will be carried out according to the System Usage Agreement. The periodical calibration or maintenance is under the responsibility of YEDAŞ and has been fixed as once in 10 years.¹⁰ The meters are sealed by YEDAŞ, the project proponent cannot intervene with the devices. • The net electricity supplied to a grid is the difference between the measured quantities of the grid electricity export and the import. Data measured by meters will be crosschecked with the OSOS.
Purpose of data	Calculation of baseline emissions to demonstrate contribution to SDG7'-7.2 By 2030, increase substantially the share of renewable energy in the global energy mix" 7.2.1 "Renewable energy share in the total final energy consumption"
Additional comment	n.a

SDG 8: Decent Work and Economic Growth

8.5.2. Unemployment rate, by sex, age and persons with disabilities

Data / Parameter	Number of employment generation
Unit	Number
Description	Number of people employed directly due to the project activity
Source of data	5 employees of SGK Records
Value(s) applied	The project provides 5 local employments. The SGK records of the employees have been provided to the VVB.

¹⁰<https://www.mevzuat.gov.tr/anasayfa/MevzuatFihristDetayIframe?MevzuatTur=7&MevzuatNo=6381&MevzuatTertip=5>

Measurement methods and procedures	The total number of persons working in the plant would be calculated based on the SGK Records
Monitoring frequency	Once for each monitoring period
QA/QC procedures	Social insurance registries of employees have been provided during each monitoring period. After first verification, only changes in employees will be reported.
Purpose of data	To demonstrate contribution to SDG8- 8.5 “By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value’ 8.5.2 Unemployment rate, by sex, age and persons with disabilities
Additional comment	n.a

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.

Data / Parameter	Health and Safety Training Records
Unit	Number of people per monitoring period
Description	5 employees have trained on health and safety issues during this monitoring period as can be seen below Table*
Source of data	Training Record and Certificates have been provided to the VVB
Value(s) applied	The project has provided health and safety training to all staff (5 employees) in this monitoring period. (09/03/2023,01/06/2023 and 21/02/2024)
Measurement methods and procedures	The total number of Health and Safety training based on Training Records or Certificates
Monitoring frequency	Once for period each monitoring
QA/QC procedures	Training records have been provided
Purpose of data	Monitoring the health and safety trainings of employees to demonstrate contribution to SDG8-8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment 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.
Additional comment	n.a

SDG 13 Climate Action

13.3.2 Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions” and following

Data/parameter:	ER _y
Unit	tCO ₂ /y
Description	Emission Reductions in year y (t CO ₂ /yr) As per AMS I.D, the baseline emissions (emission reductions) are calculated as the net electricity generated by the project activity, multiplied with the baseline emission factor for the project grid.
Source of data	Corum Solar Power Plant Project PDD registered under GS (GS6566) Measured and Calculated. (The emission reduction value the emission factor of the grid to which the project exports electricity (0.6488 tCO ₂ /MWh) and net electricity generated
Value(s) applied)	10,532 tCO ₂ ¹¹
Measurement methods and procedures	Please see B.6.2-B.6.4 and B.7.3 for more detailed description of the monitoring plan.
Monitoring frequency	Once for each monitoring period
QA/QC procedures	Please see B.7.3. for more detailed description of the monitoring plan.
Purpose of data	Calculation of baseline emissions (Baseline emissions calculated as explained in section B.6.2-B.6.4) to demonstrate contribution to SDG13-13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning (13.3.2)
Additional comment	-

D.3. Comparison of monitored parameters with last monitoring period

N/A

D.4. Implementation of sampling plan

N/A

¹¹ The actual emission reduction value of this monitoring period

SECTION E. CALCULATION OF SDG IMPACTS

E.1. Calculation of baseline value or estimation of baseline situation of each SDG Impact

SDG 7 (Affordable and Clean Energy)

The contribution to SDG 7 is defined as the produced electricity energy produced by the SPP. As there is no electricity energy produced in the baseline, the baseline value is 0.

SDG 8 (Decent Work and Economic Growth)

The project leads to employment opportunities which would not have been possible in the baseline scenario. So the baseline value for 8.5.2 (Unemployment rate, by sex, age and persons with disabilities) is 0. The other monitored parameter is Health and Safety Training for the indicator 8.8.2. Since there would have been no training offered if the project did not exist, this baseline is also 0.

SDG 13 (Climate Action)

Baseline emissions are calculated using following equation:

$$BE_y = EG_y * EF_y$$

Where,

EG_y = the net electricity exported to the grid system during the year y (16,233.833MWh)

EF_y = the emission factor of the grid to which the project exports electricity (0.6488 tCO₂/MWh)

Hence,

$$BE_y = 16,233.833 \text{ MWh/y} * 0.6488 \text{ tCO}_2/\text{MWh}$$

$$BE_y = 10,532 \text{ tCO}_2$$

E.2. Calculation of project value or estimation of project situation of each SDG Impact

SDG 7 (Affordable and Clean Energy)

EG_y = the net electricity exported to the grid system during the year y

The amount of electricity produced does not need any calculation, it is directly received from meter readings.

C (Net Electricity supplied to the grid [MWh] EG_y) = A (Electricity supplied to the grid [MWh]) – B (Electricity consumption from the grid [MWh])

The Corum Solar Power Plant net electricity supplied to the grid 16,233.833MWh during this monitoring period.

Vintage	(A) Electricity supplied to the grid [MWh]	(B) Electricity consumption from the grid [MWh]	(C) = (A) - (B) EG Net electricity supplied to the grid [MWh]
2022 19/12/2022-31/12/2022	201.501	5.158	196.343
2023	13,770.858	105.553	13,665.305
2024 01/01/2024-31/03/2024	2,403.527	31.342	2,372.185
TOTAL (19/12/2022 - 31/03/2024)	16,375.885	142.053	16,233.833

SDG 8 (Decent Work and Economic Growth)

“Number of employment generation” and does not need any calculation, it is directly received from SGK records. “Number of trainings” does not need any calculation; it is directly taken from training records. 5 people employed and all employed has taken Health and Safety Training during this monitoring period.

SDG 13 (Climate Action)

The total emission reductions can be calculated with the results of the below described equations. The emission reduction is equal to the baseline emissions minus project emissions and leakage emissions. Leakage emissions in this project are considered to be zero. There are no project emissions in this kind of project. (Since PE_y and LE_y are assumed to be 0, emission reductions are equal to baseline emissions) The general equation is as follows:

$$ER_y = BE_y - PE_y - LE_y$$

Where:

ER_y = Emission reductions in year y (tCO₂e/yr)

BE_y = Baseline emissions in year y (tCO₂/yr)

PE_y = Project emissions in year y (tCO₂e/yr)

LE_y = Leakage emissions in year y (t CO₂/y)

Baseline Emissions

The baseline emissions are calculated as follows:

$$BE_y = EGBL_y * EFCO2_{grid,y}$$

Where:

BE_y = Baseline emissions in year y (tCO₂/yr)

$EGBL_y$ = Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y (MWh)

$EFCO2_{grid,y}$ = CO₂ emission factor of the grid in year y (t CO₂/MWh)

Project Emissions

As the proposed project activity is a grid-connected wind power plant. For this reason, PE_y is considered as "0" in line with AMS I.D. Version 18.0

$$PE_y = 0$$

Vintage	EG Net electricity supplied to the grid [MWh]	EF [tCO ₂ /MWh]	Baseline emission: BE = EG * EF [t CO ₂ -eq]	ROUNDED DOWN VALUE
2022 19/12/2022- 31/12/2022	196.343	0.6488	127.39	127
2023	13,665.305	0.6488	8,866.05	8,866
2024 01/01/2024- 31/03/2024	2,372.185	0.6488	1,539.07	1,539
TOTAL (19/12/2022 - 31/03/2024)	16,233.833	0.6488	10,533	10,532

E.3. Calculation of leakage

Leakage emission (LE_y) is considered as "0" as suggested in AMS I.D Version 18.0

E.4. Calculation of net benefits or direct calculation for each SDG Impact

SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit
7	Affordable and Clean Energy	0	16,233.833 MWh	16,233.833 MWh
8	Decent Work and Economic Growth	0	5 people employed	5 people employed
8	Decent Work and Economic Growth	0	Health and Safety Trainings	Health and Safety Trainings
13	Climate Action	10,532 tCO ₂	0	10,532 tCO ₂

E.5. Comparison of actual SDG Impacts with estimates in approved PDD

SDG	Values estimated in ex ante calculation of approved PDD for this monitoring period	Actual values achieved during this monitoring period
7	18,066.137MWh	16,233.833 MWh
8	5 people employed	5 people employed
8	Training certificates or training attendance records are provided during each monitoring period.	Health and Safety Trainings certificates
13	11,721 tCO ₂ /MWh	10,532 tCO ₂ /MWh

E.5.1. Explanation of calculation of value estimated ex ante calculation of approved PDD for this monitoring period

The expected annual electricity generation value is 18,066.137MWh and emission reduction are 11,721 tCO₂ according to registered PDD. And PP has monitored 469 days (between 19/12/2022 and 31/03/2024) so PP has calculated 10,532 tCO₂ emission reduction and 16,233.833 MWh electricity generation for this fourth monitoring period.

E.6. Remarks on increase in achieved SDG Impacts from estimated value in approved PDD

The monitoring period covers the approximately 469 days operation. The comparison shows that the actual emission reduction is 10,532 tCO2 a lower (approximately 10.1%) than the expectation 11,721 tCO2 in the registered PDD. And the comparison shows that the actual net electricity generation is 16,233.833 MWh a lower (approximately 10.1 %) than the expectation generation 18,066.137 MWh in the registered PDD. The reason of difference between estimated and actual value is the solar weather conditions.

SECTION F. SAFEGUARDS REPORTING

The project takes a precautionary approach regarding environmental challenges and is not complicit in practices contrary to the precautionary principle.

Principles	Way of Monitoring-When / Mitigation Measures added to the Monitoring Plan	Chosen Data/ Parameter
Principle 1- Human Rights	Not Required	Not Required
Principle 2- Gender Equality	Not Required	Not Required
Principle 3-Community Health, Safety and Working Conditions	Not Required	Not Required
Principle 4-Cultural Heritage, Indigenous Peoples, Displacement and Resettlement	Not Required	Not Required
Principle 4.1- Sites of Cultural and Historical Heritage	Not Required	Not Required
Principle 4.2 Forced Eviction and Displacement	Not Required	Not Required
Principle 4.2 Forced Eviction and Displacement	Not Required	Not Required
Principle 4.3 Land Tenure and Other Rights	Not Required	Not Required
Principle 5. Corruption	Not Required	Not Required

<p>Principle 6.1 Labour Rights</p>	<p>Monitoring the health and safety trainings of employees to demonstrate contribution to SDG8-8.8 Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment 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</p>	<p>Health and Safety Training Records/ Once for period each monitoring</p>
<p>Principle 6.2 Negative Economic Consequences</p>	<p>Not Required</p>	<p>Not Required</p>
<p>Principle 7.1 Emissions</p>	<p>Not Required</p>	<p>Not Required</p>
<p>Principle 7.2 Energy Supply</p>	<p>Not Required</p>	<p>Not Required</p>
<p>Principle 8.1 Impact on Natural Water Patterns/Flows</p>	<p>Not Required</p>	<p>Not Required</p>
<p>Principle 8.2 Erosion and/or Water Body Instability</p>	<p>Not Required</p>	<p>Not Required</p>
<p>Principle 9.1 Landscape Modification and Soil</p>	<p>Not Required</p>	<p>Not Required</p>
<p>Principle 9.2 Vulnerability to Natural Disaster</p>	<p>Not Required</p>	<p>Not Required</p>
<p>Principle 9.3 Genetic Resources</p>	<p>Not Required</p>	<p>Not Required</p>
<p>Principle 9.4 Release of pollutants</p>	<p>During the operation phases, domestic</p>	<p>Water Quality and Quantity (Disposal of</p>

	wastewater produced by workers collected in impermeable septic tanks. This wastewater is collected by vacuum trucks of the Municipality of Corum and disposed according to Regulation on Wastewater Control.	the waste water) /Once for period each monitoring
Principle 9.5 Hazardous and Non-hazardous Waste	Not Required	Not Required
Principle 9.6 Pesticides & Fertilisers	Not Required	Not Required
Principle 9.7 Harvesting of Forests	Not Required	Not Required
Principle 9.8 Food	Not Required	Not Required
Principle 9.9 Animal husbandry	Not Required	Not Required
Principle 9.10 High Conservation Value Areas and Critical Habitats	Not Required	Not Required
Principle 9.11 Endangered Species	Not Required	Not Required

SECTION G. STAKEHOLDER INPUTS AND LEGAL DISPUTES

G.1. List all Inputs and Grievances which have been received via the Continuous Input and Grievance Mechanism together with their respective responses/mitigations.

This is the fourth monitoring period and there is no input received via the Continuous Input and Grievance Mechanism until now since 19/12/2017 (approximately 6 years and 3 months)

G.2. Report on any stakeholder mitigations that were agreed to be monitored.

They were agreed no SDG monitoring parameter to be monitored when the local stakeholders meeting.

G.3. Provide details of any legal contest that has arisen with the project during the monitoring period

No legal contest that has arisen with the project during this fourth monitoring period. The project owner has talked with villager and headman of Tatar village continuously and checked the logbook. The Continuous Input and Grievance Mechanism logbook was given to the headman of Tatar village as agreed with villager. So, if whenever local stakeholders have a complaint or a request, they can be able to fill in the grievance book which can be located at a headman office of Tatar village.

Revision History

Version	Date	Remarks
1.1	14 October 2020	Hyperlinked section summary to enable quick access to key sections Improved clarity on Key Project Information Section for POA monitoring Forward action request section Improved Clarity on SDG contribution/SDG Impact term used throughout Clarity on safeguard reporting Clarity on design changes Leakage section added for VER/CER projects Addition of Comparison of monitored parameters with last monitoring period Provision of an accompanying Guide to help the user understand detailed rules and requirements
1.0	10 July 2017	Initial adoption