

TEMPLATE

MONITORING REPORT

PUBLICATION DATE **14.10.2020**

VERSION **v. 1.1**

RELATED SUPPORT - **TEMPLATE GUIDE Monitoring Report v. 1.1**

This document contains the following Sections

Key Project Information

0 - Description of project

0 - Implementation of project

0 - Description of monitoring system applied by the project

0 - Data and parameters

0 - Calculation of SDG Impacts

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0 - Stakeholder inputs and legal disputes

KEY PROJECT INFORMATION

Key Project Information

GS ID (s) of Project (s)	GS1235
Title of the project (s) covered by monitoring report	CANTA WPP
Version number of the PDD/VPA-DD (s) applicable to this monitoring report	V2.6SOP
Version number of the monitoring report	10
Completion date of the monitoring report	23/12/2025
Date of project design certification	10/02/2023
Date of Last Annual Report	23/12/2025
Monitoring period number	01
Duration of this monitoring period	11/01/2023 – 19/08/2024
Project Representative	RHG Enertürk Enerji Üretim ve Ticaret A. Ş. (Project Owner) GTE KARBON SÜRDÜRÜLEBİLİR ENERJİ EĞİTİM DANIŞMANLIK VE TİC. AŞ (Project Developer)
Host Country	Türkiye
Activity Requirements applied	☐ Community Services Activities ☒ Renewable Energy Activities ☐ Land Use and Forestry Activities/Risks & Capacities ☐ N/A
Methodology (ies) applied and version number	ACM0002 "Grid-connected electricity generation from renewable sources ", version 21.0
Product Requirements applied	☒ GHG Emissions Reduction & Sequestration ☐ Renewable Energy Label ☐ N/A

Table 1 - Sustainable Development Contributions Achieved

Sustainable Development Goals Targeted	SDG Impact	Amount Achieved	Units/ Products
SDG 13 Climate Action (mandatory)	13.2.2 Total greenhouse gas emissions per year	160,583	tCO2 (GS VERs)/MP
SDG 7 Affordable and Clean Energy	7.2.1 Renewable energy share in the total final energy consumption	247,738.78	MWh/MP
SDG 8 Decent Work and Economic Growth	8.5.1 Average hourly earnings of female and male employees, by occupation, age, and persons with disabilities	9	Number of people employed by the project

Table 2 – Product Vintages

		Amount Achieved
Start Dates	End Dates	VER
11/01/2023	31/12/2023	97,720
01/01/2024	19/08/2024	62,863
Total		160,583

SECTION A. DESCRIPTION OF PROJECT

A.1. General description of project

The proposed project is a large-scale wind power plant project located within the boundaries of Silivri District of Istanbul province. The purpose of the proposed project is to generate electricity by utilizing the renewable energy potential to meet increasing electricity demand and thus reduce fossil fuel consumption.

The initial phase of the proposed project involves installation of 19 turbines each having 2.5 MW capacity (Total capacity is 47.5 MWm and 45MWe). Total output capacity was 159.75 GWh according to the EPDK license (18/08/2011).¹ Although, in the Generation License the total output has been stated as 159.75 GWH, the final expected output has been indicated in EPDK license (amendment date: 05/04/2018) where 2.5MW Nordex N100/2500kW R100 turbines have been selected for the project which results in 163.2 GWh annual generation.

19 turbine was accepted that has the annual generation of 163.2 GWh, while the installed capacity was accepted as 47.5 MWm / 45 MWe as per EPDK license (amendment date: 05/04/2018).

The baseline scenario that was identified as “the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources”. In accordance with that, the project has a capacity of 47.5 MWm and 45 MWe and an expected production of 163.2 GWh. Calculation approach for the difference in electricity generation to be caused by the increase in capacity and subtract it from the total production is explained separately in the monitoring plan section. “Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period version 03.0.1”²

¹ EPDK License

² <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-11-v3.0.1.pdf>

Dissimilarly from the first crediting period, for Combined Margin, the value from the ministry of energy and natural resources "TURKEY NATIONAL ELECTRICITY NETWORK EMISSION FACTOR INFORMATION FORM³" is used.

Total land used for the project is estimated as 1,900 m² for turbines, 350m² for office and facility buildings and about 150 m² for switchyard area⁴. Electricity generated at the project is fed to the national grid via Silivri TM, 154 kV, as the substation. The length of transmission line is around 11.5 km⁵.

Average lifetime of turbines is assumed as 25 years as per the tool applied⁶. Main goals of the Proposed Projects include;

- Utilization of the renewable energy potential of Turkey to meet rapidly increasing electricity demand and contribute achieving energy security.
- Increase share of WPPs in electricity generation mix of Turkey and reduction of GHG emissions.
- Contribute to the national economic development by creating direct and indirect job opportunities during construction and operation phases.
- Reduce import dependency of fossil fuel dominated electricity sector and diversify generation mix through use of local resources.
- Contribution to sustainable development through supporting local community and local economy.

SDG 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix: Projects utilizes wind power as a renewable energy source.

SDG 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: The project creates direct and indirect employment opportunities during operation phases.

³ Turkey National Electricity Network Emission Factor Information Form

⁴ CANTA WPP PRE-EIA Report page 15

⁵ Grid Connection Agreement

⁶ <http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-10-v1.pdf>

SDG 13.2. Integrate climate change measures into national policies, strategies and planning.

TABLE 3. MILESTONES FOR CANTA WPP

Milestones	Date
Preliminary EIA	January 2009
EIA Decision	13/02/2009
License Issuance	18/08/2011
Board Decision	01/11/2011
Carbon Certification Agreement	01/01/2012
EM Equipment Purchase Contract*	26/03/2012
LSC Meeting	16/04/2012
License Revision	18/04/2012
Bankable Report	13/06/2012
Forest Permission	25/06/2012
Grid Connection Agreement	03/10/2012
Loan Proposal	21/10/2012
Construction Start Date ⁷	01/03/2013
Agreement on construction of transmission line, wind park, assembly, and test operation (ABB)	13/09/2013
Subcontractor Agreement for Substation Construction (Bilmer)	22/02/2013
GS Registration Date	24/03/2014
Commissioning Date 1 st (T1, T2, T4, T6, T16, T17, T18, T19)	28/06/2014
Commissioning Date 2 nd (T3, T7, T8, T9, T15)	24/07/2014
Commissioning Date 3 rd (T5, T10, T11, T12, T13, T14)	31/05/2014
Capacity Extension License Amendment in License (Amendment of 21 turbines) **	05/04/2018
Commissioning of turbine T20	15/10/2021
Commissioning of turbine T21	26/11/2021
1 st Crediting Period	02/02/2015 - 01/02/2022

1 st Monitoring Period	02/02/2015 – 31/10/2016
2 nd Monitoring Period	16/09/2019 – 01/02/2022
2 nd Crediting Period	02/02/2022 – 01/02/2029
2 nd CP - 1 st Monitoring Period	11/01/2023 – 19/08/2024 ⁷

*Date of investment decision

**Applied for design change and rejected by GS.

Project capacity extension studies have been initiated in 2017 via turbine agreement however, construction could be started in end of 2018. Since application to GS could not be made within one year of project start date, extension part of the project was not eligible for GS certification. Therefore, generation from latest two turbines have been excluded from GS certification and claims for GS-VER certificates is made only for initial turbines.

As per the national regulations, a project introductory file (PIF) has been prepared for the project to assess the environmental impacts. In addition to national requirements, an Environmental and Social Action Plan (ESAP), Non-Technical Summary of the Project, Gap Analysis Report and Stakeholder Engagement Plan have been prepared for the project for compliance with international standards.

As it can be seen from the Table above, the Board took a decision on 01/11/2011 to integrate into carbon revenues into the project financial feasibility. In line with the CDM EB-41⁸, investment decision date has been selected as the equipment purchase contract as it is dated as the earliest contract indicating a concrete proof of the project owner's realisation of the project. The load factor of the project is calculated as 39% (before the

⁷The start date of monitoring period for 2nd crediting period will be the date when the project was submitted for design renewal i.e 11/01/2023.

⁸ <http://cdm.unfccc.int/EB/041/eb41rep.pdf>

capacity addition) based on the Bankable Report of the project for the initial phase of the project. The project area consists of private land and Treasury land used as meadow and agricultural land, and besides unused land.

Total electricity generation value is 247,738.78 and annual electricity generation value is 154,045.41 MWh/MP. Total emission reduction is 160,583 tCO₂ while total annual emission reduction is 99,851 tCO₂/MP.⁹

A.2. Location of project

Project is located within boundaries of Silivri District of İstanbul Province of Turkey. Nearest settlement to the project boundaries is Canta village which is about 650 m from the project nearest turbine.

Table 4. Coordinated of the turbines (* For New Turbines) UTM Zone and WGS 84

Zone (35S)	Y	X	Zone (35S)	Y	X
T1	588962.66	4551829.82	T11	587786.26	4554771.83
T2	589777.07	4552521.47	T12	588329.00	4553037.87
T3	588300.79	4555674.25	T13	588008.00	4554405.00
T4	589467.97	4552896.92	T14	587605.00	4555205.00
T5	589203.81	4553173.74	T15	588444.80	4555276.18
T6	588751.61	4553173.50	T16	588649.29	4551930.17
T7	589008.37	4553837.01	T17	588308.91	4551986.34
T8	589221.71	4554592.04	T18	589425.02	4551827.16
T9	588982.15	4554889.46	T19	589885.99	4551989.56
T10	588578.19	4553777.76	Switchyard	589572.25	4553327.41
T20*	589375.00	4552292.00	T21*	587774.00	4553622.00

Name	Latitude	Longitude
T1	41.11289	28.05912
T2	41.11736	28.0689
T3	41.14584	28.05168
T4	41.12079	28.06531
T5	41.1233	28.0622

⁹ ER Calculations Excel Sheet

T6	41.12333	28.05679
T7	41.12942	28.05984
T8	41.13597	28.06276
T9	41.1387	28.0598
T10	41.12876	28.05482
T20*	41.13779	28.04553
T11	41.12211	28.05175
T12	41.1345	28.04807
T13	41.14175	28.04338
T14	41.14226	28.05326
T15	41.11214	28.05535
T16	41.11268	28.0513
T17	41.11113	28.06457
T18	41.1127	28.06972
T19	41.11539	28.06398
Switchyard	41.12442	28.06651
T21*	41.12749	28.04522

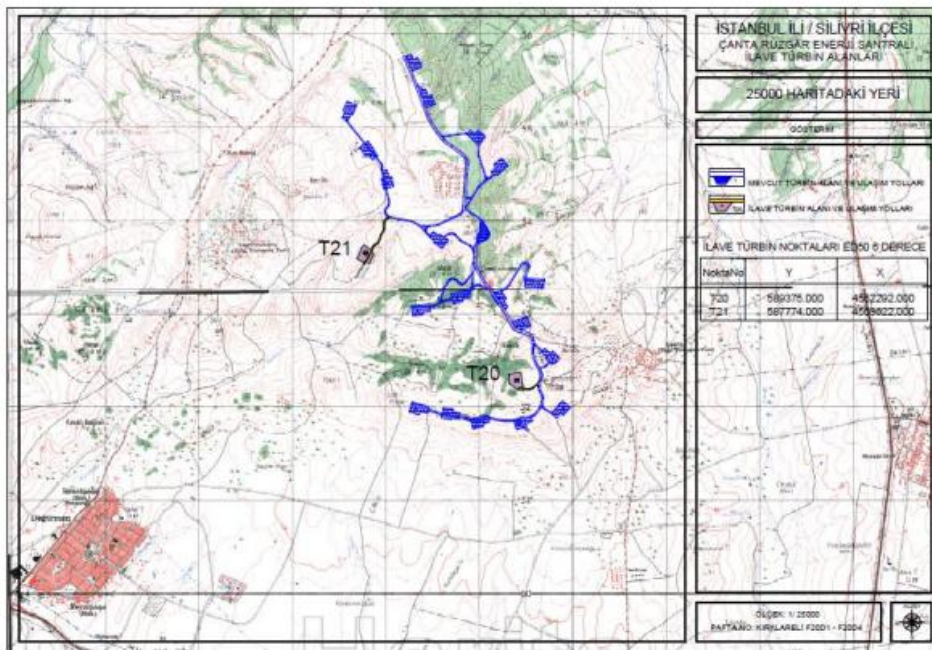


Figure 1. Layout of Turbines

Project capacity extension studies have been initiated in 2017 via turbine agreement however, construction could be started in end of 2018. Since application to GS could not be made within one year of project start date, extension part of the project was not eligible for GS certification. Therefore, generation from latest two turbines have been excluded from GS certification and claims for GS-VER certificates is made only for initial turbines. This exclusion is done by subtracting the generation by the latest commissioned turbines, T20 and T21, read from the SCADA system from the total generation read from EPIAŞ screenshots. EPIAŞ screenshots show only the total electricity generation from the power plant. However, SCADA system shows total

electricity generation from each turbine separately. In order to be as accurate as possible, EG read from SCADA system was subtracted from the EG values read from EPIAŞ screenshots.

A.3. Reference of applied methodology

The United Nations approved consolidated baseline methodology applicable to this project is ACM0002 "Large-scale Consolidated Methodology: Grid-connected electricity generation from renewable sources" Version -21.0¹⁰. ACM0002 refers to the following tools:

- "Tool for the demonstration and assessment of additionality", Version 7¹¹ and,
- "Tool to calculate the emission factor for an electricity system", Version 7¹².

A.4. Crediting period of project

The first crediting period is between 02/02/2015-01/02/2022 (both dates included). Project uses two times renewable crediting period, and this is the second crediting period. The second crediting period is between 02/02/2022 – 01/02/2029 (both dates included). Total length of the 2nd Crediting Period is seven years. This is the 1st Monitoring report of the 2nd Crediting Period.

¹⁰ <https://cdm.unfccc.int/UserManagement/FileStorage/ZPFJL01OU2RYC6N3HASIXV7K84QBG9>

¹¹ <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf>

¹² <https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.0.pdf>

SECTION B. IMPLEMENTATION OF PROJECT

B.1. Description of implemented project

Project activity involves wind turbines that converts the wind energy into electrical energy. The application of the inclusion of capacity addition was not approved by GS. Therefore, for baseline scenario 19 WEC's of Nordex N100/2500kW R100 MW turbine was accepted that has the annual generation of 163.2 GWh, while the installed capacity was accepted as 47.5 MWm /45 MWe as per EPDK license (amendment date: 05/04/2018). This energy is being converted at the site switchyard and fed to the national grid.

Technical characteristics of turbines used in CANTA WPP have been summarized in table below.

N100/2500 kW		N100/2500 kW	
Rotor		Yaw system	
Number of blades	3	Yaw bearing	Ball bearing
Rotor speed	9.6 – 14.9 rpm	Brake	Hydraulic, disc brake
Rotor diameter	99.8 m	Yaw drive	Asynchronous motors with integrated brakes
Swept area	7,823 m ²	Speed	Approx. 0,4 deg/s
Power regulation	Pitch	Control system	
Cut-in wind speed	3 m/s	Type	SPS, Remote Field Controller (RFC)
Cut-out wind speed	20 m/s	Grid connection	Via IGBT converter
Rated output at	12.5 m/s	Scope of monitoring	Remote monitoring of over 300 different parameters, e.g. temperature, hydraulic pressure, pitch parameters, wind speed and direction
Survival wind speed	52.5 m/s	Recording	Production data, event lists with filter function, long and short-term trends
Pitchregulation	Individual blade pitch	Visualisation	Panel PC in control cabinet and Web-based access possible from any PC, adapter for laptop at the bottom of tower or in nacelle
Weight	Approx. 56,500 kg	Brakes	
Blades		Design	Three independent brake systems (single pitch)
Blade length	48.7 m	Aerodynamic	Individual pitching of blades
Material	GRP	Mechanical	Disc brake
Weight	Approx. 9,800 kg	Tower	
Gearbox		Type	Modular, steel tube tower
Type	Planetary/spur gear or differential gear box	Hub height	100 m, certificate DiBt 2, IEC 3a
Gear ratio	1:77.4 (50 Hz)/1:92.9 (60 Hz)	Generator	
Generator		Power	2,500 kW
Power	2,500 kW	Voltage	660 V
Voltage	660 V	Type	Double-fed asynchronous generator with partial frequency converter
Type	Double-fed asynchronous generator with partial frequency converter	Frequency	50 or 60 Hz
Frequency	50 or 60 Hz		

The application of the inclusion of capacity addition was not approved by GS. Therefore, for baseline scenario 19 WEC's of Nordex N100/2500kW R100 MW turbine was accepted that has the annual generation of 163.2 GWh, while the installed capacity was accepted as 47.5 MWm /45 MWe as per EPDK license (amendment date: 05/04/2018). Hence, it

is a large-scale project having 45 MWe installed capacity providing 105,782 tonnes CO2 reduction.

The addition of two turbines, T20 and T21, have been rejected by Gold Standard. Therefore, annual generation was expected to be 163.2 GWh in the registered PDD. Therefore, while making the emission reduction calculations, SCADA Data of two turbines have been used to subtract from the EPIAS records including 21 turbines.

The project boundary is considered as the National Electricity Grid of Turkey according to applied tool. The spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the power plant is connected to. The project is a 45 MWe wind farm project and exceeding the 15 MW limit for small scale project according to UNFCCC regulations, the project is categorized under large scale. The project doesn't claim Green or White certificates or equivalents that may result in double counting because of carbon dioxide emission reduction purposes.

Important dates about the project have been indicated below.

Process	Date
Preliminary EIA	January 2009
EIA Decision	13/02/2009
License Issuance	18/08/2011
Board Decision	01/11/2011
Carbon Certification Agreement	01/01/2012
EM Equipment Purchase Contract*	26/03/2012
LSC Meeting	16/04/2012
License Revision	18/04/2012
Bankable Report	13/06/2012
Forest Permission	25/06/2012
Grid Connection Agreement	03/10/2012
Loan Proposal	21/10/2012
Construction Start Date ⁷	01/03/2013
Agreement on construction of transmission line, wind park, assembly, and test operation (ABB)	13/09/2013

Subcontractor Agreement for Substation Construction (Bilmer)	22/02/2013
GS Registration Date	24/03/2014
Commissioning Date 1 st (T1, T2, T4, T6, T16, T17, T18, T19)	28/06/2014
Commissioning Date 2 nd (T3, T7, T8, T9, T15)	24/07/2014
Commissioning Date 3 rd (T5, T10, T11, T12, T13, T14)	31/05/2014
Capacity Extension License Amendment in License (Amendment of 21 turbines)	05/04/2018
Commissioning of turbine T20	15/10/2021
Commissioning of turbine T21	26/11/2021

However, based on the GS Decision, capacity extension (addition of two turbines) has been rejected. Thus, ER Calculations have been made properly.

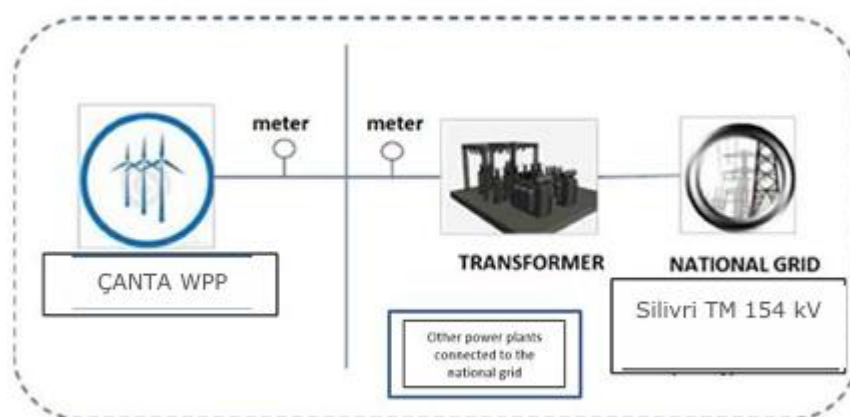


Figure 2. The flow diagram of the Project Boundry

The calibration and maintenance of the meters are carried out in line with the by law on Metering and Metering Devices. Accordingly, the meters are calibrated and sealed by TEIAS before the commissioning of the power plant. The meters are calibrated by TEIAS when there is an inconsistency between two devices. EPIAS records are used as the primary source of data for electricity generation since the billing is based on the EPIAS records while TEIAS Records are used for cross-checking. Generation of the plant can be monitored from EPIAS web platform which is accessible using a password provided to electricity generation companies. ISVM (Electricity fed to the grid) and UECM (Electricity consumed from the grid) data given in EPIAS records, as a main source, are used for emission reduction calculations. Electricity generation of the Canta

WPP is cross checked by using the records of metering devices (TEIAS) at project site. Two metering devices (one of them used as spare) are used for monitoring the electricity generated by the power plant.

Both main meter and spare meter were replaced on 23/12/2020.¹³ Technical properties of both removed and placed meters are shown in the table below.

	Placed Meters		Removed Meters	
	Main Meter	Spare Meter	Main Meter	Spare Meter
Serial No.	9798945	9798946	00471064	00471066
Brand	EMH	EMH	ELSTER	ELSTER
Class	0.5	0.5	0.5	0.5
Type	LZQJ-XC	LZQJ-XC	A1500	A1500
Date of First Index Protocol	23/12/2020	23/12/2020	2012	2012

B.1.1 Forward Action Requests

FAR#1: Old meters were tested on 29/06/2018 and new meters were installed on 23/12/2020. This should be taken into consideration during next verification.

Response: For the monitoring period under verification (11/01/2023 – 19/08/2024), only data recorded by the new meters are used. Therefore, no data gap, inconsistency, or risk to data integrity exists for the current monitoring period. This information has been transparently documented and will be duly considered during the current and future verifications.

FAR#2: In-line with GS4GG Principles and Requirements, VVB and PP shall consider the following rule after Design Renewal Certification is achieved: 5.1.29: 1st verification shall be completed within two years after the certification is achieved.

Response: The Project Proponent acknowledges the requirement under GS4GG Principles and Requirements §5.1.29. This requirement defines an expected verification

¹³ TEIAS Sayaç Değişirme ve İlk Endeks Protokolü Belgesi

timeline. The applicable Design Certification Date for the second crediting period is 10/02/2023, following Design Renewal. The verification has been submitted on 10/11/2025. The delay in the submission of the first verification was procedural and administrative in nature. The project remained continuously operational, monitoring was conducted in full compliance with the approved plan, and no environmental integrity, data consistency, or additionality concerns arose. Accordingly, the first verification is considered compliant within the applicable certification context. The renewal of crediting period was late to submit. Therefore, we must start the 2nd CP 1st MP on 11/01/2023.

FAR#3: In-line with GS4GG Principles and Requirements, VVB and PP shall consider the rule below for future monitoring activities: 5.1.39: An annual update report shall be provided to GS, when successfully Transitioned to GS4GG, for each monitoring year by the end of next calendar year for which verification is not completed.

Response: The Project Proponent acknowledges the requirement under GS4GG Principles and Requirements §5.1.39 regarding the submission of Annual Update Reports for monitoring years for which verification has not yet been completed following successful transition to GS4GG. The Project Proponent confirms that this requirement will be fully complied with for all future monitoring years. Annual Update Reports will be prepared and submitted to Gold Standard by the end of the subsequent calendar year in cases where verification is pending, ensuring continued transparency and alignment with GS4GG reporting obligations.

FAR#4: In-line with para 5.1.46 GS4GG Principles and Requirements, delay in the completion of re-validation beyond the last date of current certification cycle shall result in a reduction of any issuance of Certified Products and/or Impact Statements available during following certification cycle. Thus, PD cannot claim credits for the delay period. At the time of performance review for the second crediting period, VVB shall check the start date of monitoring period. The start date of monitoring period for 2nd crediting period will be the date when the project was submitted for design renewal i.e 11/01/2023. However, the start date of crediting period will be from 02/02/2020.

Response: For the second crediting period, the start date of the monitoring period has been conservatively defined as 11/01/2023, corresponding to the date of submission for design renewal. No credits are claimed for any period prior to this date within the second crediting period. The official start date of the second crediting period remains 02/02/2022, as per the registered project documentation; however, emission reductions are claimed strictly in line with GS requirements, excluding any ineligible delay period.

FAR#5: The project activity has not conducted any verification since 2017 during the 1st crediting period to obtain GS revenue. Therefore, a FAR is raised that the verifying VVB to check during the 1st verification of the 2nd crediting period.

Response: The Project Proponent confirms that a verification was conducted during the first crediting period, 16/09/2019 - 01/02/2022. This situation does not affect the environmental integrity of the project, as continuous operation and monitoring were maintained in accordance with the approved monitoring plan. All relevant historical data have been preserved and made available to the VVB.

B.2. Post-Design Certification changes

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

N/A

B.2.2. Corrections

>>

B.2.3. Changes to start date of crediting period

As per registered PDD version 09, the first crediting period was 01/10/2014 – 30/09/2021. Later on, during first verification the crediting period was changed to 02/02/2015 -01/02/2022. This monitoring report is the first monitoring period of the 2nd Crediting Period. There is no change to start date of 2nd Crediting Period.

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

Project capacity extension studies have been initiated in 2017 via turbine agreement however, construction could be started in end of 2018. Since application to GS could not be made within one year of project start date, extension part of the project was not eligible for GS certification. Therefore, generation from latest two turbines have been excluded from GS certification and claims for GS-VER certificates are made only for initial turbines. This exclusion has been done by via subtracting the generation of two

turbines from EPIAS records of 19 turbines.¹⁴ SCADA Data have been used for these two turbines which were rejected by GS as explained above.

B.2.5. Changes to project design of approved project

N/A

SECTION C. DESCRIPTION OF MONITORING SYSTEM APPLIED BY THE PROJECT

Monitoring is a key procedure to verify the real and measurable emission reductions from the proposed project. To guarantee the proposed project's real, measurable, and long-term GHG emission reductions, the monitoring plan is established.

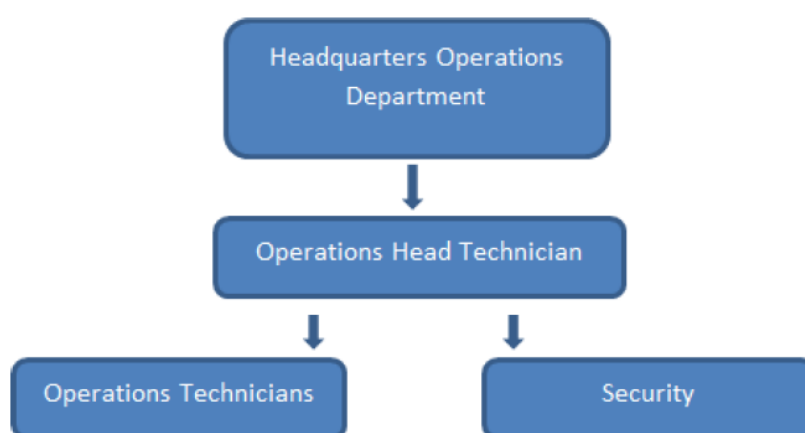
Project capacity extension studies have been initiated in 2017 via turbine agreement however, construction could be started in end of 2018. Since application to GS could not be made within one year of project start date, extension part of the project was not eligible for GS certification. Therefore, generation from latest two turbines have been excluded from GS certification and claims for GS-VER certificates is made only for initial turbines. This exclusion is done by subtracting the generation by the latest commissioned turbines, T20 and T21, read from the SCADA system from the total generation read from EPIAS screenshots. EPIAS screenshots show only the total electricity generation from the power plant. However, SCADA system shows total electricity generation from each turbine separately. In order to be as accurate as possible, EG read from SCADA system was subtracted from the EG values read from EPIAS screenshots.

Net electricity generation is measured and recorded via meters sealed by EPIAS for billing purposes. Therefore, no new additional protocol is needed for monitoring emission reduction. Power Plant Manager is responsible for the electricity generated, gathering all relevant data and keeping the records.

¹⁴ ER Calculation Excel Sheet

Generation data collected during crediting period is submitted to GTE who is responsible for calculating the emission reduction subject to verification. Generation data is used to prepare monitoring reports which are used to determine the vintage from the project activity. These reports are submitted to the duly authorized and appointed Designated Operational Entity 'DOE' before each verification period.

The monitoring system organization chart is shown in Figure below, in which the authority and responsibility of project management are defined. VER Team Members is expected to include the following staff:



Plant Manager: Responsible for running the plant and compliance with VER monitoring plan.

Accounting Manager: Responsible for keeping data about generation and consumption.

GTE Karbon Sürdürülebilir Enerji Eğitim Danışmanlık ve Ticaret A.Ş.: Responsible for emission reduction calculations, preparing monitoring report and periodical verification process.

EPIAS records is used as the primary source of data for electricity generation since the billing is based on the EPIAS records. Generation of the plant can be monitored from EPIAS web platform which is accessible using a password provided to electricity generation companies. ISVM (Electricity fed to the grid) and UECM (Electricity consumed from the grid) data given in EPIAS records is used for emission reduction calculations. Electricity generation of the Canta WPP is cross checked by using the records of metering devices at project site. Two metering devices (one of them used as

spare) is used for monitoring the electricity generated by the power plant. All data is kept for at least two years after the crediting period for QA/QC purposes.

The calibration and maintenance of the meters is carried out in line with the by law on Metering and Metering Devices¹⁵. Accordingly, the meters are calibrated and sealed by TEIAS before the commissioning of the power plant. The meters are calibrated by TEIAS when there is an inconsistency between two devices. Also, as per System Use Agreement, the regular tests of the electricity meters should be performed every two years.

Both main meter and spare meter were replaced on 23/12/2020. Technical properties of both removed and placed meters are shown in the table below.

Table 2. Technical properties of the meters¹⁶

	Placed Meters		Removed Meters	
	Main Meter	Spare Meter	Main Meter	Spare Meter
Serial no.	9798945	9798946	00471064	00471066
Brand	EMH	EMH	ELSTER	ELSTER
Class	0.5 S	0.5 S	0.5 S	0.5 s
Type	LZQJ-XC	LZQJ-XC	A1500	A1500
First Index Protocol	23/12/2020	23/12/2020	2012	2012
Test Date	22/09/2022	22/09/2022	29/06/2018	29/06/2018

¹⁵ <https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=6381&MevzuatTur=7&MevzuatTertip=5>

¹⁶ TEİAŞ Sayaç Değişim tutanağı, 23/12/2020

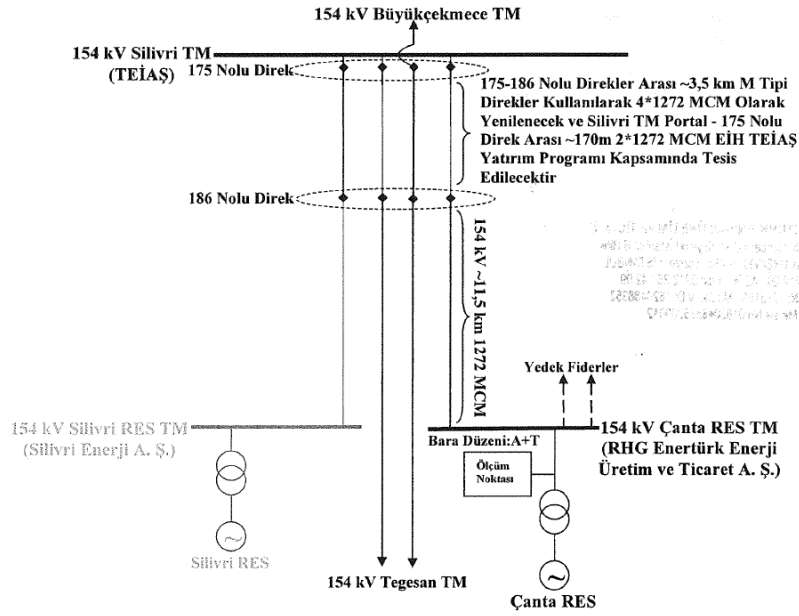


Figure 1. Single Line Diagram¹⁷

SECTION D. DATA AND PARAMETERS

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

SDG 13

Data/parameter	$EF_{CM,y}$
Unit	tCO ₂ /MWh
Description	Combined margin CO ₂ emission factor for the project electricity system in year y

¹⁷ Connection Agreement

Source of data	Data published by Turkish Ministry of Energy and Natural Resources on 06/10/2021 ¹⁸
Value(s) applied	$CM = (BM \times 0.75) + (OM \times 0.25)$ As given by the Ministry of Energy and Natural Resources, built margin is 0.4153 and operating margin is 0.7258. $(0.4153 \times 0.75) + (0.7258 \times 0.25) = 0.6482$ tCO ₂ /MWh
Choice of data or measurement methods and procedures	The coefficients are taken as 0.75 and 0.25 for BM and OM, respectively according to the methodology.
Purpose of data	To calculate baseline emission
Additional comment	-

D.2 Data and parameters monitored

Data / Parameter	Air Quality	
Unit	tCO ₂	
Description	Reduction of CO ₂ emissions due to the implementation of project activity	
Source of data	Electricity generated by CANTA WPP and calculated combined margin (CM) emission factor is used as reference in calculation of the emission reduction.	
Value(s) applied	Annual emission reduction is calculated as 99,851 tonnes of CO ₂ e	
	2023	97,720

¹⁸

https://enerji.gov.tr//Media/Dizin/EVCED/tr/%C3%87evreVe%C4%B0klm/%C4%B0klmDe%C4%9Fi%C5%9Fikli%C4%9Fi/TUESEmisyonFktr/Belgeler/2019_Sebeke_EF.pdf

	2024	62,863	
	Total for this MP	160,583	
	Annual for this MP	99,851	
Measurement methods and procedures	The net electricity supplied by the project is continuously measured and recorded by EPIAS, as the main source, and is kept by meters using at the project site are used for comparison.		
Monitoring frequency	Once every monitoring period.		
QA/QC procedures	Electricity generation of the Canta WPP is cross checked by using the records of metering devices (TEIAS) at project site. Two metering devices (one of them used as spare) is used for monitoring the electricity generated by the power plant. All data is kept for at least two years after the crediting period for QA/QC purposes.		
Purpose of data	To calculate the baseline emission value; and, to monitor the contribution to SDG 13 (Take urgent action to combat climate change and its impacts)		
Additional comment	-		

Data / Parameter	EG _{facility,y}	
Unit	MWh/MP	
Description	Quantity of net electricity generation supplied by the project plants/units to the grid in year y	
Source of data	EPIAS records as a main source and on-site meters (TEIAS records for cross-checking).	
Value(s) applied	The electricity fed to the grid in this monitoring period can be seen below:	
	Net Electricity Generation (MWh)	
	2023	150,757.02
	2024	96,981.76

	Total for this MP	247,738.78						
	Annual for this MP	154,045.41						
Measurement methods and procedures	Project capacity extension studies have been initiated in 27/08/2015 with the amendment to the EPDK license, 26/09/2017 turbine agreement and however, construction could be started in end of 2018. Since application to GS could not be made within one year of project start date, extension part of the project was found to be not eligible for GS certification in 17/07/2020. Therefore, generation from latest two turbines have decided to be excluded from GS certification and claims for GS-VER certificates are made only for initial turbines since then. This exclusion is done by via taking proportion ratio between the previous annual output, 163.2 GWh (indicated in first registered PDD) and present annual output 175 GWh (indicated in latest amended licence). Exported energy (SCADA Data) of latest two turbines has been used and the details can be seen from the Excel Calculation Sheet.							
Monitoring frequency	Continuous measurement and monthly recording.							
QA/QC procedures	Calibration of the meters are valid for 10 years based on related regulation. The meters should also comply with EPDK regulations which define the accuracy class of the meters as 0.2 or 0.5 depending on the capacity of the circuit. Maintenance and calibration of the metering devices are made by TEIAS. If there is a noticeable difference between the readings of two devices, maintenance and tests of the metering devices and the associated equipment is done before waiting for the periodical maintenance. In cases where electricity meters are regulated (e.g., the electricity is supplied to the electric grid), the electricity meter is subject to regular maintenance and testing in accordance with the stipulation of the meter supplier and/or as per the requirements set by the grid operators or national requirements. *The main and spare meter were replaced, and first index protocol was performed on 23/12/2020. <table border="1"> <tr> <td></td><td>Main Meter</td><td>Spare Meter</td></tr> <tr> <td>Serial No.</td><td>9798945</td><td>9798946</td></tr> </table>			Main Meter	Spare Meter	Serial No.	9798945	9798946
	Main Meter	Spare Meter						
Serial No.	9798945	9798946						

	Brand	EMH	EMH
	Class	0.5	0.5
	Type	LZQJ-XC	LZQJ-XC
	First Index Protocol / Meter Change Date	23/12/2020	23/12/2020
	Test Date	22/09/2022	22/09/2022
	Meter test frequency is once in two years.		
Purpose of data	ER Calculations, To monitor the contribution to SDG 7.		
Additional comment	-		

Data / Parameter	Quantitative Employment and income generation
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Unit	Number of employees
Description	Employment number of the project has provided to the region
Source of data	Documents provided by the main company / social security records
Value(s) applied	9 employees ¹⁹ (+10 security personnel who are employed under the security company)
Measurement methods and procedures	Documents
Monitoring frequency	Annual
QA/QC procedures	Employment contracts, which prepared according to the national labor law and employee's insurance entry papers can be checked.
Purpose of data	To monitor the contribution to SDG 8 (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all)
Additional comment	-

Data / Parameter	Quality of Employment
Unit	-
Description	HSE trainings
Source of data	Training attendance list and/or certificates

¹⁹ Social Security Records

Value(s) applied	Staff to be trained for health and safety issues ²⁰ 2023 EKAT (Plants with electricity currency) training
Measurement methods and procedures	Trainings are provided by the project proponent and training records are checked.
Monitoring frequency	Yearly
QA/QC procedures	The training programmes help increase the efficiency of the workforce and provides employees skilled at their job. This not only helps the company but to self-improvement of individual employees.
Purpose of data	To monitor the contribution to SDG 8 and Principle 6.1
Additional comment	-

Data / Parameter	Principle 9.4 Release of Pollutants – Air Quality
Unit	-
Description	Taking necessary action to prevent dust emission during construction.
Source of data	TEIAS
Value(s) applied	No air pollution due to dust in this monitoring period
Measurement methods and procedures	At regular intervals, irrigation is done on the ways to prevent dust emission during construction.
Monitoring frequency	Once at first verification
QA/QC procedures	-
Purpose of data	To monitor the contribution to Principle 9.4

²⁰ Training Records

Additional comment	-
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Data / Parameter	Principle 9.4 Release of Pollutants -Water Quality and Quantity
Unit	-
Description	Appropriate disposal of wastewater as required by the Law on Water Pollution Control
Source of data	Assessing collection and disposal methods during site visits and checking disposal records
Value(s) applied	According to the project manager, since the company have been a client of İSKİ for a long time, they do not pay sewage truck fees to İSKİ(Istanbul Water and Sewerage Administration). There is, however, a payment record of TRY 340.00, on 13.02.2023, TRY 297 on 10/03/2023, TRY 340 on 10/04/2023 and TRY 311 , on 08.05.2023, 501 TRY on 15/01/2024, 456 TRY on 10/02/2024, which indicates that sewage truck arrives at the project area to collect wastewater. Waste disposal record dates: 07/03/2024 15/04/2024 10/05/2024 10/06/2024 18/07/2024
Measurement methods and procedures	Domestic wastewater is collected and disposed to the sewage system via trucks; and the disposal records are kept by the Project Owner. Collection methods and waste disposal records are checked during site visits.
Monitoring frequency	Annually
QA/QC procedures	-

Purpose of data	To monitor the contribution to Principle 9.4
Additional comment	-

Data / Parameter	Principle 9.4 Release of Pollutants – Soil Condition
Unit	-
Description	Handling of excavated soil
Source of data	Photos from the site or interviews
Value(s) applied	Excavated soil is handled according to Turkish Regulations 2021 ²¹²²
Measurement methods and procedures	During construction, soil has been stored in the excavated soil storage area in order to be reused for filling of turbine foundation and landscaping purposes.
Monitoring frequency	Once at first verification
QA/QC procedures	-
Purpose of data	To monitor the contribution to Principle 9.4
Additional comment	-

Data / Parameter	Principle 9.5 Hazardous and Non-hazardous Waste - Noise Pollution
Unit	-
Description	Level of noise
Source of data	Site visit observations and interviews
Value(s) applied	No noise caused by turbines in the baseline scenario

²¹ <https://mevzuat.gov.tr/mevzuat?MevzuatNo=5401&MevzuatTur=7&MevzuatTertip=5>

²² <https://www.resmigazete.gov.tr/eskiler/2021/10/20211009-2.htm>

Measurement methods and procedures	Environmental Impact Assessment of Canta WWP indicates the level of noise expectation is to be below the limits during the operation phase of the project. Noise measurement report is provided which is dated 16/04/2021 and 05/2023.²³ Noise measurements are below the limit values according to the reports. EIA Not required: 13/02/2009 PRE-EIA REPORT: 01/2009
Monitoring frequency	Annually
QA/QC procedures	-
Purpose of data	To monitor the contribution to Principle 9.5
Additional comment	-

Data / Parameter	Principle 9.5 Hazardous and Non-hazardous Waste - Waste Oil
Unit	-
Description	Proper management of waste oil
Source of data	Assessing disposal methods during site visits and checking waste oil disposal records.
Value(s) applied	Waste declaration form has been provided by the project owner. - Organic solvents and other hazardous material colors - Engine oils without chloride - Oil filters - Organic wastes include hazardous materials - Mercury materials - Lamp flurocence

²³ Canta RES Measurement and Analysing Report

	Waste oil disposal declarations from 2023 and 2024 were issued by legal authorization and disposal processes were in compliance
Measurement methods and procedures	Waste oil from equipment is collected properly in line with the relevant regulation and disposed via accredited abatement companies. Waste oil is disposed in line with regulation # 26952 on control of waste oils. ²⁴
Monitoring frequency	Annually
QA/QC procedures	-
Purpose of data	To monitor the contribution to Principle 9.5
Additional comment	-

Data / Parameter	Principle 9.11 Endangered Species -Biodiversity
Unit	-
Description	Ensuring that the project creates no disturbance to the regional habitat
Source of data	Assessments during site visits and observation (ornithology) reports Nigar Albağ Mutlu from Almer Çevre Denetim Şirketi has been worked as biologist and bird observer between 01/08/2015 and 31/12/2024.
Value(s) applied	No disturbance to the regional habitat in the baseline scenario
Measurement methods and procedures	Assessments during site visits and observation (ornithology) reports Ornithology reports are provided to the DOE. Such as the one dated July 2019 and May 2022. Ornithology studies

²⁴ Regulation: Atık Yağların Kontrolü Yönetmeliği, numbered 26952, dated 30.07.2008
<http://www.mevzuat.gov.tr/Metin.Aspx?MevzuatKod=7.5.12290&MevzuatIliski=0&sourceXmlSearch>

	have been conducting to ensure there is no disturbance to the regional habitat.²⁵ Nigar Albağ Mutlu from Almer Çevre Denetim Şirketi has been worked as biologist and bird observer between 01/08/2015 and 31/12/2024. Fall 2024 report written by Nigar Albağ Daily Observation Data – 2023 Spring – Fall Daily Observation Data – 2024 Spring – Fall Nature Protection National Parks (Doğa Koruma Milli Parklar) formatted Ornithology report - 2025
Monitoring frequency	Annually
QA/QC procedures	-
Purpose of data	To monitor the contribution to Principle 9.11
Additional comment	-

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

This project is not a community service project, thus this section is N/A.

D.4. Implementation of sampling plan

N/A

²⁵ Ornithology Report of Cantu WPP Project

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

There is no clean energy generation for baseline situation of the project site.

SDG 8: Decent Work and Economic Growth

There is no employment opportunity as project created within the project area and nearby settlements for baseline situation.

SDG 13: Climate Action

There is no similar activity to combat with climate change on project site and nearby area for baseline situation. Therefore, emitted CO₂ would be 160,584 tCO₂ for the whole monitoring period.

The ex-ante emission reductions (ER_y) are calculated as follows:

$$ER_y = BE_y - PE_y - LE_y$$

Where:

ER_y = Emission reductions in year y (tCO₂)

BE_y = Baseline emissions in year y (tCO₂)

PE_y = Project Emissions in year y (tCO₂)

LE_y = Leakage emissions in year y (tCO₂)

Baseline emissions

Baseline emission is calculated according to the formula

$$BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$$

Where:

EG_{PJ,y} = Net electricity delivered to the grid by the project activity in year y excluding transmission losses of the grid

EF_{grid,CM,y} = Emission factor calculated according to selected methodology (Emission factor has been calculated ex-ante in PDD which is also used in calculating the baseline emissions. EF value used is tCO₂/MWh)

As it can be seen in detail in excel spread sheet used for calculations, realized baseline emissions are calculated as follows:

$$EG_{PJ,2023} = 150,757.02 \text{ MWh}$$

$$EF_{grid,CM,y} = 0.6482 \text{ tCO}_2/\text{MWh}^{26}$$

$$BE_{2023} = 150,757.02 \text{ (MWh)} \times 0.6482 \text{ (tCO}_2/\text{MWh)} = 97,720 \text{ tCO}_2\text{e}$$

$$BE_{2024} = 96,981.76 \text{ (MWh)} \times 0.6482 \text{ (tCO}_2/\text{MWh)} = 62,683 \text{ tCO}_2\text{e}$$

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

SDG 7: Affordable and Clean Energy

The project has been generated net 247,738.78 MWh clean electricity for the whole monitoring period while it is calculated as 154,045.41 MWh per annum.

SDG 8: Decent Work and Economic Growth

The project has created 9 employment opportunities.

SDG 13: Climate Action

The project has mitigated 160,584 tCO₂ in the whole monitoring period. According to the applied methodology ACM0002 (Version 21.0), for most renewable energy power generation project activities, project emissions are 0 tCO₂. This project activity does not involve project emissions that can be significant.

Vintage wise breakdown of electricity generation is:

Net Generation in 2023 (MWh)	150,757.02
Net Generation in 2024 (MWh)	96,981.76
Total Net Generation during Monitoring Period (MWh/MP)	247,738.78

Vintage wise breakdown of emission reduction is:

Net Emission Reduction in 2023 (tCO ₂)	97,720
Net Emission Reduction in 2024 (tCO ₂)	62,863

²⁶

https://enerji.gov.tr//Media/Dizin/EVCED/tr/%C3%87evreVe%C4%B0klm/%C4%B0klmDe%C4%9Fi%C5%9Fikli%C4%9Fi/TUESEmisyonFktr/Belgeler/2019_Sebeke_EF.pdf

Total Emission Reduction during Monitoring Period (tCO₂/MP)	160,583
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E.3. Calculation of leakage

According to applied methodology ACM0002 (Version 21.0), the emissions potentially arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing, transport etc.) are neglected. The energy generating equipment is not transferred from or to another activity. Therefore, leakage is considered as "0".

As a result;

$$LE_y = 0$$

$$ER_y = BE_y$$

$$160,583 \text{ tCO}_2 = 160,583 \text{ tCO}_2$$

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

SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit
13	CO ₂ emission reduction	160,583 tCO ₂	0 tCO ₂	160,583 tCO ₂
8	Creating employment opportunities	No employment	9 employments	9 employments
7	Production of clean energy	0 MWh	247,738.78 MWh	247,738.78 MWh

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 values²⁷ achieved during this monitoring period
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²⁷ Whenever emission reductions are capped, both the original and capped values used for calculations must be transparently reported. Use brackets to denote original values.

13	170,121 tCO ₂	160,583 tCO ₂
8	18 employments	9 employments
7	262,461.37 MWh	247,738.78 MWh

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

Average yearly emission reductions have been calculated by proportioning expected annual generation to the days included by this monitoring period. Average yearly emission reduction has been multiplied by monitoring period (in days) to calculate estimated emission reduction. Details of calculation is present in verification calculation excel sheet.

(Expected annual generation x emission factor) x (days included / 365)

158,728.77 MWh x 0.6482 * (355/365) = 102,884

103,732.60 MWh x 0.6482 * (232/365) = 67,237

2023 (MWh)	158,728.77	2023 (tCO₂)	102,884
2024 (MWh)	103,732.60	2024 (tCO₂)	67,237

1/11/2023	12/31/2023	355
1/1/2024	8/19/2024	232

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

Estimated and realized renewable electricity generation of the project has a slight difference due to wind potential fluctuations as it could be in nature. The project has been expected to generate 163,200 MWh/year and 262,461.37 MWh for the whole monitoring period (details of calculation is present in verification calculation excel sheet). For actual values, the project generated 154,045.41 MWh of clean energy per annum and 247,738.78MWh for the whole monitoring period.

% difference in EG: $[(247,738.78 - 262,461.37) / 262,461.37] \times 100 = - 5.6 \%$ which means the project generated 5.6 % less electricity than expected.

% difference in ER: $[(160,583 - 170,121) / 170,121] \times 100 = - 5.6 \%$ which means the project decreased CO₂ by 5.6 % less than expected.

Wind energy is believed to be very consistent in the long term but might show little deviations in the monthly figures. The wind speed and seasonal effects directly affect generated electricity. Since wind energy is always shaped by atmospheric events that have a highly variable data set, the targeted electricity generation amount may not be met.

SECTION F. SAFEGUARDS REPORTING

Principles	Mitigation Measures added to the Monitoring Plan
Principle 3 Community Health, Safety and Working Conditions	Staff receive relevant trainings. They also were trained during construction operation phases. Trainings given to the staff can be exemplified such as general HSE, risk, first aid, etc.
Principle 4.1 Sites of Cultural and Historical Heritage	The measurement between the turbines and the tumulus was performed and, according to the provided Google Earth picture, the heritage area is 206 m away from the closest turbine. Hence, in the feasibility report, it has been revealed that the project area is not included in these heritage areas according to the examinations made on the national parks, natural monuments, nature protection areas, and nature parks. Moreover, these areas are also not in the range of any construction or maintenance activities. Hence there is no mitigation required.
Principle 6.1 Labor Rights	The project developer ensures the training of workers. Different trainings have been given within the company.
Principle 9.4 Release of pollutants	Project does not have any adverse impact on water quality and quantity. Domestic wastewater was collected and disposed to the sewage system. Domestic solid waste handled in accordance with related regulation and disposed to nearest garbage container of the municipality. All the other generated waste was handled

	according to the national regulation "Turkish Water Pollution Control Regulation". All excavation soils used for road construction, turbine platform area, cable channel, foundation backfill. Excavation was used in levelling of the land. The project does not have any point or fugitive emission and heating source emissions during operation other than an emergency diesel generator. Moreover, no mitigation measure is required for noise pollution due to related justification.
Principle 9.5 Hazardous and Non-Hazardous Waste	Waste oil from equipment is collected properly in line with the relevant regulation and disposed via accredited abatement companies. Waste oil is disposed in line with regulation # 26952 on control of waste oils. Monitoring parameters defined for each relevant principle.
Principle 9.5 Noise Pollution	Noise measurement report is provided which is dated 04/2021. Environmental Impact Assessment of Canta WWP indicates the level of noise expectation is to be below the limits during the operation phase of the project.
Principle 9.11 Endangered Species	It is ensured that the project does not create disturbance to the regional habitat by regular site vetting for bird/bat nests and carcasses and recording of the same is performed along for the ornithological monitoring. Verification of these parameters is carried out once in every monitoring period.

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.

During this monitoring period, no grievances or inputs were received. There is also a grievance box kept but there is no comment received so far. The grievance book picture and the declaration of the mukhtar are provided to the VVB. Plant manager is maintaining close contact with the mukhtar and other stakeholders and make sure that in case of any grievances it is well taken care of by the authorized members of the company and plant employees.

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

No such demand was made in this monitoring period.

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

No legal contest had arisen with the project in this monitoring period.

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