Monitoring report form for CDM project activity
(Version 09.0)

MONITORING REPORT			
Title of the project activity	Çeşme Wind Power Project, Turkey		
UNFCCC reference number of the project activity	GS 2542		
Version number of the PDD applicable to this monitoring report	05		
Version number of this monitoring report	4		
Completion date of this monitoring report	09/05/2023		
Monitoring period number	2		
Duration of this monitoring period	01/08/2017- 22/05/2022		
Monitoring report number for this monitoring period	1		
Project participants	VEGA RÜZGAR ENERJİSİ ELEKTRİK ÜRETİM A.Ş		
Host Party	Turkey		
Applied methodologies and standardized baselines	ACM0002 Version 15.0, “Large-scale Consolidated baseline methodology for grid-connected electricity generation from renewable sources”		
Sectoral scopes	Energy Industries / Renewable Energies / Wind Energy / Grid Connected		
Amount of GHG emission reductions or net anthropogenic GHG removals achieved by the project activity in this monitoring period	Amount achieved before 1 January 2013	Amount achieved from 1 January 2013 until 31 December 2020	Amount achieved from 1 January 2021
	-	103,736	46,217
Amount of GHG emission reductions or net anthropogenic GHG removals estimated ex ante for this monitoring period in the PDD	144,656 tCO2e		

SECTION A. Description of project activity

A.1. General description of project activity

Çeşme Wind Power Project (hereafter referred as the "project activity" or "Çeşme WPP"), which has been developed by VEGA RÜZGAR ENERJİSİ ELEKTRİK ÜRETİM A.Ş[1]. (hereafter referred as the "project participant"), is located in Çeşme District of İzmir, in Turkey. The project participant has been granted electricity generation license from EMRA for Çeşme WPP project on 29/05/2008.

The project activity pursues both to contribute to providing energy needs of Turkey and to create local industry as well as providing employment. Çeşme Wind Power Project is in İzmir province, Çeşme District of Turkey and has the installed capacity of 18 MWm/16 MWe. The project start date is 23/05/2015 through commissioning date of the three turbines. The project activity includes 6 turbines with 3 MWm/2.67 Mwe unit capacity. Total capacity is 18 MWm/16 MWe. Annual electricity generation is calculated as 53.572.000 kWh which is transmitted to the national grid at Çeşme RES transmission line.

Çeşme WPP provided employment to the project region in terms of qualified staff such as engineers, technicians, and machine operators as well as regular personnel since the priority of employment during both the construction period and operation period has been given to the region. The first three turbines (3x3.000 kWm/2.670 kWe) has commissioned on 23/05/2015. The remaining three turbines (3x3.000 kWm/2.670 kWe) had commissioned on 20/06/2015.

The estimated amount of GHG emission reduction is 30,068 tonnes CO2e per year in the registered PDD. During its operation during this monitoring period, the actualized net electricity generation is 267,204.90 MWh. The actual emission reduction has been calculated as 149,953tonnes CO2 for this monitoring period.

The project has produced positive environmental benefits as displacing the electricity generated by fossil fuel fired power plants by utilising the renewable resources to avoid environmental pollution and GHG emissions.

Table 1- Project Implementation Schedule

Date	Milestone
29.05.2008	Issuance of the initial license
2008	Çeşme WPP Project Introductory File
3.06.2013	Agreement with Lifenerji for Carbon Consultancy
19.08.2013	Board Decision Date
11.09.2013	Agreement with Equipment Provider (Nordex)
2.01.2014	Start Date of Construction
22.05.2015	Start Date of Operation of the first 3 turbines3
20.06.2015	Start Date of Operation of the other 3 turbines
23.05.2015-31.07.2017	1st Monitoring Period
28.04.2022	Local stakeholder meeting (revised meeting requested by GS)

[1] The project company name has been changed as VEGA RÜZGAR ENERJİSİ ELEKTRİK ÜRETİM A.Ş., however the project owner is same. The generation license shows the name change.

01.08.2017- 22.05.2022	2nd Monitoring Period[2]
13.02.2023	Site visit for 2nd monitoring period and CP Renewal

A.2. Location of project activity

Çeşme District of İzmir, Turkey

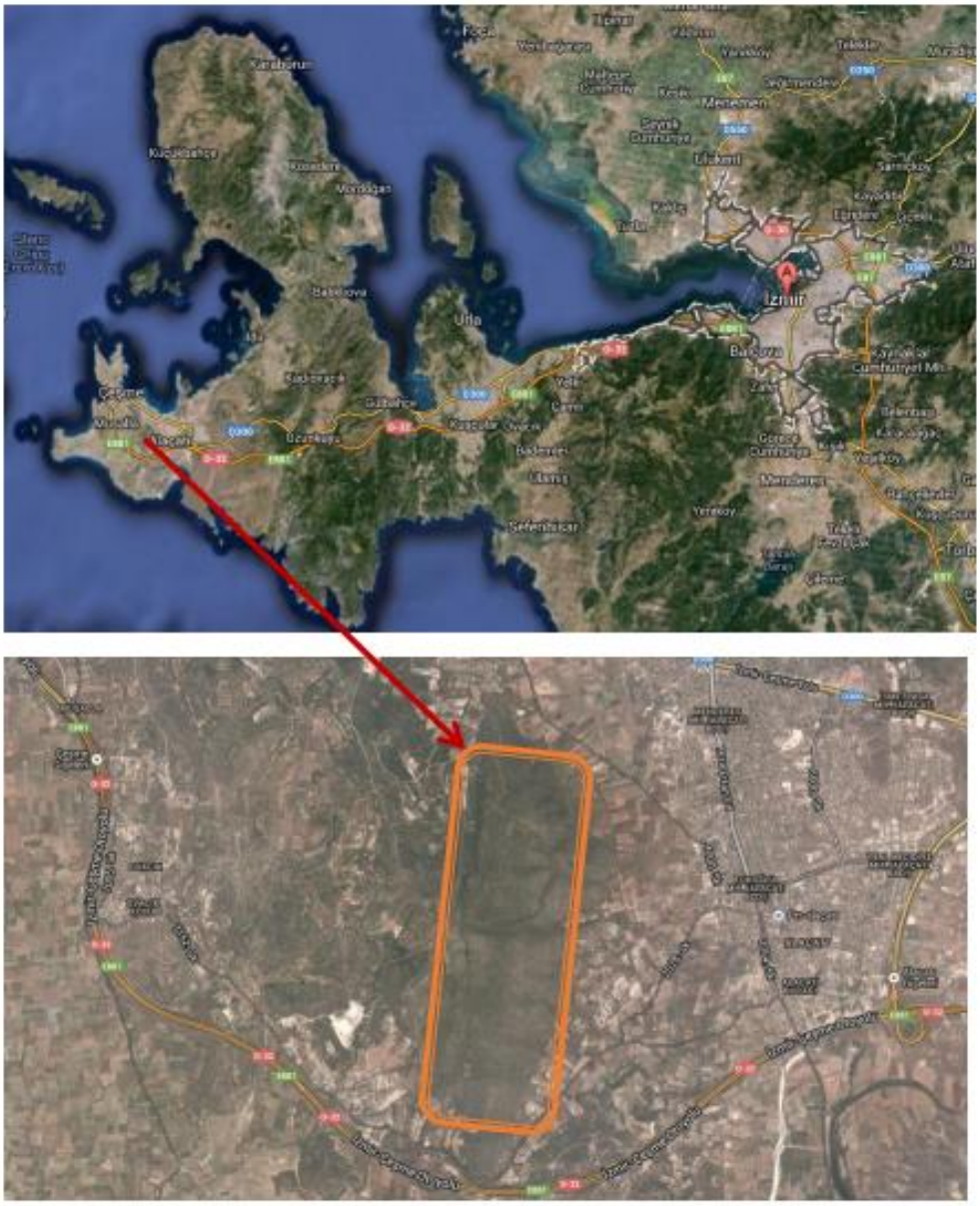

Figure 1. Map and Satellite View of Project Area

[2] Considering the unique situation of the project, the duration of the monitoring period of the project activity has been approved by GS.

Table 2- Turbines Coordinates[3]

Turbine	Longitude (E)	Latitude (N)
T1	26º 19’ 27.1761’’	38º 18’ 26.0352’’
T2	26º 19’ 40.6332’’	38º 18’ 18.0000’’
T3	26º 19’ 51.9624’’	38º 18’ 12.7116’’
T4	26º 19’ 28.8116’’	38º 17’ 56.1948’’
T5	26º 19’ 21.1845’’	38º 17’ 44.0520’’
T6	26º 19’ 22.2365’’	38º 17’ 32.7336’’

A.3. Parties and project participants

Parties involved	Project participants	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
Turkey	VEGA RÜZGAR ENERJİSİ ELEKTRİK ÜRETİM A.Ş	Yes

A.4. References to applied methodologies and standardized baselines

Applied approved baseline and monitoring methodology:

- ACM0002 Version 15.0, “Large-scale Consolidated baseline methodology for grid-connected electricity generation from renewable sources”

Used tools:

- Tool for the demonstration and assessment of additionally, Version 07.0.0[4]
- Tool to calculate the emission factor for an electricity system, Version 04.0.0[5]
- Combined tool to identify the baseline scenario and demonstrate additionality, Version 05.0.0[6]
- Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion, Version 02.0.0[7]
- Tool to determine the remaining lifetime of the equipment, Version 01[8]

A.5. Crediting period type and duration

The first crediting period is 7 years and renewable twice.

[3] Generation License

[4] http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v4.0.pdf

[5] http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf

[6] http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-02-v5.0.0.pdf

[7] http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-03-v2.pdf

[8] http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-10-v1.pdf

May 23, 2015 — May 22, 2022

SECTION B. Implementation of project activity

B.1. Description of implemented project activity

The installed capacity of the project activity is 18 MWm/16 MWe, and the number of turbines is 6. The capacity of each unit is 3000 kWm/2.670 kWe.

The amount of annual production is 53.572 MWh. The project is connected to Çeşme Substation that has 154 kV high voltage.

Table 3 - Technical Specifications of the Turbines[9]

Turbine No	Power (MW)	Brand	Pattern
1	3 MWm/2.67 MWe	Nordex	N117
2	3 MWm/2.67 MWe		
3	3 MWm/2.67 MWe		
4	3 MWm/2.67 MWe		
5	3 MWm/2.67 MWe		
6	3 MWm/2.67 MWe		

B.2. Post-registration changes

B.2.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents

There are no project or methodology deviations applied during this monitoring period.

B.2.2. Corrections

There are no corrections applied during this monitoring period.

B.2.3. Changes to the start date of the crediting period

The start date of the crediting period of the project activity was estimated as 22/05/2015 in the registered PDD. As the start date of commissioning is 23/05/2015[10], the start date of the crediting period has been changed to 23/05/2015 instead of 22/05/2015.

B.2.4. Inclusion of monitoring plan

N/A

[9] Ministry acceptance protocol

[10] Ministry Acceptance Protocol

B.2.5. Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents

There are no permanent changes during this monitoring period.

B.2.6. Changes to project design

There are changes to project design during this monitoring period.

B.2.7. Changes specific to afforestation or reforestation project activity

N/A

SECTION C. Description of monitoring system

The Operation Manager is responsible for the whole management of the Project Activity and the electrical technicians are responsible for the implementation of the Project Activity. In total, eleven employees are working for the Project Activity as eight employees are in site and three employees in central office.

Two power meters are installed at the grid interface of the project. One is the main meter and the other is spare meter of the main meter for cross-checking. Both meters are jointly inspected and sealed to be protected from interference by any of the parties. Both the main and secondary meters are owned and installed by the grid operator (TEIAS). The grid operator's is the only one authorized to deal with fixing, calibrating, or changing the meters, which will be done either by the grid operator or by a company authorized by the grid operator. During this monitoring period, there were no records of meter failure. In case of any urgent case TEIAS contacts the Operations Manager. Since the meters are within TEIAS' province, TEIAS executes all the procedures for handling non-conformities. Therefore, the Project Owner does not have any internal auditing for this purpose.

TEIAS is performing remote reading of the meters and monthly power meter readings are the basis for monitoring net electricity fed into the grid. A measuring protocol is prepared including day, peak and night hour electricity generation by the project owner and approved by governmental officers at the end of each month.

The primary source is EPIAS records. Net electricity exported is crosschecked with Meter Reading Forms. EPIAS is the financial settlement center of TEIAS. Additionally, the remote reading by the governmental body is also available. The website of EPIAS is accessible to Project Owner with their unique user ID and password. The electricity generation data is reported monthly basis.

Data will be stored electronically, during the crediting period and at least two years after the last issuance of credits for the wind farm project activity in the concerning crediting period. The Project Owner is responsible for storage of data received from the measuring devices. Site manager is responsible for data aggregation.

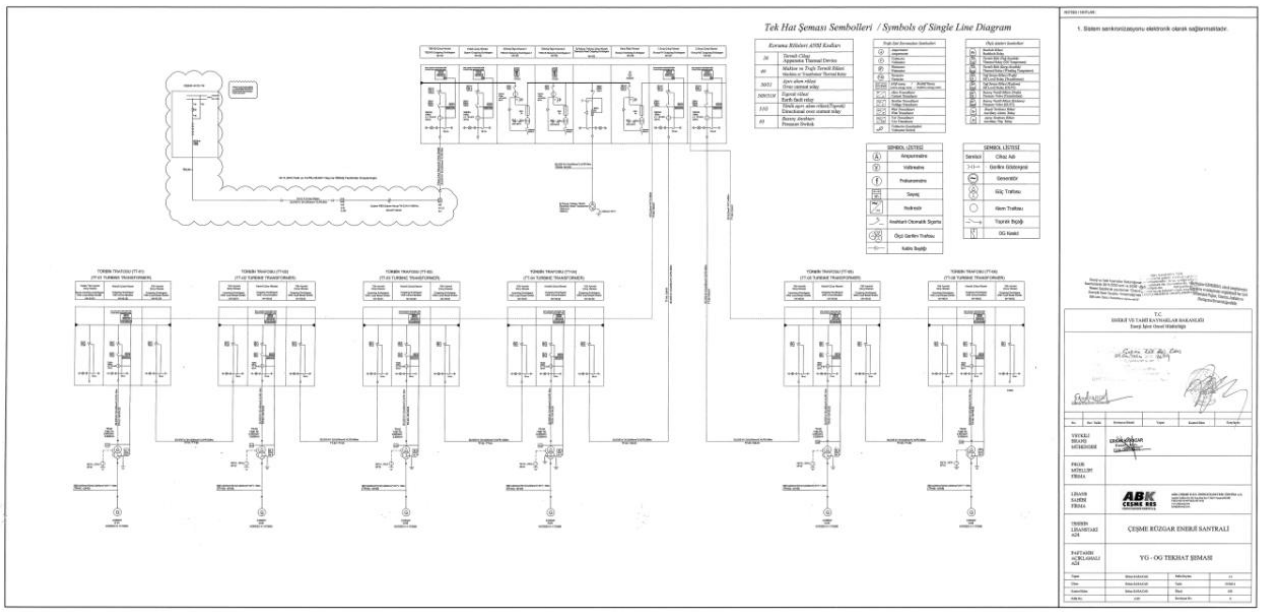

Figure A. Single Line Diagram of the Çeşme WPP

SECTION D. Data and parameters

D.1. Data and parameters fixed ex ante

Data/Parameter	Gross electricity generation
Unit	MWh
Description	Gross Electricity supplied to the grid by relevant sources (2011- 2013)
Source of data	Turkish Electricity Transmission Company (TEİAŞ), Annual Development of Turkey's Gross Electricity Generation of Primary Energy Resources (2006-2013) TEİAŞ www.teias.gov.tr/T%C3%BCrkiyeElektrik%C4%B0statistikleri/istatistik2013/uretim%20tuketim(23-47)/37(06-13).xls
Value(s) applied	Please refer to Table 12 in registered PDD
Choice of data or measurement methods and procedures	TEIAS is the national electricity transmission company, which makes available the official data of all power plants in Turkey.
Purpose of data/parameter	Data used for emission reduction calculation
Additional comments	-

Data/Parameter	Net electricity generation
Unit	MWh
Description	Net electricity generated by power plant/unit m, k or n (or in the project electricity system in case of EGy) in year y or hour h
Source of data	Turkish Electricity Transmission Company (TEIAS), Annual Development of Electricity Generation- Consumption and Losses in Turkey (1984-2013) TEIAS, see http://www.teias.gov.tr/T%C3%BCrkiyeElektrik%C4%B0statistikleri/istatistik2013/uretim%20tuketim(23-47)/34(84-13).xls
Value(s) applied	Please refer to Table 13 in registered PDD

Choice of data or measurement methods and procedures	This data is used to find relation between the gross and net electricity delivered to the grid by fossil fuel fired power plants (Table 13) Import and Export data is used to find total net electricity fed into the grid in the years of 2011, 2012 and 2013. TEIAS is the national electricity transmission company, which makes available the official data of all power plants in Turkey
Purpose of data/parameter	Data used for emission reduction calculation
Additional comments	-

Data/Parameter	**$HV_{i, y}$**
Unit	Mass or volume unit
Description	Heating Values of fuels consumed for electricity generation in the years of 2011, 2012 and 2013
Source of data	Heating Values of Fuels Consumed In Thermal Power Plants In Turkey By The Electric Utilities, TEİAŞ. See: http://www.teias.gov.tr/T%C3%BCrkiyeElektrik%C4%B0statistikleri/istatistik2013/yak%C4%B1t48-53/51.xls
Value(s) applied	Please refer to Table 18 in registered PDD
Choice of data or measurement methods and procedures	TEİAŞ is the national electricity transmission company, which makes available the official data of all power plants in Turkey. There is no national NVC data in Turkey. However, TEİAŞ announces Heating values of fuels. This data is used to calculate annual NCVs for each fuel type
Purpose of data/parameter	Data used for emission reduction calculation
Additional comments	-
Data/Parameter	**$FC_{i, y}$**
Unit	Mass or volume unit
Description	Amount of fuel type i consumed in the project electricity system in year y
Source of data	Annual Development of Fuels Consumed in Thermal Power Plants In Turkey by The Electric Utilities, TEİAŞ. See: www.teias.gov.tr/T%C3%BCrkiyeElektrik%C4%B0statistikleri/istatistik2013/yak%C4%B1t48-53/49.xls
Value(s) applied	Please refer to Table 19 in registered PDD
Choice of data or measurement methods and procedures	TEİAŞ is the national electricity transmission company, which makes available the official data of all power plants in Turkey.
Purpose of data/parameter	Data used for emission reduction calculation
Additional comments	-

Data/Parameter	**$NCV_{i, y}$**
Unit	GJ/mass or volume unit
Description	Net Calorific Value of fuel types in the years of 2011, 2012 and 2013
Source of data	Calculated by using $HV_{i, y}$ to $FC_{i, y}$ as Net Calorific Values of fuel types are not directly available in Turkey.
Value(s) applied	Please refer to Table 18, Table 19, and Table 20 in registered PDD
Choice of data or measurement methods and procedures	Once for each crediting period using the most recent three historical years for which the data is available at the time of submission of the PDD to the DOE for validation.
Purpose of data/parameter	Calculation of baseline emissions
Additional comments	-

Data/Parameter	Sample Group for BM emission factor
Unit	Name of the plants, MW capacities, fuel types, annual electricity generations and dates of commissioning.
Description	Most recent power plants which compromise 20% of total generation
Source of data	Annual Development of Fuels Consumed in Thermal Power Plants In Turkey By The Electric Utilities, TEIAS: http://www.teias.gov.tr/YayinRapor/APK/projeksiyon/KAPASITEPROJEKSIYONU2011.pdf http://www.teias.gov.tr/YayinRapor/APK/projeksiyon/KAPASITEPROJEKSIYONU2012.pdf http://www.teias.gov.tr/YayinRapor/APK/projeksiyon/KAPASITEPROJEKSIYONU2013.pdf
Value(s) applied	Please refer to Table 22 in registered PDD
Choice of data or measurement methods and procedures	TEIAS is the national electricity transmission company, which makes available the official data of all power plants in Turkey. The latest data available during PDD preparation was for 2012 please find information as: http://www.teias.gov.tr/KAPASITEPROJEKSIYONU2012.pdf
Purpose of data/parameter	-
Additional comments	-

Data/Parameter	$EF_{CO2, m, i, y}$
Unit	tCO2/GJ
Description	CO2 emission factor of fuel type i in year y
Source of data	IPCC default values at the lower limit of the uncertainty at a 95% confidence interval as provided in table 1.4 of Chapter1 of Vol. 2 (Energy) of the IPCC Guidelines on National GHG Inventories. http://www.ipccnggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_1_Ch1_Introduction.pdf
Value(s) applied	Please refer to Table 21 in registered PDD
Choice of data or measurement methods and procedures	No plant specific and national emission factor data is available in Turkey. So, IPCC default data is used.
Purpose of data/parameter	-
Additional comments	-

Data/Parameter	$\eta_{m, y}$
Unit	-
Description	Average energy conversion efficiency of power unit m in year y
Source of data	Annex I the “Tool to calculate the emission factor for an electricity system” (v.4)
Value(s) applied	Please refer to Table17 in registered PDD
Choice of data or measurement methods and procedures	For efficiency rates of Coal and Lignite Power Plants See Annex-1 of the Tool (highest rate is applied to be conservative) For Natural Gas and Oil plants efficiencies, default value given in the tool is applied: http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool07-v2.pdf
Purpose of data/parameter	Calculation of baseline emissions
Additional comments	-

Data/Parameter	$EF_{CO2, Grid, y}$
Unit	tCO2/MWh
Description	CO2 emission factor of grid in year y
Source of data	Please refer to Section B.6.3 in registered PDD
Value(s) applied	0.5612 tCO_2/MWh
Choice of data or measurement methods and procedures	For efficiency rates of Coal and Lignite Power Plants See Annex-1 of the Tool (highest rate is applied to be conservative) For Natural Gas and Oil plants efficiencies, default value given in the tool is applied: http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool07-v2.pdf
Purpose of data/parameter	Calculation of baseline emissions
Additional comments	-

D.2. Data and parameters monitored

Data/Parameter	$EG_{facility, y}$
Unit	MWh/yr
Description	Net electricity exported to the grid in the year y
Measured/calculated/ default	Measured
Source of data	EPIAS records
Value(s) of monitored parameter	24,117.15 MWh for 2017 50,675.36 MWh for 2018 55,191.33 MWh for 2019 54,864.62 MWh for 2020 59,608.90 MWh for 2021 22,747.55 MWh for 2022
Monitoring equipment	Net electricity exported is crosschecked with Meter Reading Forms issued by Project owner and approved by governmental officers. The Meter Reading Forms were issued by the governmental officers and signed by both parties. Currently, the forms are filled by the project owner and approved by the governmental officers. Additionally, the remote reading by the governmental body is also available. EPİAS records are considered as the main source. Power meters:
Measuring/reading/recording frequency	Monthly readings

Çeşme WPP	Main meter	Spare Meter
Brad	EMH	EMH
Serial Number	4213167	4213168
Latest Test Date	19/09/2020	19/09/2020
Accuracy	0.2S	0.2S

Calculation method (if applicable)	The net electricity is the difference of the electricity supplied and consumed by the project and shall be taken into account for emission reduction calculations through EPIAS records. Thus, baseline emissions are based on the net electricity supplied to the grid.
QA/QC procedures	• Back-up meter is used for crosschecking the accuracy and both meters are calibrated if required. • EPİAS records are considered as the main source for the net electricity and the values are crosschecked with the data measured by meters. • TEIAS is responsible for calibration and maintenance of the devices. The periodical calibration or maintenance is under the responsibility of TEIAS and has been fixed as once in 10 years. Since TEİAŞ meters are sealed by TEIAS, the project proponent cannot intervene with the devices. The periodic tests are executed according to TEIAS schedule in line with the relevant legal regulation. The meters were tested on 19/09/2020 during the monitoring period. • Date of First Index Protocol is 23/05/2015.
Purpose of data/parameter	Calculation of emission reductions
Additional comments	-

Data/Parameter	**Air Quality**
Unit	tons/MWh
Description	Amount of CO and NMVOC emission reductions
Measured/calculated/ default	Measured/Calculated
Source of data	- EPIAS records - According to latest official data CO and NMVOC emissions due to electricity generation in 2012 are: 0.160 tons/GWh and 0.034 tons/ GWh respectively[11]
Value(s) of monitored parameter	According to the current data of electricity amount produced (267,204.90 MWh) by Çeşme WPP, the amount of avoided emissions are as below: CO= 42.75 tons NMVOC=9.08 tons
Monitoring equipment	N/A
Measuring/reading/recording frequency	Annually
Calculation method (if applicable)	Amount of annual net electricity generation, which is calculated by monthly settlement notifications of PMUM based on monthly meter readings, will be used to calculate estimated CO and NMVOC emission reductions by project activity.
QA/QC procedures	- EPIAS records - According to latest official data CO and NMVOC emissions due to electricity generation in 2012 are: 0.160 tons/GWh and 0.034 tons/ GWh respectively.
Purpose of data/parameter	Sustainability monitoring parameters
Additional comments	-

[11] https://data.tuik.gov.tr/Bulten/Index?p=Seragazi-Emisyon-Envanteri-2012-16174#:~:text=T%C3%9C%C4%B0K%20Kurumsal&text=Envanter%20sonu%C3%A7lar%C4%B1na%20g%C3%B6re%2C%202012%20y%C4%B1l%C4%B1nda,ton%20(Mt)%20olarak%20hesapland%C4%B1. (Table 7-cell H9)

Data/Parameter	Water Quality and Quantity
Unit	m^3/y
Description	Amount of Wastewater discharged to the environment
Measured/calculated/ default	N/A
Source of data	No other sources than the statistics and payment receipt.
Value(s) of monitored parameter	Wastewater produced by workers during operation is not released to the environment but collected in an impermeable septic tank and periodically transferred by sewage truck. The payment receipt of the transferred wastewater will be provided to DOE on site Amount of Avoided Wastewater Discharge by Project Activity per year (x1000 m^3/y): 2371,3 7,027.49 m3 of waste water has been avoided.
Monitoring equipment	N/A
Measuring/reading/recording frequency	Annually
Calculation method (if applicable)	Amount of annual net electricity generation, which is calculated by monthly settlement notifications of PMUM based on monthly meter readings, will be used to calculate estimated amount of avoided wastewater discharge by project activity. Records of transfer of wastewater from power plant by sewage truck, if it was performed, will be used to demonstrate proper waste-water management.
QA/QC procedures	Wastewater produced by workers during operation is not released to the environment but collected in an impermeable septic tank and periodically transferred by sewage truck. The payment receipt of the transferred wastewater will be provided to DOE on site Amount of Avoided Wastewater Discharge by Project Activity per year (x1000 m^3/y): 2371,3
Purpose of data/parameter	Sustainability monitoring parameters
Additional comments	Monitoring process was handled by statistics from TUIK and statement from Mayor of the village.

Data/Parameter	Biodiversity
Unit	N/A
Description	Number of observed bird strikes
Measured/calculated/ default	N/A
Source of data	Ornithology report An ornithology report dated in October 2012, bat monitoring reports dated in March 2017 and September 2017 also proves that there isn't any negative impact by the project activity.[12] Project coordinator appointed by the Project Owner monitors and then inform bird/bat carcasses and nests in site. In case of any case, he reports to the management in his reports. Annual declarations signed by the coordinator have been provided to the VVB.
Value(s) of monitored parameter	There is no negative impact of the project on birds

[12] https://www.vegaenerji.com/eng/our-environmental-reports/

Monitoring equipment	N/A
Measuring/reading/recording frequency	Once during each verification
Calculation method (if applicable)	N/A
QA/QC procedures	Project coordinator appointed by the Project Owner monitors and then inform bird/bat carcasses and nests in site. In case of any case, he reports to the management in his reports. Annual declarations signed by the coordinator have been provided to the VVB.
Purpose of data/parameter	Sustainability monitoring parameters
Additional comments	-

Data/Parameter	**Quality of employment**
Unit	N/A
Description	Health & Safety Trainings
Measured/calculated/ default	N/A
Source of data	No other sources of data than attendance list
Value(s) of monitored parameter	Employees were trained for: 1. Theoretical and practical safety instructions 2. Usage of fire control tools 3. First Aid 4. Occupational and health and safety
Monitoring equipment	N/A
Measuring/reading/recording frequency	Annually (Once at the end of each monitoring period). After first verification period, only new cases will be reported. Safety measures and equipment will be shown to VVB during each site visit for verification.
Calculation method (if applicable)	N/A
QA/QC procedures	Annually (Once at the end of each monitoring period). After first verification period, only new cases will be reported. Safety measures and equipment will be shown to VVB during each site visit for verification.
Purpose of data/parameter	Sustainability monitoring parameters
Additional comments	-

Data/Parameter	**Quantitative employment and income generation**
Unit	N/A
Description	a) Number of local employments b) Expropriation documents.
Measured/calculated/ default	N/A
Source of data	a) For number of local employments: SGK Records b) Supporting documents related to expropriation were provided.

<table>
<tr><td>Value(s) of monitored parameter</td><td>a) Please see the yearly employee numbers as below[13]:

<table><tr><th>Year</th><th>Employee</th></tr><tr><td>2017</td><td>9</td></tr><tr><td>2018</td><td>9</td></tr><tr><td>2019</td><td>11</td></tr><tr><td>2020</td><td>11</td></tr><tr><td>2021</td><td>9</td></tr><tr><td>2022</td><td>11</td></tr></table>
b) Expropriation was finalized.</td></tr>
<tr><td>Monitoring equipment</td><td>N/A</td></tr>
<tr><td>Measuring/reading/recording frequency</td><td>a) Annually for the number of local employments.
b) For the expropriation; only during the first verification.</td></tr>
<tr><td>Calculation method (if applicable)</td><td>N/A</td></tr>
<tr><td>QA/QC procedures</td><td>a) For number of local employments: SGK Records
b) Supporting documents related to expropriation were provided.</td></tr>
<tr><td>Purpose of data/parameter</td><td>Sustainability monitoring parameters</td></tr>
<tr><td>Additional comments</td><td>-</td></tr>
</table>

Data/Parameter	**Balance of payment and investments**
Unit	N/A
Description	Amount of payment for natural gas to be imported for electricity generation.
Measured/calculated/ default	Measured/Calculated
Source of data	TEİAŞ statistics for natural gas share in the electricity mix shall help to demonstrate the high import dependency. Amount of annual net electricity generation, which is calculated by monthly settlement notifications of PMUM (EPIAS) based on monthly meter readings, will be used to calculate correspondent amount of currency saved by project activity with help of above calculated factor.
Value(s) of monitored parameter	• Total Payment Avoided for Natural Gas Import by the Project During Monitoring Period: 5,001,435 Euro • Amount of Avoided Imported Natural Gas by Project Activity During Monitoring Period: 24,234,731 m^3
Monitoring equipment	Electricity meters
Measuring/reading/recording frequency	Annually
Calculation method (if applicable)	TEİAŞ statistics for natural gas share in the electricity mix shall help to demonstrate the high import dependency. Amount of annual net electricity generation, which is calculated by monthly settlement notifications of PMUM based on monthly meter readings, will be used to calculate correspondent amount of currency saved by project activity with help of above calculated factor.

[13] SGK records have been provşded to the VVB.

QA/QC procedures	TEİAŞ statistics for natural gas share in the electricity mix shall help to demonstrate the high import dependency. Amount of annual net electricity generation, which is calculated by monthly settlement notifications of PMUM (EPIAS) based on monthly meter readings, will be used to calculate correspondent amount of currency saved by project activity with help of above calculated factor
Purpose of data/parameter	Sustainability monitoring parameters
Additional comments	-

Forward Action Requests under 202210_Grievance_GS2542_SCReport

Forward Action Request 1:
Regarding the need that all risks identified by stakeholders are clearly discussed and mitigation planned and monitored over the remaining crediting period

During verification process for the entire and remaining crediting period, the comments and responses raised in section C.3. Assessment of comments from all consultations above of the aforementioned Stakeholder Consultation Report shall be verified to confirm and ensure that continues implementation of the mentioned activities are in place and provide sustainable action and continuous implementation.

All proofs have been submitted to the VVB.

Forward Action Request 2:

The project shall update the project documents and resolve inconsistencies in different documents.

PD shall ensure that this is performed during next verification process based on the information mentioned in the investigation report section 4.5 (b) iv. "Some minor inconsistencies were found in project documents and validation report – such as referring to wrong distances between nearby city and project site, using a slightly wrong map, not referring to monitoring parameter, etc. During the discussion, the verifying VVB confirmed that the project and wind turbine locations were crossed check with GPS coordinates and information was found accurate".

- A google map that shows the correct distances between nearby city and project site have been provided to the VVB. The project has already initiated the CP renewal process, thus there won't be any inconsistency in project documents.

Forward Action Request 3:
The Verification Body at next verification process shall ensure that all documents that sustain the information provided in the Stakeholder Consultation Report are available and in accordance with the statements included in such report.

Additionally, the legal court case situation shall be verified and confirmed by the VVB during verification assessment, in particular during physical site assessment to confirm that legal situation of the project land is closed.

- All the documents Stakeholder Consultation Report have been provided to the VVB. The reports in Table 4 have also been submitted to the VVB.

Table 4- Environmental reports that were submitted to the VVB[14]

No	Date	Report
1	October 2012	ORNITHOLOGY CUMULATIVE EVALUTION REPORT
2	May 2014	LANDSCAPE REHABILITATION REPORT
3	September 2014	ELECTRO MAGNETIC RESONANCE REPORT
4	October 2014	DUST EMISSION REPORT-1
5	December 2015	DUST EMISSION REPORT
6	December 2016	HONEY BEES AND PRODUCTION REPORT
7	March 2017	BAT MONITORING REPORTS, AUTUMN-DECEMBER 2016
8	September 2017	BAT MONITORING REPORTS, SPRING-SUMMER 2017 PERIOD
9	October 2019-September 2020	SOUND AND NOISE MEASUREMENT REPORT

Forward Action Request 4:
The project should successfully complete the verification demonstrating compliance with all the requirements.

Additionally, the legal situation of the project land is closed.

Regarding the EIA process courts, Ms.Madeleine Staaf Kura had raised a court to stop expropriation process claiming that power plants would conflict with tourism activities that they planned to invest in. The court however decided that energy investments were of priority and tourism plans were cancelled. The evidence by court (İzmir 5th court, Decision numbered 2016/969, pg 12) has been provided to the VVB. Then, Ms.Madeleine Staaf Kura sold all her land at her own will to a Turkish citizen (not local) on 14/12/2021.

Forward Action Request 5:

The verifying VVB must conduct a physical on-site visit and interview the local stakeholders.

A physical on-site visit has been arranged on 13th February2023.

D.3. Implementation of sampling plan

N/A

[14] Our Environmental Reports – Vega Energy (vegaenerji.com)

SECTION E. Calculation of emission reductions or net anthropogenic removals

E.1. Calculation of baseline emissions or baseline net removals

The baseline emission BEy (tCO2e) during the monitoring period results from:

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

Where:

BE_y	Baseline emissions in year y (tCO2e/y)
$EG_{PJ,y}$	Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y (MWh)
$EF_{grid,CM,y}$	Combined margin CO2 emission factor for grid connected power generation in year y calculated by using the latest version of the "Tool to calculate the emission factor for an electricity system" (tCO2/MWh)

$EF_{grid,CM,y}$ value is fixed as 0.5605 tCO2/MWh for during the crediting period. Table 5 shows the baseline emissions for the verification period:

Table 5- Baseline Emissions

Month	(A) Electricity supplied to the grid [MWh]	(B) Electricity consumed from the grid [MWh]	(C) = (A) - (B) EG (ID 8) Net electricity supplied to the grid [MWh]	EF [tCO_2/MWh]	Baseline emission: ER = EG * EF [t CO_2-eq]
Aug-17	6,471.27	2.43	6,468.83	0.5612	3,630
Sep-17	2,965.10	6.85	2,958.26	0.5612	1,660
Oct-17	4,723.35	6.17	4,717.18	0.5612	2,647
Nov-17	3,400.59	9.37	3,391.22	0.5612	1,903
Dec-17	6,583.70	2.04	6,581.66	0.5612	3,694
Jan-18	5,438.04	7.60	5,430.44	0.5612	3,048
Feb-18	4,347.92	5.47	4,342.45	0.5612	2,437
Mar-18	6,861.54	3.26	6,858.27	0.5612	3,849
Apr-18	2,252.41	11.33	2,241.08	0.5612	1,258
May-18	3,094.80	9.62	3,085.18	0.5612	1,731

Jun-18	2,836.50	7.80	2,828.70	0.5612	1,587
Jul-18	4,390.69	3.71	4,386.98	0.5612	2,462
Aug-18	3,868.95	6.16	3,862.79	0.5612	2,168
Sep-18	4,220.68	3.58	4,217.10	0.5612	2,367
Oct-18	3,004.98	5.24	2,999.74	0.5612	1,683
Nov-18	5,368.29	4.47	5,363.82	0.5612	3,010
Dec-18	5,065.13	6.33	5,058.81	0.5612	2,839
Jan-19	6,364.90	4.37	6,360.53	0.5612	3,570
Feb-19	5,326.24	3.08	5,323.16	0.5612	2,987
Mar-19	5,502.04	3.20	5,498.83	0.5612	3,086
Apr-19	4,647.34	4.86	4,642.48	0.5612	2,605
May-19	3,090.09	7.83	3,082.26	0.5612	1,730
Jun-19	4,626.85	2.94	4,623.91	0.5612	2,595
Jul-19	4,680.08	4.20	4,675.89	0.5612	2,624
Aug-19	5,378.74	3.28	5,375.45	0.5612	3,017
Sep-19	4,357.52	6.03	4,351.49	0.5612	2,442
Oct-19	2,483.95	11.41	2,472.53	0.5612	1,388
Nov-19	4,073.64	7.12	4,066.52	0.5612	2,282
Dec-19	4,726.03	7.76	4,718.27	0.5612	2,648
Jan-20	6,609.38	3.64	6,605.74	0.5612	3,707
Feb-20	5,709.81	3.82	5,705.98	0.5612	3,202
Mar-20	5,345.50	5.25	5,340.24	0.5612	2,997
Apr-20	4,069.12	5.52	4,063.60	0.5612	2,280
May-20	3,706.91	8.11	3,698.79	0.5612	2,076
Jun-20	3,018.17	6.74	3,011.43	0.5612	1,690
Jul-20	5,321.36	1.65	5,319.71	0.5612	2,985
Aug-20	5,111.81	3.85	5,107.96	0.5612	2,867
Sep-20	3,388.10	9.43	3,378.68	0.5612	1,896
Oct-20	2,304.39	10.51	2,293.88	0.5612	1,287
Nov-20	4,796.67	3.72	4,792.95	0.5612	2,690
Dec-20	5,548.79	3.14	5,545.65	0.5612	3,112
Jan-21	7,152.31	2.10	7,150.20	0.5612	4,013
Feb-21	5,040.07	3.82	5,036.25	0.5612	2,826
Mar-21	5,443.27	3.58	5,439.69	0.5612	3,053
Apr-21	5,662.19	4.68	5,657.50	0.5612	3,175
May-21	3,431.41	6.33	3,425.08	0.5612	1,922
Jun-21	2,716.30	4.67	2,711.63	0.5612	1,522
Jul-21	5,637.21	3.97	5,633.24	0.5612	3,161
Aug-21	4,452.28	4.99	4,447.29	0.5612	2,496
Sep-21	4,930.62	3.60	4,927.03	0.5612	2,765
Oct-21	3,846.55	6.60	3,839.95	0.5612	2,155
Nov-21	4,284.38	8.08	4,276.29	0.5612	2,400
Dec-21	7,066.73	1.99	7,064.74	0.5612	3,965
Jan-22	6,017.69	2.24	6,015.45	0.5612	3,376

Feb-22	4,261.95	3.95	4,258.01	0.5612	2,390
Mar-22	6,775.78	3.70	6,772.08	0.5612	3,800
Apr-22	3,667.30	6.28	3,661.02	0.5612	2,055
May-22	2,050.49	9.50	2,040.99	0.5612	1,145
2017 Vintage (01.08.2017-31.12.2017)	24,144.00	26.85	24,117.15	0.5612	13,534.00
2018 Vintage (01.01.2018-31.12.2018)	50,749.91	74.55	50,675.36	0.5612	28,439.00
2019 Vintage (01.01.2019-31.12.2019)	55,257.41	66.08	55,191.33	0.5612	30,973.00
2020 Vintage (01.01.2020-31.12.2020)	54,930.00	65.38	54,864.62	0.5612	30,790.00
2021 Vintage (01.01.2021-31.12.2021)	59,663.31	54.41	59,608.90	0.5612	33,452.00
2022 Vintage (01.01.2021-22.05.2022)	22,773.21	25.66	22,747.55	0.5612	12,765.00
Total	267,517.83	312.93	267,204.90	0.5612	149,953

E.2. Calculation of project emissions or actual net removals

In accordance with the methodology ACM0002 Version 15.0, “Large-scale Consolidated baseline methodology for grid-connected electricity generation from renewable sources, no project emissions need to be considered. Project emissions apply only for geothermal power plants, solar thermal power plants and for some hydro power plants.

Therefore PEy = 0

E.3. Calculation of leakage emissions

In accordance with the methodology ACM0002 Version 15.0, “Large-scale Consolidated baseline methodology for grid-connected electricity generation from renewable sources, no leakage emissions are considered. The main emissions potentially giving rise to leakage in context of electric sector projects are emissions arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g., extraction, processing, and transport). These emission sources are neglected.

LEy = 0

E.4. Calculation of emission reductions or net anthropogenic removals

	Baseline GHG emissions or baseline net GHG removals (t CO_2e)	Project GHG emissions or actual net GHG removals (t CO_2e)	Leakage GHG emissions (t CO_2e)	GHG emission reductions or net anthropogenic GHG removals (t CO_2e)			
				Before 01/01/ 2013	From 01/01/ 2013 until 31/12/ 2020	From 01/01/ 2021	Total amount
Total	144,656	149,953	0	0	103,736	46,217	149,953

E.5. Comparison of emission reductions or net anthropogenic removals achieved with estimates in the registered PDD

Amount achieved during this monitoring period (t CO_2e)	Amount estimated ex ante for this monitoring period in the PDD (t CO_2e)
149,953	144,656

E.5.1. Explanation of calculation of "amount estimated ex ante for this monitoring period in the PDD"

Estimated electricity generation in ex ante calculation of registered PDD is 53,572.00 MWh, which corresponds to 257,732.69 MWh for 1756 days. And net electricity generation achieved during this monitoring period is 267,204.90 MWh (for 01/08/2017 – 22/05/2022, 1756 days).

Estimated emission reduction in ex ante calculation of registered PDD is 30,068 tCO2, which corresponds to 144,653 tCO2 for 1756 days. And actual emission reduction achieved during this monitoring period is 149,955 tCO2 (for 01/08/2017 - 22/05/2022,1756 days).

E.6. Remarks on increase in achieved emission reduction

Both the actual emission reductions and net electricity generation achieved during the monitoring period are higher than the estimated amount. The difference is 3.7 % during the monitoring report. This increase is within the ranges of sensitivity analysis and it has no impact on the additionality.

Table 5- Comparison of electricity generation

Vintage	Period	Total Days	Amount achieved during this monitoring period (MWh)	Amount estimated ex ante (MWh)	Difference (MWh)	Difference (%)
2017	**2017 Vintage (01.08.2017-31.12.2017)**	153	24,117.15	22,456.21	1,660.94	7.4%
2018	**2018 Vintage (01.01.2018-31.12.2018)**	365	50,675.36	53,572.00	-2,896.64	-5.4%
2019	**2019 Vintage (01.01.2019-31.12.2019)**	365	55,191.33	53,572.00	1,619.33	3.0%
2020	**2020 Vintage (01.01.2020-31.12.2020)**	366	54,864.62	53,718.77	1,145.84	2.1%
2021	**2021 Vintage (01.01.2021-31.12.2021)**	365	59,608.90	53,572.00	6,036.90	11.3%
2022	**2022 Vintage (01.01.2021-22.05.2022)**	142	22,747.55	20,841.71	1,905.84	9.1%
Total		**1756**	**267,204.90**	**257,732.69**	**9,472**	**3.7%**

Table 6- Comparison of emission reductions

Vintage	Period	Total Days	Amount achieved during this monitoring period (tCO2e)	Amount estimated ex ante (tCO2e)	Difference (tCO2e)	Difference (%)
2017	**2017 Vintage (01.08.2017-31.12.2017)**	153	13,534	12,604	930	7.4%
2018	**2018 Vintage (01.01.2018-31.12.2018)**	365	28,439	30,068	-1,629	-5.4%
2019	**2019 Vintage (01.01.2019-31.12.2019)**	365	30,973	30,068	905	3.0%
2020	**2020 Vintage (01.01.2020-31.12.2020)**	366	30,790	30,150	640	2.1%
2021	**2021 Vintage (01.01.2021-31.12.2021)**	365	33,452	30,068	3,384	11.3%
2022	**2022 Vintage (01.01.2021-22.05.2022)**	142	12,765	11,698	1,067	9.1%
Total		1756	149,953	144,656	5,297	3.7%

E.7. Remarks on scale of small-scale project activity

N/A