

المجلس العالمي للبصمة الكربونية  
GLOBAL CARBON COUNCIL



# Project Submission Form

V3.2 - 2020

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<b>COVER PAGE- Project Submission Form (PSF)</b>				
<i>Complete this form in accordance with the instructions attached at the end of this form.</i>				
<b>BASIC INFORMATION</b>				
<b>Title of the Project Activity</b>	<b>Gazi-Sakarbayır Wind Power Plant Bundle</b>			
<b>PSF version number</b>	1.2			
<b>Date of completion of this form</b>	22/07/2022			
<b>Project Owner(s)</b> <small>(Shall be consistent with De-registered CDM Type B Projects)</small>	Arı En Elektrik Üretim Anonim Şirketi			
<b>Country where the Project Activity is located</b>	Turkey			
<b>GPS coordinates of the project site(s)</b>	<b>Bundle</b>	<b>Turbine</b>	<b>Latitude (N)</b>	<b>Longitude (E)</b>
	Gazi	T1	41° 8'34.09" (41.142802°)	28°19'2.63" (28.317397°)
		T2	41° 8'24.60" (41.140166°)	28°19'7.42" (28.318727°)
		T3	41° 8'42.40" (41.145110°)	28°19'52.73" (28.331314°)
		T4	41° 8'22.35" (41.139540°)	28°18'54.46" (28.315128°)
		T5	Determined soon	Determined soon
	Sakarbayır	T1	41°10'25.22" (41.173671°)	28°17'11.00" (28.286389°)
		T2	41°10'23.50" (41.173195°)	28°18'11.18" (28.303105°)
		T3	Determined soon	Determined soon
<b>Eligible GCC Project Type as per the Project Standard</b> <small>(Tick applicable project type)</small>	<input checked="" type="checkbox"/> <b>Type A:</b> <input type="checkbox"/> Type A1 <input checked="" type="checkbox"/> Type A2  <input type="checkbox"/> <b>Type B – De-registered CDM Projects:<sup>1</sup></b>			

<sup>1</sup> Owners of Type B projects shall fill in the form provided in Appendix 7.

	<input type="checkbox"/> Type B1 <input type="checkbox"/> Type B2				
<b>Minimum compliance requirements</b>	<input checked="" type="checkbox"/> Real and Measurable GHG Reductions <input checked="" type="checkbox"/> National Sustainable Development Criteria (if any) <input checked="" type="checkbox"/> Apply credible baseline and monitoring methodologies <input checked="" type="checkbox"/> Additionality <input checked="" type="checkbox"/> Local Stakeholder Consultation Process <input checked="" type="checkbox"/> Global Stakeholder Consultation Process <input checked="" type="checkbox"/> No GHG Double Counting <input checked="" type="checkbox"/> Contributes to United Nations Sustainable Development Goal 13 (Climate Action)				
<b>Choose optional and additional requirements</b> <small>(Tick applicable label categories)</small>	<input checked="" type="checkbox"/> Do-no-net-harm Safeguards to address Environmental Impacts <input checked="" type="checkbox"/> Do-no-net-harm Safeguards to address Social Impacts <input checked="" type="checkbox"/> Contributes to United Nations Sustainable Development Goals (in addition to Goal 13)				
<b>Applied methodologies</b> <small>(Shall be approved by the GCC or the CDM)</small>	ACM0002: "Grid-connected electricity generation from renewable sources" (Version 20.0);				
<b>GHG Sectoral scope(s) linked to the applied methodology(ies)</b>	<table border="1"> <thead> <tr> <th>GHG Sectoral Scope</th> <th>GHG Sectoral Scope Title</th> </tr> </thead> <tbody> <tr> <td>GHG-SS #1</td> <td>Energy industries (renewable / non-renewable sources)</td> </tr> </tbody> </table>	GHG Sectoral Scope	GHG Sectoral Scope Title	GHG-SS #1	Energy industries (renewable / non-renewable sources)
GHG Sectoral Scope	GHG Sectoral Scope Title				
GHG-SS #1	Energy industries (renewable / non-renewable sources)				

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	Rules and Requirements	Reference	Version	
<p><b>Applicable Rules and Requirements for Project Owners</b> (Tick applicable Rules and Requirements)</p>	<input checked="" type="checkbox"/> ISO 14064-2			
	<input checked="" type="checkbox"/> Applicable host country legal requirements /rules			
	<input checked="" type="checkbox"/> GCC Rules and Requirements <sup>2</sup>	<input checked="" type="checkbox"/> Project Standard		V3.1
		<input type="checkbox"/> Approved GCC Methodology (XXXXX)		
		<input checked="" type="checkbox"/> Program Definitions		V3.1
		<input checked="" type="checkbox"/> Environment and Social Safeguards Standard		V2.0
		<input checked="" type="checkbox"/> Project Sustainability Standard		V2.1
		<input checked="" type="checkbox"/> Instructions in Project Submission Form (PSF)-template		V3.2
		<input checked="" type="checkbox"/> Clarification No.1		V1.1
	<input checked="" type="checkbox"/> CDM Rules <sup>3</sup>	<input checked="" type="checkbox"/> Approved CDM Methodology (XXXXX)	ACM0002	V20.0
		<input checked="" type="checkbox"/> Tool for the demonstration and assessment of additionality	TOOL 01	V07.0.0
		<input type="checkbox"/> Combined tool to identify the baseline scenario and demonstrate additionality	TOOL 02	
		<input checked="" type="checkbox"/> Tool to calculate the emission factor for an electricity system	TOOL 07	V7.0
		<input type="checkbox"/> Demonstration of additionality of microscale project activities	TOOL 19	
		<input type="checkbox"/> Demonstration of additionality of small-scale project activities	TOOL 21	
<input type="checkbox"/> Additionality of first-of-its-kind project activities		TOOL 23		

<sup>2</sup> GCC Program rules and requirements: <https://www.globalcarboncouncil.com/resource-centre.html>

<sup>3</sup> CDM Program rules: <https://cdm.unfccc.int/Reference/index.html>

	<input checked="" type="checkbox"/> Common practice	TOOL 24	V3.1
	<input checked="" type="checkbox"/> Investment analysis	TOOL 27	V11.0
	<input type="checkbox"/> Positive lists of technologies		
	<input type="checkbox"/> Guidelines for objective demonstration and assessment of barriers		
	<input type="checkbox"/> Add rows if required		
<p><b>Choose Third Party External Project Verification by approved GCC Verifiers<sup>4</sup></b> (Tick applicable verification categories)</p>	<input checked="" type="checkbox"/> GHG emission reductions (i.e., Approved Carbon Credits <b>(ACCs)</b> )		
	<input checked="" type="checkbox"/> Environmental No-net-harm Label <b>(E<sup>+</sup>)</b>		
	<input checked="" type="checkbox"/> Social No-net-harm Label <b>(S<sup>+</sup>)</b>		
	<input checked="" type="checkbox"/> United Nations Sustainable Development Goals <b>(SDG<sup>+</sup>)</b>		
	<input type="checkbox"/> Bronze SDG Label		
	<input type="checkbox"/> Silver SDG Label		
	<input type="checkbox"/> Gold SDG Label		
	<input checked="" type="checkbox"/> Platinum SDG Label		
	<input type="checkbox"/> Diamond SDG Label		
	<input checked="" type="checkbox"/> CORSIA requirements <b>(C<sup>+</sup>)</b>		
<input checked="" type="checkbox"/> Host Country Attestation on Double counting			


<sup>4</sup> **Note:** GCC Verifiers under the Individual Track are not eligible to conduct verifications for GCC Project Activities whose owners intend to supply carbon credits (ACCs) for use within CORSIA.

Project Submission Form

<p><b>Declaration to be made by the Project Owner(s)<sup>5</sup></b></p> <p>(Tick all applicable statements)</p>	<p>The Project Owner(s) declares that:</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> The Project Activity complies with the eligibility of the applicable project type (A1, A2, B1 or B2) as stipulated by the Project Standard.</li> <li><input checked="" type="checkbox"/> The Project Activity shall start operations, and start generating emission reductions, on or after 1 January 2016.</li> <li><input checked="" type="checkbox"/> The Project Activity is eligible to be registered under the GCC program.</li> <li><input checked="" type="checkbox"/> No carbon credits generated by the proposed Project Activity will be claimed as carbon credits in any other GHG program anywhere in the world, either for compliance or voluntary purposes, for the entire 10-year GCC crediting period.</li> <li><input checked="" type="checkbox"/> The proposed Project Activity, if Type A, is NOT registered as a GHG Project Activity in any other GHG program or any other voluntary program anywhere in the world.</li> <li><input checked="" type="checkbox"/> The proposed Project Activity is NOT included as a component Project Activity (CPA) in a registered GHG Programme of Activities (PoA) under any GHG program (such as the CDM or any other voluntary program) anywhere in the world.</li> <li><input checked="" type="checkbox"/> The proposed Project Activity is NOT a CPA that has been excluded from a registered PoA under any GHG program (such as the CDM or any other voluntary program) anywhere in the world.</li> </ul> <p>Provide details (if any) below for the boxes ticked above.</p>
	<ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> If a GCC project chooses to apply to use ACCs under CORSIA, the Project Owner(s) is required to declare that they are aware that they must obtain and provide to the GCC and its Registry (operated by IHS Markit) a written attestation from the host country's national focal point (e.g., Ministry of Environment or Civil Aviation Authority) or focal point's designee, as required by CORSIA Emissions Unit Eligibility Criteria, which:             <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Confirms the avoidance of double counting as required by CORSIA;</li> <li><input checked="" type="checkbox"/> Shall be made publicly available prior to the use of units from the host country under CORSIA; and</li> <li><input checked="" type="checkbox"/> Places all responsibility on the Project Owner(s) to replace any and all doubly claimed or counted ACCs by the host country, in the GCC registry operated by IHS Markit.</li> </ul> </li> </ul> <p>Provide details below for the boxes ticked above</p>
	<p>The Project Owner(s) declares that:</p>

<sup>5</sup> The "Project Owner" means the legal entity or organization that has overall control and responsibility for the Project Activity.



	<p><input checked="" type="checkbox"/> All of the information provided in this document, including any supporting documents submitted to the GCC or its registry operator IHS Markit at any time, is true and correct;</p> <p><input checked="" type="checkbox"/> They understand that a failure by them to provide accurate information or data, or concealing facts and information, can be considered as negligence, fraud or willful misconduct. Therefore, they are aware that they are fully responsible for any liability that arises as a result of such actions.</p> <p>Provide details below for the boxes ticked above</p>
<p><b>Appendixes 1-7</b></p>	<p>Details about the Project Activity are provided in Appendixes 1 through 7 to this document.</p>
<p><b>Name, designation, date and signature of the Project Owner(s)</b></p>	<p><b>On behalf of Arı En Elektrik Üretim Anonim Şirketi</b></p> <p>Serkan KORKMAZ</p> <hr/> <p><b>22/07/2022</b></p> <hr/>  <p>DESİLYON DANIŞMANLIK TİC. A.Ş.  Müşteriler Kemal Mah. Dumlupınar Blv.  No: 274/7 B Blok No: 11 Çankaya/Ankara  VKN: 2930990046 VUKU: MALTEPE</p>

## 1. PROJECT SUBMISSION FORM

### Section A. Description of the Project Activity

#### A.1. Purpose and general description of the Project Activity

Arı En Elektrik Üretim Anonim Şirketi has constructed the Gazi-Sakarbayır Wind Power Plant Bundle project. The aim of the project is to produce electrical energy from wind to supply the Turkish national grid.

By means of reducing dependency to the fossil fuels, environmental pollution is significantly reduced. Also, clean energy is generated by using wind power. Regarding to this, Arı En Elektrik Üretim Anonim Şirketi constructed a wind power plant in İstanbul province, Turkey. Based on the applied tool, the project boundary is considered as the National Electricity Grid of Turkey. The baseline scenario refers to the energy generation from the fossil fuels.

The project includes two bundles which are Gazi WPP and Sakarbayır WPP. According to generation licenses, the annual electricity generations are 52,500 MWh, and 28,000 MWh for Gazi WPP and Sakarbayır WPP, respectively. However, these values are valid for four turbines and two turbines, respectively. As explained below, the plants consist of commissioned turbines and planned to be commissioned in 01/01/2023, the annual electricity generation values differ. According to ER Sheet, annual electricity generation was 6,521 MWh for 01/11/2018 - 31/12/2018. Between 01/01/2019 and 01/01/2023 is calculated as 45,500 MWh while the annual electricity generation after 01/01/2023 is calculated as 117,950 MWh. For the final year of crediting period is 98,561 MWh. Therefore, the average annual electricity generation is calculated as 88,561 MWh.<sup>6</sup>

The generation license is signed on 16/03/2011 for four turbines of Gazi WPP. Moreover, a request on capacity addition was made to the Ministry of Environment, Urbanization and Climate Change for Gazi WPP. By this capacity addition, the capacity of the plant will increase from 16.9 MWm / 15 MWe to 28.3 MWm / 26.4 MWe. However, the Ministry accepted the addition of only one turbine which results in the total capacity of 22.6 MWm / 20 MWe for Gazi WPP at 02/12/2021<sup>7</sup>. This capacity addition is planned to be made in 01/01/2023. However, only two turbines have been commissioned. One turbine which is T1 in Gazi WPP has been commissioned on 27/10/2018 and the other one which is T2 in Gazi WPP has been commissioned on 11/12/2018. Moreover, other three of them will be commissioned in 01/01/2023.

Furthermore, the generation license is signed on 16/03/2011 for two turbines of Sakarbayır WPP. A request on capacity addition was made to the Ministry of Environment, Urbanization and Climate Change for Sakarbayır WPP. By this capacity addition, the capacity of the plant will increase from 8,45 MWm / 8 MWe to 14,15 MWm / 13,7 MWe and the Ministry accepted all capacity addition for Sakarbayır WPP at 29/11/2021<sup>8</sup>. This capacity addition is planned to be

<sup>6</sup> Gazi-Sakarbayır Wind Power Plant Bundle ER Sheet

<sup>7</sup> Plant Capacity Addition Letter of Gazi WPP

<sup>8</sup> Plant Capacity Addition Letter of Sakarbayır WPP

made in 01/01/2023. However, two turbines have been commissioned in 22/10/2018, and other one will be commissioned in 01/01/2023.

The information on each turbine is given in Table 1. explicitly.

**Table 1. Information of the project**

Bundle	Name of the plant	Installed Capacity (MWe)	Installed Capacity (MWm)	Electricity Generation (MWh/yr) <sup>9</sup>	Commissioning Certificate Date <sup>10</sup>
Gazi	T1	2.5	3.45	70,000,000.00	27/10/2018
	T2	2.5	3.45		11/12/2018
	T3	5	5		Planned at 18/08/2022
	T4	5	5		Planned at 18/08/2022
	T5	5	5.7		Planned at 01/01/2023
Sakarbayır	T1	3.00	3.45	47,950,000.00	22/10/2018
	T2	5.00	5.00		22/10/2018
	T3	5.7	5.7		Planned at 01/01/2023
<b>Total</b>		33.7	36.75	117,950,000.00 (After 2023)	

Gazi WPP is within the scope of "Environmental Impact Assessment (EIA) Regulation" Annex II List Article 42 "Wind power plants with 5 turbines or 10-50 MWm installed power". Since the capacity of the project is less than the threshold value (4 turbines < 5 turbines which is threshold value before capacity addition), the project is under the scope of "EIA regulation provisions are not applied". Therefore, the application was made to the Ministry of Environment and Urbanization for Gazi WPP before capacity addition. After the necessary examinations, the decision "EIA Exemption" was taken in 19/06/2017. After capacity addition, Gazi WPP reaches to threshold which is 5 turbines. Therefore, the project description report has been prepared and approved for Gazi WPP. According to this, "EIA is not required." decision was made by the Ministry of Environment and Urbanization on 13/10/2020 considering 5 turbines and 20.7 MW electricity production.

Sakarbayır WPP is within the scope of "Environmental Impact Assessment (EIA) Regulation" Annex II List Article 42 "Wind power plants with 5 turbines or 10-50 MWm installed power". Since, the capacity of the project is less than the threshold value, the project is under the scope of "EIA regulation provisions are not applied". Therefore, the application was made to the Ministry of Environment and Urbanization for Sakarbayır WPP. After the necessary examinations, the decision "EIA Exemption" was taken in 16/06/2017.

<sup>9</sup> Gazi-Sakarbayır Wind Power Plant Bundle ER Sheet

<sup>10</sup> Commissioning Certificates of Gazi-Sakarbayır WPP Bundle

Thus, the project is considered to be implemented according to the national laws and regulations as long as the environmental precautions stated in the report are applied.

**Table 2. Milestone of Gazi WPP Bundle**

<b>Milestone</b>	<b>Date</b>
Generation License	16/03/2011
Connection Agreement	10/10/2012
EIA Exemption Letter	19/06/2017
System Connection Agreement	05/10/2018
Commissioning Certificate of T1 Turbine	27/10/2018
Commissioning Certificate of T2 Turbine	11/12/2018
Project Description Report	September 2020
"EIA is not required." Decision	13/10/2020
Plant Capacity Addition Letter for Four Turbines to Five Turbines	02/12/2021
Completion date of T3 and T4 turbines	Planned at 18/08/2022
Completion date of T5 turbines	Planned at 01/01/2023

**Table 3. Milestone of Sakarbayır WPP Bundle**

<b>Milestone</b>	<b>Date</b>
Generation License	16/03/2011
Connection Agreement	10/10/2012
EIA Exemption Letter	16/06/2017
System Connection Agreement	04/10/2018
Commissioning Certificate of T1	22/10/2018
Plant Capacity Addition Letter for two turbines to three turbines	29/11/2021
Completion date of T3 turbines	Planned at 01/01/2023

The project activity will generate greenhouse gas (GHG) emission reductions by avoiding CO<sub>2</sub> emission from electricity generation by fossil fuel power plants connected to Turkish National Power Grid. Total installed capacity is 33.7 MWe / 36.75 MWm.

Because of avoiding using fossil fuels, according to the ER Sheet and the emission reduction is estimated around 4,227 tCO<sub>2</sub>e in 2018, 29,493 tCO<sub>2</sub>e in 2019 to 2021, 37,884 for 2022, 76,455 tCO<sub>2</sub>e 2023 to 2027 and 63,887 tCO<sub>2</sub>e in 2028. The differences between the years are because of the different commissioning dates of the units as explained above paragraph. For the entire crediting period, 576,750 tons of CO<sub>2</sub> are expected to be reduced.

The main purposes of Gazi-Sakarbayır Wind Power Plant Bundle project are as follows:

- To meet the electricity demand by using wind power potential
- To decrease GHG emissions by using renewable sources
- To remove dependency on fossil fuel sources
- To reduce air pollutants by staying away from fossil fuel sources
- To contribute the economy development and sustainable development

The project is expected to contribute 5 SDGs which are SDG 7, 8, 9, 11 and 13.

**SDG 7 - Affordable and Clean Energy:** The project contributes SDG Target 7.2 “By 2030, increase substantially the share of renewable energy in the global energy mix” by the utilization of wind power as a renewable energy source.

**SDG 8 – Decent Work and Economic Growth:** During the construction and operation phases of the project, direct and indirect job opportunities are created. Therefore, the project contributes to SDG Target 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.”

**SDG 9 – Industry, Innovation, and Infrastructure:** The project helps the Target 9.4 “By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.”

**SDG 11 – Sustainable Cities and Communities:** The project promotes SDG Target 11.6 “By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management” by decreasing particulate matter caused by fossil fuel emissions in the cities.

**SDG 13 – Climate Change:** The project helps to reduce CO2 emissions by producing clean renewable energy. Thus, it contributes SDG Target 13.3 “Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning”.

## A.2. Location of the Project Activity

Address and geodetic coordinates of the physical site of the Project Activity				
Physical address	Bundle	Part of Plant	Latitude (North)	Longitude (East)
Silivri, İstanbul	Gazi	T1	41° 8'34.09" (41.142802°)	28°19'2.63" (28.317397°)
		T2	41° 8'24.60" (41.140166°)	28°19'7.42" (28.318727°)
		T3	41° 8'42.40" (41.145110°)	28°19'52.73" (28.331314°)
		T4	41° 8'22.35" (41.139540°)	28°18'54.46" (28.315128°)
		T5	Determined soon	Determined soon
	Sakarbayır	T1	41°10'25.22" (41.173671°)	28°17'11.00" (28.286389°)
		T2	41°10'23.50" (41.173195°)	28°18'11.18" (28.303105°)
		T3	Determined soon	Determined soon



**Figure 1. Location of Turbines of Sakarbayır Wind Power Plant**



**Figure 2. Location of Turbines of Gazi Wind Power Plant**

### A.3. Technologies/measures

The total installed capacity of this project is 36.75 MWm / 33.7 MWe (3x(5 MWm / 5 MWe) + 2x(3.45 MWm / 2.5 MWe) + (3.45 MWm / 3 MWe) + (5.7 MWm / 5.7 MWe) + (5.7 MWm / 5 MWe)) with 8 wind turbines. However, the plant has 3 generators and transformers which are commissioning and other 5 generators and transformers will be built in 01/01/2023. The technical details of the main equipment for the project are shown in below tables.

**Table 4. T1 in Gazi WPP technical details<sup>11</sup>**

<b>Turbine for T1 in Gazi WPP</b>	<b>Value</b>
Manufacturer	Vestas Wind Systems A/S
Type	Vestas V126 / 3.45 MW
Serial Number (T1)	222480

<b>Generator for G1 in Gazi WPP</b>	<b>Value</b>
Manufacturer	SFIG
Type	Asynchronous Generator
Power (kW)	3650
Voltage (V)	750
Frequency (Hz)	50
Revolution (rpm)	1450 / 1550
Current (A)	3400

<b>Transformer for T1 in Gazi WPP</b>	<b>Value</b>
Type	Step-up Transformer
Power (kVA)	4000
Voltage	0.650 / 34.5 kV

**Table 5. T2 in Gazi WPP technical details<sup>12</sup>**

<b>Turbine for T2 in Gazi WPP</b>	<b>Value</b>
Manufacturer	Vestas Wind Systems A/S
Type	Vestas V126 / 3.45 MW
Serial Number (T2)	222481

<b>Generator for G2 in Gazi WPP</b>	<b>Value</b>
Manufacturer	SFIG
Type	Asynchronous Generator
Power (kW)	3650
Voltage (V)	750
Frequency (Hz)	50

<sup>11</sup> Commissioning Certificate of T1 in Gazi WPP

<sup>12</sup> Commissioning Certificate of T2 in Gazi WPP

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Revolution (rpm)	1450 / 1550
Current (A)	3400

<b>Transformer for T2 in Gazi WPP</b>	<b>Value</b>
Type	Step-up Transformer
Power (kVA)	4000
Voltage	0.650 / 34.5 kV

**Table 6. T1 and T2 in Sakarbayır WPP technical details<sup>13</sup>**

<b>Turbine for T1 and T2 in Sakarbayır WPP</b>	<b>Value</b>
Manufacturer	Vestas Wind Systems A/S
Type	Vestas V126 / 3.45 MW
Serial Number (T2)	222481

<b>Generator for G1 and G2 in Sakarbayır WPP</b>	<b>Value</b>
Manufacturer	SFIG
Type	Asynchronous Generator
Power (kW)	3650
Voltage (V)	750
Frequency (Hz)	50
Revolution (rpm)	1450 / 1550
Current (A)	3400

<b>Transformer for T1 and T2 in Sakarbayır WPP</b>	<b>Value</b>
Type	Step-up Transformer
Power (kVA)	4000
Voltage	0.650 / 34.5 kV

<sup>13</sup> Commissioning Certificate of T1 in Sakarbayır WPP



#### A.4. Project Owner(s)

Location/ Country	Project Owner(s)	Where applicable <sup>14</sup> , indicate if the host country has provided approval (Yes/No)
Turkey	Arı En Elektrik Üretim Anonim Şirketi	N/A

#### A.5. Declaration of intended use of Approved Carbon Credits (ACCs) generated by the Project Activity

The Project Activity is expected to generate ACCs for a full 10-year crediting period and supply the credits to offset the following GHG emissions:

Period		Name of the Entities	Purpose and Quantity of ACCs to be supplied
From	To		
01/11/2018	31/10/2028	CORSIA	57,675 tCO <sub>2</sub> e annually

The project owner confirms that the ACC's generated from the project will not be double counted in any other mechanism. ACCs from project activity will be used to create additional income streams for investment and reduce project financial risks, thereby ensuring sustainability of the project.

#### A.6. Additional requirements for CORSIA

Please see Section E and F.

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<sup>14</sup> For example, *Project Coordination Form* is to be filled-in by Project Owners for projects located in Qatar. A written attestation from the host country's national focal point or the focal point's designee, as required by CORSIA (Refer section A.5 of the PSF guidelines).

## Section B. Application of selected methodology(ies)

### B.1. Reference to methodology(ies)

The official methodology ACM0002 version 20.0, Grid-connected electricity generation from renewable sources. This CDM methodology refers to the latest approved versions of the following tools:

- am-tool-01-v7.0.0-Tool for the demonstration and assessment of additionality (V07.0.0)<sup>15</sup>
- am-tool-07-v7.0 - Tool to calculate the emission factor for an electricity system (V07.0)<sup>16</sup>
- am-tool-24-v03.1 - Common practice (V03.1)<sup>17</sup>
- am-tool-27-v11.0 - Investment Analysis (V11.0)<sup>18</sup>

### B.2. Applicability of methodology(ies)

The official methodology ACM0002 version 20.0, Grid-connected electricity generation from renewable sources is used to establish the baseline under the following conditions.

#### Condition para 3:

This methodology is applicable to grid-connected renewable energy power generation project activities that:

- Install a Greenfield power plant.
- Involve a capacity addition to (an) existing plant(s);
- Involve a retrofit of (an) existing plants/units.
- Involve a rehabilitation of (an) existing plant(s)/unit(s); or
- Involve a replacement of (an) existing plant(s)/unit(s).

#### Status of project activity:

The project activity involves a new installation of greenfield wind power generation plant. Hence the methodology is applicable to the project activity.

#### Condition para 4:

The project activity may include renewable energy power plant/unit of one of the following types:

- Hydro power plan/unit with or without reservoir,
- Wind power plant/unit,

<sup>15</sup> <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-01-v7.0.0.pdf>

<sup>16</sup> <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-07-v7.0.pdf>

<sup>17</sup> <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-24-v1.pdf>

<sup>18</sup> <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-27-v11.0.pdf>

- Geothermal power plant/unit,
- Solar power plant/unit,
- Wave power plan/unit or
- Tidal power plan/unit.

**Status of project activity:**

The project activity is a grid connected wind power plant.

**Condition para 4:**

- (a) The project activity may include renewable energy power plant/unit of one of the following types: hydro power plant/unit with or without reservoir, wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit;
- (b) In the case of capacity additions, retrofits, rehabilitations or replacements (except for wind, solar, wave or tidal power capacity addition projects) the existing plant/unit started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion, retrofit, or rehabilitation of the plant/unit has been undertaken between the start of this minimum historical reference period and the implementation of the project activity.

**Status of project activity:**

As the project activity is a wind power plant, the part a of this condition is applicable, but the part b is not.

**Condition para 5:**

In case of hydro power plants, one of the following conditions shall apply:

- (a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or
- (b) The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density, calculated using equation (7), is greater than 4 W/m<sup>2</sup>; or
- (c) The project activity results in new single or multiple reservoirs and the power density, calculated using equation (7), is greater than 4 W/m<sup>2</sup>; or
- (d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, calculated using equation (7), is lower than or equal to 4 W/m<sup>2</sup>, all of the following conditions shall apply.

(i) The power density calculated using the total installed capacity of the integrated project, as per equation (8), is greater than  $4 \text{ W/m}^2$ ;

(ii) Water flow between reservoirs is not used by any other hydropower unit which is not a part of the project activity.

(iii) Installed capacity of the power plant(s) with power density lower than or equal to  $4 \text{ W/m}^2$  shall be

a. Lower than or equal to 15 MW; and

b. Less than 10 per cent of the total installed capacity of integrated hydro power project

**Status of project activity:**

This condition is not relevant, as the project activity is not the installation of a hydro power plant.

**Condition para 6:**

In the case of integrated hydro power projects, project proponent shall:

(a) Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro power project; or

(b) Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of water balance is to demonstrate the requirement of specific combination of reservoirs constructed under CDM project activity for the optimization of power output. This demonstration has to be carried out in the specific scenario of water availability in different seasons to optimize the water flow at the inlet of power units. Therefore, this water balance will take into account seasonal flows from river, tributaries (if any), and rainfall for minimum of five years prior to the implementation of the CDM project activity.

**Status of project activity:**

This condition is not relevant, as the project activity is not the installation of a hydro power plant.

**Condition para 7:**

The methodology is not applicable to:

(a) Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site;

(b) Biomass fired power plants/units.

**Status of project activity:**

Since the project activity does not include any of the given criteria, the methodology is applicable.

**Condition para 8:**

In the case of retrofits, rehabilitations, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is “the continuation of the current situation, that is to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance”

**Status of project activity:**

This condition is not relevant, as the project activity does not involve capacity additions, retrofits, replacement, or rehabilitations.

Additionally, the proposed project activity meets applicability criteria of the following tools:

**TOOL01:** Tool for the demonstration and assessment of additionality (Version 07.0.0)

**Condition para 9:**

The use of the “Tool for the demonstration and assessment of additionality” is not mandatory for project participants when proposing new methodologies. Project participants may propose alternative methods to demonstrate additionality for consideration by the Executive Board. They may also submit revisions to approved methodologies using the additionality tool.

**Status of project activity:**

The methodology (ACM0002) chosen for the project requires the use of this tool.

**Condition para 10:**

Once the additionally tool is included in an approved methodology, its application by project participants using this methodology is mandatory.

**Status of project activity:**

The methodology (ACM0002) chosen for the project requires the use of this tool.

**TOOL07:** Tool to calculate the emission factor for an electricity system; Version 07.0

“This tool may be applied to estimate the OM, BM and/or CM when calculating baseline emissions for a project activity that substitutes grid electricity that is where a project activity supplies electricity to a grid or a project activity that results in savings of electricity that would have been provided by the grid (e.g., demand-side energy efficiency projects). “

**Status of project activity:**

According to “Turkey National Network Emission Factor Data Sheet”<sup>19</sup> document from Ministry of Energy and Natural Resources, the emission factor coefficient ( $EF_{grid,CM,y}$ ) could be used as 0.6482 tCO<sub>2</sub>/MW. This emission factor is calculated by using “Tool to calculate the emission factor for an electricity system, ver 07.0”. Hence this tool is applicable.

**TOOL24:** Common practice, Version 03.1

**Condition para 3:**

This methodological tool is applicable to project activities that apply the methodological tool “Tool for the demonstration and assessment of additionality”, the methodological tool “Combined tool to identify the baseline scenario and demonstrate additionality”, or baseline and monitoring methodologies that use the common practice test for the demonstration of additionality

**Condition para 4:**

In case the applied approved baseline and monitoring methodology defines approaches for the conduction of the common practice test that are different from those described in this methodological tool, the requirements contained in the methodology shall prevail.

**Status of project activity:**

The methodology ACM0002 (Version 20.0) applied in this project requires the use of this tool to demonstrate the common practice of this project.

**TOOL27:** Investment analysis, Version 11.0

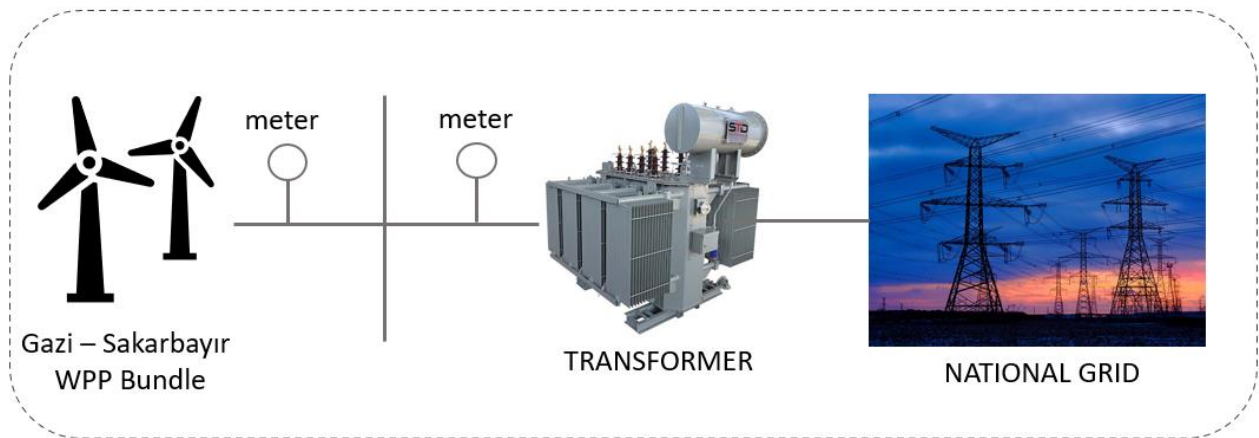
“This methodological tool is applicable to project activities that apply the methodological tool “Tool for the demonstration and assessment of additionality”, the methodological tool “Combined tool to identify the baseline scenario and demonstrate additionality”, the guidelines “Non-binding best practice examples to demonstrate additionality for SSC project activities”, or baseline and monitoring methodologies that use the investment analysis for the demonstration of additionality and/or the identification of the baseline scenario.”

<sup>19</sup> [https://enerji.enerji.gov.tr/Media/Dizin/BHIM/tr/Duyurular//Bilgi\\_Formu\\_Web\\_Sitesi\\_2019\\_202110071443.pdf](https://enerji.enerji.gov.tr/Media/Dizin/BHIM/tr/Duyurular//Bilgi_Formu_Web_Sitesi_2019_202110071443.pdf)

**Status of project activity:** Since the proposed project activity applies the methodological tool “Tool for the demonstration and assessment of additionality”, this methodological tool is applicable to project activity.

### B.3. Project boundary, sources, and greenhouse gases (GHGs)

Regarding to applied methodology ACM0002; the project boundary is considered as the National Electricity Grid of Turkey. The project boundary covers power plant and the other power plants which connected to the related electricity system.



**Figure 3. Project Boundary**

According to applied methodology, the Greenhouse Gases (“GHG”) and emission sources included in or excluded from the project boundary are shown in the following table:

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Source		GHG	Included?	Justification/Explanation
<b>Baseline</b>	CO <sub>2</sub> emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity	CO <sub>2</sub>	Yes	Major Emission Source
		CH <sub>4</sub>	No	Minor Emission Source. Excluded for simplification
		N <sub>2</sub> O	No	Minor Emission Source. Excluded for simplification
<b>Project Activity</b>	For dry or flash steam geothermal power plants, emissions of CH <sub>4</sub> and CO <sub>2</sub> from non-condensable gases contained in geothermal steam	CO <sub>2</sub>	No	Not applicable. This project is not a geothermal power plant.
		CH <sub>4</sub>	No	Not applicable. This project is not a geothermal power plant.
		N <sub>2</sub> O	No	Not applicable. This project is not a geothermal power plant.
	For binary geothermal power plants, fugitive emissions of CH <sub>4</sub> and CO <sub>2</sub> from non-condensable gases contained in geothermal steam	CO <sub>2</sub>	No	Not applicable. This project is not a geothermal power plant.
		CH <sub>4</sub>	No	Not applicable. This project is not a geothermal power plant.
		N <sub>2</sub> O	No	Not applicable. This project is not a geothermal power plant.
	For binary geothermal power plants, fugitive emissions of hydrocarbons such as n-butane and isopentane (working fluid) contained in the heat exchangers	Low GWP hydrocarbon/ refrigerant	No	Not applicable. This project is not a geothermal power plant.
	CO <sub>2</sub> emission from combustion of fossil fuels for electricity generation in solar thermal power plants and geothermal power plants	CO <sub>2</sub>	No	Not applicable. This project is a wind power plant.
		CH <sub>4</sub>	No	Not applicable. This project is a wind power plant.
		N <sub>2</sub> O	No	Not applicable. This project is a wind power plant.
		N <sub>2</sub> O	No	Not applicable. This project is not a hydro power plant.



#### B.4. Establishment and description of the baseline scenario

ACM0002: Grid-connected electricity generation from renewable sources, ver 20.0 is the methodology for large scale project activities. Therefore, Gazi-Sakarbayır WPP Bundle follows this methodology. Within the scope of this methodology, “Tool for the demonstration and assessment of additionality, version 07.0.0”, “Tool to calculate the emission factor for an electricity system, version 07.0”, “Common practice, version 03.1”, and “Investment analysis, version 11.0” have been used.

The baseline scenario has been stated 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” with respect to the ACM0002 methodology paragraph 22.

The project activity includes wind power plant to benefit power of the wind to produce electricity and supply to the Turkish National Grid.

Thermal power plants are the most used type in electrical energy production in Turkey. However, that is not enough since Turkey is an upper-developing country and there is an increasing demand of electricity. Also, these plants cause a lot of carbon emissions.<sup>20</sup>

Because of the slow development of alternative energy sources, thermal power plants will increase in the future to meet the demand of electricity. Furthermore, because the large natural resource availability in Turkey, thermal power plants have been increased.<sup>21</sup>

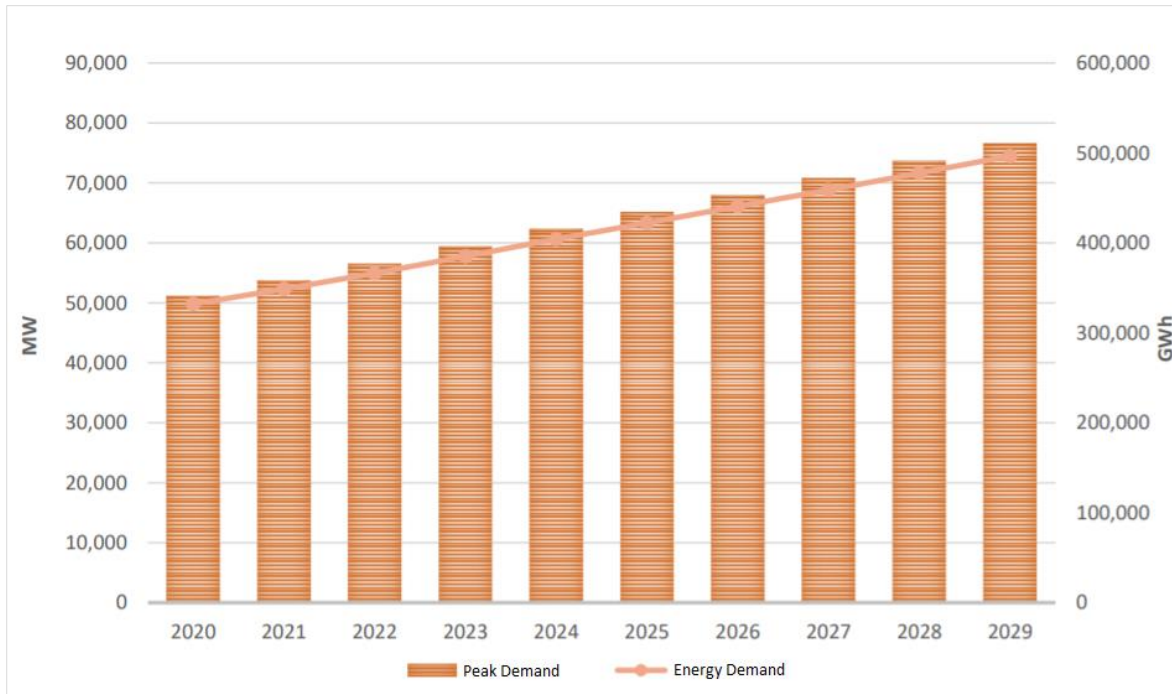
In the absence of the proposed project activity, the number of thermal power plants would increase in order to meet the electricity demand. The figure below shows Turkey's maximum electricity demand prediction for the years 2020-2029.

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<sup>20</sup> [https://iea.blob.core.windows.net/assets/cc499a7b-b72a-466c-88de-d792a9daff44/Turkey\\_2021\\_Energy\\_Policy\\_Review.pdf](https://iea.blob.core.windows.net/assets/cc499a7b-b72a-466c-88de-d792a9daff44/Turkey_2021_Energy_Policy_Review.pdf)

<sup>21</sup> [https://iea.blob.core.windows.net/assets/cc499a7b-b72a-466c-88de-d792a9daff44/Turkey\\_2021\\_Energy\\_Policy\\_Review.pdf](https://iea.blob.core.windows.net/assets/cc499a7b-b72a-466c-88de-d792a9daff44/Turkey_2021_Energy_Policy_Review.pdf)

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**Figure 4. Maximum peak demand and energy demand prediction for Turkish electricity system between 2020 – 2029<sup>22</sup>**

The project is expected to reduce in emissions of around 4,227 tCO<sub>2</sub>e in 2018, between 2019 – 2021 29,493 tCO<sub>2</sub>e, 37,884 tCO<sub>2</sub>e in 2022, 76,455 tCO<sub>2</sub>e 2023 to 2027 and 63,887 tCO<sub>2</sub>e in 2028. The total is expected to reduce in emissions of 576,750 tCO<sub>2</sub>e.

### B.5. Demonstration of additionality

The GCC applies the following approach for demonstrating additionality, consisting of two components:

- (a) A Legal Requirement Test
- (b) An Additionality Test either based on a Positive List test or a projects-specific additionality test.

The project is not enforced by law. The project passes the legal requirement test since there are no enforced laws, statutes, regulations, court orders, environmental-mitigation agreements, permitting conditions of other legally binding mandates requiring its implementation. Since voluntary commitments/agreements within a sector or by an entity do not constitute the legal requirement, the project is additional as per paragraph 46 of Project Standard.

The proposed project activity meets the criteria for additionality since:

- The project without carbon credits does not provide benefit financially.

<sup>22</sup> <https://www.epdk.gov.tr/Detay/DownloadDocument?id=ln7Z9RT85yM=>

- Due to increasing demand of electricity, the proposed project activity is not enough for meeting the demand. Thus, new power plants should be constructed which includes mainly thermal power plants.
- Mandatory laws and regulations are present:
  - Electricity Market Law<sup>23</sup>
  - Law on Utilization of Renewable Energy Resources for the Purpose of Generating Electricity Energy<sup>24</sup>
  - Energy Efficiency Law<sup>25</sup>
  - Forest Law<sup>26</sup>
  - Environment Law<sup>27</sup>

To evaluate economic and financial status of the project activity, the investment analysis is made (Tool 01). There is no public funding in Turkey for finance of this type of projects. Based on the average market sheets signed with banks, loan conditions are identified.

### **Step 2a – Determine appropriate analysis method**

Three options to identify the analysis methods are as follows:

- Simple Cost Analysis
- Investment Comparison Analysis
- Benchmark Analysis

The Simple Cost Analysis is not applicable because the project activity provides economic benefits by selling electricity.

There is no alternative investment because the baseline of the project is generation of electricity by the grid.

Based on the above situations, the benchmark analysis is chosen for evaluation of the project investment.

### **Step 2b – Apply Benchmark Analysis (Option III)**

The data defined by World Bank for similar project types are used for benchmark analysis. It is given as 15%<sup>28</sup> for equity IRR by a report generated in June 2017. For the project, average electricity tariff must be above 7.3 \$c/kWh to reach the equity IRR values. In the absence of carbon income and assuming the initial investment figures are assumed, the tariff is set in this way to make the investment reasonable.

<sup>23</sup> <https://www.mevzuat.gov.tr/MevzuatMetin/1.5.4628.pdf>

<sup>24</sup> <https://www.mevzuat.gov.tr/MevzuatMetin/1.5.5346.pdf>

<sup>25</sup> <https://www.resmigazete.gov.tr/eskiler/2007/05/20070502-2.htm>

<sup>26</sup> <https://www.mevzuat.gov.tr/MevzuatMetin/1.3.6831.pdf>

<sup>27</sup> <https://www.mevzuat.gov.tr/MevzuatMetin/1.5.2872.pdf>

<sup>28</sup> <https://documents1.worldbank.org/curated/en/799701498842988254/pdf/ICR00004069-06192017.pdf>

**Sub-step 2c – Calculation and comparison of financial indicators**

The data defined by World Bank for similar project types are used for benchmark analysis. It is given as 15%<sup>29</sup> for equity IRR by a report generated in June 2017. For the project, average electricity tariff must be above 7.3 \$/kWh to reach the equity IRR values. In the absence of carbon income and assuming the initial investment figures are assumed, the tariff is set in this way to make the investment reasonable.

**Table 5. Financial parameters of the project used for investment analysis**

Parameters	Data Value	Unit	Reference
Installed Capacity	10.35 MWm / 8 MWe (Before 01/01/2023)	MWe	Generation Licenses
	36.75 MWm / 33.7 MWe (After 01/01/2023)		Plant Expansion Letters of Gazi WPP and Sakarbayır WPP
Annual Electricity Generation	28.000 GWh (Before 01/01/2023)	GWh	Plant Expansion Letters of Gazi WPP and Sakarbayır WPP
	117.950 GWh (After 01/01/2023)		
Total Capital Investment for first 3 turbines	13,782,722.00	\$	CAPEX Document
Total Capital Investment for after turbines	48,938,650.00	\$	
Total Capital Investment	13,782,722.00	\$	CAPEX Document
Principal Payments	0.00	\$	There is no loan for the project.
General & Administrative (\$)	64,607.00 (Before 01/01/2023)	\$	OPEX Document
	64,607.00 (After 01/01/2023)		
Repair & Maintenance (\$)	146,442.00 (Before 01/01/2023)	\$	
	146,442.00 (After 01/01/2023)		
Land lease & Insurance (\$)	34,457.00 (Before 01/01/2023)	\$	
	111,985.00 (After 01/01/2023)		
<b>Total</b>	245,506.00 (Before 01/01/2023)	\$	
	323,034.00 (After 01/01/2023)		
<b>System usage fee</b>	78,217.00	\$	

<sup>29</sup> <https://documents1.worldbank.org/curated/en/799701498842988254/pdf/ICR00004069-06192017.pdf>

**Table 6. Financial parameters used for investment analysis<sup>30</sup>**

Parameters	Data Value	Unit	Reference
Sale Price 5 Years	7.5	EUR¢/Kwh	Feasibility Study Reports
Sale Price 5-10 Years	6.3	EUR¢/Kwh	
Sale Price 10-25 years	5.2	EUR¢/Kwh	
Expected ACCs price	3.5	\$/Kwh	-

The World Bank has established applied benchmark for renewable energy investments in Turkey. It comprises a minimum IRR requirement for project finance, as well as a threshold benchmark for IRR. As a result, the benchmark is appropriate equity IRR. The benchmark IRR was derived from a World Bank loan to Turkey's renewable energy industry as part of the Clean Technology Fund (CTF). The suggested CTF benchmark was found to be compatible with the qualifying requirements for emission reduction projects (that is, significant potential in emission reductions, demonstration potential, development impact and implementation potential). For each project type, threshold IRRs have been calculated, which are the lowest IRRs required to attract investors.

Applied benchmark IRR is conservative and reliable. World Bank EBRD<sup>31</sup>, which is another international finance institution providing loan to Turkish RE and EE projects have published their evaluation report. This report shows that average IRR of 10 projects financed is 15% (Table 3.3 page 40) which is above the applied benchmark.

According to the investment analysis made for project activity, Project Internal Rate of Return (IRR) of the Gazi-Sakarbayır Wind Power Plant has been calculated and indicated at time of investment decision and for the final project design. IRR has been calculated 10.07% referring the parameters given above without considering the carbon revenue at time of investment decision considering the full capacity of the project which is 02/12/2021.

As the amount of flow that can be turbined increases, the production to be obtained from the project increases. These production increases up to a certain amount of flow cover the increases in cost and increase the profitability and internal rate of the project. However, after a certain flow rate, production increases do not meet the cost increases and the profitability of the project decreases after this flow.

According to the Regulation on Certification and Support of Renewable Energy Resources<sup>32</sup>, the government gave an incentive of 7.5 EUR¢/kWh for the first 5 years after the facility commissioning and 6.3 EUR¢/kWh for the second 5 years, project uses government incentives for electricity generation is assumed as 5.2 EUR¢/kWh after ten years.

<sup>30</sup><https://www.epdk.gov.tr/Detay/DownloadDocument?id=Z0Yu9X9bM7o=>

<sup>31</sup><https://documents1.worldbank.org/curated/en/799701498842988254/pdf/ICR00004069-06192017.pdf>

<sup>32</sup><https://www.mevzuat.gov.tr/anasayfa/MevzuatFihristDetayIframe?MevzuatTur=7&MevzuatNo=18907&MevzuatTertip=5>

### Sub-step 2d – Sensitivity Analysis

Sensitivity analysis has been carried out for three main parameters identified;

- Investment cost
- Operating Cost
- Electricity Sales Revenue

**Table 7. Sensitivity analysis for Gazi-Sakarbayır WPP Bundle (except carbon revenue)**

With ±2.5% fluctuation range up to ±10% for the above parameters, this table has been generated.	% Fluctuation						
	-15.0	-10	-5.0	0.0	+5	+10	+15
<b>Investment Cost</b>	12.19	11.40	10.70	10.07	9.50	8.97	8.49
<b>Operation Cost</b>	8.71	8.66	8.59	10.07	8.49	8.44	8.39
<b>Electricity Income</b>	8.10	8.76	9.42	10.07	10.72	11.37	12.02

The ACC income will enhance the project’s financial indicators and make it more attractive to investors, according to the investment and sensitivity study. The scenario was examined, and it was discovered that the project is additional in the scenario. Given that the figures above are based on the highest guaranteed price rather than the average price, optimistic estimates for annual generation, and the fact that those figures do not reflect the risk of investment, the role of carbon income is a critical number in allowing the project to move forward and a favorable investment and funding decision to be made. Carbon revenue has a significant effect in this respect in terms of decreasing the period for return on investment and minimizing investment risk.

Investment cost is another key factor that influences equity IRR. However, because the agreements have been signed and the expenses have been realized according to the financial model, there is no way to predict a reduction in the investment cost. Operating expenses have an influence on equity IRR, but it is little and does not result in a substantial change in equity IRR, and the variation percentage required to meet the benchmark is extremely large and unlikely. Based on the above information, it is seen that project is not the most attractive option. Therefore, the project is considered as additional to the baseline scenario.

### Step 4: Common Practice Analysis

The section below provides the analysis as per step 4 of the “Tool for the demonstration and assessment of additionality”, version 7.0.0 and according to “Common Practice” Tool version 03.1.

**Step 2: Identify similar projects (both CDM and non-CDM) which fulfill all of the following conditions:**

- a) The projects are located in the applicable geographical area;

**Applicable geographical area is Turkey, Marmara Region.**

- b) The projects apply the same measure as the proposed project activity;

**Renewable Energy Projects**

- c) The projects use the same energy source/fuel and feedstock as the proposed project activity, if a technology switch measure is implemented by the proposed project activity;

**Wind Power Plants**

- d) The plants in which the projects are implemented produce goods or services with comparable quality, properties and applications areas (e.g. clinker) as the proposed project plant;

**Not applicable**

- e) The capacity or output of the projects is within the applicable capacity or output range calculated in Step 1;

**Range in between 16.85 MW – 50.55 MW**

- f) The projects started commercial operation before the project design document (CDM-PDD) is published for global stakeholder consultation or before the start date of proposed project activity, whichever is earlier for the proposed project activity.

**The commissioning date of the wind power power plants is 22/10/2018.**

**Therefore, projects, which have started commercial operation before 22/10/2018, have been considered for analysis.**

There are 3 project meeting above criteria.

**Step 3: within the projects identified in Step 2, identify those that are neither registered CDM project activities, project activities submitted for registration, nor project activities undergoing validation. Note their number,  $N_{all}$ .**

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All projects with conditions are listed in a table and 1 project are identified according to geographical locations (Gazi-Sakarbayır WPP Bundle is located in Marmara Region) of the projects which are essential whether it manages to have certain financial flow to the investment. The project cannot be demonstrated as CDM or voluntary carbon projects ( $N_{all}$ ).

Therefore,  $N_{all} = 3$

**Table 8. Nall Projects**

Name of the Plant	Capacity in MW	$N_{all}$
Kürek Dağı RES	33	1
Manastır-Esenköy RES	30	1
Poyraz RES	30	1

**Step 4: within similar projects identified in Step 3, identify those that apply technologies that are different to the technology applied in the proposed project activity. Note their number  $N_{diff}$ .**

There is no different to the technology applied in the proposed project activity.

Therefore,  $N_{diff}=0$

**Step 5: calculate factor  $F=1-N_{diff}/N_{all}$  representing the share of similar projects (penetration rate of the measure/technology) using a measure/technology similar to the measure/technology used in the proposed project activity that deliver the same output or capacity as the proposed project activity.**

Hence,  $F = 1 - (0/3) = 1$

and,  $N_{all} - N_{diff} = 3 - 0 = 3$

Since the proposed project activity would be common practice only both of the following conditions apply.

$F > 0.2$  and  $N_{all} - N_{diff} > 3$

Therefore,  $F = 1$  and  $N_{all} - N_{diff} = 3$  the project activity is not common practice and so, the project is additional.

## B.6. Estimation of emission reductions

### B.6.1. Explanation of methodological choices

According to “Turkey National Network Emission Factor Data Sheet” document from Ministry of Energy and Natural Resources, Operating, Build and Combined Margin Emission Factors have been published. The Ministry has calculated the factors as using the “Tool to calculate the emission factor for an electricity system”. Since it’s the latest available data, published by the ministry, these factors have been considered.



### Calculation of the Operating Margin Emission Factor

It's been published as 0.7258 tCO<sub>2</sub>/MWh by the Ministry of Energy and Natural Resources.<sup>33</sup>

### Calculation of the Build Margin Emission Factor

It's been published as 0.4153 tCO<sub>2</sub>/MWh by the Ministry of Energy and Natural Resources.<sup>34</sup>

### Calculating of the Combined Margin Emission Factor

It's been published as 0.6482 tCO<sub>2</sub>/MWh for the wind power plant by the Ministry of Energy and Natural Resources.

The combined margin is calculated ex-post and has been fixed for the crediting period.<sup>35</sup>

### Baseline Emission:

According to ACM0002 methodology version 20.0, the baseline emissions are to be calculated as follows:

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

where

BE<sub>y</sub>= Baseline emissions in year y (tCO<sub>2</sub>/yr)

EG<sub>facility,y</sub> = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh/yr)

EF<sub>grid,CM,y</sub>= Combined margin CO<sub>2</sub> emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (tCO<sub>2</sub>/MWh)

According to the ER Sheet, EG<sub>facility,y</sub><sup>36</sup> = 88,978 MWh/yr. Also, according to "Turkey National Network Emission Factor Data Sheet" document from Ministry of Energy and Natural Resources, the emission factor coefficient (Efg<sub>rid,CM,y</sub>) could be used as 0.6482 tCO<sub>2</sub>/MWh.

Therefore, the baseline emission annually is:

$$BE_y = (88,561) \times (0.6482) = 57,675 \text{ tCO}_2\text{e}$$

### Project Emission:

According to the methodology ACM0002 version 20.0 paragraph 31, the project activity is a wind power plant that neither uses fossil fuel nor operates geothermal power plant or having water reservoirs (i.e PE<sub>FF,y</sub> = 0; PE<sub>GP,y</sub> = 0; PE<sub>HP,y</sub> = 0); therefore, the project emission has been considered to be zero.

$$PE_y = PE_{\text{FF},y} + PE_{\text{GP},y} + PE_{\text{HP},y}$$

<sup>33</sup> <https://www.greensolarnetwork.org/assets/attachments/dosyalar/Elektrik-%C5%9Eebekesi-Emisyon-Fakt%C3%B6r%C3%BC.pdf>

<sup>34</sup> <https://www.greensolarnetwork.org/assets/attachments/dosyalar/Elektrik-%C5%9Eebekesi-Emisyon-Fakt%C3%B6r%C3%BC.pdf>

<sup>35</sup> <https://www.greensolarnetwork.org/assets/attachments/dosyalar/Elektrik-%C5%9Eebekesi-Emisyon-Fakt%C3%B6r%C3%BC.pdf>

<sup>36</sup> <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-05-v3.0.pdf>

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Therefore,

$$PE_y = 0$$

**Leakage Emission:**

No leakage emissions are applicable for Gazi-Sakarbayır WPP Bundle under ACM0002 methodology paragraph 53.

Therefore,

$$LE_y = 0$$

Based on the data above, the emission reduction value for Gazi-Sakarbayır WPP Bundle is:

$$ER_y = BE_y = 57,675 \text{ tCO}_2\text{e/yr}$$

**B.6.2 Data and parameters fixed ex ante**

**Data / Parameter Table 1.**

<b>Data / Parameter:</b>	<b>EF<sub>grid,CM,y</sub></b>
Methodology reference	ACM0002 (Version 20.0)
Data unit	tCO <sub>2</sub> /MWh
Description	Emission factor of the Turkish grid determined ex-ante. It's been published by the Ministry of Energy for 2019 on 06/10/2021.
Measured/calculated /default	Calculated
Data source	Ministry of Energy and Natural Resources <a href="https://enerji.enerji.gov.tr/Media/Dizin/BHIM/tr/Duyurular//Bilgi_Formu_Web_Sitesi_2019_202110071443.pdf">https://enerji.enerji.gov.tr/Media/Dizin/BHIM/tr/Duyurular//Bilgi_Formu_Web_Sitesi_2019_202110071443.pdf</a>
Value(s) of monitored parameter	0.6482
Measurement/ Monitoring equipment (if applicable)	N/A

Measuring/reading/recording frequency (if applicable)	Once for each crediting period
Calculation method (if applicable)	-
QA/QC procedures	Official data
Purpose of data	Calculation of the baseline emissions-to demonstrate contribution to SDG Target 13.3.: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.
Additional comments	-

### B.6.3. Ex-ante calculation of emission reductions

According to “Turkey National Network Emission Factor Data Sheet” document from Ministry of Energy and Natural Resources, Operating, Build and Combined Margin Emission Factors have been published. The Ministry has calculated the factors as using the “Tool to calculate the emission factor for an electricity system”. The emission factor coefficient ( $EF_{grid,CM,y}$ ) could be used as 0.6482 tCO<sub>2</sub>/MWh.

Moreover, in accordance with ACM0002, the baseline emissions are calculated as the net electricity generated by the project activity, multiplied with the baseline emission factor of the project grid.

$$BE_y = (88,978) \times (0.6482) = 57,675 \text{ tCO}_2\text{e}$$

#### Project Emissions

Since the project activity is a wind project,

$$PE_y = 0$$

#### Leakage

In accordance with the ACM0002. (Version 20), leakage is taken as zero since the project is a new power plant is taken as zero,

$$LE_y = 0$$

Project Submission Form

Therefore,

**Emission Reductions**

$$ER_y = BE_y - PE_y - LE_y$$

$$ER_y = BE_y = 57,675 \text{ tCO}_2\text{e}$$

**B.6.4. Summary of ex ante estimates of emission reductions**

Year	Baseline emissions (t CO <sub>2</sub> e)	Project emissions (t CO <sub>2</sub> e)	Leakage (t CO <sub>2</sub> e)	Emission reductions (t CO <sub>2</sub> e)
2018 (01/11/2018 - 31/12/2018)	4,227	0	0	4,227
2019	29,493	0	0	29,493
2020	29,493	0	0	29,493
2021	29,493	0	0	29,493
2022	37,884	0	0	37,884
2023	76,455	0	0	76,455
2024	76,455	0	0	76,455
2025	76,455	0	0	76,455
2026	76,455	0	0	76,455
2027	76,455	0	0	76,455
2028 (01/01/2028 - 31/10/2028)	63,887	0	0	63,887
<b>Total number of crediting years</b>	10 years			
<b>Annual average over the crediting period</b>	<b>57,675</b>	<b>0</b>	<b>0</b>	<b>57,675</b>
<b>Total (tonnes of CO<sub>2</sub>e)</b>	<b>576,750</b>	<b>0</b>	<b>0</b>	<b>576,750</b>

## B.7. Monitoring plan

### B.7.1. Data and parameters to be monitored

**Data / Parameter Table 1.**

<b>Data / Parameter:</b>	EG <sub>facility,y</sub>	
Methodology reference	ACM0002 (Version 20.0)	
Data unit	MWh	
Description	Net Electricity generated and delivered to the grid by the power plant in year y	
Measured/calculated/default	Measured	
Data source	Electricity meter readings on-site	
Value(s) of monitored parameter	Annual electricity generation is 88,561 MWh as indicated in ER Sheet	
Measurement/ Monitoring equipment		
	Type of meter	<u>T1 and T2 in Gazi WPP</u> Köhler  <u>T1 in Sakarbayır WPP</u> Köhler
	Location of meter	On-site
	Accuracy of meter	0.2S
	Serial number of meters	<u>T1 and T2 in Gazi WPP</u> 21009200 (Main Meter) 21009386 (Spare Meter)  <u>T1 in Sakarbayır WPP</u> 21009201 (Main Meter) 21009887 (Spare Meter)
	Calibration frequency	2 years
	Date of Calibration/ validity	-
	Reference No. of Calibration Certificate	-
	Calibration Status	Calibrated
Measuring/reading/ recording frequency	Monthly	

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<p>Calculation method (if applicable)</p>	<p>EPIAS records are taken via remote reading system. The values are cross-check with the on-site meter records. Electricity generation data is recorded by two electricity meters. According to them, the invoices of the electricity are provided to TEIAS. The quantity of electricity supplied by the project activity to the grid and the quantity of electricity delivered to the related area from the grid are measured. Internal consumption from electricity is subtracted from the delivered electricity to calculate the net generation.</p>
<p>QA/QC procedures</p>	<p>Calibration of the meters are valid for 10 years based on related regulation.<sup>37</sup> In addition, according to System Usage Agreement with TEIAS, the meters are calibrated once in two years. Therefore, it complies with regulations of ministry of 10 years but in conservative approach of TEIAS protocol calibrations will be carried out in 2 years only. The meters are sealed by TEIAS and the project proponent are not allowed to access the meters. If there is a significant difference between the readings of two devices, TEIAS is informed about this situation. EPDK regulations should be followed for the meters to identify the accuracy class of the meters as 0.2 or 0.5.</p>
<p>Purpose of data</p>	<p>To calculate the emission reductions To evaluate the contribution SDG 9 Infrastructure, Industrialization Target 9.4 “By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.”</p>
<p>Additional comments</p>	<p>-</p>

<sup>37</sup> <https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=6381&MevzuatTur=7&MevzuatTertip=5>

**Data / Parameter Table 2.**

<b>Data / Parameter:</b>	CO <sub>2</sub> Emissions
Methodology reference	GCC Environment and Social Safeguards Standard, v2.0
Data unit	Tons
Description	Reduction of CO <sub>2</sub> emissions due to implementation of the project activity.
Measured/calculated /default	Calculated
Data source	Electricity generated by Gazi-Sakarbayır WPP Bundle and the emission factor coefficient
Value(s) of monitored parameter	57,675 tons of CO <sub>2</sub> annually
Measurement/ Monitoring equipment	Meters on site
Measuring/reading/ recording frequency	Continuous reading, monthly recording
Calculation method (if applicable)	Electricity generation which is measured and recorded by EPIAS.
QA/QC procedures	-
Purpose of data	To evaluate the contribution SDG 13 Climate Action, Target 13.3 “Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.”
Additional comments	-

**Data / Parameter Table 3.**

<b>Data / Parameter:</b>	Quantitative Employment and Income Generation
Methodology reference	GCC Environment and Social Safeguards Standard, v2.0
Data unit	Number of employed staff during operation
Description	Creating new job opportunities
Measured/calculated /default	Calculated
Data source	Employment records
Value(s) of monitored parameter	At least 10 people to be employed
Measurement/ Monitoring equipment	-
Measuring/reading/ recording frequency	Annually
Calculation method (if applicable)	Checking the employment records to confirm the number of employed staff
QA/QC procedures	-
Purpose of data	To evaluate the contribution SDG 8 Economic Growth, Target 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.”
Additional comments	-



**Data / Parameter Table 4.**

<b>Data / Parameter:</b>	Employee Trainings
Methodology reference	GCC Environment and Social Safeguards Standard, v2.0
Data unit	Certificates
Description	Providing Health and Safety Trainings
Measured/calculated/default	-
Data source	Training records
Value(s) of monitored parameter	-
Measurement/Monitoring equipment	-
Measuring/reading/recording frequency	Providing for new employees
Calculation method (if applicable)	-
QA/QC procedures	-
Purpose of data	To ensure the safety of employees and to prevent accidents that may occur in the workplace in the project activity
Additional comments	-

**Data / Parameter Table 5.**

<b>Data / Parameter:</b>	PM <sub>2.5</sub> & PM <sub>10</sub>
Methodology reference	GCC Environment and Social Safeguards Standard, v2.0
Data unit	µg/m <sup>3</sup>
Description	The project activity eliminates the increase of PM <sub>2.5</sub> and PM <sub>10</sub> emissions which would have been released to the atmosphere by fossil fuel consumption, in the absence of the proposed project.
Measured/calculated /default	Calculated
Data source	<ul style="list-style-type: none"> <li>Air Pollution Report, 2018 Chamber of Environmental Engineers, Turkey <a href="https://www.cmo.org.tr/resimler/ekler/9d62b3a2bb620a4_ek.pdf">https://www.cmo.org.tr/resimler/ekler/9d62b3a2bb620a4_ek.pdf</a></li> <li>Annual development of Turkey's electricity generation by primary energy resources TEİAŞ <a href="https://webapi.teias.gov.tr/file/75996a59-00a6-4f11-b3e8-986225ae4917?download">https://webapi.teias.gov.tr/file/75996a59-00a6-4f11-b3e8-986225ae4917?download</a></li> </ul>
Value(s) of monitored parameter	PM <sub>2.5</sub> and PM <sub>10</sub> emissions arise from thermal electricity generation. The proposed project activity, as a renewable energy power plant and one of the sources for cleaned energy, uses wind power to produce electricity without any emissions. Thus, the project activity will contribute to the reductions of both PM <sub>2.5</sub> and PM <sub>10</sub> by replacing fossil fuel sourced plants.
Measurement/ Monitoring equipment	Calculated
Measuring/reading/ recording frequency	PM <sub>2.5</sub> and PM <sub>10</sub> were measured in implementation of the project activity several times by the project owner. The measurement will be conducted by project owner after 5 years. Also, General Directorate of Meteorology measures these levels regularly. Each year a report is generated and published.
Calculation method (if applicable)	To calculate PM <sub>2.5</sub> and PM <sub>10</sub> , "Air Pollution Report" and data of TEİAŞ were used.
QA/QC procedures	-

Purpose of data	To evaluate the contribution SDG 11 Sustainable Cities and Communities, SDG Target 11.6 “By 2030, reduce The adverse per capita environmental impacts of cities, including by paying special attention to air quality and municipal and other waste management.” Indicator 11.6.2 Annual mean levels of fine particulate matter (e.g. PM2 .5 and PM10) in cities (population weighted)
Additional comments	-

#### Data / Parameter Table 6.

<b>Data / Parameter:</b>	Solid waste Pollution from Hazardous wastes
Methodology reference	GCC Environment and Social Safeguards Standard, v2.0
Data unit	Waste invoices
Description	Generated hazardous waste such as waste oil within the scope of the project may cause soil contamination.
Measured/calculated /default	-
Data source	Mobile Waste Tracking System
Value(s) of monitored parameter	Amount of hazardous waste generated and disposed of in an environmentally-sound manner
Measurement/ Monitoring equipment	-
Measuring/reading/ recording frequency	-
Calculation method (if applicable)	-
QA/QC procedures	For further endorsement, hazardous waste generation and handling records are kept.
Purpose of data	Mitigate and/or reduce the environmental and social impact risks by addressing the solid waste pollution from hazardous waste.
Additional comments	-

**Data / Parameter Table 7.**

<b>Data / Parameter:</b>	Solid waste
Methodology reference	GCC Environment and Social Safeguards Standard, v2.0
Data unit	Waste invoices
Description	Waste may be generated during operation and construction.
Measured/calculated /default	-
Data source	Waste declaration
Value(s) of monitored parameter	Amount of waste generated and disposed of in an environmentally-sound manner.
Measurement/ Monitoring equipment	-
Measuring/reading/ recording frequency	-
Calculation method (if applicable)	-
QA/QC procedures	For further endorsement, waste generation and handling records are kept.
Purpose of data	Mitigate and/or reduce the environmental and social impact risks by addressing the waste pollution.
Additional comments	-

**Data / Parameter Table 8.**

<b>Data / Parameter:</b>	Solid waste Pollution from Batteries
Methodology reference	GCC Environment and Social Safeguards Standard, v2.0
Data unit	Waste invoices
Description	There is waste battery formation due to personnel activities to be carried out during the construction and operation phases.
Measured/calculated /default	-
Data source	Waste declaration
Value(s) of monitored parameter	Waste batteries will be collected and sent to licensed companies. Amount of waste battery generated and disposed of in an environmentally-sound manner.
Measurement/ Monitoring equipment	-
Measuring/reading/ recording frequency	-
Calculation method (if applicable)	-
QA/QC procedures	For further endorsement, batteries generation and handling records are kept.
Purpose of data	Mitigate and/or reduce the environmental and social impact risks by addressing the pollution.
Additional comments	-

**Data / Parameter Table 9.**

<b>Data / Parameter:</b>	Wastewater discharge without/with insufficient treatment
Methodology reference	GCC Environment and Social Safeguards Standard, v2.0
Data unit	Waste invoices
Description	During operation, domestic wastewater generation will be occurred.
Measured/calculated /default	-
Data source	Record of wastewater
Value(s) of monitored parameter	Amount of wastewater generated and treated.
Measurement/ Monitoring equipment	-
Measuring/reading/ recording frequency	-
Calculation method (if applicable)	-
QA/QC procedures	For further endorsement, wastewater generation and vacuum records are kept.
Purpose of data	Mitigate and/or reduce the environmental and social impact risks by addressing the wastewater pollution.
Additional comments	-

**Data / Parameter Table 10.**

Data / Parameter:	Noise Pollution
Methodology reference	GCC Environment and Social Safeguards Standard, v2.0
Data unit	Noise data
Description	Noise in wind turbines causes two different types of noise. The first of these is the mechanical noise originating from the system such as gearbox, cooling fans, generator, gear, and the second is the aerodynamic noise caused by the wind-blade interaction, which causes more environmental noise.
Measured/calculated /default	-
Data source	Noise records.
Value(s) of monitored parameter	-
Measurement/ Monitoring equipment	-
Measuring/reading/ recording frequency	-
Calculation method (if applicable)	-
QA/QC procedures	For further endorsement, wastewater generation and vacuum records are kept.
Purpose of data	Mitigate and/or reduce the environmental and social impact risks by addressing the noise pollution.
Additional comments	-
Program of Risk Management Actions to achieve the target(s):	
QA/QC procedures:	

**Data / Parameter Table 11.**

Data / Parameter:	Ecology (Protecting/ enhancing plant life, Protecting/ enhancing species diversity,
Methodology reference	GCC Environment and Social Safeguards Standard, v2.0
Data unit	Ecological Studies
Description	It can harm the ecology during construction and operation.
Measured/calculated /default	-
Data source	Ecologic Studies
Value(s) of monitored parameter	Results of Ecological Studies
Measurement/ Monitoring equipment	-
Measuring/reading/ recording frequency	-
Calculation method (if applicable)	-
QA/QC procedures	For further endorsement, studies are kept.
Purpose of data	Mitigate and/or reduce the environmental and social impact risks by addressing the ecological damage.
Additional comments	-
Program of Risk Management Actions to achieve the target(s):	
QA/QC procedures:	



## B.7.2. Monitoring-program of risk management actions

There is no parameter evaluated as “Harmful” in Section E.

## B.7.3. Sampling plan

Not applicable.

## B.7.4. Other elements of the monitoring plan

To calculate emission reductions, monitoring is the main procedure for the project activity. The monitoring plan is prepared for verifying these emissions.

The meters are sealed by TEIAS, and the project proponent are not allowed to access the meters. Net electricity generation is measured and recorded by TEIAS monthly (through remote reading). Power Plant Manager is responsible for the electricity generated, gathering all relevant data, and keeping the records.

Through the crediting period, the project owner submitted the electricity generation data to Desilyon Danışmanlık Ticaret A.Ş. who is responsible for calculating the emission reduction for the verification. The monitoring report could be prepared based on these data.

Team Members are expected to include the following staff:

**Plant Manager:** Responsibility for running the plant and compliance with ACC monitoring plan

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

**Desilyon Danışmanlık Ticaret A.Ş.:** Responsible for emission reduction calculations, preparing monitoring report and periodical verification process.

The meters (main and spare) are installed with respect to the regulations by TEIAS. Furthermore, data monitoring is carried out with these meters. The reason of using two meters is to compare between measured values recorded. If there is a significant difference between the readings of two devices, TEIAS is informed about this situation. EPDK regulations should be followed for the meters to identify the accuracy class of the meters as 0.2 or 0.5.

The quantity of electricity supplied by the project activity to the grid (ISVM) and the quantity of electricity delivered to the related area from the grid (UEVM) are measured and demonstrated by EPIAS. Internal consumption from electricity is subtracted from the delivered electricity to calculate the net generation.

All data is kept for at least two years after the crediting period for QA/QC purposes.

Before the commissioning of the power plant, calibration of the electricity meters is made and sealed by TEIAS. Then, if there is an inconsistency between the meters, they are calibrated by TEIAS.

## **Section C. Start date, crediting period type and duration**

### **C.1. Start date of the Project Activity**

The earliest commissioning date of the project activity is 27/10/2018 for Gazi WPP and 22/10/2018 for Sakarbayır WPP.

### **C.2. Expected operational lifetime of the Project Activity**

The project is licensed on 16/03/2011 for Gazi WPP and Sakarbayır WPP. As per the license issued by Energy Market Regulatory Authority (EMRA) all legal rights of the project is given to Arı En Elektrik Üretim Anonim Şirketi until 16/03/2060. Thus, total expected operational lifetime of the project activity is 49 years.

### **C.3. Crediting period of the Project Activity**

#### **C.3.1. Fixed crediting period**

The crediting period is fixed as 10 years.

#### **C.3.2. Start date of the crediting period**

Start date of crediting period is 01/11/2018, after the provisional acceptance approved.

#### **C.3.3. Duration of the crediting period**

The crediting period is between 01/11/2018 - 31/10/2028.

## Section D. Environmental impacts

### D.1. Analysis of environmental impacts

Please see section E.

### D.2. Environmental impact assessment

Gazi WPP is within the scope of "Environmental Impact Assessment (EIA) Regulation" Annex II List Article 42 "Wind power plants with 5 turbines or 10-50 MWm installed power". Since the capacity of the project is less than the threshold value (4 turbines < 5 turbines which is threshold value before capacity addition), the project is under the scope of "EIA regulation provisions are not applied". Therefore, the application was made to the Ministry of Environment and Urbanization for Gazi WPP before capacity addition. After the necessary examinations, the decision "EIA Exemption" was taken in 19/06/2017. After capacity addition, Gazi WPP reaches to threshold which is 5 turbines. Therefore, the project description report has been prepared and approved for Gazi WPP. According to this, "EIA is not required." decision was made by the Ministry of Environment and Urbanization on 13.10.2020 considering 5 turbines and 20.7 MW electricity production.

Sakarbayır WPP is within the scope of "Environmental Impact Assessment (EIA) Regulation" Annex II List Article 42 "Wind power plants with 5 turbines or 10-50 MWm installed power". Since, the capacity of the project is less than the threshold value, the project is under the scope of "EIA regulation provisions are not applied". Therefore, the application was made to the Ministry of Environment and Urbanization for Sakarbayır WPP. After the necessary examinations, the decision "EIA Exemption" was taken in 16/06/2017.

Thus, the project is considered to be implemented according to the national laws and regulations as long as the environmental precautions stated in the report are applied. The environmental precautions stated in the report are as follows;

#### Construction Waste

It is possible that wastes such as iron and concrete residues will be generated during the construction processes of the activity. These wastes that will be generated during the construction processes will be categorized and collected separately within the construction site, and the wastes that can be reused will be used during the construction processes. Wastes that cannot be reused will be given to licensed recycling companies for construction and demolition waste, so that they will be removed from the project area and reintroduced to the economy.<sup>38</sup>

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<sup>38</sup> EIA Description Report, Page 80

### Waste Batteries and Accumulators

There is waste battery formation due to personnel activities to be carried out during the construction and operation phases. Waste batteries will be collected and sent to licensed companies.<sup>39</sup>

### End of Life Tires

During the construction phase of the project, the tire changes of both the transportation vehicles to be used within the scope of the project and the personal vehicles of the personnel will be carried out at authorized services. In cases where tire replacement is mandatory within the project area, the waste tire that will occur will be delivered to the nearest authorized service or units that distribute and sell vehicle tires.<sup>40</sup>

### Hazardous Wastes

The "Waste Management Regulation", which was published in the Official Gazette dated 02.04.2015 and numbered 29314, will be complied with for hazardous wastes that may occur.<sup>41</sup>

### End of Life Tires

During the construction phase of the project, the tire changes of both the transportation vehicles to be used within the scope of the project and the personal vehicles of the personnel will be carried out at authorized services. In cases where tire replacement is mandatory within the project area, the waste tire that will occur will be delivered to the nearest authorized service or units that distribute and sell vehicle tires.<sup>42</sup>

### Noise Pollution

The noise level to be generated from the activities during the construction and operation phases has been calculated according to the limit values of the regulation in the nearby settlements, and the turbine numbered T2 during the operation phase is above the limit values in the calculations made for the sensitive structure/housing at a distance of 180 m.

However, in the evaluation in question, modeling was done considering that the noise sources are located at a single point. Since such a situation does not exist under normal conditions, it is foreseen that it will not pose a danger to the sensitive building/housing. In this context, in case of complaints, noise measurements will be made in the area.

These effects will be further reduced by regular maintenance of the vehicles during the construction phase and by complying with the working hours and appropriate speed limits.<sup>43</sup>

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<sup>39</sup> EIA Description Report, Page 79

<sup>40</sup> EIA Description Report, Page 79

<sup>41</sup> EIA Description Report, Page 80

<sup>42</sup> EIA Description Report, Page 79

<sup>43</sup> EIA Description Report, Page 81

### Shadow Flicker (Shadow and Vibrations)

Shadow effect and blade flare are a special case of the visual effect of wind turbines. Lighting will be provided so that night birds can notice the turbines. White light will not be used for lighting, red lights will be made.<sup>44</sup>

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<sup>44</sup> EIA Description Report, Page 84

## Section E. Environmental and social safeguards

### E.1. Environmental safeguards

Impact of Project Activity on		Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards									Project Owner's Conclusion	
		Description of Impact (both positive and negative)	Legal requirement / Limit	Do-No-Harm Risk Assessment			Risk Mitigation Action Plans		Do-No-Harm Residual Risk Assessment		Self-Declaration	
				Not Applicable (No actions required)	Harmless (No actions required)	Harmful (Actions required)	Operational Controls	Program of Risk Management Actions	Re-evaluate Risks	Monitoring	Explanation of Conclusion	The Project Activity will not cause any harm
<p><b>Environmental impacts on the identified categories<sup>45</sup> indicated below.</b></p>	<p>Indicators for environmental impacts</p>	<p>Describe anticipated environmental impacts, both positive and negative from all sources (stationary and mobile), that may result from the Project Activity, within and outside the project boundary, over which the Project Owner(s) has control, and beyond what would reasonably be expected to occur in the absence of the Project Activity.</p>	<p>Describe the applicable national regulatory requirements /legal limits related to the identified risks of environmental impacts.</p>	<p>If no environmental impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as <b>Not Applicable</b> (No actions required)</p>	<p>If environmental impacts are anticipated, but are expected to be in compliance with applicable national regulatory requirements/ below the legal limits, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as <b>Harmless</b> (No actions required)</p>	<p>If environmental impacts are anticipated that will not be in compliance with the applicable national regulatory requirements or are likely to exceed legal limits, then the Project Activity is likely to cause harm (may be un-safe) and shall be indicated as <b>Harmful</b> (Actions required).</p>	<p>Describe the operational controls and best practices, focusing on how to implement and operate the Project Activity, to reduce the risk of impacts that have been identified as <b>Harmful</b>.</p>	<p>Describe the Program of Risk Management Actions (refer to Table 3), focusing on additional actions (e.g., installation of pollution control equipment) that will be adopted to reduce the risk of impacts that have been identified as <b>Harmful</b>.</p>	<p>Re-evaluate risks after Risk Mitigation Action Plans have been developed (refer to previous two columns) for impacts that have been identified as <b>Harmful</b>. Indicate whether the risks have been eliminated or reduced and, where appropriate, indicate them as <b>Harmless</b> (No actions required)</p>	<p>Describe the monitoring approach and the parameters to be monitored for each impact that has been identified as <b>Harmful</b> and described in the PSF (refer to Table 3).</p>	<p>Describe how the Project Owner has concluded that the Project Activity is likely to achieve the identified Risk Mitigation Action Plan targets for managing risks to levels that are unlikely to cause any harm.</p>	<p>Confirm that the Project Activity risks of negative environmental impacts are expected to be managed to levels that are unlikely to cause any harm (Mark +1 for <b>Yes</b> or and -1 for <b>No</b>)</p>
<b>Environmental Safeguards</b>												
Environment - Air	SO <sub>x</sub> emissions	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A

<sup>45</sup> sourced from the CDM SD Tool and the sample reports are available ( <https://www4.unfccc.int/sites/sdcmicrosite/Pages/SD-Reports.aspx> )

NO <sub>x</sub> emissions	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	
CO <sub>2</sub> emissions	The project reduces CO <sub>2</sub> emissions since it reduces the amount of fossil fuel used. Thus, air pollution decreases.	N/A	-	The project reduces CO <sub>2</sub> emissions in the baseline; hence the project will not cause any harm in this regard.	-	N/A	N/A	N/A	The electricity generation will be monitored by using electricity meters. Thus, emission reduction will be calculated accordingly.	The project is expected to result in lower CO <sub>2</sub> emission than the baseline throughout the crediting period.	+1	
CO emissions	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A		
Suspended particulate matter (SPM) emissions	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A		
Fly ash emissions	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A		
Non-Methane Volatile Organic Compounds (NMVOCs)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A		
Odor emissions	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A		
Noise Pollution	The noise emitted by wind turbines was measured as 104.8 dB. However, there is not any cause of noise pollution	According to the Regulation on the Ambient Noise Evaluation and Control the limits are 60-70 dBA. However, for the facilities located more than 500 meters away from the settlements, no assessment is made based on the environmental permit or environmental license document.	-	Harmless	-	N/A	N/A	N/A	Regular meetings are held with people living close to the area and will be used as a monitoring method.	Due to the technical specification of the wind turbine and the distance between two wind farms maintained at site, it is expected that noise will be significantly low from the project activity. Also, mechanical noise is the noise created by the gearbox, generator, and backup motors. Mechanical noise will be eliminated by using acoustic sheaths and special gears and covering the rotating parts with sound absorbing material.	+1	

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	Solid waste Pollution from Plastics	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	
Environment Land	Solid waste Pollution from Hazardous wastes	No hazardous pollution was observed during the maintenance activities. It is disposed according to the "Turkish Waste Management Regulation".	Turkish Waste Management Regulation	-	Harmless	-	N/A	N/A	N/A	Waste invoices are generated.	All wastes with hazardous waste characteristics are stored separately in the hazardous waste storage area. The project owner undertakes to manage the wastes in compliance to prevailing laws and regulations. Licensed waste collection vehicle is collected hazardous waste.	+1
	Solid waste Pollution from Bio-medical wastes	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	
	Solid waste Pollution from E-wastes	No e-waste pollution was observed during the operation of the project. It will be disposed of in the future according to the "Turkish Waste Management Regulation".	Turkish Waste Management Regulation	-	Harmless	-	N/A	N/A	N/A	Waste declarations are made regularly within the scope of regulation and licensed disposal vehicle takes hazardous waste. Regarding this waste invoices are generated.	The project owner undertakes to manage the e-waste in compliance to prevailing laws and regulations.	+1
	Solid waste Pollution from Batteries	There is no battery pollution which is anticipated during the operation of the project. It will be disposed in the future according to "Turkish Waste Management Regulation".	Waste Management Regulation	-	Harmless	-	N/A	N/A	N/A	Waste battery collection boxes will be available for possible waste batteries, and the waste batteries to be collected will be sent to TAP (Turkish Waste Battery Association).	The project owner undertakes to manage the battery in compliance to prevailing laws and regulations. Licensed waste collection vehicle is collected solid waste	+1



												Pollution from Batteries.	
	Solid waste Pollution from end-of-life products/equipment	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	
	Soil Pollution from Chemicals (including Pesticides, heavy metals, lead, mercury)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	
	Soil erosion	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	
Environment - Water	Reliability/ accessibility of water supply	N/A	N/A	-	-	-	N/A	N/A	N/A	N/A	N/A	N/A	
	Water Consumption from ground and other sources	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	
	Generation of wastewater	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	
	Wastewater discharge without/with insufficient treatment	The project does not cause any wastewater discharge without treatment.	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	
	Pollution of Surface, Ground and/or Bodies of water	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	
Environment - Natural Resources	Conserving mineral resources	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	N/A	
	Protecting/enhancing plant life	No endemic flora species were found in the project area that fall under the IUCN List.	Performance Requirement 6 of the European Bank for Reconstruction and Development (EBRD) and IFC Performance Standard 6 (Conservation of Biodiversity and Sustainable Management of Living Natural Resources) and AIB	-	Harmless	-	N/A	N/A	Harmless	The project owner will ensure that the damage to the flora and fauna existing in the project area will be minimized, that the said activity will be continued in a way that will not cause habitat fragmentation and habitat loss, and that the activity will be carried out taking into account the regeneration ability of the area, and that the endangered, narrowly distributed or	No negative impact is expected on flora species.	+1	

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			Environmental and Social Standard ESS1							endemic in the project area will be carried out. He promised that in case of encountering a flora and fauna species, which is a unique species, the Istanbul Branch Directorate will be informed without any damage.		
	Protecting/enhancing species diversity	There are no endangered bird species in the project areas according to international lists. There are no breeding grounds for colonial waterfowl such as herons and ducks at the project sites. No migratory large-winged gliding bird species were observed in the airspace observations where the studies were conducted <sup>46</sup> ..	N/A	-	Harmless	-	N/A	N/A	Harmless	The owner of the project stated that birds and bats will not be harmed in the project area; Nest and carcass checks will be carried out at the bottom of the turbines and in its immediate vicinity, especially during the autumn and spring migration periods when bird activity is intense, between April 1 and August 15, which is the breeding season, and Istanbul Branch Directorate will be informed if nesting and carcass is seen; He promised that wild fauna species will not be disturbed especially during breeding, feeding and wintering periods, the eggs of these species will not be harmed, these eggs will not be collected even if they are empty, and devices or applications that produce odor, light, heat and sound that wild vertebrates may perceive as a threat will be minimized.	No negative impact is expected on bird migration route.	+1

<sup>46</sup> Project Description Document, page 73-74

	Protecting/enhancing forests	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	
	Protecting/enhancing other depletable natural resources	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	
	Conserving energy	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	
	Replacing fossil fuels with renewable sources of energy	The project activity replaces fossil fuels with wind energy as it's based on the baseline.	There is no such legal limit.	-	Harmless	-	N/A	N/A	N/A	The electricity generated from wind power will be monitored throughout the crediting period. You can see the data and monitoring records in B.7.1.	The generated electricity by the project activity will be continuously measured and the related CO <sub>2</sub> emission reduction will be calculated according to the applied methodology .	+1
	Replacing ODS with non-ODS refrigerants	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	

**Note:** If the score is: (a) zero or greater, the overall impact is neutral or positive and there is no net harm; and (b) less than zero, the overall impact is negative and there is net harm to Environment. Score is obtained after adding the individual scores in each of the rows in the last column of the above table.

<b>Net Score:</b>	<b>+8</b>
<b>Project Owner's Conclusion in PSF:</b>	The Project Owner confirms that the Project Activity will not cause any net harm to the environment.

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E.2. Social Safeguards

Impact of Project Activity on		Information on Impacts, Do-No-Harm Risk Assessment and Establishing Safeguards									Project Owner's Conclusion		
		Description of Impact (both positive and negative)	Legal requirement /Limit	Do-No-Harm Risk Assessment			Risk Mitigation Action Plans		Do-No-Harm Residual Risk Assessment		Self-Declaration		
				Not Applicable (No actions required)	Harmless (No actions required)	Harmful (Actions required)	Operational Controls	Program of Risk Management Actions	Re-evaluate Risks	Monitoring	Explanation of Conclusion	The Project Activity will not cause any harm	
<p><b>Social impacts on the identified categories<sup>47</sup> indicated below.</b></p> <p>Indicators for social impacts</p>		Describe the impacts on society and stakeholders, both positive and negative, that may result from constructing and operating of the Project Activity.	Describe the applicable national regulatory requirements / legal limits related to the identified risks of social impacts.	If no social impacts are anticipated, then the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as <b>Not Applicable</b> (No actions required)	If social impacts are anticipated, but are expected to be in compliance with applicable national regulatory requirements/ legal limits, then it the Project Activity is unlikely to cause any harm (is safe) and shall be indicated as <b>Harmless</b> (No actions required)	If social impacts are anticipated that will not be in compliance with the applicable national regulatory requirements/ legal limits, then the Project Activity is likely to cause harm (may be unsafe) and shall be indicated as <b>Harmful</b> (Actions required).	Describe the operational controls and best practices, focusing on how to implement and operate the Project Activity, to reduce the risk of impacts that have been identified as <b>Harmful</b> .	Describe the Program of Risk Management Actions (refer to Table 3), focusing on additional actions (e.g., construction of crèche for workers) that will be adopted to reduce the risk of impacts that have been identified as <b>Harmful</b> .	Re-evaluate risks after Risk Mitigation Actions plans have been developed (refer to previous two columns) for impacts that have been identified as <b>Harmful</b> . Indicate whether the risks have been eliminated or reduced and, where appropriate, indicate them as <b>Harmless</b> (No actions required)	Describe the monitoring approach and the parameters to be monitored for each impact that has been identified as <b>Harmful</b> and to be described in the PSF (refer to Table 3).	Describe how the Project Owner has concluded that the Project Activity is likely to achieve the identified Risk Mitigation Action Plan targets for managing risks to levels that are unlikely to cause any harm.	Confirm that the Project Activity risks of negative social impacts are expected to be managed to levels that are unlikely to cause any harm (Mark +1 for <b>Yes</b> or and -1 for <b>No</b> )	
<b>Social Safeguards</b>													
<b>Social - Jobs</b>		Long-term jobs (> 1 year) created/ lost	The project creates long-term job opportunities for the operational period. 10 people have been employed as long-term workers.	Employment is made according to national employment regulations.	N/A	-	Harmless	N/A	N/A	N/A	The number of people employed in the project will be monitored through SGK (Social Security Institution) records or payroll records.	Employment will be monitored and recorded.	+1
		New short-term jobs (< 1 year) created/ lost	The project creates short term job opportunities during construction.	All employment are done according to the national	N/A	-	Harmless	N/A	N/A	N/A	Project construction created new short term jobs during construction.	Employment has been recorded.	+1

<sup>47</sup> sourced from the CDM SD Tool and the sample reports are available ( <https://www4.unfccc.int/sites/sdcmicrosite/Pages/SD-Reports.aspx> )

			employment regulations.							Checking the employment records to confirm the number of employed staff during construction.		
	Sources of income generation increased / reduced	The project increases income by creating job opportunities.	All payments and right comply with the Labor Law. <sup>48</sup>	N/A	-	Harmless	N/A	N/A	N/A	The number of people employed in the project will be monitored through payroll records.	When necessary, statement of employment can be provided.	+1
<b>Social - Health &amp; Safety</b>	Disease prevention	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	
	Reducing / increasing accidents	Occupational accidents at the site may be occurred.	All trainings and precautions are completed according to the HSE Law. <sup>49</sup>	N/A	-	Harmless	N/A	N/A	N/A	Records of trainings will be provided.	Occupational health and safety training is provided to all employees regularly. Also, new employees are provided to these trainings. Moreover, the number of accidents as a indicator will be included and monitored to reflect the incidence of accidents.	+1
	Reducing / increasing crime	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	
	Reducing / increasing food wastage	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	
	Reducing / increasing indoor air pollution	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	
	Efficiency of health services	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	

<sup>48</sup> <https://www.mevzuat.gov.tr/MevzuatMetin/1.5.4857.pdf>

<sup>49</sup> <https://www.mevzuat.gov.tr/MevzuatMetin/1.5.6331.pdf>

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	Sanitation and waste management	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	
<b>Social - Education</b>	Job related training imparted or not	Work-related and technical trainings are provided to the employees.	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	
	Educational services improved or not	N/A	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	
	Project-related knowledge dissemination effective or not	N/A	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	
<b>Social - Welfare</b>	Improving/deteriorating working conditions	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	
	Community and rural welfare	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	
	Poverty alleviation (more people above poverty level)	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	
	Improving / deteriorating wealth distribution/generation of income and assets	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	
	Increased or / deteriorating municipal revenues	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	
	Women's empowerment	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	
	Reduced / increased traffic congestion	N/A	N/A	N/A	-	-	N/A	N/A	N/A	N/A	N/A	

**Note:** If the score is: (a) zero or greater, the overall impact is neutral or positive and there is no net harm; and (b) less than zero, the overall impact is negative and there is net harm to society. Score is obtained after adding the individual scores in each of the rows in the last column of the above table.

**Net Score:**

**+4**

**Project Owner's Conclusion in PSF:**

The Project Owner confirms that the Project Activity will not cause any net harm to society.

## Section F. United Nations Sustainable Development Goals (SDG)

The project is expected to contribute 5 SDGs which are SDG 7, 8, 9, 11 and 13.

**SDG 7 – Affordable and Energy:** The project contributes SDG Target 7.2 “By 2030, increase substantially the share of renewable energy in the global energy mix” by the utilization of wind power as a renewable energy source.

**Related indicator:** 7.2.1 Renewable energy share in the total final energy consumption

**SDG 8 – Decent Work and Economic Growth:** During the construction and operation phases of the project, direct and indirect job opportunities are created. Therefore, the project contributes to SDG Target 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.”

**Related indicator:** 8.5.1 Average hourly earnings of female and male employees, by occupation, age and persons with disabilities

**SDG 9 – Industry, Innovation, and Infrastructure:** The project helps the Target 9.4 “By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities.”

**Related indicator:** 9.4.1 CO<sub>2</sub> emission per unit of value added

**SDG 11 – Sustainable Cities and Communities:** The project promotes SDG Target 11.6 “By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management” by decreasing particulate matter caused by fossil fuel emissions in the cities.

**Related indicator:** 11.6.2 Annual mean levels of fine particulate matter (e.g., PM<sub>2.5</sub> and PM<sub>10</sub>) in cities (population weighted)

**SDG 13 – Climate Action:** The project helps to reduce CO<sub>2</sub> emissions by producing clean renewable energy. Thus, it contributes SDG Target 13.3 “Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning”.

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

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UN-level SDGs	UN-level Target	Declared Country-level SDG	Defining Project-level SDGs				Project Owner(s)'s Conclusion		
			Project-level SDGs	Project-level Targets/ Actions	Project-level Indicators	Contribution of Project-level Actions to SDG Targets	Monitoring	Explanation of Conclusion	Are Goal/ Targets Likely to be Achieved?
<p><b>Describe UN SDG targets and indicators</b></p> <p>See: <a href="https://unstats.un.org/sdgs/indicators/indicators-list/">https://unstats.un.org/sdgs/indicators/indicators-list/</a></p>	Describe the UN-level target(s) and corresponding indicator no(s)	Has the host country declared the SDG to be a national priority? Indicate Yes or No	<p>Define project-level SDGs by suitably modifying and customizing UN/ Country-level SDGs to the project scope.</p> <p><b>For guidance see:</b> Integrating the SDGs into Corporate Reporting- A Practical Guide: <a href="https://www.unglobalcompact.org/docs/publications/Practical_Guide_SDG_Reporting.pdf">https://www.unglobalcompact.org/docs/publications/Practical_Guide_SDG_Reporting.pdf</a></p> <p>Case-study from Coca-Cola and other organizations to develop organization-wide SDGs (page 114): <a href="https://pub.iges.or.jp/pub/realising-transformative-potential-sdgs">https://pub.iges.or.jp/pub/realising-transformative-potential-sdgs</a></p>	Define project-level targets/actions, by suitably modifying and customizing UN/Country-level targets to the project scope. Define the target date by which the Project Activity is expected to achieve the project-level SDG target(s). Refer to the previous column for guidance	Define project-level indicators by suitably modifying and customizing UN/Country-level indicators to the project scope or creating a new indicator(s). Refer to the previous column for guidance	Describe and justify how actions taken under the Project Activity are likely to result in a direct positive effect that contributes to achieving the defined project-level SDG targets and is additional to what would have occurred in the absence of the Project Activity	Describe the monitoring approach and the monitoring parameters to be applied for each project-level SDG target and Indicator	Describe how the Project Owner has concluded that the project is likely to achieve the identified Project level SDGs target(s).	Describe whether the project-level SDG target(s) is likely to be achieved by the target date (Yes or No)
Goal 1: End poverty in all its forms everywhere	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Goal 3. Ensure healthy lives and promote well-being for all at all ages	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A



<b>Goal 5. Achieve gender equality and empower all women and girls</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Goal 6. Ensure availability and sustainable management of water and sanitation for all</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all</b>	SDG Target 7.2 "By 2030, increase substantially the share of renewable energy in the global energy mix" by the utilization of wind power as a renewable energy source. Related indicator: 7.2.1 Renewable energy share in the total final energy consumption.	Yes	Increasing the share of renewable energy sources in the total electricity generation delivered to the national grid	Generate 117.950 GWh clean energy annually.	To increase the share of electricity generation capacity installed from renewable energy sources.	The project increases the share of renewable energy in Turkey's energy generation mix by providing clean energy. The plant provides 117.950 GWh of clean energy to the grid annually.	Calculate the share of installed capacity from renewable energy.	The commissioning date of project is 2018. Project continues to produce clean energy without any problems.	Yes
<b>Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</b>	SDG Target 8.5 "By 2030, achieve full and productive	Yes	Generating income and job opportunities	Providing employment opportunities for at least 10 people	Recruitment of at least 10 people, including people with disabilities	The project generate employment for both operation and construction period and created long-	Social Security Payrolls are kept by project owner regularly and Social	Personnel have been employed by the project owner according to the regulations	Yes

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	<p>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". Related indicator: 8.5.1 Average hourly earnings of female and male employees, by occupation, age and persons with disabilities</p>					<p>term employment for the people working at the construction site.</p>	<p>Security Institution also has it.</p>	<p>and the social security payments of the personnel are made regularly.</p>	
<p><b>Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation</b></p>	<p>SDG Target 9.4 "By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased</p>	<p>Yes</p>	<p>Provides a clean and resilient power generation facility</p>	<p>The project is a 117.950 GWh resilient energy generation facility.</p>	<p>Providing clean energy</p>	<p>Providing clean energy by avoiding 57,675 tCO<sub>2</sub> annually.</p>	<p>The project has produced clean energy by implementing a wind power plant and helps the adaptation of clean energy technologies</p>	<p>Check meters records project implementation continues.</p>	<p>Yes</p>

	resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities". Related indicator: 9.4.1 CO2 emission per unit of value added								
<b>Goal 10. Reduce inequality within and among countries</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable</b>	SDG Target 11.6 "By 2030, reduce the adverse per capita environmental impacts	Yes	Decrease the amount of PM2.5 and PM10 emissions in the cities.	Reduction of PM2.5 is 10.7631 µg/m <sup>3</sup> . and reduction of PM10 is 34.3085 µg/m <sup>3</sup> .	Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)	As known, fossil fuel emissions are secondary sources of PM2.5 and PM10 in the cities. Since the project reduces the use of fossil fuels, PM2.5	PM2.5 and PM10 have been recorded by Ministry of Environment Urbanization and Climate Change <sup>50</sup> and you can see the ER calculation	Project Owner operates the plant since 2018 and complies with targeted SDGs so far.	Yes

<sup>50</sup> <http://sim.csb.gov.tr/SERVICES/airquality> (Based on cities in Turkey)

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	of cities, including by paying special attention to air quality and municipal and other waste management.” Indicator 11.6.2 Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted)						and PM10 formation will be reduced accordingly. Hence, the project helps to improve air quality in cities.	sheet excel. PM2.5 and PM10 were measured in implementation of the project activity several times. The measurement will be conducted by project owner after 5 years. Also, General Directorate of Meteorology measures these levels regularly. Each year a report is generated and published. <sup>51</sup>		
<b>Goal 12. Ensure sustainable consumption and production patterns</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Goal 13. Take urgent action to combat climate change and its impacts</b>	SDG Target 13.3 “Improve education, awareness-raising and human and institutional capacity	Yes	Eliminate 57,675 tCO <sub>2</sub> annually	Commissioning of 117.950 GWh renewable energy power plant	Reducing greenhouse gas emissions by 57,675 tons annually.	Since wind energy is used in the project, there is no greenhouse gas emission related to the project activity. Eliminates 57,675 tCO <sub>2</sub> annually.	Calculate avoided GHG emissions every year.	The plant is operated since 2018 by project owner and complied with targeted SDGs so far.	Yes	

<sup>51</sup> <https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=12188&MevzuatTur=7&MevzuatTertip=5> (article 13, paragraph 4)

	on climate change mitigation, adaptation, impact reduction and early warning". Related indicator: 13.3.2 Number of countries that have communicated the strengthening of institutional, systemic and individual capacity-building to implement adaptation, mitigation and technology transfer, and development actions								
<b>Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Goal 15. Protect, restore and promote sustainable use of terrestrial</b>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss									
Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>SUMMARY</b>							<b>Targeted</b>	<b>Likely to be Achieved</b>	
Total Number of SDGs							5	5	
Certification label (Bronze, Silver, Gold, Platinum, or Diamond) for the ACCs as defined in the PSF							Platinum	Platinum	

## Section G. Local stakeholder consultation

### G.1. Modalities for local stakeholder consultation

A public participation meeting has not been held before for this project within the scope of the EIA Regulation.

- Therefore, the Local Stakeholder meeting organized by Desilyon Danışmanlık Ticaret A.Ş for Gazi WPP Bundle. It was arranged at 11:00 on 30/03/2022 in Gazitepe village Coffee House in Gazitepe / İstanbul. The meeting was announced orally. Furthermore, announcements were sent to the headmen and coffee houses of the nearby settlements and posted on the board.

#### Agenda

11:00 – 11:15 = Opening and Presentation

11:15 – 11:40 = Project Introduction and Sustainability Evaluation

11:40 – 11:55 = Q&A

11:55 – 12:10 = Evaluation and Feedback

12:10 – 12:25 = Closing

- Also, the Local Stakeholder meeting organized by Desilyon Danışmanlık Ticaret A.Ş for Sakarbayır WPP Bundle. It was arranged at 14:00 on 30/03/2022 in Akören village Coffee House in Akören / İstanbul. The meeting was announced orally. Furthermore, announcements were sent to the headmen and coffee houses of the nearby settlements and posted on the board.

#### Agenda

14:00 – 14:15 = Opening and Presentation

14:15 – 14:40 = Project Introduction and Sustainability Evaluation

14:40 – 14:55 = Q&A

14:55 – 15:10 = Evaluation and Feedback

15:10 – 15:25 = Closing

The people who participated in the local consultation were informed by hanging on the boards of the neighborhood mukhtars in the Gazitepe neighborhood and Akören Mahallesi, where the project is located, and the local people were called through the headman. The meetings were announced 2 weeks ago, and the meetings were held face to face.

Local stakeholders were given some information about the project at the beginning of the meeting. The electricity capacity of the project, its effects on the environment, people and natural life in the region where the project is located were mentioned. Local stakeholders were informed about climate change, the impact of greenhouse gases on the climate and greenhouse gas emissions. It was explained why hydro power was preferred for the project and the contribution of renewable energy sources to greenhouse gas emissions.

## **G.2. Summary of comments received**

Stakeholders did not make any negative comments about the project during the meeting. In addition, the joint outcome of stakeholder consultation is positive. The local people have been very satisfied with the project so far, and the project has provided job opportunities in the region.

## **G.3. Consideration of comments received**

There were no negative comments in general at the meeting, however the contact information of the facility manager was shared with the stakeholders in order to be able to communicate and comment with the facility manager in the next process, and it was stated that the project owner and the local people would always be in contact. Moreover, feedback from meeting attendees will be reviewed and revised annually (if necessary) during the operational phase, while the grievance mechanism will be reviewed on an ongoing basis. Grievance book has been prepared and it will be delivered to the headman of the nearby village. The complaints will be provided in the Verification process.

## **Section H. Approval and authorization**

The application process of Letter of Attestation has been initiated with the related authorities. It will be provided in the Verification process.



## Appendix 1. Contact information of project owners

<b>Organization name</b>	Arı En Elektrik Üretim Anonim Şirketi
<b>Country</b>	Turkey
<b>Address</b>	Kazım Özalp Mahallesi, Reşit Galip Cd. No:97, Çankaya/Ankara
<b>Telephone</b>	+90 [312] 439 43 34
<b>E-mail</b>	<a href="mailto:cahit.balyen@cabagrup.com.tr">cahit.balyen@cabagrup.com.tr</a>
<b>Website</b>	<a href="https://cabagrup.com.tr/">https://cabagrup.com.tr/</a>
<b>Contact person</b>	Cahit Balyen

## Appendix 2. Affirmation regarding public funding

This section has been left blank intentionally.

## Appendix 3. Applicability of methodology(ies)

This section has been left blank intentionally.

## Appendix 4. Further background information on ex ante calculation of emission reductions

This section has been left blank intentionally.

## Appendix 5. Further background information on monitoring plan

This section has been left blank intentionally.

**Appendix 6. Summary report of comments received from local stakeholders**

**Gazi WPP Bundle**

Gazi



Gazi-Sakarbayır Rüzgar Enerji Santralleri Projesi Yerel Paydaş Toplantısı Katılımcı Listesi				
İsim - Soyisim	Kurum / Görev	Adres	Telefon	İmza
Metin Ergon	Vatandaş	Gazitepe	532 267 31 32	Metin
Sinem Demir	Vatandaş	Gazitepe Mah.	0542 651 16 64	Sinem
Secattin ILDIZ	Muhtar	Gazitepe Mah.	0536 233 06 71	Secattin
Güray CAN	Köylü	Gazitepe Köyü	0532 680186	Güray
Ahmet Kocak	Vatandaş	Gazitepe Mahallesi	—	Ahmet
Kadir Altın	Vatandaş	Gazitepe Mah.	0531 358 02 10	Kadir

Gazi



Gazi-Sakarbayır RES	Ad Soyad	Güray CAN
	Kurum / Görev	Köylü
	Tarih	30/03/2022
	İmza	

Toplantı ile ilgili görüşleriniz nelerdir?

Bilgilendirici bir toplantıydı. Sorularım cevaplandı.

Proje ile ilgili olumlu bulduğunuz konular nelerdir?

Rüzgar enerjisi iyidir, temizdir.  
Köyümüze hayırlı olsun.

Proje ile ilgili olumsuz bulduğunuz konular nelerdir?

Yoktur.

Project Submission Form

Gazi



Gazi-Sakarbayır RES	Ad Soyad	Metin Ergin
	Kurum / Görev	Çarşıtepe Mah. / Vatandaş
	Tarih	30.03.2022
	İmza	Metin
Toplantı ile ilgili görüşleriniz nelerdir?		
Çok güzel geçti. Bilgilendirildik. Proje çok güzel ve başarılı.		
Proje ile ilgili <u>olumlu</u> bulduğunuz konular nelerdir?		
Projeys çok faydalı buldum. Rüzgardan elektrik elde edilmesi çok iyi bir fikir. Türbinleri de gördük. Kayımlarda ıs olanağı seçildi. Kayımların yollarını düzelttiler. Mükemmel bir proje. Herkesin eline sağlık.		
Proje ile ilgili <u>olumsuz</u> bulduğunuz konular nelerdir?		
Bize ve çevreye bir zararı yok. Aksine çok fazla faydası var. Olumsuz görüşüm yok.		

Gazi



Gazi-Sakarbayır RES	Ad Soyad	Sinem Demir
	Kurum / Görev	Gazitepe mah. / Ustadaş
	Tarih	30.03.2022
	İmza	

Toplantı ile ilgili görüşleriniz nelerdir?

Güzel, bilgilendirici ve faydalı bir toplantı yapıldı. Projeyi ayrıntılı bir şekilde anlattılar. Sorduğumuz sorulara güzel yanıtlar aldık.

Proje ile ilgili **olumlu** bulduğunuz konular nelerdir?

Yenilenebilir enerjiyi kullanması güzel. Çevreye olan olumsuz bir durumunun olmaması bizim için çok iyi. Bu tarz projelerin devamını diliyorum.

Proje ile ilgili **olumsuz** bulduğunuz konular nelerdir?

Olumsuz bir konu yoktur.

Project Submission Form

Gazi

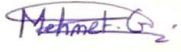






Gazi-Sakarbayır RES	Ad Soyad	Secattin ILDIZ
	Kurum / Görev	Gazitepe Mah.-Muhtar
	Tarih	30.03.2022
	İmza	
Toplantı ile ilgili görüşleriniz nelerdir?		
Toplantı genel olarak güzeldi. Bilgilendiriciydi.		
Proje ile ilgili <u>olumlu</u> bulduğunuz konular nelerdir?		
Başta tereddütlerimiz olsada bu toplantı sonrası hepsi silindi. Proje hem elektrik açısından hemde iş imkanı açısından çok olumlu bir proje.		
Proje ile ilgili <u>olumsuz</u> bulduğunuz konular nelerdir?		
Olumsuz yön yok.		

## Sakarbayır WPP Bundle

 Sakarbayır



Gazi-Sakarbayır Rüzgar Enerji Santralleri Projesi Yerel Paydaş Toplantısı Katılımcı Listesi				
İsim - Soyisim	Kurum / Görev	Adres	Telefon	İmza
Mustafa Gül	Vatandaş	Akören Mah.	533 251 14 84	
Hüseyin ERGİN	Akören Mahalle Muhtarı	Akören Mah.	0535 781 1547	
Ümit Bal	Akören Mah. Vatandaş	"	0542 871 20 93	
Ergün Coşkun	Vatandaş	"	506 583 96 30	
Alaaddin KALAN	Mahalle Sakini	Akören Mahallesi	0505 565 00 82	

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Sakarbayır



Gazi-Sakarbayır RES	Ad Soyad	Aladdin KALAVA
	Kurum / Görev	Atören Mahallesi - Mahalle Sakini
	Tarih	30/03/2022
	İmza	
Toplantı ile ilgili görüşleriniz nelerdir?		
Toplantı güzeldi, düzenleyenlere teşekkür ederim.		
Proje ile ilgili <u>olumlu</u> bulduğunuz konular nelerdir?		
Proje hakkında detaylı bilgiler verildi, mahalleye ve çevreye zarar vermeyeceğine dair temennilerde ve taahhütlerde bulunuldu. Uzmanlar konusunu izin ile okuduk. Olumlu bir proje.		
Proje ile ilgili <u>olumsuz</u> bulduğunuz konular nelerdir?		
Yoktur		





Gazi-Sakarbayır RES	Ad Soyad	Ergün Ceviz
	Kurum / Görev	Vatandaş
	Tarih	30.03.22
	İmza	
Toplantı ile ilgili görüşleriniz nelerdir?		
<p>Toplantıda her şey netti, açıklamalar iyi yapıldı. Genel olarak olumlu bulduğum bir toplantıydı.</p>		
Proje ile ilgili <u>olumlu</u> bulduğunuz konular nelerdir?		
<p>RES temiz enerji üretiyor. Geleceğe faydalı. Gelecek için önemli bir adım olmuş.</p>		
Proje ile ilgili <u>olumsuz</u> bulduğunuz konular nelerdir?		
<p>RESler temiz, olumsuz bulduğum bir konu yoktur.</p>		

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Akören / Sakarbayır



Gazi-Sakarbayır RES	Ad Soyad	Hüseyin ERGİN
	Kurum / Görev	Akören Mahalle Muhtarı
	Tarih	30/03/2022 - Garsamba
	İmza	
Toplantı ile ilgili görüşleriniz nelerdir?		
<p>Toplantı <del>gösterimi</del> bilgilendirmek, görüşlerimi almak ve sorularımı cevaplandırmak için yapıldı. Arkadaşlar süreci güzel adanıldılar.</p>		
Proje ile ilgili <u>olumlu</u> bulduğunuz konular nelerdir?		
<p>Çanak arazilere türbinler koyuldu ve o arazilerden elektrik kazancı sağlanıyor. Bence böyle projeler Türkiye'nin 4 bir tarafında yapılmalıdır.</p>		
Proje ile ilgili <u>olumsuz</u> bulduğunuz konular nelerdir?		
<p>Su ana kadar olumsuz bir konu fark etmedim.</p>		

Gazi-Sakarbayır RES	Ad Soyad	Mustafa Gül
	Kurum / Görev	Akşen Mah. Vatandası
	Tarih	30.03.2022
	İmza	

Toplantı ile ilgili görüşleriniz nelerdir?

Toplantı iyi geçti. Bilgilendirildik. Projeyi anlattılar.

Proje ile ilgili **olumlu** bulduğunuz konular nelerdir?

İyi proje olduğunu düşünüyorum Böyle projeler hep devam eder. Ülkemizin gelişmesi adına önemli.

Proje ile ilgili **olumsuz** bulduğunuz konular nelerdir?

Yoktur.

## Appendix 7. Summary report of comments received from local stakeholders translated to English

### GAZİ WPP Bundle



<b>Gazi-Sakarbayır WPP Bundle</b>	<b>Name Surname</b>	Güray Can
	<b>Institution / Mission</b>	Villager
	<b>Date</b>	30/03/2022
	<b>Signature</b>	Y
<b>What are your views on the meeting?</b>		
It was an informative meeting. My questions have been answered.		
<b>What are the aspects that you find <u>positive</u> about the project?</b>		
Wind energy is good, clean. Good luck to our village.		
<b>What are the issues that you find <u>negative</u> about the project?</b>		
There is none.		

<b>Gazi-Sakarbayır WPP Bundle</b>	<b>Name Surname</b>	Metin Ergün
	<b>Institution / Mission</b>	Gazitepe Neighbourhood / Villager
	<b>Date</b>	30/03/2022
	<b>Signature</b>	Y
What are your views on the meeting?		
It was very nice. We have been informed. The project is very beautiful and successful.		
What are the aspects that you find <b>positive</b> about the project?		
I found the project very useful. Generating electricity from the wind is a very good idea. We also saw turbines. It provided job opportunities to our villagers. They fixed the roads of the village. An excellent project. Good luck to everyone.		
What are the issues that you find <b>negative</b> about the project?		
It does not harm us or the environment. On the contrary, it has many benefits. I don't have a negative opinion.		

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<b>Gazi-Sakarbayır WPP Bundle</b>	<b>Name Surname</b>	Sinem Demir
	<b>Institution / Mission</b>	Gazitepe Neighbourhood / Villager
	<b>Date</b>	30/03/2022
	<b>Signature</b>	Y
<b>What are your views on the meeting?</b>		
It was a nice, informative, and useful meeting. They explained the project in detail. We got good answers to the questions we asked.		
<b>What are the aspects that you find <u>positive</u> about the project?</b>		
It's good that it uses renewable energy. It is very good for us that there is no negative situation to the environment. I wish such projects to continue.		
<b>What are the issues that you find <u>negative</u> about the project?</b>		
There is no negative issue.		

<b>Gazi-Sakarbayır WPP Bundle</b>	<b>Name Surname</b>	Secattin Ildız
	<b>Institution / Mission</b>	Mukhtar of Gazitepe Neighbourhood
	<b>Date</b>	30/03/2022
	<b>Signature</b>	Y
What are your views on the meeting?		
The meeting was generally good. It was informative.		
What are the aspects that you find <b>positive</b> about the project?		
Although we had hesitations at first, all of them were deleted after this meeting. The project is a very positive project both in terms of electricity and job opportunities.		
What are the issues that you find <b>negative</b> about the project?		
There are no negative aspects.		

**Sakarbayır WPP Bundle**



<b>Gazi-Sakarbayır WPP Bundle</b>	<b>Name Surname</b>	Alaaddin Kalava
	<b>Institution / Mission</b>	Resident of Akören Neighbourhood
	<b>Date</b>	30/03/2022
	<b>Signature</b>	Y
What are your views on the meeting?		
The meeting was nice, thank you to the organizers.		
What are the aspects that you find <b>positive</b> about the project?		
Detailed information was given about the project, they made wishes and commitments that it would not harm the neighborhood and the environment, and we were convinced because the experts spoke. It's a positive project.		
What are the issues that you find <b>negative</b> about the project?		
None.		



<b>Gazi-Sakarbayır WPP Bundle</b>	<b>Name Surname</b>	Ergün Ceviz
	<b>Institution / Mission</b>	Citizen
	<b>Date</b>	30/03/2022
	<b>Signature</b>	Y
What are your views on the meeting?		
Everything was clear in the meeting; the explanations were well made. It was a meeting that I found generally positive.		
What are the aspects that you find <b>positive</b> about the project?		
WPP produces clean energy. Beneficial to the environment. It is an important step for the future.		
What are the issues that you find <b>negative</b> about the project?		
WPPs are clean, there is no issue that I find negative.		

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<b>Gazi-Sakarbayır WPP Bundle</b>	<b>Name Surname</b>	Hüseyin Ergin
	<b>Institution / Mission</b>	Mukhtar of Akören Neighbourhood
	<b>Date</b>	30/03/2022
	<b>Signature</b>	Y
<b>What are your views on the meeting?</b>		
The meeting was held to inform, get our <u>views</u> and answer our questions. Friends explained the process well.		
<b>What are the aspects that you find <u>positive</u> about the project?</b>		
Turbines were placed on the barren <u>lands</u> and they gained electricity from those lands. I think such projects should be done all over Turkey.		
<b>What are the issues that you find <u>negative</u> about the project?</b>		
I haven't noticed any negative issues so far.		

<b>Gazi-Sakarbayır WPP Bundle</b>	<b>Name Surname</b>	Mustafa Gül
	<b>Institution / Mission</b>	Akören Neighbourhood / Citizen
	<b>Date</b>	30/03/2022
	<b>Signature</b>	Y
What are your views on the meeting?		
The meeting went well. We have been informed. They explained the project.		
What are the aspects that you find <b>positive</b> about the project?		
I think it's a good project. Such projects continue. It is important for the development of our country.		
What are the issues that you find <b>negative</b> about the project?		
There is none.		

**Appendix 8. Summary of de-registered CDM project (Type B)**

This section has been left blank intentionally.

<i>Complete this form in accordance with the instructions attached at the end of this form.</i>																							
<b>CDM Project registration number</b>																							
<b>Date of registration of CDM Project</b>																							
<b>Title of the Project Activity</b>																							
<b>CDM Project de-registration reference number</b>																							
<b>Date of de-registration of the CDM Project</b>																							
<b>Project Participants</b> <small>(authorized by the host / annex 1 country letter of approval)</small>																							
<b>Country where the project is located</b>																							
<b>Applied CDM methodology(ies)</b> <small>(provide reference and version number(s))</small>																							
<b>Pre-registration changes to the CDM Project Activity</b> <small>(Tick as applicable)</small>	<table border="1"> <thead> <tr> <th style="background-color: #e1eef6;"><b>CDM Pre-registration Changes</b></th> <th style="background-color: #e1eef6;"><b>Reference number</b></th> <th style="background-color: #e1eef6;"><b>Approved</b></th> <th style="background-color: #e1eef6;"><b>Provide a summary of pre-registration changes</b></th> </tr> </thead> <tbody> <tr> <td>Deviations from the CDM methodology</td> <td></td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Deviations from the CDM Tool</td> <td></td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Deviations from the CDM rules</td> <td></td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Other.....</td> <td></td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> </tr> </tbody> </table>			<b>CDM Pre-registration Changes</b>	<b>Reference number</b>	<b>Approved</b>	<b>Provide a summary of pre-registration changes</b>	Deviations from the CDM methodology		<input type="checkbox"/>		Deviations from the CDM Tool		<input type="checkbox"/>		Deviations from the CDM rules		<input type="checkbox"/>		Other.....		<input type="checkbox"/>	
<b>CDM Pre-registration Changes</b>	<b>Reference number</b>	<b>Approved</b>	<b>Provide a summary of pre-registration changes</b>																				
Deviations from the CDM methodology		<input type="checkbox"/>																					
Deviations from the CDM Tool		<input type="checkbox"/>																					
Deviations from the CDM rules		<input type="checkbox"/>																					
Other.....		<input type="checkbox"/>																					

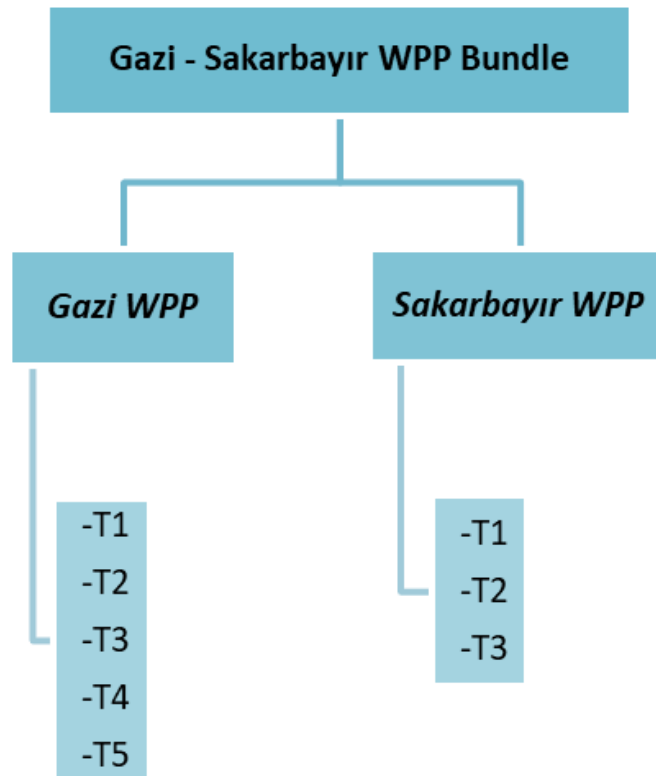
<b>Post-registration changes to the CDM Project Activity</b> (Tick as applicable)	<b>CDM Post registration Changes</b>	<b>Reference number</b>	<b>Approved</b>	<b>Provide a summary of post-registration changes</b>
	Change in project design		<input type="checkbox"/>	
	Request for revision of monitoring plan		<input type="checkbox"/>	
	Request for change in start date of crediting period		<input type="checkbox"/>	
	Renewal of crediting period		<input type="checkbox"/>	
	Temporary deviations		<input type="checkbox"/>	
	Other.....		<input type="checkbox"/>	

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<b>Crediting Period(s)</b>	<b>Crediting period(s)</b>		<b>Period</b> (start & end dates)	<b>ERs as per registered PDD/MR</b>	<b>CERs issued</b>	
	<b>Crediting Period</b> (shall start on or after 1 Jan 2016)	Fixed 10 year				
		<b>Renewable</b> (7 years, with 2 approved renewals)	1 <sup>st</sup>			
			2 <sup>nd</sup>			
		3 <sup>rd</sup>				
	Period for which CERs have been issued					
	Period for which CERs have been requested but not issued					-
	Period for which CERs have never been requested for issuance (no monitoring reports submitted)					-
Period for which CERs have never been requested for issuance prior to CDM de-registration					-	
Remaining Crediting period, after CDM de-registration, for which CERs have not been issued by the UNFCCC CDM Executive Board, subject to a ceiling of 10 years as allowed under the GCC Program					-	
<b>Details of Previous CDM Issuance Requests</b>	<b>Issuance Request</b>	<b>Period</b> (start & end dates)	<b>ERs as per registered PDD</b>	<b>Quantity of CERs requested to be issued</b>	<b>Quantity of CERs issued</b>	
	1 <sup>st</sup>					
	2 <sup>nd</sup>					
	3 <sup>rd</sup>					
	4 <sup>th</sup>					
	5 <sup>th</sup>					
	Add rows .....					
	<b>Total</b>					

<p><b>List any open issues in the Validation and last Verification Report (e.g., FARs, if any) and how they have been addressed</b></p>	
<p><b>Any other relevant information that has not been reported in the registered CDM documents and that may have adverse impacts on the environmental integrity of the Project Activity</b></p>	
<p><b>Provide the list of all the registered documents related to this project, as available on the UNFCCC/CDM website and the corresponding URLs.</b></p>	

**Appendix 9. Applicability of Clarification No.1**



**Figure 5. Levels in Bundled Project**



**Table 9. Level-1 Analysis**

Level-1 analysis - Consideration of key aspects for developing Homogeneous Bundles:				
Requirements of paragraphs 10-11 of Clarification No.1		Reference	Similar Bundles/Activities (color coded)	
			Gazi WPP	Sakarbayır WPP
<b>Similarity in Technological Considerations</b>	Technology	Paragraph 11 (i)	Wind power	Wind power
	Methodology		ACM0002, v20.0	ACM0002, v20.0
	Cross-effects exist or not		No cross effects exist	No cross effects exist
	Same output of each activity (e.g., heat or power or cogeneration);	Paragraph 12 (b)	Electricity	Electricity
<b>Similarity in Economic and Policy Considerations</b>	Additionality approach (investment or barrier analysis as stipulated by the applicable methodology)	Paragraph 11 (ii)	Investment analysis	Investment analysis
	All the activities within the bundle should have same barrier(s).	Paragraph 12 (d) (iii)	Does not apply barrier analysis. Not applicable.	
	Investment analysis method and financial indicator (e.g., post tax project or equity IRR, or pre-tax project or equity IRR, NPV, etc.)	Paragraph 11 (ii)	Equity IRR	Equity IRR
	Comparable key input values (which constitute more than 20% of total project investment costs and total project revenues, which is applicable as per the specific project situation) (Key differentiating parameter between bundles)		Key input values to the investment analysis (such as investment cost/MW, electricity tariff, PLF (%) and net electricity generation/MW) for activities Muğla SPP Bundle do not vary more than 5%	Key input values to the investment analysis (such as investment cost/MW, electricity tariff, PLF (%) and net electricity generation/MW) for activities Niğde SPP Bundle do not vary more than 5%
	Same investment decision year		Same Final Investment Decision Year (2017)	
	Same investment benchmark applicable for additionality analysis (e.g., Cost of Equity, weighed average cost of capital).		15% benchmark	
	Different land costs at two different locations (Key differentiating parameter between bundles)		NA	
	Supplying electricity to the different grids/ captive Purposes		Exported to national Grid	

Project Submission Form

	Project capacity		Total project capacity @ 20.7 MW	Total project capacity @ 13.7 MW
	Project investors profile		Owned by Arı En Elektrik Üretim Anonim Şirketi	Owned by Arı En Elektrik Üretim Anonim Şirketi
	Legal ownership of bundles		The Letter of Authorization states that there is only one legal owner (Arı En Elektrik Üretim Anonim Şirketi), who has authorized two project owners (Arı En Elektrik Üretim Anonim Şirketi, Desilyon Danışmanlık Tic. A.Ş.) and one of which is authorized to be the only focal point (Desilyon Danışmanlık Tic. A.Ş.) to act on behalf of all the project owners and has authority to manage the project and will have the ownership of ACCs	
<b>Similarity in Environmental or Methodological Considerations</b>	Application of same methodology (or approved combinations where cross effects are addressed)	Paragraph 11 (iii) i	ACM0002, v20.0	ACM0002, v20.0
	Same baseline approach and the outcome	Paragraph 11 (iii) ii	The baseline for all the activities in the bundle is national electricity grid.	The baseline for all the activities in the bundle is national electricity grid.
	Same monitoring approach and parameters for the part included for GHG	Paragraph 11 (iii) iii	All projects in this category have same monitoring approach and measurement parameters.	All projects in this category have same monitoring approach and measurement parameters.

## DOCUMENT HISTORY

Version	Date	Comment
V 3.2	31/12/2020	<ul style="list-style-type: none"> <li>▪ The name of GCC Program’s emission units has been changed from “Approved Carbon Reductions” or ACRs to “Approved Carbon Credits” or ACCs.</li> </ul>
V 3.1	17/08/2020	<ul style="list-style-type: none"> <li>▪ Editorial revisions made               <ul style="list-style-type: none"> <li>○ Revised Table in section B.7.2 on Monitoring-program of risk management actions</li> <li>○ Revised Table in section E.1 on Environmental Safeguards</li> <li>○ Revised Table in section E.1 on Social Safeguards</li> <li>○ Revised Table in section F on United Nations Sustainable Development Goals (SDG)</li> </ul> </li> </ul>
V 3.0	05/07/2020	<ul style="list-style-type: none"> <li>▪ Revised version released on approval by Steering Committee as per GCC Program Process;</li> <li>▪ Revised version contains following changes:               <ul style="list-style-type: none"> <li>○ Change of name from Global Carbon Trust (GCT) to Global Carbon Council (GCC);</li> <li>○ Considered and addressed comments raised by Steering Committee:                   <ul style="list-style-type: none"> <li>➢ during physical meeting (SCM 01, dated 29 Oct 2019, Doha Qatar); and</li> <li>➢ electronic consultations EC01-Round 01 (15.09.2019 – 25.09.2019), EC01-Round 02 (27.03.2020 – 27.06.2020).</li> </ul> </li> <li>○ Feedback from Technical Advisory Board (TAB) of ICAO on GCC submission for approval under CORSIA<sup>52</sup>;</li> </ul> </li> </ul>
V 2.0	25/06/2019	<ul style="list-style-type: none"> <li>▪ Revised version released for approval by the GCC Steering Committee.</li> <li>▪ Revised version includes additional details and instructions on the information to be provided, consequent to the latest developments world-wide (e.g., CORSIA EUC).</li> </ul>
V 1.0	01/11/2016	Initial version released under the GCC Program Version 1

<sup>52</sup>See ICAO recommendation for conditional approval of GCC at [https://www.icao.int/environmental-protection/CORSIA/Documents/TAB/Excerpt\\_TAB\\_Report\\_Jan\\_2020\\_final.pdf](https://www.icao.int/environmental-protection/CORSIA/Documents/TAB/Excerpt_TAB_Report_Jan_2020_final.pdf)

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