



Draft Report

Mid Size Sustainable Energy Financing Facility (MidSEFF) Çamseki Wind Power Plant (Extension): Non-Technical Summary (NTS)

May 2018

AKBANK

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Table of Contents

Acronyms.....	iv
1. General Plant Description.....	5
2. Environmental and Social Baseline	8
2.1 Environmental Description of the Project Area	8
2.2 Social Condition of the Project Area	9
3. Social and Environmental Impacts.....	10
3.1 Land Use	10
3.2 Water Use & Wastewater Management.....	10
3.3 Waste Production and Management.....	10
3.4 Birds and other species.....	10
3.5 Emissions: Noise and Particulate.....	10
3.6 Landscape.....	11
3.7 Summary of Environmental and Social Impacts	11

Acronyms

CIA	Cumulative Impact Assessment
CITES	The Convention on International Trade in Endangered Species of Wild Fauna and Flora
EBRD	European Bank of Reconstruction and Development
EIA	Environmental Impact Assessment
ESMP	Environmental and Social Management Plan
EPC	Engineering, Procurement and Construction
ERP	Emergency Response Plan
ESAP	Environmental and Social Action Plan
ETL	Energy Transmission Line
EU	European Union
ESGA	Environmental and Social Gap Analysis Report
GIS	Geographical Information System
ha	Hectare
HSE	Health, Safety and Environment
IUCN	The International Union for Conservation of Nature
kWe	Kilowatt electrical
kWp	Kilowatt peak
LC	Least Concern
MidSEFF	Mid-Size Sustainable Energy Financing Facility
MoEU	Ministry of Environment and Urbanization
MoFWA	Ministry of Forestry and Water Affairs
MWe	Megawatt electrical
OHS	Occupational Health and Safety
PA	Project Advisor (Golder)
PIR	Project Information Report
PC	Project Consultant (MidSEFF)
PR	Performance Requirements
PV	Photovoltaic
SACs	Special Areas for Conservation
SEP	Stakeholder Engagement Plan
SPAs	Special Protection Areas
SPV	Special Purpose Vehicle
TEDAŞ	Turkish Electricity Distribution Corporation
TEİAŞ	Turkish Electricity Transmission Corporation
TS	Transformer Station
VIA	Visual Impact Assessment
WPP	Wind Power Plant

1. General Plant Description

The Çamseki WPP with a total of 20.8 MWe capacity is located in the Çanakkale Province, Ezine District and was commissioned in June, 2009. The extension project proposed by Sponsor (Alize Enerji Elektrik Üretim A.Ş.) consists of 18 wind turbines of 2.35 MW capacity per each for a total of 42.3 MW according to the final configuration. The construction works of the extension project began in November 2017 and the turbines have been operational since April 2018. Overall plant capacity reaches 63.1 MW after the implementation of the extension project.

In the early stage of the project, the Sponsor received the “EIA Not Required” certificate for the project that foresaw the installation of 17 turbines for a total of 46.45 MW installed capacity (29th December 2014). Later, the Sponsor applied the Çanakkale Provincial Directorate of Environmental and Urbanisation for an amendment in the number of turbines (17 to 20) for the same project area and received the positive opinion of the Directorate on 22.04.2015. Since the number of turbines has been changed to 20, the Sponsor consulted the Ministry of Environment and Urbanization and got their written consent on the new configuration. According to the official letter dated 24.08.2017, the Ministry stated that ‘EIA not Required’ decision is also applicable for the new configuration and the Electricity Generation License was amended accordingly. During the zoning plan approval process of the extension project, the Çanakkale Road and Transportation Services (Çanakkale Yol ve Ulaşım Hizmetleri Müdürlüğü) has shared negative opinion regarding the locations of the two proposed turbines (T21; X:431192, Y:4416437) and (T22; X:431333, Y:4416242) (Figure 1-1). The Sponsor has consulted to the Provincial Directorate of Environment and Urbanization for the final configuration consisting of 18 turbines and received their positive opinion regarding validity of “EIA Not Required” certificate on 24.08.2017. Figure 1-1 shows existing and extension phase’s turbines.

For the capacity extension, the Electricity Generation License (with the issue number of EÜ/1167-1/834 dated 18th April 2007) has been amended based on the final configuration with 18 additional turbines for a total of 42.3 MW installed capacity (overall plant capacity of 63.1 MW) on 02.08.2017 by the Energy Market Regulatory Authority (EMRA).

The grid connection point is 154 kV Ezine Transformer Station (TS) which is approximately 17 km away from Çamseki WPP. The connection voltage is 154 kV and the system connection agreement has been signed on 11.09.2013 between TEİAŞ and the Sponsor. An additional 6-km underground energy transmission line (ETL), which connects the turbines to the switchyard, has been constructed for the extension project. For the connection between the Çamseki WPP switchyard (Figure 1-3) and the Ezine TS, existing 154 kV ETL is used and there is no need to construct a new ETL for the extension project.

The opinion letter by TEİAŞ dated 23rd November 2017 was obtained for the capacity extension. It is stated in the opinion letter that revision of the existing connection agreement is not required for the capacity increase. In addition, the system usage agreement was renewed prior to the operation of the turbines according to official letter dated on 20th February 2018 received by TEİAŞ. Provisional acceptances were received from the Ministry of Energy and Natural Sources according to the official letters dated on 01st March 2018, 16th March 2018, 06th April 2018 and 19th April 2018.



Figure 1-1: Çamseki WWP - WTG locations (Existing turbines; T1-T11, Extension phase's turbines; T12-T29)

Several Wind Power Plants are present in the surrounding area (Figure 1-2), of those plants the nearest (Enerjisa WPP in Mahmudiye Town, Çanakkale) is located 4 km to the Çamseki WPP.



Figure 1-2: The location of the Çamseki WWP and other WPPs around the project location

All of the extension turbines are selected as Enercon E92. The hub height of the E92s is 78 meters, while their rotor diameters are 92 meters. The coordinates in UTM (ED50 datum) of the proposed turbines according to the Electricity Production License (amended on 02.08.2017) are given in the table below.

Turbine	Turbine type	Easting	Northing
T12	Enercon 92	429383	4416745
T13	Enercon 92	429630	4416677
T14	Enercon 92	429746	4416467
T15	Enercon 92	429955	4416340
T16	Enercon 92	430126	4416177
T17	Enercon 92	430346	4416017
T18	Enercon 92	430516	4416375
T19	Enercon 92	430704	4416146
T20	Enercon 92	430924	4416565
T21	Enercon 92	431432	4415123
T22	Enercon 92	431140	4415126
T23	Enercon 92	430847	4415185
T24	Enercon 92	430595	4415247
T25	Enercon 92	430330	4415308
T26	Enercon 92	429968	4415388
T27	Enercon 92	429965	4415090
T28	Enercon 92	429611	4415227
T29	Enercon 92	429531	4415469

The annual electricity production is expected to be 137,000,000 kWh/year for the extension phase (with an overall production of 218,800,000 kWh/year) according to the Electricity Generation License.



Figure 1-3: Existing switchyard at the Çamseki WWP

The closest settlement is the Üvecik Village, which is approximately 750 meters away from the nearest turbine.

2. Environmental and Social Baseline

2.1 Environmental Description of the Project Area

The Çamseki WPP with a total of 20.8 MWe capacity is located in Çanakkale Province, Ezine District and was commissioned in June, 2009. The extension project consists of additional 18 turbines and increases the annual electricity production to 137,000,000 kWh/year. The construction works of the extension project began in November 2017 and the turbines have been operational since April 2018. Summary of the environmental characteristics of the extension project is given below.

Table 2-1: Summary of environmental characteristics

ENVIRONMENTAL ASPECTS	PRESENCE /DISTRIBUTION	COMMENTS
Land use	The plant location is within the forest areas and some private lands (agricultural lands).	<p>Forest Permit has been received from the Çanakkale Forestry General Directorate.</p> <p>Expropriation has been made in line with the decision of the related Ministry for the private (agricultural) lands (28 parcels), where the site roads and some of the turbines are located. The expropriation process has been completed by the EMRA. No physical resettlement actions are expected to be needed.</p> <p>For the connection between the switchyard and the Ezine Transformer Station, existing 154 kV ETL is used and there is no need to construct a new ETL.</p>
Water surfaces	Küçük Menderes River is 4.5 km away from the project site.	There will not be any interaction with any water surface area during the project works.
Protected areas	<p>At the project site, there is no evidence of relevant cultural heritage or cultural goods in general terms. The closest archaeological site is at the Historical National Park of Truva (13 km away from the project site).</p> <p>One of the most important natural area of the region is Kazdağları Natural Park which is approximately 54 km away from the project site.</p>	There is not any interaction with any protected areas during the project works.
Flora and Fauna	<p>None of the flora species found at the project site are classified as Critically Endangered (CR) or Endangered (EN).</p> <p>Amongst the 82 bird species observed within the project site, there is one bird species classified as Near Threatened (NT), <i>Falco vespertinus</i>. There is no bird species classified as Endangered (EN) or Vulnerable (VU) within the project site. There are 52 bird species listed under Annex II of the BERN however all of them are categorized as Least Concern (LC) according to the IUCN.</p> <p>Project site is not on the major bird migration routes.</p>	2 years bird monitoring campaign (seasonally) is required after completion of the project for the assessment of the cumulative impacts of the Çamseki WPP on birds.

2.2 Social Condition of the Project Area

According to the 2017 statistics, the population of Çanakkale Province and Ezine District are 530,417 and 31,962, respectively.

The closest settlement is the Üvecik Village, which is approximately 750 meters away from the nearest turbine.

The major part of the project area belongs to the Ministry of Forestry and Water Affairs (MoFWA) and the Forest Permit has been received. The expropriation process has been completed by the EMRA for the private lands (agricultural lands) where the site roads and some of the turbines are located in line with the council of Ministers' decision. No physical resettlement actions are expected to be needed.

At the project site, there is no evidence of relevant cultural heritage or cultural goods in general terms. The closest archaeological site is at the Historical National Park of Truva (13 km away from the project site).

3. Social and Environmental Impacts

3.1 Land Use

The plant location is within the forest areas and some private lands (agricultural lands). Forest Permit has been received from the Çanakkale Forestry General Directorate. A Landscape Restoration Plan will be prepared for the Project. The expropriation process for agricultural lands has been completed.

An underground ETL of 6 km has been constructed for the extension project. The line connects the new turbines to the existing switchyard at the Çamseki WPP and passes along the site roads. For the connection between the switchyard and the Ezine Transformer Station, existing 154 kV ETL is used and there is no need to construct a new ETL.

3.2 Water Use & Wastewater Management

There is domestic waste water generation during operation phase. The daily domestic water requirement is 150 litres per capita, considering 11 employees during the operation phase (existing project and extension), the domestic water requirement is 1.65 m³/day. Domestic waste waters generated by the project workers is collected in impermeable septic tanks constructed in line with Turkish regulation. The wastewater is transferred to the closest treatment plant by vacuum trucks of the Municipality when the tanks are filled.

The needed water is supplied from nearby water network and transferred by tankers to the project site. According to the above mentioned information, the WPP project is not expected to affect the water component.

3.3 Waste Production and Management

The solid waste generated for operation phase of the Çamseki WPP extension project is domestic solid waste (paper, plastics, glass, etc.). Daily domestic solid waste production is 1.34 kg per capita, for a total of 14.74 kg/day taking into account 11 project workers during operation phase. The recyclable wastes are displaced in separate waste containers and collected by the Municipality.

Waste oil is expected to be generated from the maintenance carried out at the project site. Waste oils will be controlled according to "Regulation on Control of Waste Oil".

3.4 Birds and other species

There are no critically endangered or endangered flora and fauna species found in the project site. Amongst the 82 bird species observed within the project site, there is one bird species classified as Near Threatened. Ecological assessment study indicates that the project site is not on the major bird migration routes and no negative impacts are expected on fauna and particularly on birds considering the proposed turbine locations. The Sponsor is committed to conduct bird monitoring for the first 2 years of the operation period seasonally.

3.5 Emissions: Noise and Particulate

Noise emissions is generated during the operation phase of the project. The nearest residential area sensitive to noise is Üvecik Village and is located at approximately 750 meters to the project site. Sponsor will conduct noise measurement campaign during the operation phase.

During operation, minimal air emissions can be appear not directly associated with plant operation but with traffic, maintenance, etc. The mitigation measures against air emissions generated during operation phase will be defined in the Waste Management Plan to be prepared by the Sponsor.

3.6 Landscape

The turbines are visible from the nearby residential areas such as Üvecik Village which is 750 meters away from the project area. Although a visual impact assessment is not explicitly required by the Turkish regulation on EIA for project, Visual Impact Assessment will be completed. As a result of the assessments, necessary compensation/mitigation measures will be described in case of non-negligible impacts. The Sponsor will also conduct a Landscape Restoration Plan and its monitoring considering the implementation of necessary restoration activities in order to guarantee the restatement.

3.7 Summary of Environmental and Social Impacts

A summary of the impacts with their quantifications is given below.

Table 3-1: Impact Quantification

COMPONENT	IMPACT	QUANTIFICATION
Land use	<u>Use of forestry and agricultural land</u>	Forest Permit has been received from the Çanakkale Forestry General Directorate. Expropriation process has been completed for the private (agricultural) lands.
Wastewater	<u>Utilization and Discharge</u>	1.65 m ³ /day domestic wastewater during the operation phase (assuming 11 workers in the operation phase).
Waste	<u>Production of solid waste</u>	14.74 kg/day domestic waste during the operation phase (assuming 11 workers in the operation phase)
Fauna and flora	<u>Interference with flora-fauna species</u>	Project site is not on the major bird migration routes. The Sponsor is committed to conduct bird monitoring for the first 2 years of the operation period seasonally.
Emissions	<u>Noise</u>	The Sponsor will conduct noise measurement campaign during the operation phase.
	<u>Particulate</u>	During operation, minimal air emissions can be appear not directly associated with plant operation but with traffic, maintenance, etc.
Landscape	<u>Changes in the aspect of the area</u>	A Visual Impact Assessment and a Landscape Restoration Plan will be prepared and implemented for the Project.
Cumulative Impacts	<u>Other WPPs and ETL's</u>	The Sponsor will evaluate the cumulative impacts from the nearby WPPs and their ETL's, with particular reference to bird life and landscape.

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