

# SOMA 4 Wind Power Plant

## Non-Technical Summary



**POLAT ENERJİ**

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## 1.0 INTRODUCTION

### 1.1 Project Background

Soma Enerji Elektrik Üretim A.Ş. ("Soma Energy"), the Project Company, currently operates 169 turbines, with a total installed capacity of 240.1 MW as Soma Wind Power Plant ("WPP") in the Soma and Kırkağaç Districts of the Province of Manisa and Savaştepe District of the Province of Balıkesir, Turkey. Soma Energy plans to expand upon this WPP and increase its capacity by adding 12 turbines with 4 MW capacity as Soma 4 WPP Project (here in after called as "the Project"). The Project will increase the current capacity of the Soma WPP, which is in operation since 2009, by 48 MW to a total capacity of 288.1 MW.

### 1.2 What Is the Purpose of This Document?

This document is a non-technical summary ("NTS") of the Environmental and Social Impact Assessment studies conducted for the Project, according to Equator Principals and International Finance Corporation ("IFC") Performance Standards. It has been presented in a non-technical language. It presents basic information about the Project, potential environmental and social impacts related with the project and the mitigation measures proposed by Soma Energy. This document has been prepared to provide information to stakeholders and answer potential questions that may arise, while fostering mutual communication between the stakeholders and the Project representatives, by presenting information on the stakeholder grievance mechanism.

### 1.3 What Is Renewable Energy?

In daily life, there are variety of methods to generate energy, from burning coal for steam to harnessing the power of the wind. These energy generating methods can be categorized as renewable and non-renewable energy. Theoretically, the source of energy for the production of renewable energy cannot be depleted, unlike the sources for non-renewable energy production. For example, steam powered thermal power plants are a form of non-renewable energy as they rely on the incineration of biomass, such as coal, to produce steam and the amount of coal in the world is limited. Energy sources such as solar, wind, geothermal, etc. cannot be depleted. As such, these types of energy sources are known as "renewable".

While the sources of renewable energy may not be limited, implementation of renewable energy production can be limited, as it depends on the availability of access the renewable sources. For instance, wind energy may be a renewable form of energy, but not all locations receive enough wind to allow energy production, making the wind power plant viable.

### 1.4 Why Renewable Energy?

The Earth's temperatures are climbing at an alarming rate driven by the ever-increasing amount of greenhouse gas emissions. With rising temperatures, the Earth's climate is forced to change. More extreme climatic conditions are encountered every day in different parts of the world, including flash floods, intense drought and severe heat events, extreme weather conditions. The effects of climate change reach every corner of our planet, and Turkey itself is expected to be highly impacted. As a result, it is in the best interest of the world and Turkey to prevent the release of greenhouse gases.

Renewable energy sources produce significantly less greenhouse gases because instead of obtaining energy from non-renewable fuels, they source their energy from relatively "cleaner" options. Therefore, investments in renewable energy are a way for the world to combat climate change.

Renewable energy options are also generally independent energy productions options. For instance, natural gas is a relatively clean energy option among the fossil fuels, but in the case of Turkey, as the country does not have natural gas reserves, it is imported from other countries. The more fuel sources Turkey imports, the more dependent it is on other countries for producing its own energy. However, renewable energy options, such as solar and wind power belong to wherever the sun shines and the wind blows; these energy options provide energy independence.

The demand for energy in Turkey is increasing, as are the tensions in the region and the effects of climate change, making the use of clean, renewable energy that is not dependent on a foreign source even more important. According to the Ministry of Energy and Natural Resources the total electricity consumption in Turkey increased by 4.7% to 167.1 billion kWh between July 2016 and July 2017, and production increased 6.7% to 167.3 billion kWh. As of July 2017, of the electricity produced, 34% was produced from natural gas, 31% from coal, 24% from hydropower, 6% from wind power, 2% from geothermal power, and 3% from other sources, such as solar, biomass and heating oil. Thus, over 60% of Turkey's power relies on non-renewable resources. Hence investment capacity of renewable energy, such as wind power, is very important.

## **1.5 How Do We Harness the Energy in Wind?**

Wind is the movement of air. Anything that moves has energy. In order to capture that energy, it needs to be transformed into an energy that can be used, like electricity. In order to do this wind turbines are erected. The energy in the wind turns two or three propeller-like blades around a rotor. The rotor is connected to the main shaft, which spins a generator to create electricity. This electricity is transferred to a switchyard, where after it is sent via powerlines to the national electricity distribution network.





*Figure 1. Example photos of wind turbines and switchyard*

## 1.6 What Is the Soma WPP Capacity Increase Project?

Soma Energy plans to expand upon this WPP and increase its capacity by adding 12 turbines with 4 MW capacity as Soma 4 WPP Project. The Project will increase the current capacity of the Soma WPP, which is in operation since 2009, by 48 MW to a total capacity of 288.1 MW.

The existing Soma WPP is already connected to the national grid through the Soma B Substation, which was built and is currently being operated by the Turkish Electricity Transmission Company (TEİAŞ in Turkish). Electricity produced at the Soma WPP is transferred via a 21.4 km 380 kV overhead energy transmission line from the switchyard to the Soma B Substation. The Project shall not require the construction of any additional overhead energy transmission lines or an additional switchyard. It shall make use of the already existing infrastructure.

The Project is located in the Soma District of the Manisa Province and the Savaştepe District of the Balıkesir Province of Turkey. The Project location, including each of the 12 potential turbine locations to be constructed is shown in Figure 2.

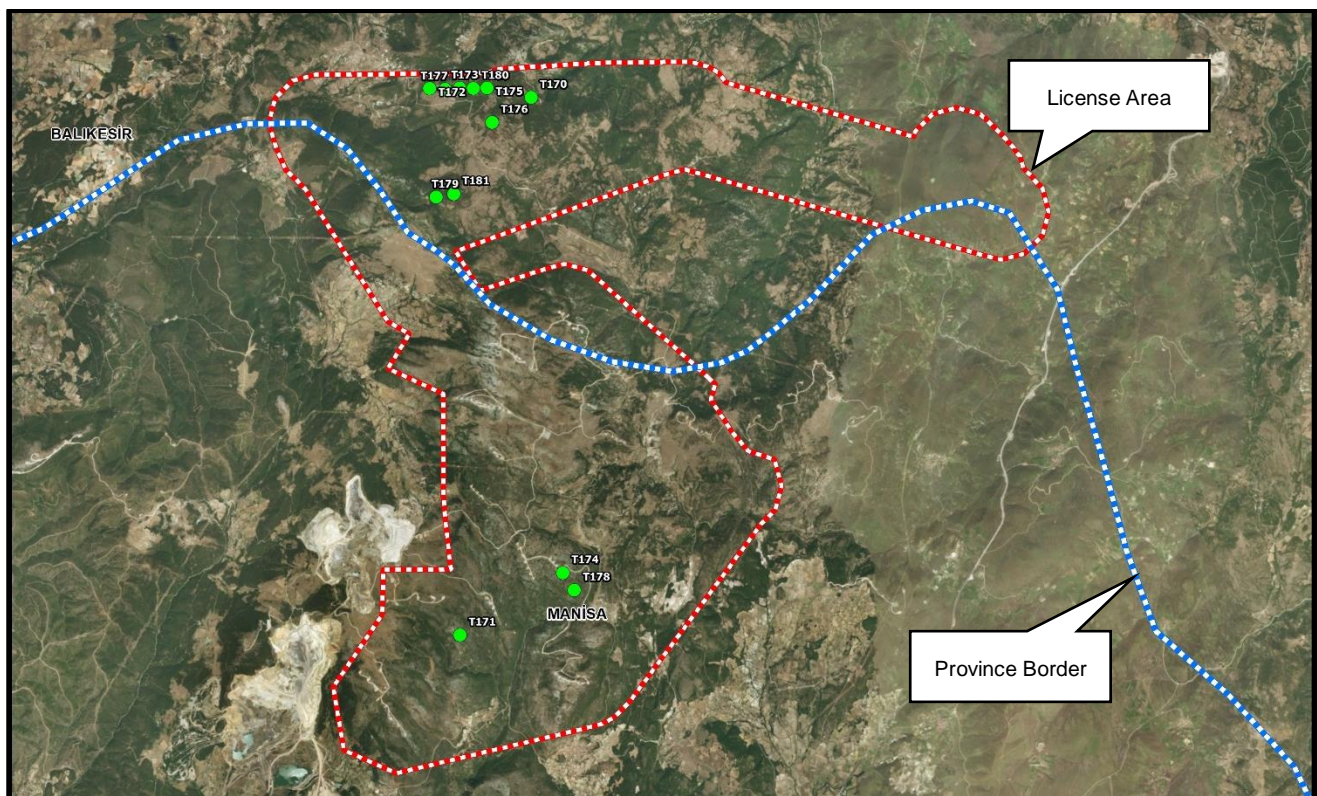


Figure 2. Soma 4 Project - Turbine locations

## 1.7 Who Is Soma Energy?

Polat Energy established the Project Company, namely Soma Enerji Elektrik Üretim A.Ş., for the development of the Soma WPP Project. Polat Energy is sole owner of the Project and aims to secure funding for the Soma 4 WPP Project.

Soma Energy currently operates 169 turbines, with a total installed capacity of 240.1 MW as Soma Wind Power Plant in the Soma and Kırkağaç Districts of the Province of Manisa and Savaştepe District of the Province of Balıkesir, Turkey.



## 1.8 Where Is the Soma 4 WPP Project?

The Project is located in the Soma District of the Manisa Province and the Savaştepe District of the Balıkesir Province of Turkey. The Project location, including each of the 12 potential turbine locations to be constructed is shown in the Figure 2. The turbines are located in forest area.

The Project site is located approximately at 15 km northeast of the Soma District centre and 10 km east of Savaştepe District center. The nearest settlement to the proposed turbines is the Hıdırbalı Neighbourhood, which is located at 600 meters southwest of the T176. Distances of the settlements to the turbines are given in the below table.

Table 1: The Settlements around the Project Area

Settlement	District / Province	The Nearest Turbine	Distance	Direction
Dikmeler Neighbourhood	Savaştepe / Manisa	T172	1,6 km	NW
Yukarıkaraçam Neighbourhood	Savaştepe / Manisa	T175	1,6 km	N
Hıdırbalı Neighbourhood	Savaştepe / Manisa	T176	0,6 km	SW
Tabanlar Neighbourhood	Savaştepe / Manisa	T179	3,4 km	NW
Kayrakaltı Neighbourhood	Soma / Manisa	T179	2,3 km	SW
Çerkezsultaniye Neighbourhood	Soma / Manisa	T174	3,0 km	NW
Hamidiye Neighbourhood	Kırkağaç / Manisa	T174	2,9 km	NE
Çevircek Neighbourhood	Soma / Manisa	T171	1,8 km	S

## 1.9 What Is the Purpose of the Project?

As discussed, Turkey needs further investments in renewable energy. In this respect, the purpose of the Soma 4 WPP is to provide clean independent energy in a sustainable and cost-effective way and therefore contribute to the region and the nation.



## 1.10 What Is the Status of Wind Power in Soma?

Soma energy currently operates 169 turbines, with a total installed capacity of 240.1 MW as Soma Wind Power Plant (“WPP”) in the Soma and Kırkağaç Districts of the Province of Manisa and Savaştepe District of the Province of Balıkesir. Soma WPP is the largest WPP in Turkey in term of its total installed capacity. Soma WPP is not the only WPP in the Provinces of Manisa and Balıkesir. There are 3 WPPs within 10 km of the Project area. Details of these WPPs are provided in below table.

Table 2: WPPs Around the Project Area

WPP Name	Distance to the Soma 4 WPP (km)	Project Status	Total License Capacity (MWe)	Number of Turbines
Bilgin WPP	6.9	In operation	120	46
Geres WPP	9.4	In operation	30	12
Kuyucak WPP	5.5	In operation	50.1	14

## 2.0 THE PROJECT IN DETAIL

### 2.1 Who Is Funding the Project?

Polat Energy is the sole owner of the Project and aims to secure funding for the Soma 4 WPP Project from Garanti Bank A.Ş. (“Garanti Bank”).

### 2.2 What Standards Will Be Employed in the Project?

Soma Energy commits to adhere to the provisions of Turkish Legislation applicable, during the lifetime of the Project. These requirements include (but are not limited to) the Environment Law (2872 numbered), Occupational Health and Safety Law (6331 numbered), Labour Law (4857 numbered) and their issued regulations.

Additionally, Equator Principles, International Finance Corporation (“IFC”) Performance Standards (“PS”)s and related EHS guideline of IFC will be followed for the Project.

The Project will adhere to whichever legislation or guidelines are more stringent. These include the Equator Principles, Performance Standards of IFC and national legislation.

In April 2019, Environmental Social Due Diligence (“ESDD”) report has been prepared to highlight the areas of concern or omissions so as to confirm the compliance or otherwise of the Project with the applicable IFC PSs and current Turkish legislation. As a result of the ESDD, the Environmental, Social Action Plan (“ESAP”) for the Project has been developed, addressing any and all environmental and social components that may be impacted by the Project. Soma Energy has taken action to close any gaps identified and implement the actions defined in the ESAP. The ESAP will be monitored semi-annually during the construction/annually during the operation and will be reported to the Garanti Bank.

## 2.3 What Is the History and Current Status of the Project?

This Project is an extension of the already existing Soma WPP, which entered into operation in 2009.

Soma Energy currently operates 169 turbines, with a total installed capacity of 240.1 MW as Soma Wind Power Plant ("WPP") in the Soma and Kırkağaç Districts of the Province of Manisa and Savaştepe Districts of the Province of Balıkesir, Turkey. Soma Energy plans to expand upon this WPP and increase its capacity by adding 12 turbines with 4 MW capacity as Soma 4 WPP Project. The Project will increase the current capacity of the Soma WPP, which is in operation since 2009, by 48 MW.

The standard "49-year Electric Power Generation License" for the Project (License No. EÜ/1149-7/827, dated 04<sup>th</sup> April 2007) was issued by Energy Market Regulatory Authority ("EMRA") for the Soma Wind Power Plant Project for a capacity of 140.1 MW. The construction started in 2009 and the final stage was started commercial operation in January 2012. After commercial operation started, Soma Enerji applied for a capacity extension in line with the legislation. In 2013, Energy Markets Regulatory Authority of Turkey (EMRA) granted 100 MW additional extension (Soma 3 WPP) increasing the total capacity of the power plant to 240.1 MW, which started commercial operation in June 2015.

Following the completion of Soma 3, Soma Enerji applied for a second extension. In January 2018, the project was granted with an additional capacity extension of 48 MW (Soma 4 WPP), which will increase the installed capacity to 288.1 MW.

The Environmental Impact Assessment ("EIA") Permits obtained for the Soma Wind Power Project and the extension projects are listed in the table below.

*Table 3: Project Environmental Permitting*

Project EIA Permitting	Issue Date
"EIA is Not Required" Decision for the 52 MW Project (Original Soma WPP) with 65 turbines in the Balıkesir Province	18 <sup>th</sup> September 2007
"EIA is Not Required" Decision for the 140.8 MW Project (Original Soma WPP) with 111 turbines in the Manisa Province	18 <sup>th</sup> September 2007
"EIA Positive" Decision for the "380 kV Soma WPP – Soma B Substation" Energy Transmission Line	12 <sup>th</sup> June 2009
"EIA is Not Required" Decision for the 140.1 MW (Original Soma WPP) with 119 turbines in the Manisa Province for the location, number and rated power changes	01 <sup>st</sup> April 2011
"EIA is Not Required" Decision for the 22.4 MW (Original Soma WPP) with 20 turbines in the Balıkesir Province for the location, number and rated power	04 <sup>th</sup> May 2011
"EIA is Not Required" Decision for the 62 MWe extension project (Soma 3 WPP) with 31 turbines in the Manisa Province	20 <sup>th</sup> February 2013
"EIA is Not Required" Decision for the 38 MWe extension project (Soma 3 WPP) with 19 turbines in the Balıkesir Province	21 <sup>st</sup> February 2013

Project EIA Permitting	Issue Date
"EIA Positive" Decision for the extension project from 240.1 MWm to 672.7 MWm (Soma 4 and Soma 5 WPPs) with 103 turbines in the Manisa and Balıkesir	18 <sup>th</sup> February 2016
"EIA Positive" Decision for the extension project from 240.1 MWm to 611 MWm (Soma 4 and Soma 5 WPPs revision) with 148 turbines in the Manisa and	27 <sup>th</sup> December 2016
Official Letter from the MoEU confirming that EIA Decision is valid for the location changes of 7 turbines and technical changes of 12 turbines	14 <sup>th</sup> February 2018
Official Letter from the MoEU confirming that EIA Decision is valid for the location changes of 4 turbines	14 <sup>th</sup> September 2018

As a result of this Project, energy production of the Soma WPP will be increased from approximately 700,000,000 kWh/year to 860,000,000 kWh/year.<sup>1</sup> According to the Final EIA Report of the Soma WPP Capacity Increase Project prepared in 2016, the Project's planned economical life time is 49 years, after which the end of life equipment will be renewed in order to continue operation. After the completion of operation, the entire facility will be dismantled, and the area will be restored to its natural state.

The existing Soma WPP is already connected to the national grid through the Soma B Substation, which was built and is currently being operated by the Turkish Electricity Transmission Company (TEİAŞ in Turkish). Electricity produced at the Soma WPP is transferred via a 21.4 km 380 kV overhead energy transmission line from the switchyard to the Soma B Substation. The Project shall not require the construction of any additional overhead energy transmission lines or an additional switchyard. It shall make use of the already existing infrastructure.

## 2.4 What Is the Project Schedule?

The Project construction is planned to start by mid of May 2019 and the Project is expected to be commissioned by February 2020.

The duration for construction is planned to be approximately 9 months and the wind turbine generator installation and commissioning is expected to be completed by February to start operational phase.

## 2.5 Does the Project Have Any Potential Impacts?

There are both positive and negative impacts that could potentially manifest as a result of Soma 4 WPP. These impacts have been identified and mitigation measures have been designed through environmental, health and safety and social studies conducted for the Project. Mitigation measures are used to lessen the effect of a negative impact and to increase the benefits of a positive impact. Some of these mitigation measures to be implemented have been listed in the sections below.

The below table provides a summary of the Project versus no project scenario for key social, economic and environmental indicators.

Impact	No Project Option	With Project Option
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<sup>1</sup> Polat Energy Web Site, <https://polatenerji.com/santrallerimiz/soma-res>

Impact	No Project Option	With Project Option
Economic Impacts	No revenues to the national government. No opportunity to become an independent energy producer, which has an effect on economic policies	Revenues to the national government. Opportunity to become an independent energy producer, which has a positive effect on economic policies by decreasing energy imports and contributing to energy independence of the country
Socio-Economic Impacts	No direct negative impacts on local communities. Loss of local employment and skills enhancement opportunities.	Some minor impact on local communities in terms of visual impacts, temporary disruption of access to construction areas. It may create opportunity for local employment, skills enhancement and diversification of local economy.
Environmental Impacts	No environmental impacts. No impacts on biodiversity or natural resources.	Impacts on biodiversity components, such as faunal life (birds, bats, etc.) and habitat that requires mitigation. To generate renewable electrical energy instead of thermal sourced electrical energy which has major environmental impacts, such as carbon emissions that result with climate change, etc. Minor environmental impacts associated with land take and habitat loss, which can be mitigated.

## 2.6 What Has Soma Energy Done to Study These Impacts?

There are several biodiversity studies conducted by national experts for each extension step of the Soma WPP Project. The latest study was conducted in 2015-2016 for Soma 4-5 WPP Projects and given in the EIA Report.

The Project area is located in forest land and there is not any main bird migration route in the Project area. Based on the document review, globally or nationally threatened flora and fauna species are not expected to be encountered within the Project area.

A carcass search will be conducted. A carcass removal study will assess the impact of scavengers (dogs, foxes, jackals, corvids, raptors, etc) and an observer detection rate assessment will evaluate the searcher accuracy. These studies are required to calculate the actual number of casualties of the existing turbines.

In addition, Specific Biodiversity Action Plan (BAP) for the Project needs to be developed. While developing BAP, required additional studies, defined mitigation measures should be taken into consideration.

## 2.7 Are There any Main Bird Migration Routes in the Project Area?

When biological components are considered, birds are one of the most impacted by wind farms. Birds can be struck by the turbine blades. There is not any main bird migration route in the Project area.



## 2.8 What Are the Potential Positive Impacts of the Project and How Can They Be Amplified?

### During the Construction Phase:

- **Impact:** Local procurement is a positive impact of the Project (both socially and economically speaking). It may create opportunity for local employment, skills enhancement and diversification of local economy.

*For that:*

- Local employment and procurement will be prioritized.

### During the Operational Phase:

- **Impact:** Local procurement is a positive impact of the Project (both socially and economically speaking). It may create opportunity for local employment, skills enhancement and diversification of local economy.

*For that:*

- Local employment and procurement will be prioritized. This may create opportunity for local employment, skills enhancement and diversification of local economy.
- **Impact:** Greenhouse gas production will be decreased as a result of the Project.
  - To generate renewable electrical energy instead of thermal sourced electrical energy which has major environmental impacts, such as carbon emissions that result with climate change.
- **Impact:** Revenues to national government.
  - Opportunity to become an independent energy producer, which has an effect on economic policies by decreasing energy import bills and enhancing energy security.

## 2.9 What Are the Potential Negative Impacts of the Project and What Are Their Mitigation Measures?

### During the Construction Phase:

- **Impact:** Air quality can be impacted as a result of emissions from construction activities and transportation. These include PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, and VOC.

*Mitigation Measures:*

- Precautions will be taken against sources of air pollution such as the storage of earthworks (i.e. topsoil, subsoil), the movement of vehicles on unpaved roads within the Site, exhaust emissions, and other works;
- Parts of the operating width or the construction site, which are exposed to excessive traffic, will be wetted through controlled application of water sprays (e.g. water trucks) as required by the available conditions;
- Exhaust systems of all vehicles will comply with the exhaust emission limits identified in the relevant legislation according to the vehicle/equipment type and the procedures. Moreover, the maintenance of such vehicles/equipment will be carried out as recommended by the manufacturer;
- Relevant Management Plans/Procedures (i.e. Traffic Management Plan, Air Quality Management Plan, Training Plan) will be implemented.

- **Impact:** Noise will be produced from the construction activities such as the construction of roads and the transportation of materials.
  - In the scope of Local EIA, noise calculations were made for the construction phase of the Project by using the sound power levels of the machine and equipment which will be used in the construction phase. The dispersion of the average sound pressure levels to be derived from the mentioned machine and equipment was calculated according to the distance. Distribution of average sound pressure levels to be generated from all sources during the construction phase by distance is presented in the report. According to calculation results, the limit value of 70 dBA is achieved after a distance of about 125 m. Because of the nearest distance between the turbines and the settlements is greater than 125 m, local EIA indicated that, the construction activities to be carried out within the scope of capacity increase will not have any negative impact on the settlements.

*Mitigation Measures:*

- Relevant authorities will be consulted regarding the acceptable working hours for construction;
  - Every component of all machinery and equipment will be maintained and repaired properly to minimize noise emissions. Periodic maintenance of construction equipment will be conducted;
  - On-site staff will be trained on how to position the machinery on the site to mitigate the noise emissions experienced by the neighbouring settlements as well as on the proper use and maintenance of the tools and equipment;
  - Relevant Management Plans/Procedures (E.g. Traffic Management Plan, Noise Management Plan, Training Plan) will be implemented.
- **Impact:** During construction, potable water will need to be provided using demijohns to be purchased from licensed providers. The need for domestic water will be met by groundwater. Certificate of use of groundwater in is already taken from the authorities. This could lead to complaints of excessive water use during the construction phase.

*Mitigation Measures:*

- The necessary permits related to water usage gathered from authorities. If additionally permits needed, they will be obtained, and permit obligations will be carried out.
- **Impact:** Wastewater will be produced from the camp site. If it is not disposed of properly, it can be a source of pollution.

*Mitigation Measures:*

- There are leakproof septic tanks present for domestic wastewater. Septic tanks will be used to collect the wastewater during both the construction phase;
  - The wastewater collected in the septic tanks will be collected by the respective municipality to be disposed of properly. There is a protocol with the nearest Municipality and the tanks will be emptied at least once a year.
- **Impact:** Biological components such as flora and fauna may be impacted by two different factors, namely, land disturbance and dust and noise impacts (discussed above).

*Mitigation Measures:*

- General mitigation measures have been defined in detail in the EIA Report, the Ornithological and Ecological Assessment Reports. An example of such a measure is minimizing the amount of land disturbed.
- **Impact:** There are no cultural heritage items identified in the Project Area; however, there may be chance finds.

*Mitigation Measures:*

- A Cultural Heritage Management Plan (including a Chance Find Procedure) will be developed and implemented;
- Training will be provided to workers related to Chance Find Procedure.
- **Impact:** Socially and economically speaking, there are some negative impacts including the restricted access to the forest lands (impacts on livelihood resources) during the construction of the turbines.

*Mitigation Measures:*

- Local procurement and employment will be prioritized;
- Corporate Social Responsibility Project will be developed and implemented.
- **Impact:** Community Health and Safety can be negatively impacted by the increased traffic load, unauthorized site access, potential communication problems between community members and workers, and dust and noise impacts (as discussed above).

*Mitigation Measures:*

- Relevant Management Plans/Procedures (E.g. Traffic Management Plan, Training Plan, Community Health and Safety Plan) will be implemented;
- The Grievance Mechanism Procedure will be implemented;
- Cumulative Impact Assessment will take existing Soma WPP, Bilgin WPP and Kolin TPP Projects into consideration and mitigation measures will be developed.
- **Impact:** Occupational Health and Safety is an issue within the construction site. Risks associated with this construction site include activities of working at heights and lifting operations.

*Mitigation Measures:*

- Occupational H&S Policies/Plans/Procedures/Instructions, an Emergency Response Plan, and a Traffic Management Plan will be implemented;
- Related Trainings will be provided to all workers;
- Turkish legislation requirements will be fully followed;
- Emergency drills will be carried out;
- All accidents/incidents will be reported and investigated;
- All suggestions/complaints will be reported and acted upon as per the Grievance Mechanism Procedure;

- Site inspections will be conducted regularly.

**During the Operational Phase:**

Dust, water consumption, and wastewater production are not foreseen as sources of negative impacts during the operational phase. The following are the foreseen impacts.

- **Impact:** Biological components such as flora and fauna may be impacted by the Project (including the turbines).

*Mitigation Measures:*

- General mitigation measures have been defined in detail in the EIA Report, the Ornithological and Ecological Assessment Reports.
- A carcass search will be conducted in 2020 and 2021. A carcass removal study will assess the impact of scavengers (dogs, foxes, jackals, corvids, raptors, etc) and an observer detection rate assessment will evaluate the searcher accuracy. These studies are required to calculate the actual number of casualties of the existing turbines.

**Impact:** While there are no cultural heritage items identified in the Project Study area, there may be chance finds during any phases of the Project.

*Mitigation Measures:*

- A Cultural Heritage Management Plan (including a Chance Find Procedure) will be developed and implemented.

- **Impact:** Visual impacts are an issue for all of the turbines.

*Mitigation Measures:*

- Cumulative Impact Assessment Study will be conducted including the visual impacts with considering the existing Soma WPP and nearby facilities. The mitigation measures will also be identified in the Cumulative Impact Assessment Report.

- **Impact:** Shadow Flicker and Blade/Ice throw could be potential hazards on community health and safety.

*Mitigation Measures:*

- Shadow Flicker Assessment considering the cumulative impacts of the planned capacity increase Project with 12 turbines and the already existing WPP will be conducted;
- Blade / Ice Throw considering the cumulative impacts of the planned capacity increase Project with 12 turbines and the already existing WPP will be conducted;
- The mitigation measures will also be identified in the Cumulative Impact Assessment Report for both Shadow Flicker Assessment and Blade/Ice throw assessment and these stated measures will be implemented;
- Turbines will be maintained regularly;
- Unauthorized access to the turbines will be prevented.



- **Impact:** Noise will be produced from the operation of the turbines.
  - In the scope of Local EIA, noise calculations were made for the operation phase with the assumption that the noise level of each turbine was 106 dBA, the dispersion of the average cumulative sound pressure levels due to the total 317 turbines (together with Soma 4 and Soma 5 Projects) was calculated by distance. According to calculation results, the limit value of 70 dBA is achieved after a distance of about 300 m. Because of the nearest distance between the turbines and the settlements is greater than 300 m, local EIA indicated that, the operation activities to be carried out within the scope of capacity increase will not have any negative impact on the settlements.

*Mitigation Measures:*

- Periodic maintenance of the turbines will be conducted;
- Relevant Management Plans/Procedures (E.g. Traffic Management Plan, Noise Management Plan, Training Plan, Environmental, H&S and Social Monitoring Plan) will be implemented;
- **Impact:** Community health and safety could be negatively impacted in the event of a rotor blade failing and detaching from the turbine.

*Mitigation Measures:*

- Minimum setback distances will be implemented as determined after Blade / Ice Throw Assessment;
- Care will be taken to ensure all design parameters are implemented correctly;
- Turbines will be maintained regularly;
- Unauthorized access to the turbines will be prevented.
- **Impact:** Occupational Health and Safety issues will likely only be of concern during the maintenance of the turbines.

*Mitigation Measures:*

- Occupational H&S Policies/Plans/Procedures/Instructions, an Emergency Response Plan, and a Traffic Management Plan will be implemented;
- Related Trainings will be provided to all workers;
- Turkish legislation requirements will be fully followed;
- Emergency drills will be carried out;
- All accidents/incidents will be reported and investigated;
- All suggestions/complaints will be reported and acted upon as per the Grievance Mechanism Procedure;
- Site inspections will be conducted regularly.

## 2.10 How Will Land Acquisition Take Place?

Soma 4 WPP Project area and planned access road are located in forest land and required permits have been obtained. There is not any private land in the Project area. Therefore, there will not be need of land acquisition process during the project works.

## 2.11 How Many Personnel Will Be Employed in the Project?

It is planned to employ 120 people for the field preparation and construction process. The Project has set the local employment targets and will prioritize local applicants during recruitment.

## 3.0 HOW WILL SOMA ENERGY ENGAGE WITH STAKEHOLDERS?

A Stakeholder Engagement Plan (SEP) has been prepared for the construction and operational phases of the Project in line with IFC Performance Standards. The SEP identifies target groups and the specific range of engagement activities required for each group.

Soma Energy will provide transparent informative material in a consistent and timely manner to the affected communities and the remaining stakeholders. The tools and the methods to be used for the information disclosure during construction and operation of the Project are as follows.

- Soma Energy will keep information on the Project updated on their website in both Turkish and English. The homepages of the website can be found here:
  - <http://www.somaenerji.com.tr>
- Information sheets including a non-technical summary of the Project, key project issues and details regarding Soma Energy's approach to minimizing, mitigating and managing potential negative impacts will be prepared and made available on the Soma Energy websites and at the Soma 4 WPP Project construction site offices. Copies of these information sheets will be posted at the mukhtar offices of the affected communities identified as stakeholders.
- At the Soma Energy website, material providing information about different stages of the project will be available, and stakeholders will be kept posted.
- Consultation events and opportunities should be widely and proactively publicized, especially among Project affected parties, at least 1 week prior to any meeting via website announcements, through mukhtars, local newspaper advertisement, posted information banner in mukhtars' offices.

Initial engagement methods have been in the form of meetings and interviews. Local stakeholder consultation meeting will be held in the beginning of the construction. Engagement activities will continue during the construction and operational period. Construction and Operational Managers of the Project will maintain regular dialogue with the local Mukhtars of the affected settlements. Identified public institutions that are stakeholders will be visited directly periodically and correspondences will be made, as deemed necessary.

Project related information communication meetings will be open to the entire public and will be announced through local media. Furthermore, they will be held at the locations where stakeholders (especially local communities) can easily reach like the local Mukhtar offices. If needed, separate meetings can be organized at venues frequently visited by women for women only meetings.

As the Project progresses, additional methods of communication will be employed via the Soma Energy website and various means of public media.

## 4.0 HOW WILL THE PROJECT SUPPORT COMMUNITY DEVELOPMENT?

Soma Energy will establish a Corporate Social Responsibility ("CSR") Program and this program will be administered centrally.

The CSR will include the development of local action plan and interaction with the local community and support for local development projects. CSR program will be stand alone for the Project. The CSR program will link with the SEP to ensure a consistent approach and engagement with local community.

As the construction of the Project has yet to commence, no social responsibility projects have been carried out yet.

## 5.0 HOW CAN I RAISE A COMPLAINT OR ASK A QUESTION?

Soma Energy has established a grievance mechanism which is available for every stakeholder to use, both internal and externally. Any comments or concerns can be brought to management attention either verbally or in writing (by post or e-mail) or by filling in a grievance form. Through that mechanism Soma Energy will respond to and resolve the issues raised.

For the collection of external grievances from community:

- Grievance mechanism process will be communicated with stakeholders during stakeholder engagement meetings (including the locations of the grievance/suggestion);
- The grievance/suggestion boxes will be made available at the Mukhtars offices or villagers' gathering points (such as tea houses etc.) in the nearest settlements; and
- Stakeholders will be aware of the location of the grievance/suggestion boxes and how to submit their grievances (either through web site or with grievance/suggestion boxes).

In order to ask a question, to make a comment or a complaint, stakeholders may also reach out to the General Directorate by using following contact information. All questions, comments and complaints should be initially fielded to Begüm Işık.

**Soma Enerji Elektrik Üretim A.Ş.:**

Kağıthane Polat Ofis

Gürsel Mah. İmrahor Cad. Yankı Sk.

No: 27 Kat:3 B07-B08

34400 Kağıthane – İstanbul TURKEY

Telephone: +90 (212) 213 66 35

Fax: +90 (212) 213 66 39

