



# **SALIHILI-ADALA SOLAR POWER PLANT**

## **ENVIRONMENTAL MANAGEMENT PLAN**

**ADALA DISTRICT, SALIHILI, MANISA  
(PARCEL 2250)**



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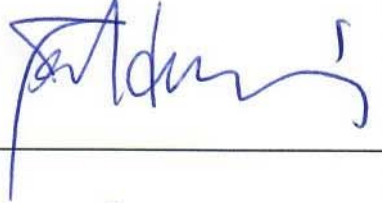



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**MANISA  
2016**

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## **PREFACE**

It is planned to establish and operate Salihli-Adala Solar Power Plant (SPP) on the Section 12 and Parcel 2250 within the borders of Adala district, Salihli, Manisa of the Aegean Region.

The nearest residential unit to the area where Salihli-Adala SPP Project is to be established is households located approximately 180 m to the southwest linked to Adala district, Salihli, Manisa. Rural settlements have a small number of population, and when considering the distance to the project site, these rural settlements are located at a safe and sufficient distance, and no adverse impact is expected on the rural settlements as a result of the project.

In accordance with Article 1, (3) of The Law, which is numbered as 6360, on the Amendment of Certain Laws and Legislative Decrees With the Establishment of Metropolitan Municipality and the Twenty Seven Province in the Fourteen State, the village legal entity was abolished and the villages participated in the municipality of the district where they were affiliated with as neighborhood. For this reason, according to this law Adala settlement is rural settlements converted into neighborhood status.

The primary socio-economic benefit to be achieved with the proposed project is to accelerate the electrification of rural communities. For this reason, proposed settlements will not be affected negatively from the project, on the contrary, they will be affected positively.

Salihli, Adala SPP Project consists of 2 projects each of which has 0.999 MW installed power. It is planned to be established and operated by Agrolive Agriculture, Livestock, Tourism, Food Industry and Trade Inc. and MBK Energy Tourism Industry and Trade Inc. on parcel 2250. In order to evaluate the environmental impacts of the proposed projects, an application was made within the scope of the "Regulation on Environmental Impact Assessment" which was published in the Official Gazette dated 25.11.2014 and numbered 29186. In the application, it is stated that the threshold value of the planned project is considered to be outside the scope because it is less than the threshold value in the regulation lists. However, regarding the planned investment, it has been stated that the relevant provisions of the issued regulations according to the law of amendment in Law on Environment numbered 2872 and the Law on Environment Law numbered 5491 must be complied with. In addition, it has been stated that the anticipated necessary permits within the scope of other in-force legislation are required to get. Nonetheless, it is stated that ecological balance should not be disturbed and that the precautions to protect and develop the environment should be respected. (See Appendix-1 Opinion Article of Republic of Turkey Manisa Governorate Provincial Directorate of Environment and Urban Planning on Environmental Impact Assessment Regulation).

In this context, there is no need to obtain the Environmental Permit and License Certificate in the scope of Environmental Law and Environmental Permit and License Regulation, which was published with regard to Environmental Law in the Official Gazette with the number of 291115 on the 10<sup>th</sup> of September, 2014, in the construction and operation period of the projects. However, the wastes and their effects resulting from the environmental impacts of the planned project will be kept under control within the scope of the Waste Management Regulation numbered 29314 and dated 02.04.2015 of the Official Gazette.

In the scope of the Salihli, Adala SPP, by using polycrystal panels which have total installed capacity of 1,998 MW electricity will be generated with optically fixed photovoltaic systems.

Assessment of environmental and social impacts associated with the proposed Salihli, Adala SPP Project is carried out in this report.

In the report; environmental and social impacts are described under the headings of land use, geology and seismicity, climatology, hydrology and hydrogeology, protected species, flora, fauna, demography, livelihood and employment, infrastructure and wastes. The environmental and social impacts of the project have been assessed in accordance with Environmental Legislation of the Ministry of Environment and Urbanization. The experienced consultants, who prepared the report, have analyzed the ecosystem structure of the project area and explained the environmental and social impacts in detail. Within the scope of the proposed project, waste generation and disposal methods will be explained by taking land preparation, construction stage and operation phase into account.

## 1. INTRODUCTION

### 1.1. PURPOSE

While Turkey's energy demand has reached 211 billion kWh in 2010, it is expected to be 450 billion kWh in 2023. Electricity in Turkey are generated from natural gas, hydroelectric, coal and lignite, imported coal, wind, liquid fuels like diesel and fuel oil, geothermal, biogas and solar energy.

Turkey is located between 36°-42° north latitude and 26°-45° east longitude over the world. With its solar energy potential due to its geographical location, Turkey is fortunate compared to many other countries. According to a study conducted by General Directorate of Electric Power Resources Survey and Development Administration (EIE), using the sunshine duration and radiation intensity data (measured between 1966 and 1982) from Turkish State Meteorological Service, annual average total sunshine duration of the Turkey is 2640 hours (7.2 hours daily), average total radiation intensity is 1311 kWh/m<sup>2</sup>.year (3.6 kWh/m<sup>2</sup> daily).

Monthly total solar energy and sunshine duration of Turkey are given in Table 1.

**Table 1.** Monthly total solar energy and sunshine duration values of Turkey per month

| Months         | Monthly Total Solar Energy          |                                  | Sunshine Duration   |
|----------------|-------------------------------------|----------------------------------|---------------------|
|                | (Kcal/cm <sup>2</sup> -month)       | (kWh/m <sup>2</sup> -month)      | (Hour/month)        |
| January        | 4,45                                | 51,75                            | 103,0               |
| February       | 5,44                                | 63,27                            | 115,0               |
| March          | 8,31                                | 96,65                            | 165,0               |
| April          | 10,51                               | 122,23                           | 197,0               |
| May            | 13,23                               | 153,86                           | 273,0               |
| June           | 14,51                               | 168,75                           | 325,0               |
| July           | 15,08                               | 175,38                           | 365,0               |
| August         | 13,62                               | 158,40                           | 343,0               |
| September      | 10,60                               | 123,28                           | 280,0               |
| October        | 7,73                                | 89,90                            | 214,0               |
| November       | 5,23                                | 60,82                            | 157,0               |
| December       | 4,03                                | 46,87                            | 103,0               |
| <b>Total</b>   | <b>112,74</b>                       | <b>1311</b>                      | <b>2640</b>         |
| <b>Average</b> | <b>308,0 cal/cm<sup>2</sup>.day</b> | <b>3,6 kWh/m<sup>2</sup>.day</b> | <b>7,2 hour/day</b> |

The sunniest region of Turkey is South Eastern Anatolia Region and the Mediterranean Region is the second sunniest region in Turkey. Total solar energy and the sunshine duration values of Turkey's regions are given in Table 2.

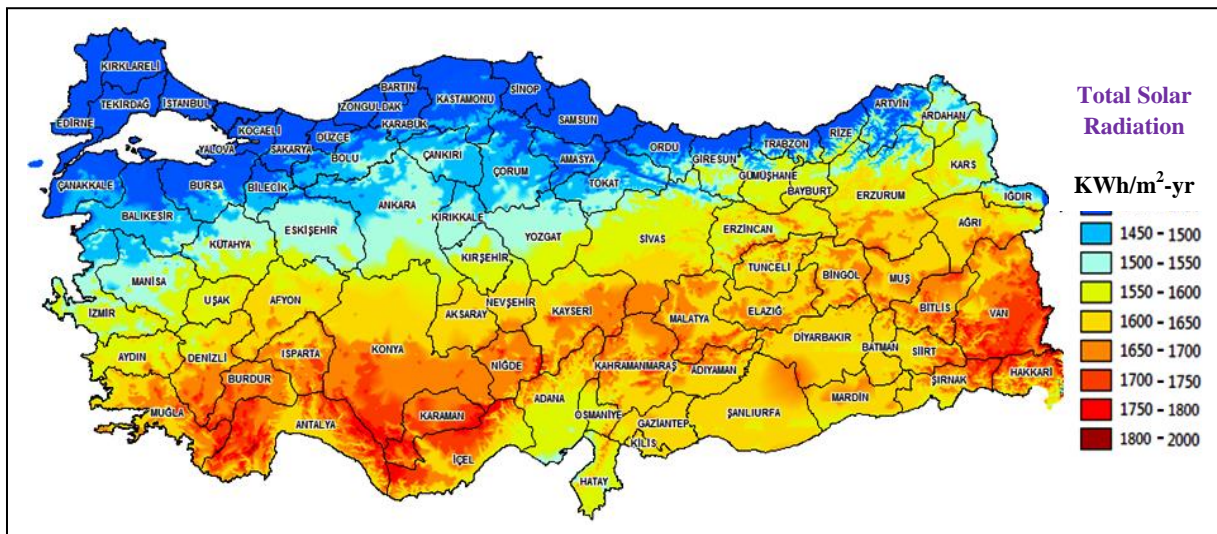
**Table 2.** Turkey's Total Annual Solar Energy Potential Values by Regions

| Region                | Total Solar Energy<br>(kWh/m <sup>2</sup> -year) | Sunshine Duration<br>(Hour/year) |
|-----------------------|--------------------------------------------------|----------------------------------|
| Southeastern Anatolia | 1460                                             | 2993                             |
| Mediterranean         | 1390                                             | 2956                             |
| East Anatolia         | 1365                                             | 2664                             |
| Central Anatolia      | 1314                                             | 2628                             |
| Aegean                | 1304                                             | 2738                             |
| Marmara               | 1168                                             | 2409                             |
| Black Sea             | 1120                                             | 1971                             |

However, according to the studies conducted lately, these potential values are less than Turkey's real potential. Turkey's solar energy potential is 20-25% higher than the values shown above.

The solar energy and sunshine duration values of 57 provinces were calculated using new EIE measurements from eight different stations and Turkish State Meteorological Service data.

ESRI, an internationally validate Solar Radiation Model, was run at 500 x 500 meter resolution for Turkey and mapped by using Geographic Information Systems (GIS) techniques. These maps were calibrated using measurements taken from Turkish State Meteorological Service and EIE stations and monthly average of solar radiation and sunshine duration were calculated. As a result of this study Turkey's Solar Energy Potential Map (SEPM) was prepared in 2010 (see Figure 1).



(Source: Republic of Turkey Ministry of Energy and Natural Resources General Directorate of Renewable Energy Official Web Site <http://www.eie.gov.tr/MyCalculator/Default.aspx>, R.D.: 28.11.2016).

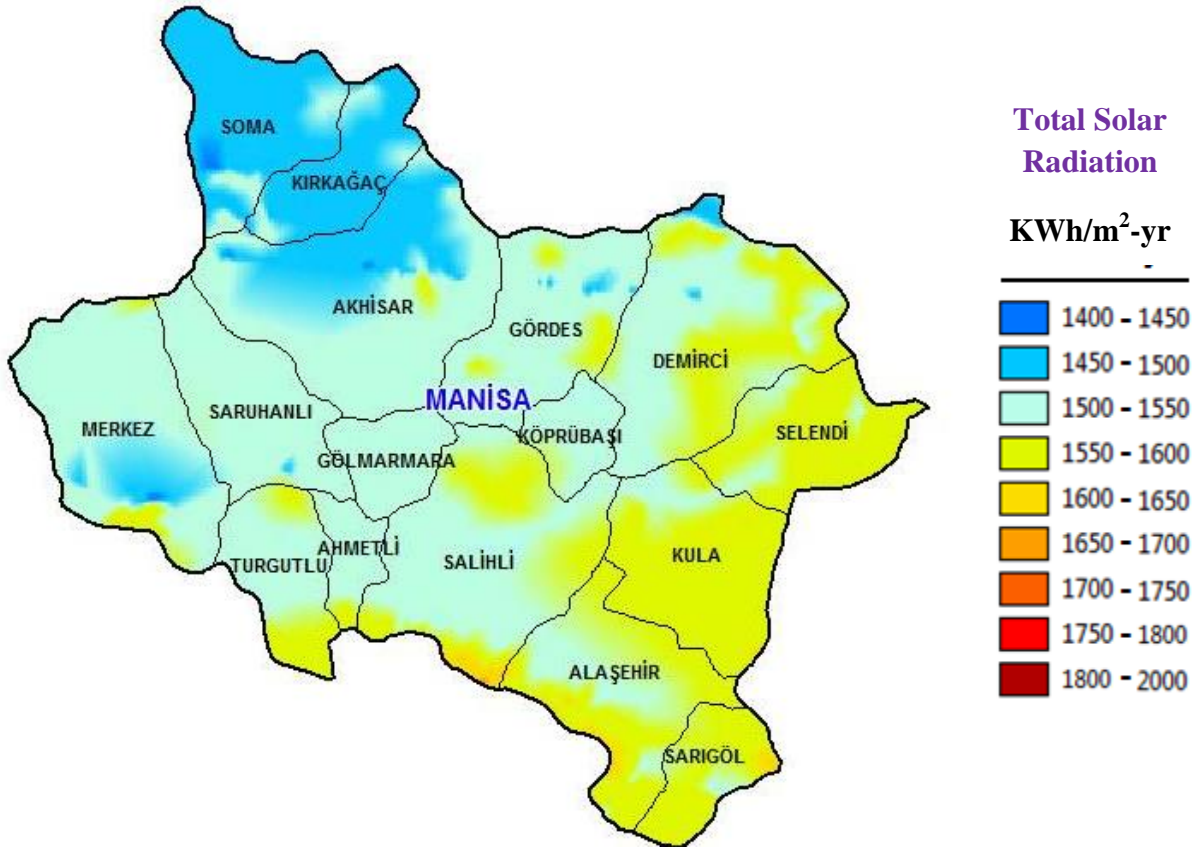
**Figure 1.** Turkey's Solar Energy Potential Map

According to the Solar Energy Potential Map, Turkey's annual electricity production potential is 380 billion kWh (kilowatt-hours). Map was prepared by removing the residential area, forest and farmland, wetlands, places where slopes greater than 3 degrees, special and environmental protection areas, highways, railways, ports.

Turkey has the potential to benefit from the sun for 7-8 months. Among the European countries, Turkey is the second country where has the most sunshine duration after Spain. Turkey is also third country in the world with 12 million square meters of solar energy potential. Turkey's sunshine duration is 2640 hours and the annual solar radiation intensity is 1,311 kWh / m<sup>2</sup>. Technically Turkey's solar energy potential may be used as 26.4 million TOE heat and in 8.8 million TOE electricity (380 billion kWh) productions.

Parcel 2250 of Adala district that is located Salihli, Manisa in Aegean Region of Turkey is determined as the investment area of Solar Power Plant Project. The specified project area has an estimated solar energy potential of 1500 - 1600 KWh / m<sup>2</sup>-year, according to Turkey's Solar Energy Potential Atlas (See Figure 2).





(Source: Republic of Turkey Ministry of Energy and Natural Resources General Directorate of Renewable Energy Official Web Site, <http://www.eie.gov.tr/MyCalculator/pages/45.aspx>, R.D.: 28.11.2016).

**Figure 2.** Manisa Solar Energy Potential Map

The purpose of the Salihli, Adala SPP which is planned to be established within the boundaries of parcel 2250 of Adala District of Salihli, Manisa is to generate electricity by transforming solar energy in the region into electrical energy.

## 1.2. METHOD

The duration of the construction will last approximately 120 days and it is predicted that the economic life will be 25 years in the scope of operation.

In the terrain studies conducted, it was observed that no construction activities were started in the area. The project area can be reached by the existing stable road which is separated from Salihli-Simav Road (D-585).

*Pre-Field Preparations;* activities like construction of intra-parcel transportation route, cleaning of the plants and trees located in the field where photovoltaic panels will be placed, the installation of container-type site building will be carried out as a part of pre-field preparations. The field where photovoltaic panels will be installed is flat and therefore there will be no need any excavation and filling operations in order to flatten the land.

*Completion of Construction Works;* the construction of the administrative building, determining the photovoltaic panels placement points, preparation of switchyard area will be carried out within the scope of construction operations.

*Transportation of the Main Equipment Such As Inverters And PV Panels to the site;* other auxiliary equipment used in installation of photovoltaic panels and inverters with the main equipment will be brought to the site after the preparation of the photovoltaic panels installation field and the construction of administrative buildings.

*Completion of Installation of Main Equipment;* the installation process will be carried out after photovoltaic panels, inverters and auxiliary equipment are brought to the site.

*Completion of Installation of the Main Equipment and Connection Setup;* the final connections and the completion of the installation will be conducted at this stage in order to produce electricity from SPP.

*Solar Power Plant Testing and Completion;* at this stage, the SPP will be tested to ensure if it produces the required energy or not and final checks will be made.

*Acceptance Test;* at this stage, for the purpose of provisional acceptance of the plant, an acceptance test is performed by the institution authorized by the Ministry.

In the proposed project, electricity will be generated by photovoltaic systems which are fixed in optimum position by using polycrystalline panels. Photovoltaic panels usually consist of cells comprising two electric contacts located between silicon-based semiconductor materials. The amount of electricity it will generate depends on how long they are exposed to direct sunlight. Surface shape of solar panels can be in the form of square, rectangle and circle. Their surface area can be about 100 cm<sup>2</sup> and thickness is between 0.1 and 0.4 mm. When the sun rays hit the panel and are absorbed by panel, some atoms forming the semiconductor are released. Thus, one side of the panel positively charged and the other side negatively charged. All released electrons move in the same direction and generate the electric current. Electrical contacts capture the current and take into the electrical circuit. The electricity that is produced by photovoltaic panels is direct current. Therefore it must be converted to alternating current by using an inverter before being introduced into the system. The electricity that is produced by photovoltaic panels is direct current. The main equipment in the system are the photovoltaic panels and the inverters that convert direct current to alternating current.

#### Photovoltaic Panels

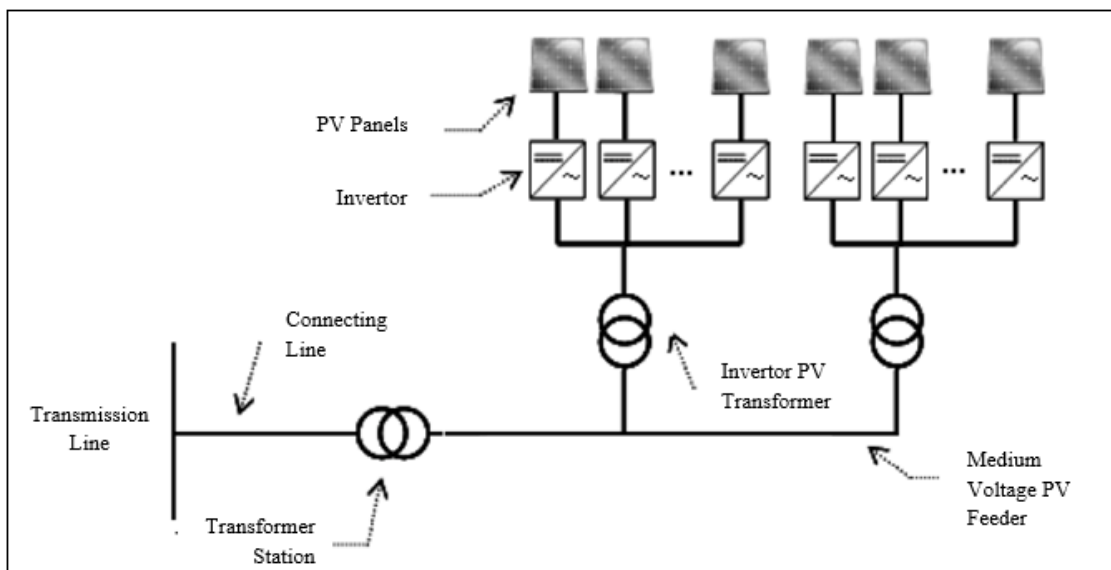
Solar panels consist of combined solar cells and convert the solar energy directly to electricity. PV (photovoltaic) cells are made from silicon, semiconductor material. There is "silicon" element, a semiconductor, in the structure of the solar panels. When sunlight is absorbed by these materials, electrons are separated from their atoms and become free in the material. Thus, an electric current occurs. Solar panels are formed by assembling the numerous solar cells connected each other in parallel or in series on a surface (See Figure 3).



**Figure 3.** Example of Photovoltaic Panels and Solar Power Plant

### *Inverter*

Inverter is a device that converts direct current power into alternating current power. In general, there are two types of inverter. One's output is pure sine wave and the other's is not. The inverter generating pure sine wave must be used in the systems that have the sensitive loads. The inverter power equals to sum of the power values of loads that can operate simultaneously in the system. Depending on the structure of solar cells, solar energy is converted into electric energy with a yield of between 5% and 30%. In order to increase the power output numerous solar cells are mounted on a surface by connected to each other in parallel or serial. Depending on the power demand the modules are connected in parallel or serial to each other. Thus, the systems whose power is in the range of a few Watts to Mega Watts are created. Schematic representation of the electric power generation in the SPP project is given below (See Figure 4).



**Figure 4.** Schematic of SPP Electricity Generation

### **1.3. REGULATORY REQUIREMENTS**

Salihli, Adala SPP Project consists of 2 projects each of which has 0.999 MWe installed power.

In order to evaluate the environmental impacts of proposed projects, an application was made within the scope of the "Regulation on Environmental Impact Assessment" which was published in the Official Gazette dated 25.11.2014 and numbered 29186. The threshold value of the planned project is considered to be outside the scope because it is less than the threshold value in the regulation lists. However, regarding the planned investment, it has been stated that the relevant provisions of the issued regulations according to the law of amendment in Law on Environment numbered 2872 and the Law on Environment Law numbered 5491 must be complied with. In addition, it has been stated that the anticipated necessary permits within the scope of other in-force legislation are required to get. Nonetheless, it is stated that ecological balance should not be disturbed and that the precautions to protect and develop the environment should be respected. (See Appendix-1 Opinion Article of Republic of Turkey Manisa Governorate Provincial Directorate of Environment and Urban Planning on Environmental Impact Assessment Regulation).

Within this context, during the construction and operational periods of the project, it is not required to take the Environmental Permit and License in the scope of Environmental Law and Environmental Permits and Licenses Regulation issued pursuant to Environmental Law (dated 09.10.2014, No. 291115, Official Gazette). However, generated wastes will be managed in accordance with the Waste Management Regulations (dated 02.04.2015, No. 29314, Official Gazette).

Apart from that, since the project funding is planned as a World Bank loan; environmental conditions are evaluated in line with international standards and obligations in addition to national legislation. In this context, it will also be implemented in harmony with the World Bank safeguard standards.

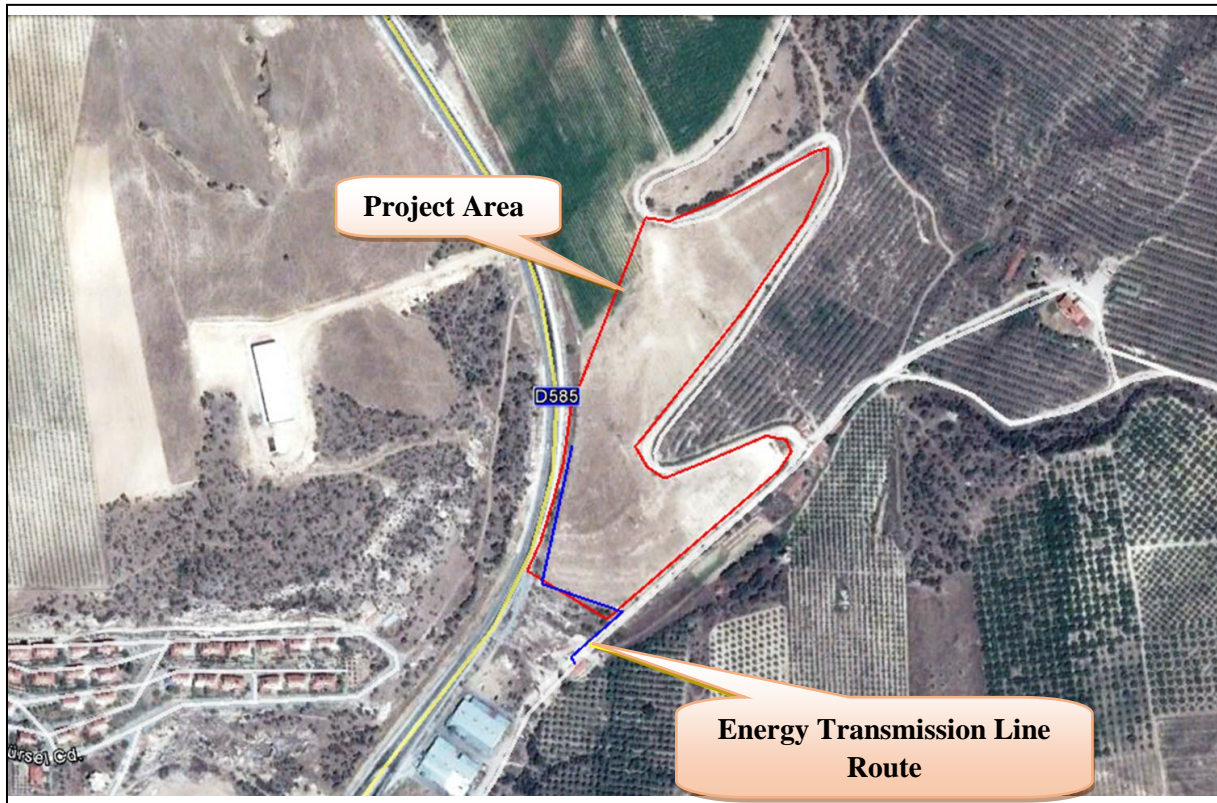


## 2. PROPOSED DEVELOPMENT

### 2.1. PURPOSE OF THE PROJECT

Salihli, Adala SPP Project consists of 2 projects each of which has 0.999 MW installed power. In the scope of the project, by using polycrystal panels which have total installed capacity of 1.998 MW electricity will be generated with optically fixed photovoltaic systems.

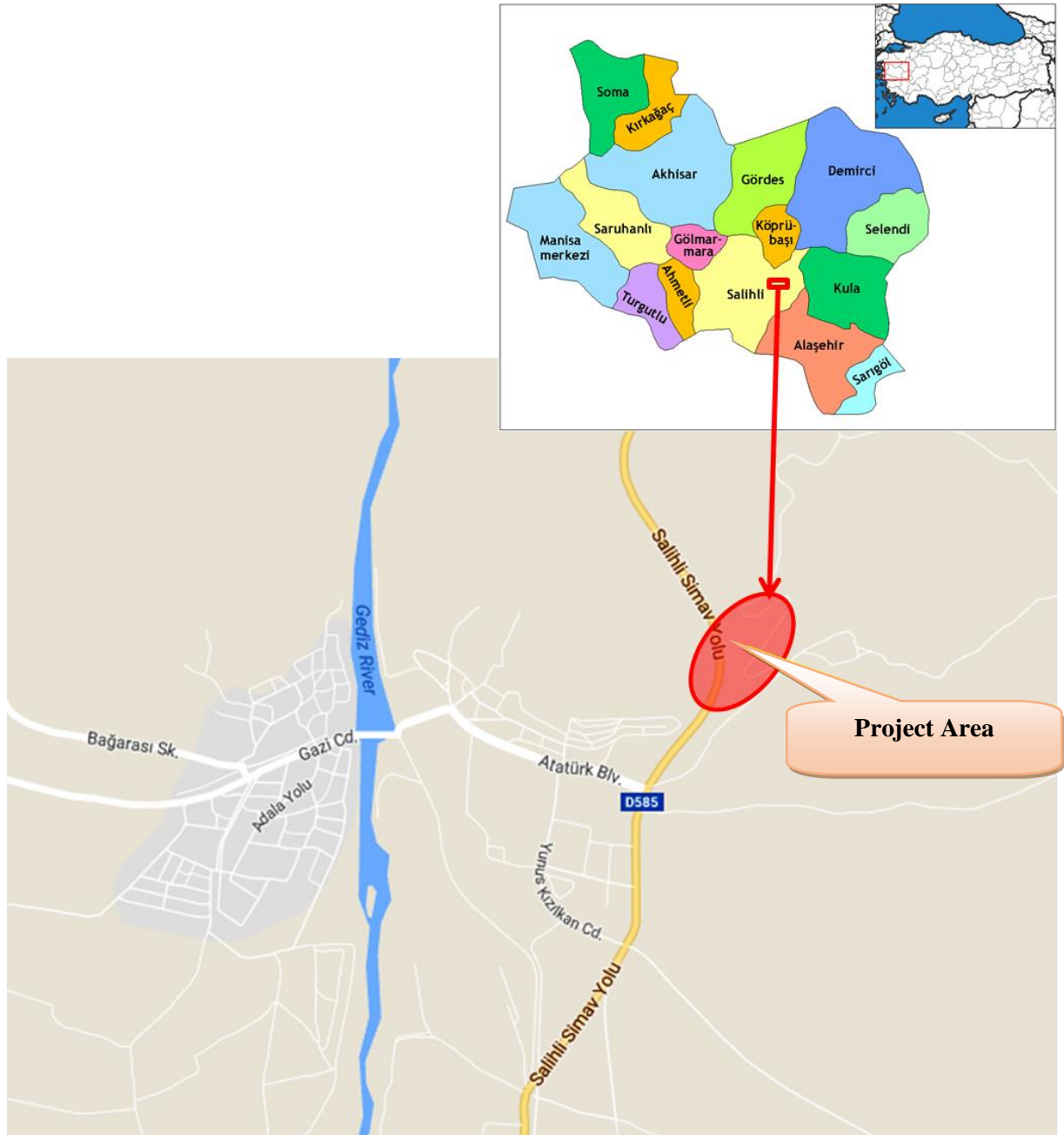
The plant will be installed to feed directly from the pole numbered 15 with 34,5 kV 3x3/0AWG conductor of Demirköprü (Adala-Salihli City) -II ENH which is going out from 154/31,5kV Salihli TS and fed with 34,5 kV 2x477 MCM conductor from Demirköprü I-II feeders. The DC will be connected to the system via the 2 building type TS with 1250 kVA power to be installed by taking energy from 2 output cells. The energy to be installed will be connected to the DC which is already installed 250 m ahead with the underground cable. The line route will pass by the existing cadastral road and will not require purchase a new area (see Figure 5).



**Figure 5.** Satellite Image Showing the Route of Power Transmission Line

### 2.2. PROJECT LOCATION AND SITE

It is planned to establish and operate Salihli-Adala Solar Power Plant (SPP) on the Parcel 2250 within the borders of Adala district, Salihli, Manisa of the Aegean Region. Site Location Map of the project area is given in Figure 6.



**Figure 6.** Site Location Map for the Project Area

Settlements that are linked to Adala District is located approximately in 180 m southwest direction; Attalos Farm is located approximately in 240 m east direction; olive oil factory is located approximately in 230 m west direction, and industrial zone is located approximately in 120 m southwest direction of proposed project area (See Figure 7).





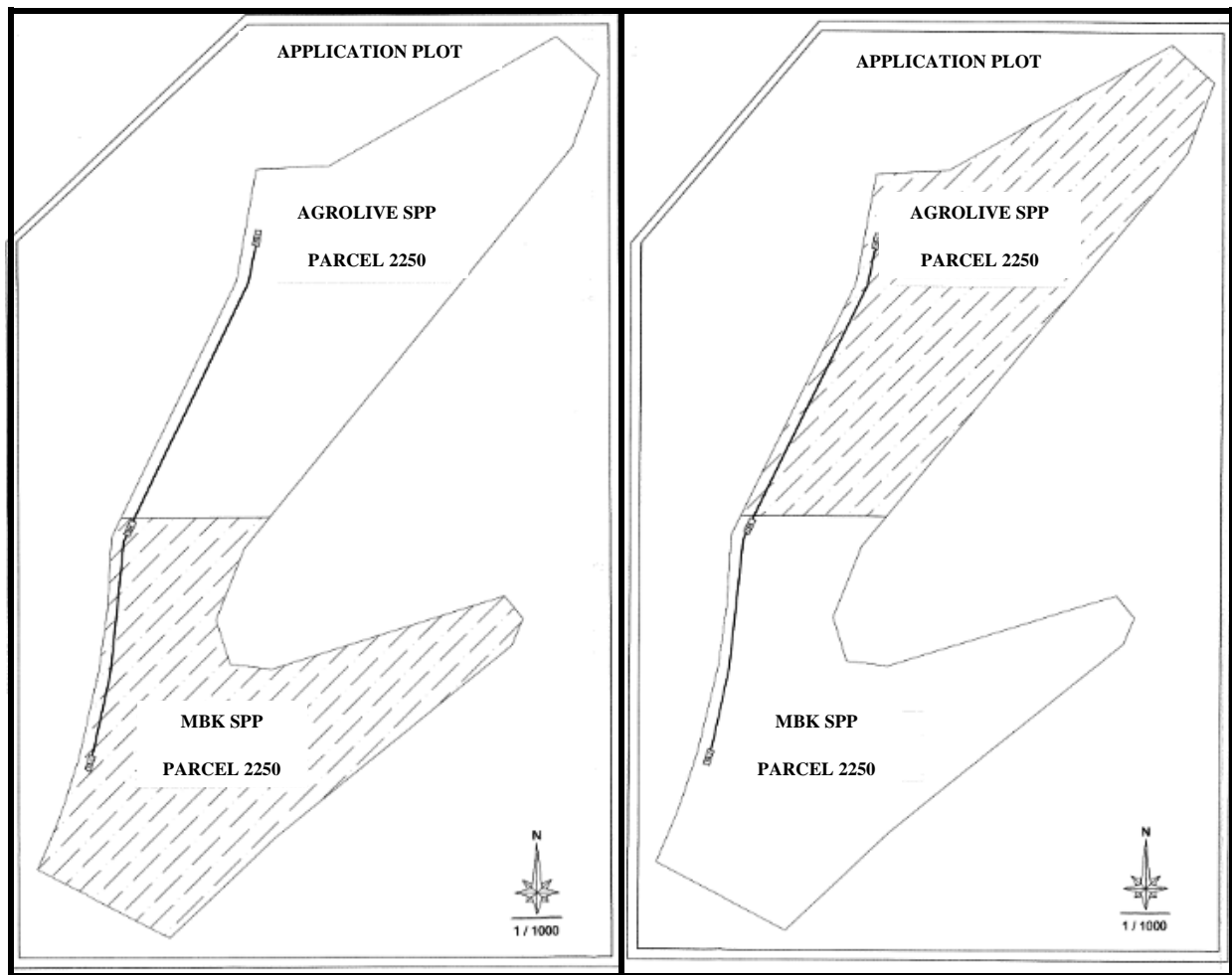
**Figure 7.** Satellite Image about the Project Area

The project area can be reached by the existing stabilized road, which is approximately 1,00 km, separated from Salihli-Simav Road (D-585) (See Figure 7).

### **2.3. PROJECT COMPONENTS**

Salihli, Adala SPP Project consists of 2 projects each of which has 0.999 MWe installed power. Proposed project area of parcel numbered 2250 is covered by acorn and that takes an area of 30.846,61 m<sup>2</sup> (See Appendix-3, Photocopy of Land Certificate).

It is planned to be established and operated by Agrolive Agriculture, Livestock, Tourism, Food Industry and Trade Inc. and MBK Energy Tourism Industry and Trade Inc. on parcel 2250. Layout of the project is given in Figure 8.



**Figure 8.** Layout of the Project

## 2.4. ANALYSIS OF THE ALTERNATIVES

The surface of the parcel area is cleaned, lightly leveled and flattened in the current situation. For this reason, the surface looks like a smooth farming area. However, the soil structure is stony/rocky as it is seen from photographs (see Figure 9).



**Figure 9.** General View of Soil Structure



The parcel on which the project will be installed is covered with shrub and bushes and the age of the bushes were determined as 35-40 years. It means that agricultural activity has not been carried out in a part of the area since this time. In the remaining parts, wheat is grown, and as it is understood from the very weak structure of the stubble, productive production has not been achieved. Because of the climate, it has not been tried to grow other crops in the region. Because this place is where there are hard magmatic and metamorphosed rocks in the region. Since the other terrains of the village is in the form of clay deposits in spite of the slope, terraces and trees can be planted easily by digging. However, since the project subdivisions are hard rock areas, they cannot be evaluated in perennial plant production due to the difficulty of planting trees. For this reason, the parcel was abandoned in the form of shrubbery.

Land title of the proposed project area with parcel numbered 2250 belongs to Agrolive Agriculture, Livestock, Tourism, Food Industry and Trade Inc. and MBK Energy Tourism Industry and Trade Inc. rent the project area (See Appendix-4, Rental Contract).

This project is the best alternative for the selected area in order to decrease energy demand of Turkey using renewable energy sources. Within the evaluations above, the formulation selected for the production of electricity using photovoltaic solar panels in project was determined optimally in consideration of land status and it was not intended to find any other alternative for the project and project location.

### 3. ENVIRONMENTAL STATUS

#### 3.1. LAND USE

It is planned to establish and operate a Solar Power Plant (SPP) Project within the boundaries of parcel numbered 2250 in Adala district, Salihli, Manisa.

Salihli, Adala SPP Project consists of 2 projects each of which has 0.999 MW installed power. In the parcel with area of 30.846,61 m<sup>2</sup>, layout of the project is given in Figure 8.

Planned project area has been shown in the 1/100,000 scale Environment Plan of İzmir-Manisa Planning Area, and it remains in the field of "Agricultural Land". 1/100,000 scale Environment Master Plan and Legend of the project is given in Appendix 6.

Proposed project area of parcel numbered 2250 is covered by acorn (See Appendix-3 Photocopy of Land Certificate) and tenure of the area belongs to Agrolive Agriculture, Livestock, Tourism, Food Industry and Trade Inc. and MBK Energy Tourism Industry and Trade Inc. rent the project area (See Appendix-4, Rental Contract).

In the terrain studies, it was observed that any construction activities were not started in the area. In the project area, there is no agricultural activity at current situation in the Parcel numbered 2250, and the land is empty (See Figure 10).



**Figure 10.** General View of Parcel 2250 in Current Situation

Within the scope of the project, the energy transmission lines are passing through the parcel 2250 and the mentioned transmission lines will be displaced (See Figure 11 and Figure 28).



**Figure 11.** General View of Energy Transmission Lines Passing Through the Project Area

The proposed project area is shown in the 1/25.000 Scale Topographic Map given in Appendix-2.

As a result of the inspection carried out by the Governorship of the Provincial Directorate of Food, Agriculture and Livestock in relation to the class application for the Solar Power Plant planned to be established in the relevant areas; it is stated that parcel numbered 2250 falls into the classification of "**Dry Marginal Agricultural Land**" (DAL). In accordance with Council Decision numbered 114/3: It is stated that the governorship is seen the request for the construction of "Solar Power Plant" as appropriate under the conditions that taking measures to prevent damage to the environment and the agricultural activities carried out in the region, and observance of the points indicated by the 2nd Regional Directorate of State Hydraulic Works dated 24.06.2014 and numbered 54495999-754-390543-149 of the opinion articles. (See Appendix-7, Opinion Article dated 08.07.2014 and numbered 8057 of Republic of Turkey Manisa Governorate Province Food, Agriculture and Livestock Directorate).

In the opinion Article dated 18.10.2016 and numbered 11081 of Republic of Turkey Salihli Municipality Plan and Project Directorate; 1/5000 Scale Master Plan and 1/1000 Scale Implementation Plan prepared for the establishment of Unlicensed Solar Power Plant on immovable registered in 2250 parcels of Adala District, Salihli sent to the Metropolitan Assembly for the approval, and Salihli Municipal Council was approved them with a decision dated 04-10-2016 and numbered 2016/131. However, it is stated that 1/1000 Scale Implementation Plan which is determined as suitable area for the construction that is planned to evaluated together with the 1/5000 Scale Master Development Plan was sent to Manisa Metropolitan Municipality in order to examine and approve by Metropolitan Municipality





In the area of investigation, there are reddish brown soils. Detailed information and land status of the area are given below.

As can be seen from the Land Asset Map given in Figure 12; the area contains Regosol Soils, loosely built soil, formed on limestone and terrestrial detritus. The formula  $R\ 15.3 / O / VI$  es which is symbolized in the map also shows that; surface soil is in the VI class in land use capability due to the 6-8% surface soil slope, severe erosion, partly coated with forest cover, and adverse soil properties. The meaning of these explanations falls within the definition of a marginally dry area in the new classification. This area is defined as follows:

**Absolute Farmland (AF):** Absolute farmlands are agricultural lands which are expanded due to local preoccupation or local needs, except for special crop land and planted agricultural land. The land and topographic limitations of these lands are much higher while the potential for agricultural production is low. The land slope is more than 12% in places where rainfall is less than 640 mm, more than 18% in places where the rainfall is 640 mm or more, and the soil depth is less than 50 cm. The yield obtained from the grown plants is generally below the local average. These lands are not suitable for irrigation with conventional irrigation methods and irrigation can be done using advanced irrigation techniques.

Local marginal land with agricultural integrity within absolute farmlands, special crop land and planted farmland is considered as an important agricultural land that is widespread in order not to disturb agricultural unity. If the negative impact on agricultural integrity is removed by the land conservation project prepared for these lands in the non-agricultural permits, it is allowed or not.

Because of the lack of agricultural integrity in terms of its characteristics, it cannot be economically used in agricultural production and/or remained in agricultural lands which are less than 2 hectares of absolute farmland or special crop land, less than 0.5 hectare planted land and less than 0.3 hectare greenhouse farmland are not considered as important agricultural land. It can be considered as a marginal area considering the local importance of non-agricultural permits.

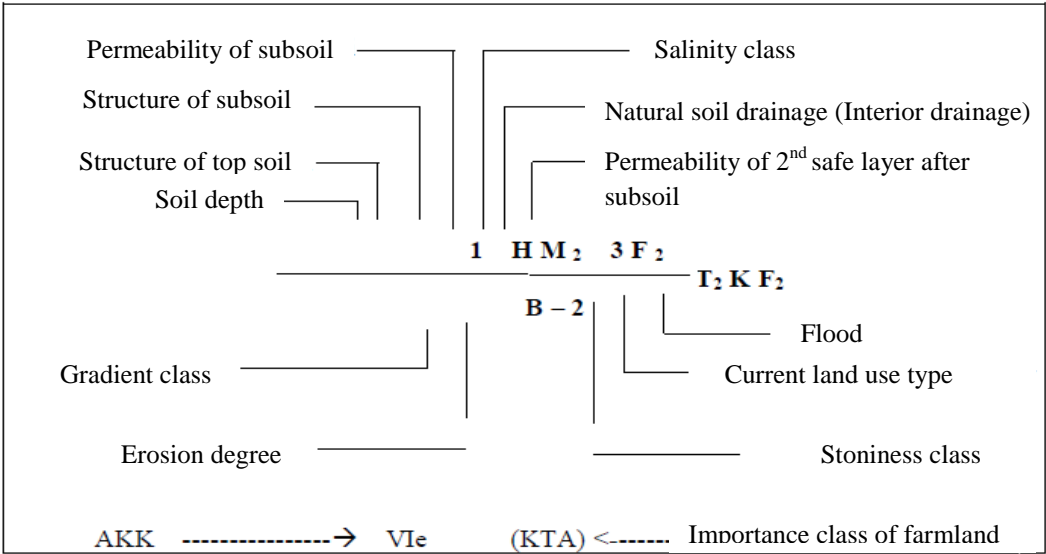
**Regosol Soils:** The letter R in the map shows the Regosol Soils; they have loose grained, very low organic matter contents, high permeability, sandy structure and low yielding soil. If the territory of the region is evaluated according to the existing legislation, it is defined as marginal agricultural area or VI, VII class.

In land classification, VI. and VII. class lands are defined as follows;

**VI. Class Land:** A sixth grade land is a land that requires moderate measures, even when used as a forestry or meadow. It is too inclined and exposed to severe erosion. It is not suitable for cultivation due to its crop, wet or very dry or other reasons.

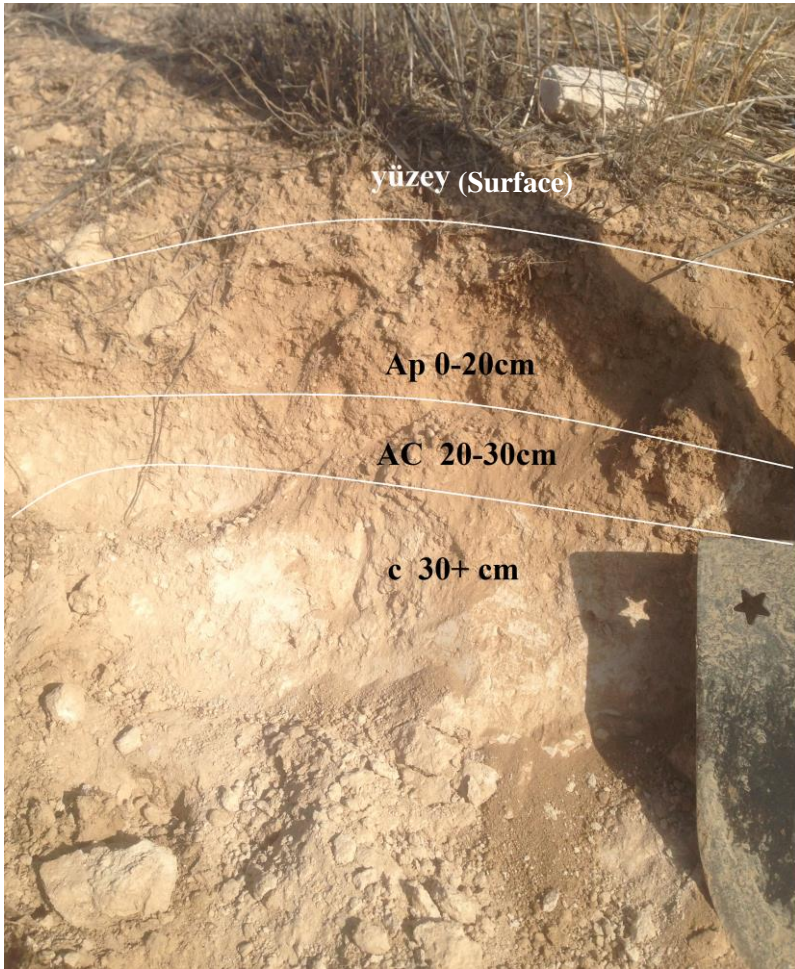
**VII. Class Land:** The seventh grade land is very inclined, has suffered from erosion, is stony and defective, and contains crop, dry, swamp or some other unfavorable soil. Provided that you are very careful, it can be used as a meadow or a forest. If the vegetation cover is reduced, the erosion becomes very intense.

## STANDARD SYMBOLS FOR SOIL SURVEY



**Figure 13. Mapping Standards and Keys Used in Land Classification**

If the land is classified using this key, the following drawing is obtained.



**Figure 14.** View from Soil Profile Which is Belong to Land



The land can be divided into 2 parts in terms of slope and soil structure. In the upper part has more steep slopes and stones. This part, which is located on the western side of the parcel is suffered from more erosion and the main material is came out to the surface. The less sloping lower part consists of the eastern and northern parts of the parcel. The stones is less and the depth is relatively higher in that parts. Erosion is also low due to low slope.



**Figure 15.** Overview of Surface Stone and Erosion in the Project Area

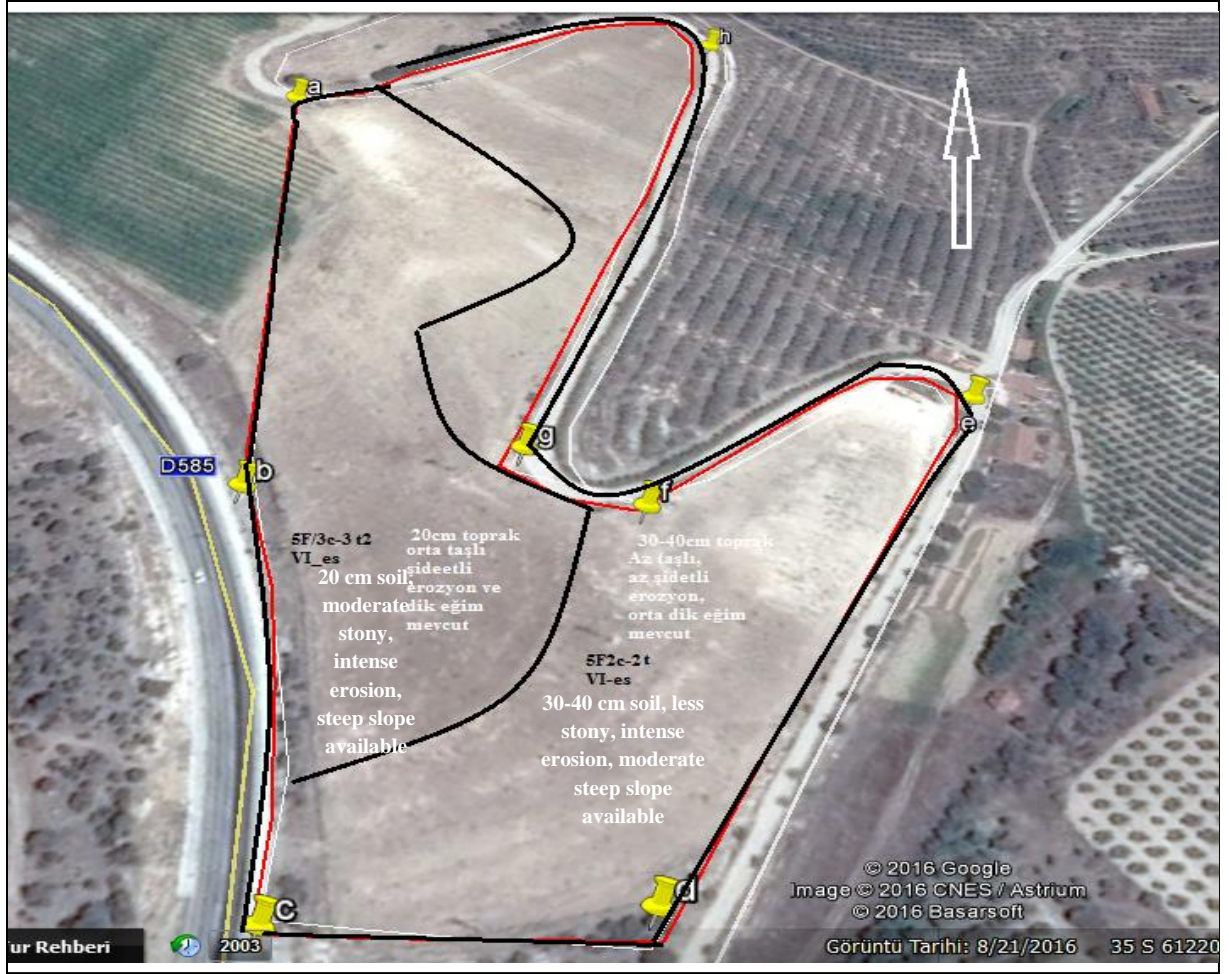
The parcel has been suffered from extreme erosion (the main material has come out to the surface in some places) inclined from north to south and east.

### **3.1.b. Topography**

The investigated area is a sloping land located on the hilltop. The area is adjacent to the Salihli-Simav Road (D585) and the southern portion of the land extending into the pit, which can be considered as a dry stream bed. The surface is lightly leveled and located in a wavy area.

### **3.1.c. Effectual Soil Depth**

30% of the parcel surface is covered with stones and 10% is covered with rocks which rise to the surface. The remaining areas are covered with accumulated clayed soil in the holes of rocks which did not rise to the surface. For this reason, soil depth varies between 20-50 cm. The depth is 25-50 cm in the southern parts of the area (less inclined places) and in the part which is more inclined in the western part, the soil depth is about 20 cm. Since most of the area has stones and rocks, the land is not suitable for agricultural activities.



**Figure 16.** Map of Soil Depth Belong to Land

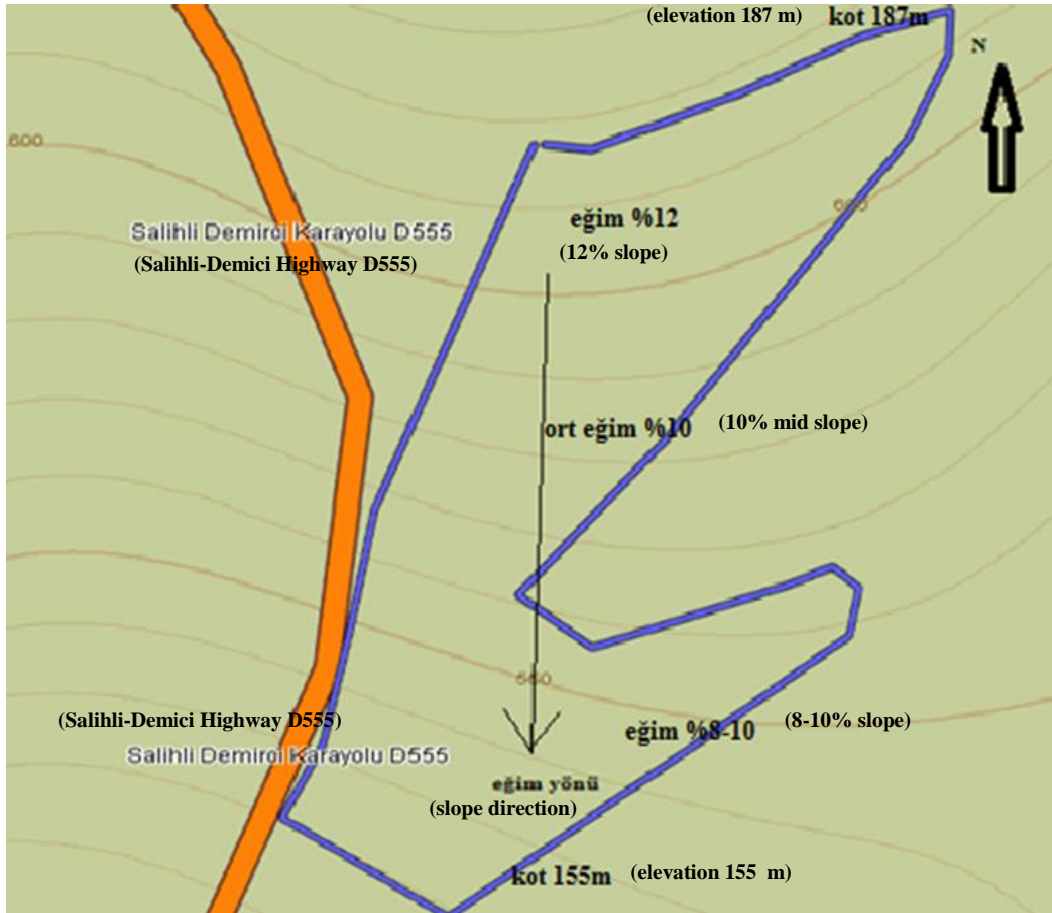
### 3.1.d. Slope

The project area that parcel numbered 2250 has been has been suffered from extreme erosion (the main material has come out to the surface in some places) inclined from north to south and east.

As seen in the slope and soil map in Figure 17, area is divided into 2 parts due to slope, stiffness, rockiness and depth. It is possible to divide the slope of area of investigation where the main settlement extends north-south direction into 2 sections as upward and downward.

It is possible to classify the upper part at 12% slope (3C) and lower part at 8% slope (2C). In the lower part (south) stoniness and rockiness are more concentrated, but the soil accumulated between the rocks is deeper.





**Figure 17.** Incline Map of the Project Area

### 3.1.e. Content of the Soil

Since the soil consists of limestone, gneiss, magnetite, mica schist in particular and especially mixed clayey main material, the clays in these minerals remained and constituted the main component of soil. Therefore, soil has a high content of clay (CL-clay).

### 3.1.f. Restrictive Factors of Agricultural Production

In the current situation, the bushes and shrubs of the parcel areas are cut out and cleaned and the surface is evened. Since the area is filled with some of the existing lands into the depressions of the rocks, the surface appears to be a smooth farming area. However, 15-25 cm lower layers are rocky, and it is possible to see this situation in opened pits and profiles.

After the examination of the shrubs rings, the age of natural bushes in the upper part of the parcel were determined as 35-40 years (See Figure 18). It means that agricultural activity has not been carried out in a part of the area since this time. The presence of very shallow soil, steep slope and severe erosion has inhibited the tillage farming. Because of the climate, it has not been tried to grow other crops in the region. Because this place is where there are hard magmatic and metamorphosed rocks in the region. Since the other terrains of the village is in the form of clay deposits in spite of the slope, terraces and trees can be planted easily by digging. However, since the project subdivisions are hard rock areas, they cannot be evaluated in perennial plant production due to the difficulty of planting trees. For this reason, the parcel was abandoned in the form of shrubbery.



**Figure 18.** Overview of the Shrubs in the Upper Parcels of the Project Area

### **3.1.g. Erosion**

The land can be divided into 2 parts in terms of slope and soil structure. In the upper part has more steep slopes and stones. This part, which is located on the western side of the parcel is suffered from more erosion and the main material is came out to the surface. The less sloping lower part consists of the eastern and northern parts of the parcel. The stones is less and the depth is relatively higher in that parts. Erosion is also low due to low slope.



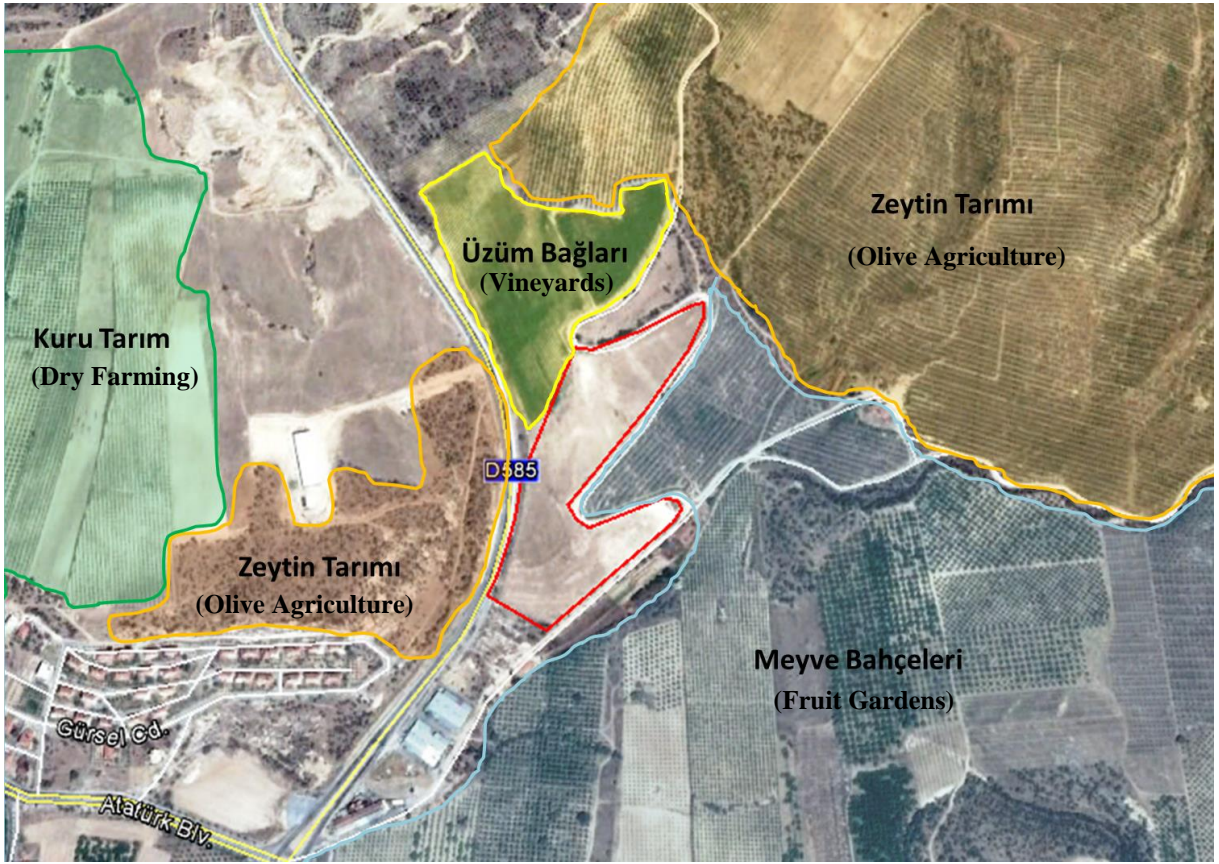
**Figure 19.** View from Surface Area of the Project Area

### **3.1.h. Usage of Surrounding Lands with Requested Land**

In the conducted terrain studies, it was observed that no construction activities were started in the area. Also, there is no agricultural activity in the current situation in the project area with parcel numbered 2250, and the land is in an empty state.



There are vineyards in the north of the project area, olive agriculture in the west, northeast and east of the project area, and fruit gardens in the south (pomegranate, apricot etc.) (See Figure 20, 21, 22, 23).



**Figure 20.** Satellite View Showing Agricultural Activities in the Vicinity of the Project Area



**Figure 21.** Overview of Vineyards in the North of the Project Area





**Figure 22.** Overview of Olive Trees in the Northeast and East of the Project Area



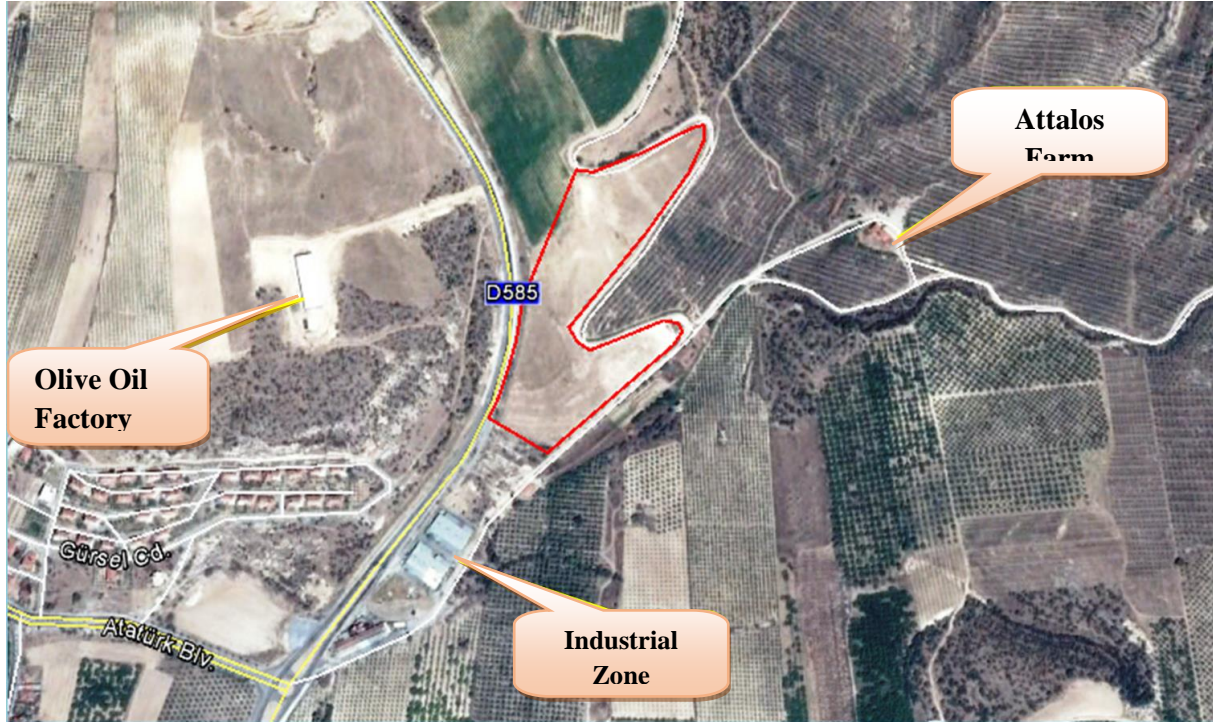
**Figure 23.** General View of Fruit Orchards in the South of the Project Area

Some parts of the mentioned agricultural lands are located within the Attalos Farm boundaries belonging to the investor. Despite the planted area is around the project area, the



parcel numbered 2250, which is not suitable for cultivation, is reserved for solar energy investments.

In addition, there is Attalos Farm in the east, olive oil factory in the west and industrial zone in the southwest of the project area (See Figure 24, 25, 26, 27).



**Figure 24.** Satellite View that Shows the Surrounding Areas of the Project Area



**Figure 25.** Overview of Attalos Farm in the East of the Project Area





**Figure 26.** Overview of the Olive Oil Factory in the West of the Project Area



**Figure 27.** Overview of Industrial Zone in the Southwest of the Project Area

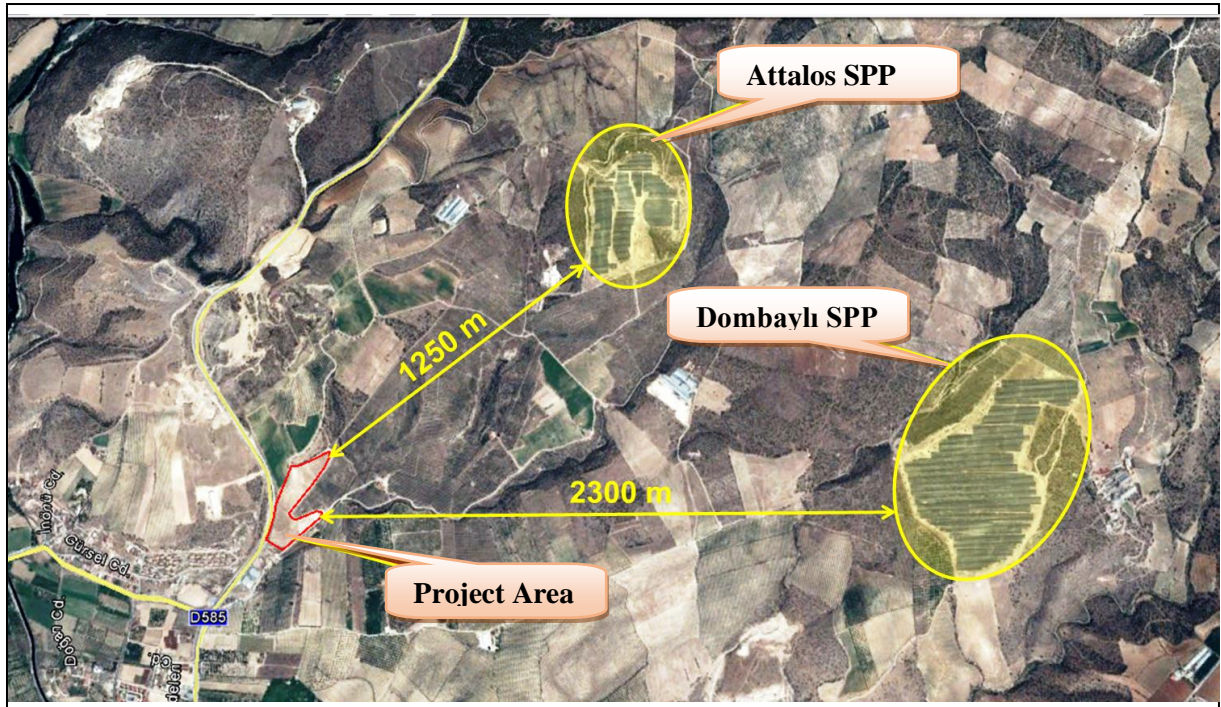
Energy transmission lines are passing through the project area and the mentioned transmission lines will be displaced (See Figure 11 and Figure 28).





**Figure 28.** General View of Energy Transmission Lines Passing Through Parcel 2250

Attalos SPP Project with 2 MW installed power is located approximately 1250 m northeast of the proposed project area and Dombaylı SPP Project with 16 MW installed power is located approximately 2300 m east of the proposed project area (See Figure 29).

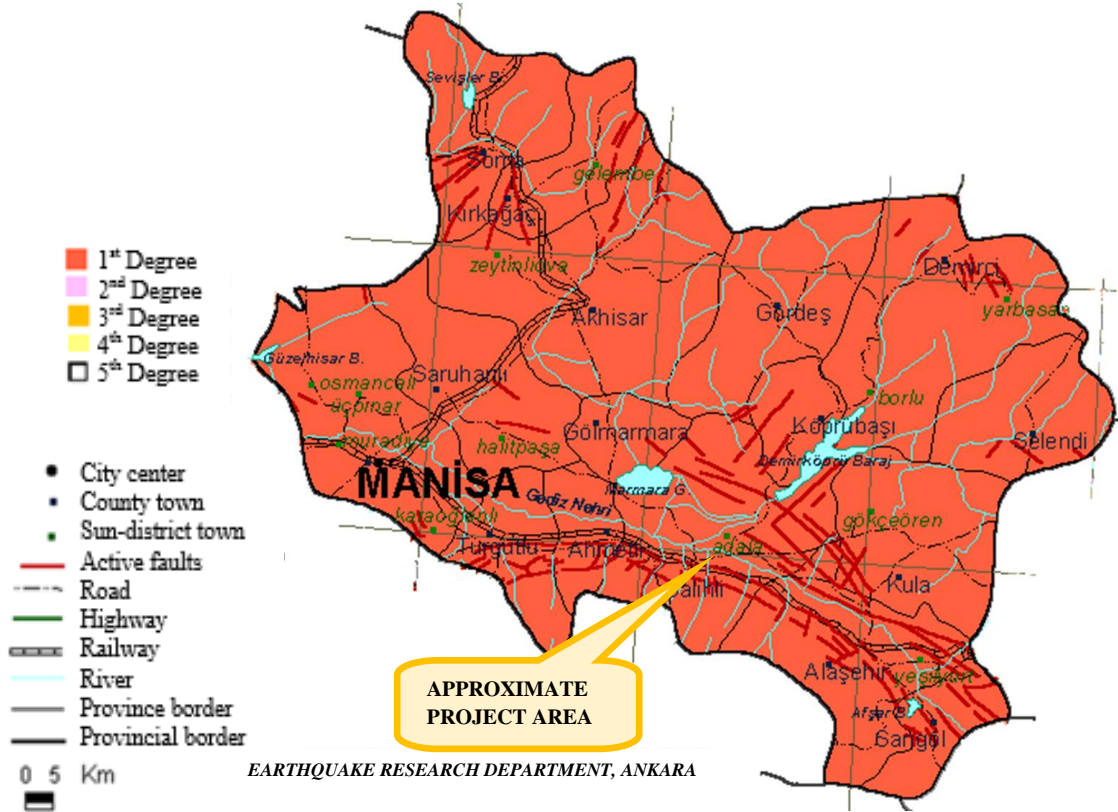


**Figure 29.** Satellite View that Shows the SPP Projects Around the Project Area

### 3.2. EARTHQUAKE RISKS AND GEOLOGY

#### Earthquake Risks

According to the Seismic Zoning Map of Turkey (1996) data prepared by the General Directorate of Disaster Affairs Earthquake Research Bureau the proposed project area and its surroundings are located within the 1<sup>st</sup> Degree Earthquake Zone (See Figure 30).



(Source: [www.deprem.gov.tr/sarbis/depbolge/manisa.gif](http://www.deprem.gov.tr/sarbis/depbolge/manisa.gif), Earthquake Research Bureau Official Website).

**Figure 30.** Earthquake Map Showing Approximate Project Area

Within the scope of the proposed project, the principles of "Regulation on Buildings to be Built in Seismic Zones" (dated 06.03.2007, No. 26454, Official Gazette) and "Regulation on Amending of the Regulation on Buildings to Be Built in Seismic Zone" (dated 03.05.2007, No. 26511, Official Gazette) will be complied.

#### Geological Condition

Within the scope of the project, it is planned to establish and operate the Solar Power Plant (SPP) within the boundaries of the Parcel 2250, Soil Survey Report was prepared by Batı Jeofizik Inc. for the purpose of revealing the general geological location and ground investigations of the region.

In the prepared Soil Survey Report; the study area is located within the Ulubey Formation (Tiu). This formation is composed of units of lacustrine lime stones. Lime stones contain thin clayey and marly levels in some places. The lime stones are thick, smooth, less inclined and somewhere in the form of horizontal layers. They show a karstic structure with a



melting gap. It is seen that limestones contain silica levels in some places. it has been observed that; during the carbonate deposition in the lacustrine area, hot SiO<sub>2</sub> and saturated solutions coming from the volcanic activity are effective from time to time. According to the characteristics of the fossils they contain, it is accepted that they were Pliocene aged in the old surveys.

Two drill holes with the depth of 5,00 m were opened in investigation area. Vegetable soil in the first 0.20 m of the ground and shale in the range of 0,20 m to 5,00 m are found in the drilling wells which are opened.

### **3.3. CLIMATE**

Manisa is under macroclimate Mediterranean climate conditions. The northern part of the province is located at the transition point of Mediterranean climate and continental climate. The average annual temperature is 16.8 °C, the warmest month is July with 34.4 °C and the coldest month is January with 3 °C. The average annual precipitation is 740 mm with a semi-arid character (Source: Manisa Nature Tourism Master Plan, 2013-2023i Republic of Turkey Forestry and Water Affairs Ministry General Directorate of Nature Conservation and National Parks IV Region Directorate).

### **3.4. HYDROLOGY and HYDROGEOLOGY**

Within the scope of the project, it is planned to establish and operate the Solar Power Plant (SPP) within the boundaries of the Parcel 2250, Soil Survey Report was prepared by Batı Jeofizik Inc. for the purpose of revealing the general geological location and ground investigations of the region.

Two ground drillings, each of them 5,00 m deep, were done in the area of investigation. Underground water was not found in the drillings. According to the information gathered from the environment, the groundwater is about 40 m.

The dry stream is located approximately 15 m west of the project area and approximately 60 m to the east (see Appendix-2, 1/25.000 Scale Topographic Map). Since the project area is elevated as a level, it does not carry any underground or surface water potential.

In addition, there is Gediz River, which is located about 1 km west of the proposed project area. Demirköprü Dam and SPP is located about 4 km northeast of the project area for irrigation, flood control and energy production purposes (see Appendix-2, 1/25.000 Scaled Topographic Map).

### **3.5. PROTECTED SPECIES**

In the area investigations carried out in October 2016, it was observed that no construction activities were started in the area.

Flora and fauna elements, located and potentially located in the area where the activities will take place and its vicinity, are discussed separately in the sections 3.5.1 and 3.5.2.

### 3.5.1. Flora

In order to determine the flora of the project area and its surroundings it has benefited from various literature sources and floristic structure of the project area is given in detail in Table 3. The flora of the site searched in the TUBITAK Turkey Plant Database (TUBIVES) and flora table was organized according to this data.

Turkey, according to today's data, is the habitat of 12,000 different plants (Erik and Tarikahya, 2004:148-149). One of the most important features that separates the country from the other areas in the temperate zone is the plant diversity. The feature showed up with the contribution of Turkey's geographical characteristics to the diversity of plant communities, of 29 course, is closely related to be included into three flora regions. As is known, Turkey is represented by three flora regions; the Euro-Siberian, the Mediterranean and Iran-Turan flora regions (Avci, 1993).

The project area was examined with regard to Turkey Phytogeographic Regions and it was determined that the project area is within the Western Anatolia Sub-region of Mediterranean region.

Although the project area is dominated by the similar plant communities in Western Anatolia, Mediterranean coast but some of the major Mediterranean species like Taurus fir (*Abies cilcica*) and Lebanese cedar (*Cedrus libani*) disappear. Most of the endemic species in the Western Anatolia is located on mountainside like Nif, Spil and Boz Mountains.

In the Western and Central Taurus, coniferous forests formation consists of black pine at higher elevations (*Pinus nigra*), fir (*Abies cilcica*) and cedar (*Cedrus libani*) spreads. Below the 1000-1200 meters the pine (*Pinus brutia*) and scrub in their destruction fields formations dominate. Gariga communities cover the most places where the scrub formation is deteriorated.

Amanus Mountain is a very important area in terms of flora history besides its excess amount of rainfall and high relative humidity in the summer. The remarkable ones among the endemic species spread in this field are many different types like the Ajuga postie, Origanum Amanuma, Helleborus vesicarius and Vulfeni orientalis and the number of endemics in this mountainous area is more than 250. Except endemic species Amanus Mountain is attracted notice with its so many Euro-Siberian elements like badgers (*Taxus baccata*), beech (*Fagus orientalis*), boxwood (*Buxus sempervirens*), holly (*Ilex aquifolium*), laurel (*Laurocerasus officinalis*) and tall gator (*Smilax excelsa*).

Due to the presence of relict plants and the diversity of vegetation of the Amanos Mountain, it is also stated that a migration route in the Pleistocene (Avci, 1993; Çakan and Byfield, 2005: 256).

In the conducted terrain studies, it was observed that no construction activities were started in the area. Also, there is no agricultural activity in the current situation in the project area with parcel numbered 2250, and the land is in an empty state. There are grassy species in the current situation and no tree community has been found in the area. However, in the vicinity of the project area, there are vineyards in the north; olive agriculture in the northeast and east; and fruit gardens in the south (pomegranate, apricot etc.). Some parts of the mentioned agricultural lands are located within the Attalos Farm boundaries belonging to the

investor. Despite the planted area is around the project area, the parcel numbered 2250, which is not suitable for cultivation, is reserved for solar energy investments.

For this reason, mentioned species are included in Table 3, where the area of activity and the flora of the nearby environment are addressed.

In Table 3 that shows the flora inventory species list, family type, widely used Turkish name, distribution in Turkey, endemism category and conservation status according to the RDB (Red Data Book) are explained.

Flora list likely to be found in the project area has been analyzed according to the "Turkey Plant Red Data Book (RDB)" and according to the literature it is predicted that there are no plant species protected by endemic plant in the area.

There has not been observed any kind of protected species due to the Berne Convention in the area where the activities are performed in.

**Table 3.** Flora Elements Found or can be Possibly Found in the Project Area and Its Surroundings.

| SPECIE NAME                                                                  | TURKISH NAME | HABITAT                                                                | ENDEMISM | RDB | DISTRIBUTION IN TURKEY                       |
|------------------------------------------------------------------------------|--------------|------------------------------------------------------------------------|----------|-----|----------------------------------------------|
| <b>APIACEAE</b>                                                              |              |                                                                        |          |     |                                              |
| <i>Eryngium campestre</i> L. var. <i>campestre</i> (L.) HUDSON               | Tengel Diken | Forest Clearance, Stoned Hillside, Degraded Step, Fallow Fields, Dunes | -        | -   | NW. and W. of Turkey                         |
| <b>ASTERACEAE</b>                                                            |              |                                                                        |          |     |                                              |
| <i>Anthemis auriculata</i> BOISS.                                            | -            | Field, Limestone Slope, Pinus Forest                                   | -        | -   | W. Turkey                                    |
| <i>Anthemis austriaca</i> JACQ.                                              | -            | Step, Fallow Field, Road side                                          | -        | -   | Turkey (except N. Anatolia)                  |
| <i>Carduus pycnocephalus</i> L. subsp. <i>pycnocephalus</i> L.               | -            | Rocky Limestone Slope, Field Edge, Empty Area                          | -        | -   | NW. Turkey, W. Anatolia, S. Anatolia         |
| <i>Carthamus lanatus</i> L.                                                  | -            | Arid Slopes, Empty Area, Fallow Field                                  | -        | -   | Turkey                                       |
| <i>Senecio vernalis</i> WALDST. ET KIT.                                      | -            | Sandy And Empty Areas, Field, Rocky Slope                              | -        | -   | Turkey                                       |
| <b>CONVOLVULACEAE</b>                                                        |              |                                                                        |          |     |                                              |
| <i>Convolvulus betonicifolius</i> MILLER subsp. <i>betonicifolius</i> MILLER | -            | Fallow & Veiled Fields, Road Edges, Dry Ditches                        | -        | -   | Turkey (except NE. and SW. Anatolia)         |
| <b>OLEACEAE</b>                                                              |              |                                                                        |          |     |                                              |
| <i>Olea europaea</i> L. var. <i>europaea</i> L.                              | Zeytin       | Culture                                                                | -        | -   | Outer Anatolia, E. Anatolia (W. Mesopotamia) |
| <b>PUNICACEAE</b>                                                            |              |                                                                        |          |     |                                              |
| <i>Punica granatum</i> L.                                                    | Nar          | Calcareous slopes, bushes                                              | -        | -   | N., W. and SE. Anatolia                      |
| <b>ROSACEAE</b>                                                              |              |                                                                        |          |     |                                              |
| <i>Prunus x domestica</i> L.                                                 | Kayısı       | Hills, mountain                                                        | -        | -   | Turkey                                       |

| SPECIE NAME                                                                                                | TURKISH NAME         | HABITAT                                                      | ENDEMISM | RDB | DISTRIBUTION IN TURKEY        |
|------------------------------------------------------------------------------------------------------------|----------------------|--------------------------------------------------------------|----------|-----|-------------------------------|
|                                                                                                            |                      | slopes, fieldside, roadside                                  |          |     |                               |
| <b>SCROPHULARIACEAE</b>                                                                                    |                      |                                                              |          |     |                               |
| <i>Verbascum glomeratum</i> BOISS.                                                                         | Kümensi Sığirkuyruğu | Quercus Shrub, Pinus Forests, Steppe, Limestone Rocks, Ruins | -        | -   | Anatolia (except E. Anatolia) |
| <b>VITACEAE</b>                                                                                            |                      |                                                              |          |     |                               |
| <i>Vitis vinifera</i> L.                                                                                   | Üzüm                 | Cultivar vineyards                                           | -        | -   | Turkey                        |
| RDB: Red Data Book<br>N: North, S: South, E: East, W: West, NE: North-East, NW: North-West, SE: South-East |                      |                                                              |          |     |                               |

There was not come across any endemic among flora species present or possibly present in the project area. The flora elements which are present or possibly present are the species have a countrywide distribution area. For this reason, it is foreseen that no adverse impact that originated from the activity will occur on the biodiversity.

### 3.5.2. Fauna

While a list of fauna in the activity area and its surroundings was prepared, vertebrate fauna was basically studied under 4 classes. These classes are listed in Table 4 as mphibians, reptiles, birds and mammals.

When amphibians and reptiles were examined it has been benefited from Ibrahim Baran's book named as "Amphibians and Reptiles of Turkey" in addition to literature has benefited considering the habitat and topography.

For identification of bird species it has been benefited from Lars Svensson's "Collins Bird Guide", "Turkey Birds" (Kiziroğlu, 1989) and Hermann Heinzel, Richard Fitter, John Parslow's "Turkey and the European Birds". Activity area consists of bird fauna and the bird species found or can be possibly found there. Some bird species protected by national and international legislation and some bird species identified around the project area are classified according to Red Data Book categories.

Amphibian, reptile, bird and mammal of the vertebrate species found or can be possibly found in the project area are given in Table 4 and each species has been analyzed according to "IUCN Category", "2016-2017 Hunting Season Central Hunting Commission Decisions" and "Berne Convention".

**Table 4.** Fauna Elements Found or can be Possibly Found in the Project Area and Its Surroundings

| SPECIE NAME             | TURKISH NAME       | IUCN | BERN        | MAK 2016-2017 |
|-------------------------|--------------------|------|-------------|---------------|
| <b>AMPHIBIA SPECIES</b> |                    |      |             |               |
| <b>BUFONIDAE</b>        |                    |      |             |               |
| <i>Bufo viridis</i>     | Gece Kurbağası     | LC   | Appendix-II | -             |
| <b>REPTILIA SPECIES</b> |                    |      |             |               |
| <b>LACERTIDAE</b>       |                    |      |             |               |
| <i>Ophisops elegans</i> | Tarla Kertenkelesi | LC   | Appendix-II | -             |
| <b>AVES SPECIES</b>     |                    |      |             |               |
| <b>COLUBRIDAE</b>       |                    |      |             |               |

| SPECIE NAME               | TURKISH NAME   | IUCN | BERN         | MAK<br>2016-2017 |
|---------------------------|----------------|------|--------------|------------------|
| <i>Eirenis modestus</i>   | Uysal Yılan    | LC   | Appendix-III | -                |
| <b>AVES SPECIES</b>       |                |      |              |                  |
| <b>COLUMBIFORMES</b>      |                |      |              |                  |
| <b>COLUMBIDAE</b>         |                |      |              |                  |
| <i>Columba livia</i>      | Kaya Güvercini | LC   | Appendix-III | Appendix-II      |
| <b>PASSERIFORMES</b>      |                |      |              |                  |
| <b>CORVIDAE</b>           |                |      |              |                  |
| <i>Corvus frugilegus</i>  | Ekin Kargası   | LC   | -            | Appendix-II      |
| <i>Pica pica</i>          | Saksağan       | LC   | -            | Appendix-II      |
| <b>STURNIDAE</b>          |                |      |              |                  |
| <i>Sturnus vulgaris</i>   | Sığırcık       | LC   | -            | Appendix-I       |
| <b>PASSERIDAE</b>         |                |      |              |                  |
| <i>Passer domesticus</i>  | Serçe          | LC   | -            | Appendix-II      |
| <b>MAMMALIA SPECIES</b>   |                |      |              |                  |
| <b>ERINACEIDAE</b>        |                |      |              |                  |
| <i>Erinaceus concolor</i> | Kirpi          | LC   | -            | -                |
| <b>DIPODIDAE</b>          |                |      |              |                  |
| <i>Rattus norvegicus</i>  | Göçmen Sıçan   | LC   | -            | -                |
| <b>GLIRIDAE</b>           |                |      |              |                  |
| <i>Dryomys nitedula</i>   | Hasancık       | LC   | Appendix-III | -                |

There was not come across any endemic among fauna species present or possibly present in the project area. The fauna elements which are present or possibly present are the species have a countrywide distribution area. For this reason, it is foreseen that no adverse impact that originated from the activity will occur on the biodiversity.

## **4. SOCIAL SITUATION**

### **4.1. METHODOLOGY FOR BASIC DATA COLLECTION**

Information meeting conducted on November 25<sup>th</sup>, 2016 in the Adala District which is covers the boundries of the project area. In this context, meetings were held with the local people and Headman of Adala. In the meeting, the contributions of the proposed project was explained and questions of local people were answered at the end of the meetings.

Explanations of public participation and public information is provided in Section 6.6.

### **4.2. DEMOGRAPHY**

As a result of the interviews with the Headman of Adala District, it was learned that the population of 450-500 households in Adala District is about 2500 people.

According to TURKSTAT 2015 population data, the population is 2.072 people at Adala District; Salihli, Manisa.

### **4.3. LIVELIHOOD AND EMPLOYMENT**

Agriculture and animal husbandry are the main sources of income for the population living in Adala District. Local community mostly deal with the cultivation of grapes, olives, tomatoes, peppers and fruits (pomegranate, apricot, watermelon, etc.).

Apart from that, poultry and livestock activities are being carried out on a small scale in the region and livestock activity (egg, milk production, etc.) is carried out largely in order to meet their own needs.

### **4.4. INFRASTRUCTURE AND TRANSPORTATION**

Adala District is easily accessible by using the Salihli-Simav Road (D585). The project area can be reached via the existing stable road which is separated from the Salihli-Simav Road (See Figure 7).

Water supply and sewage network is available in the area. There are garbage containers at certain points and they are collected by waste collection vehicles belonging to Salihli Municipality.

There are 1 family health center and schools in primary, secondary and high school level in Adala District. Electricity is available in the district, also wood and coal are used for heating purposes.

## 5. ENVIRONMENTAL IMPACTS

Within the scope of the project, land preparation and construction period and operation period will be discussed. There will be 25 people working on the land preparation and construction period of the project. During the operation period, there will be no permanent staff except for the guard, and it is planned that 10 people will take part in the maintenance-repair works to be performed in certain periods and/or in case of breakdowns. Detailed information about waste is given in section 5.2. and 5.3.

### 5.1. EXPROPRIATION

Land title of the proposed project area with parcel numbered 2250 belongs to Agrolive Agriculture, Livestock, Tourism, Food Industry and Trade Inc. (See Appendix-3, Photocopy of Land Certificate) and MBK Energy Tourism Industry and Trade Inc. rent the project area (See Appendix-4, Rental Contract). For this reason, no expropriation will be done within the scope of the project.

### 5.2. CONSTRUCTION PERIOD IMPACTS

The duration of the construction will be approximately 120 days and it is observed that no construction activities have been started in the area.

Measures to be taken against the environmental impacts that will occur during construction period for the project described below in the context of the worst case scenario under the titles of solid wastes, liquid wastes, air emissions, noise, excavation, natural resource consumption, etc.

Within the scope of the project, land preparation and construction period and operation period will be mentioned. It is planned that 25 people will take part in the preparation and construction period of the project.

Possible wastes that may have formed from the project were evaluated within the scope of the "Waste Management Regulation" published in the Official Gazette dated 02.04.2015 and numbered 29314 and are given in Table 5 together with waste codes.

**Table 5.** Possible Waste Occurred During Construction Period of the Project and Waste Codes

| CODE         | WASTE TYPE                                                                                                                                 |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| <b>13 02</b> | <b>Waste Engine, Transmission and Lubrication Oils</b>                                                                                     |
| 13 02 08*    | Other Waste Engine, Transmission and Lubrication Oils                                                                                      |
| <b>15 01</b> | <b>Packaging (Included Separately Collected Packaging Waste by the Municipality)</b>                                                       |
| 15 01 01     | Paper and Cardboard Packaging                                                                                                              |
| 15 01 02     | Plastic Packaging                                                                                                                          |
| 15 01 03     | Wood Packaging                                                                                                                             |
| 15 01 04     | Metallic Packaging                                                                                                                         |
| 15 01 05     | Composite Packaging                                                                                                                        |
| 15 01 06     | Mixed Packaging                                                                                                                            |
| 15 01 07     | Glass Packaging                                                                                                                            |
| <b>15 02</b> | <b>Absorbents, Filter Materials, Cleaning Cloths and Protective Clothing</b>                                                               |
| 15 02 02*    | Dangerous Goods Contaminated Absorbents, Filter Materials (Oil Filters Unless Defined in Other Ways), Cleaning Cloths, Protective Clothing |
| 15.02.03     | Absorbents, Filter Materials, Cleaning Cloths, Protective Clothing except 15 02 02                                                         |
| <b>16 01</b> | <b>End-of-Life Vehicles in Various Transport Types (including Working Machines) and</b>                                                    |

| CODE         | WASTE TYPE                                                                                                                                            |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | <b>Waste from Vehicle Maintenance and Dissemble of End-of-Life Vehicles</b>                                                                           |
| 16 01 03     | End-of-Life Tires                                                                                                                                     |
| 16 01 07*    | Oil Filters                                                                                                                                           |
| <b>16 06</b> | <b>Batteries and Accumulators</b>                                                                                                                     |
| 16 06 02*    | Nickel Cadmium Batteries                                                                                                                              |
| 16 06 04*    | Alkaline Batteries (Except 16 06 03)                                                                                                                  |
| 16 06 05*    | Other Batteries and Accumulators                                                                                                                      |
| <b>17.01</b> | <b>Concrete, Brick, Tile and Ceramic</b>                                                                                                              |
| 17.01.01     | Concrete                                                                                                                                              |
| 17.01.07     | Concrete, Brick Tiles and Ceramic Mixtures Or Separated Groups except 17 01 06                                                                        |
| <b>17.02</b> | <b>Wood, Glass and Plastic</b>                                                                                                                        |
| 17.02.01     | Wood                                                                                                                                                  |
| 17.02.02     | Glass                                                                                                                                                 |
| 17.02.03     | Plastic                                                                                                                                               |
| <b>18 01</b> | <b>Wastes from Birth, Diagnosis, Treatment or Disease Prevention Studies in Humans</b>                                                                |
| 18 01 04     | Wastes to Eliminate Infection that are Not Subjected to Special Processing and Treatment (eg Bundles, Body Bodies, Disposable Clothing, Lower Glands) |
| <b>20 01</b> | <b>Separate Collection Fractions (Except 15 01)</b>                                                                                                   |
| 20.01.01     | Paper and Cardboard                                                                                                                                   |
| 20 01 08     | Biodegradable Kitchen and Canteen Wastes (Domestic Waste)                                                                                             |
| 20 01 21*    | Fluorescent Lamps and Other Mercury-Containing Wastes                                                                                                 |
| 20 01 26*    | Liquid and Solid Oils except 20 01 25                                                                                                                 |
| 20 01 33*    | Battery and Accumulators under the 16 06 01, 16 06 02 or 16 06 03, and Unclassified Mixed Batteries and Accumulators Including These Batteries        |

\* Wastes with an asterisk (\*) next to the six-digit waste code are hazardous waste.

Types, quantities and disposal methods of wastes which are likely to occur during land preparation and construction period and operational period are detailed in the following subheadings:

### ***Domestic Solid Waste***

Domestic solid waste will be originated from the personnel who will work in the field preparation and construction period of the project. 25 workers are planned to be employed for the preparation and construction period of the project. The amount of domestic solid waste produced per person per day is calculated by using the 1.25 kg/person-day value. (Source: [www.tuik.gov.tr](http://www.tuik.gov.tr), Turkish Statistical Institute, Municipality Waste Statistics, Manisa, 2014 Yearbooks).

|                         |                                                        |
|-------------------------|--------------------------------------------------------|
| Number of Employees     | : 25 people                                            |
| Unit Solid Waste Amount | : 1,25 kg/person-day                                   |
| Solid Waste Amount      | : 25 people x 1,25 kg/person-day = <b>31,25 kg/day</b> |

Within the scope of the land preparation and construction works to be carried out within the project, **31,25 kg/day** domestic solid waste will be originating from 25 personnel. Domestic solid wastes will have organic wastes such as food waste.

Domestic solid wastes that are generated during the land preparation and construction period of the project will be accumulated in the leak-proof containers that will be placed on the construction site area and then collected by Salihli Municipality's waste collection vehicles.



### ***Vegetable Soil***

Excavation activities will be carried out at the preparation and construction period of the project, where cable ducts and panel posts are struck. Since the project area is vacant land, vegetable soil will not come as a result of the excavation activities due to the fact that there is no agricultural activity in the area and natural vegetal cover is not found.

In the case of vegetable soil formation in the scope of the project, besides the excavated areas, the excavation will be temporarily stored separately from the materials and will be used again in the field regeneration works after excavation and filling works.

### ***Excavation Material (Excavation Soil)***

During the preparation and construction period of the project, excavation activities will be carried out in area where cable channels and panel poles are struck, and excavation materials will be generated from the excavation works.

The excavation material that may generate during the preparation and construction period of the project will be stored temporarily near the excavated areas and relevant excavation materials will be reused for backfilling purposes after the placement of the cables and poles. Excess excavation material that cannot be reused can be removed from the area by moving to excavation material area and/or to municipal dumping areas.

### ***Packaging Waste***

25 workers are planned to be employed during the preparation and construction period of the project. The amount of domestic solid waste produced per person per day is calculated by using the 1.25 kg/person-day value and total solid waste amount is calculated as 31,25 kg/day. In this case, packaging wastes are calculated as follows using 15% value (Source: [www.tuik.gov.tr](http://www.tuik.gov.tr), Turkish Statistical Institute, Municipality Waste Statistics, Manisa, 2014 Yearbooks).

$$\begin{aligned}\text{Packaging Waste Amount} &= \text{Solid Waste Amount} \times 15/100 \\ &= 31,25 \text{ kg/day} \times 0,15 \\ &= \mathbf{4,69 \text{ kg/day}}\end{aligned}$$

It is predicted that the amount of packaging waste to be generated in the land preparation and construction period of the project will be approximately **6,00 kg/day** when the wastes of other non-domestic materials are added to the calculated value.

The packaging waste that will be generated during the land preparation and construction period of the project will be collected separately from the other wastes within the project area and will be disposed to the licensed facilities.

### ***Waste Battery and Accumulators***

Wastes that can be generated during the land preparation and construction period of the project can be classified as waste accumulators, waste accumulators of used equipment and vehicles and waste batteries coming from used portable radios and light sources. Battery replacement of the vehicles will be performed in places where the infrastructure for these

works is sufficient and will be taken by the vehicle maintenance and repair offices.

The amount of waste batteries to be generated during land preparation and construction period is estimated as approximately **0,10 kg/day**.

Waste batteries and accumulators which are formed in the land preparation period of the project shall be disposed separately from the domestic wastes in the waste collection area to be constructed within the project area. These wastes shall be stored temporarily on the concrete and covered areas in containers which interior and exterior surfaces corrosion resistant and have "Waste Battery Temporary Storage" caption on both surfaces.

### ***Hazardous Waste***

It is envisaged that the relevant project will produce about **1.00 kg/day** of hazardous wastes such as contaminated absorbents, filter materials, cleaning cloths, personnel work clothes (coats, trousers, shoes), gloves and masks which will be formed during the land preparation and construction period.

Hazardous wastes that may occur during construction and construction period of the project shall be stored temporarily in durable, leak proof, safe and internationally accepted containers placed on the closed concrete site within the project area. There shall be a hazardous waste expression on the containers and shall store temporarily so as not to react any chemicals. These wastes will be sent to the closest licensed hazardous waste recycling facility or licensed hazardous waste disposal facility. The report prepared for the delivery of the wastes to the licensed company will be kept for inspection.

### ***Waste Oil***

Waste oil that may occur during construction works of the project is limited to the waste motor oil of the equipment used. The daily, weekly, regular maintenance and oil changes of the vehicles and machinery used in the construction period will be carried out by an authorized service at outside of the project area.

However, if the oil of the vehicles and work machines need to be changed in the project area, it is predicted that about **5,00 lt/day** of waste oil will be generated at the stage to be installed in the project area.

Possible waste oils from the preparation and construction period of the project will be collected in tanks/containers with an indicator that has a prevention arrangement of overfilling placed on the impermeable area. Then, these wastes will be disposed by sending to licensed facilities.

### ***Waste Vegetable Oils***

Since cooking will not done at the area in the preparation and construction period of the relevant project, the vegetable waste oil will not be generated in the project area as the food needs of the 25 staff will be met by purchasing from the outside.

However, it is predicted that about **2,50 lt/day** waste vegetable oil will be produced if the food needs of the personnel to be worked on should be met on the project area.

In the event of waste vegetable oil being generated, it will be collected in closed vessels separately from other wastes and collected in licensed collection facilities by licensed collecting vehicles that will be collected periodically and sent to licensed disposal facilities.

### ***Medical Waste***

In case of event encountered during the construction period of the project and requires immediate medical attention, it is possible that some medical waste will occur because of first aid done to the staff.

Within this scope, it is predicted that 1 gram/day-employee medical waste will be formed. According to this situation, the total amount of medical waste that can be generated from the total of 25 personnel who will work in the field preparation and construction period of the project;

$$25 \text{ employee} \times 1 \text{ gram/day-employee} = 25 \text{ gram/day} = \mathbf{0,025 \text{ kg/day}}.$$

Possible medical wastes that may be generated during the field preparation and operation period of the project will be collected on the parcel boundaries, resistant to tearing, puncturing, explosion and transport, in red plastic bags with "International Biohazard" emblem and "CAUTION MEDICAL WASTE" emblem and their disposal will be provided by sending them to licensed facilities.

### ***End-of-Life Tire***

The tires of the vehicles and heavy construction equipment used in the construction period will be replaced by authorized service and there will be no waste tires in the project area.

However, if it is necessary to change the tires of the vehicle and work equipment in the project site, it is anticipated that a tire with a life span of approximately **240,00 kg/month** is completed.

If waste tire is formed within the scope of the project, it will be temporarily stored in the prefabricated construction site to be built within the boundaries of the parcel and will be disposed through the licensed company.

### ***Dust Emission***

Excavation activities will be carried out at the locations where the cable channels and panel posts of the project are prepared and constructed during the construction period. Therefore, the excavation, loading, unloading and storage activities to be carried out and the movements of the vehicles in the field may result in dust emissions.

#### **Precautions to Reduce Dust Emission**

- Care will be given to loading and unloading without blowing about
- Surplus excavation materials on the truck will cover with canvas when transporting it.
- Irrigation/spraying activities will be done with the water-tenders on the land according to the seasonal conditions.

- Speed limit will be applied to the vehicles that will drive in the working area
- By spraying on the stored material, moisture content is kept at a level that prevents dusting
- The personnel will be trained and informed on dust emission and its effects
- Selection of proper dust masks according to CE and EN standards will be done and masks will be given to employees. Similarly, occupational safety instructions on personal protective equipment will be given to employees and raise their awareness.

### ***Noise Level***

There will be some noise generation from the heavy construction equipment that will be used in the land preparation and construction period of the project. However, these works are not far-reaching and mechanical installations of the panels will be carried out by doing some excavation activities at the locations where the cable ducts and panel posts are struck. A small number of machines will be used for these operations and the land preparation and construction period will be completed by 4 months and will be put into operation period.

The fact that the project area is an open and wide area will ensure that the level of noise to be generated will be kept at the minimum level with certain effects such as noise is not constant but constant time intervals and variable.

Furthermore, since there is no settlement around the project area, it will not be possible to influence the closest settlement units from the noise level to be generated.

### ***Precautions to Reduce Noise Level***

- Land preparation and construction works to be carried out within the scope of the project will be realized within the daytime time zone.
- The heavy construction equipment that cause noise will not be used unnecessarily.
- The daily, weekly and monthly maintenance of the working machines to be used will be performed regularly by authorized services.
- The personnel will be informed about the possible noise level and its effects by necessary training
- The related provisions of the "Occupational Health and Safety Regulation" which was published in the Official Gazette on 09.12.2003 with the number of 25311 will be complied with in all the works.
- Due to the noise coming from the project area; to protect the health of employees and to ensure the continuity of the activity, appropriate protective equipment such as ear buds or earplugs shall be provided.

## **5.3. OPERATION PERIOD IMPACTS**

The economic life of the activity is predicted to be 25 years. Mentioned project will not have permanent staff except for the guard at the operational stage and it is planned that approximately 10 people employed in maintenance and repair works to be performed in certain periods and/or in case of breakdowns.

### ***Domestic Solid Waste***

During the operation period of the project there will be no permanent personnel except for the guard and domestic solid wastes originating from personnel who will take part in maintenance-repair works to be performed in certain periods and/or in case of breakdowns may be formed. 10 people will be employed in the maintenance and repair works and the amount of domestic solid waste produced per person per day is calculated using 1.25 kg/person-day value (Source: [www.tuik.gov.tr](http://www.tuik.gov.tr), Turkish Statistical Institute, Municipality Waste Statistics, Manisa, 2014 Yearbooks).

Number of Employee : 10 people  
The Unit Solid Waste Amount : 1,25 kg/person-day  
Solid Waste Amount : 10 people x 1,25 kg/ person-day = **12,50 kg/day**

Within the scope of the operational works to be carried out within the project, **12,50 kg/day** domestic solid waste will be originating from 10 personnel. Domestic solid wastes will have organic wastes such as food waste.

Domestic solid wastes that are generated during operational period of the project will be accumulated in the leak-proof containers that will be placed on the construction site area and then collected by the Salihli Municipality's waste collection vehicles.

### ***Vegetable Soil***

There is no activity to generate vegetable soil during the operation period of the relevant project.

### ***Excavation Material (Excavation Soil)***

There is no activity to generate excavation material (excavation soil) during the operation period of the relevant project.

### ***Packaging Wastes***

10 workers are planned to be employed for the operational period of the project. The amount of domestic solid waste produced per person per day is calculated by using the 1.25 kg/person-day value and total solid waste amount is calculated as 12,50 kg/day. In this case, packaging wastes are calculated as follows using 15% value (Source: [www.tuik.gov.tr](http://www.tuik.gov.tr), Turkish Statistical Institute, Municipality Waste Statistics, Manisa, 2014 Yearbooks).

Packaging Waste Amount = Solid Waste Amount x 15/100  
= 12,50 kg/day x 0,15  
= **1,88 kg/day**

It is predicted that the amount of packaging waste to be generated in the operational period of the project will be approximately **3,00 kg/day** when the wastes of other non-domestic materials are added to the calculated value.

The packaging waste that will be generated during operational period of the project will be collected separately from the other wastes within the project area and will be disposed to



the licensed facilities.

### ***Waste Battery and Accumulators***

Wastes that can be generated during the operational period of the project can be classified as waste accumulators, waste accumulators of used equipment and vehicles and waste batteries coming from used portable radios and light sources. Battery replacement of the vehicles will be performed in places where the infrastructure for these works is sufficient and will be taken by the vehicle maintenance and repair offices.

The amount of waste batteries to be generated during operational period is estimated as approximately **0,10 kg/day**.

Waste batteries and accumulators which are formed in the operational period of the project shall be disposed separately from the domestic wastes in the waste collection area to be constructed within the project area. These wastes shall be stored temporarily on the concrete and covered areas in containers which interior and exterior surfaces corrosion resistant and have "Waste Battery Temporary Storage" caption on both surfaces. These wastes will be disposed at the licensed collection points that will be created by businesses or municipalities which distribute and sell battery products.

### ***Hazardous Wastes***

It is envisaged that the relevant project will produce about **1,00 kg/day** of hazardous wastes such as contaminated absorbents, filter materials, cleaning cloths, personnel work clothes (coats, trousers, shoes), gloves and masks which will be formed during the operational period.

Hazardous wastes that may occur during operational period of the project shall be stored temporarily in durable, leak proof, safe and internationally accepted containers placed on the closed concrete site within the project area. There shall be a hazardous waste expression on the containers and shall store temporarily so as not to react any chemicals. These wastes will be sent to the closest licensed hazardous waste recycling facility or licensed hazardous waste disposal facility. The report prepared for the delivery of the wastes to the licensed company will be kept for inspection.

### ***Waste Oil***

Waste oil that may occur during operational works of the project is limited to the waste motor oil of the equipment used. During the daily, weekly and monthly maintenance of used vehicles and machines and oil changes, authorized service stations will be used and waste oil will not be generated in the project area.

However, if the oil of the vehicles and work machines need to be changed in the project area, it is predicted that about **5,00 lt/day** of waste oil will be generated in the project area.

Possible waste oils from the operational period of the project will be collected in tanks/containers with an indicator that has a prevention arrangement of overfilling placed on the impermeable area. Then, these wastes will be disposed by sending to licensed facilities.

### ***Waste Vegetable Oils***

In maintenance-repair work to be carried out in certain periods and/or in case of failure in the operational period of the project, cooking will not be done at the area so the vegetable waste oil will not be generated in the project area as the food needs of the 10 staff will be met by purchasing from the outside.

In the event of waste vegetable oil being generated, it will be collected in closed vessels separately from other wastes and collected in licensed collection facilities by licensed collecting vehicles that will be collected periodically and sent to licensed disposal facilities.

### ***Medical Wastes***

In the case of any negativity encountered in the repair and maintenance work to be carried out in certain periods and/or any breakdown situations during the operational period of the project requires immediate medical attention, it is possible that some medical waste will occur because of first aid done to the staff.

Within this scope, it is predicted that 1 gram/day-employee medical waste will be formed. According to this situation, the total amount of medical waste that can be generated from the total of 10 personnel who will work in the field preparation and construction period of the project;

$$10 \text{ employee} \times 1 \text{ gram/day-employee} = 10 \text{ gram/day} = \mathbf{0,01 \text{ kg/day}}.$$

Possible medical wastes that may occur during the operational period of the project shall be collected and stored on the parcel borders in red plastic bags, which are resistant to tearing, puncture, explosion and transport, with "International Biohazard" emblem and "CAUTION MEDICAL WASTE" statement and then disposed through the licensed company.

### ***End-of-Life Tire***

In the case of maintenance-repair work to be carried out in certain periods and/or breakdown cases, the tires of the vehicles and heavy construction equipment will be replaced by authorized service and there will be no waste tires in the project area.

If waste tire is formed within the scope of the project, it will be temporarily stored in the boundaries of the parcel and will be disposed through the licensed company.

### ***Dust Emission***

There is no activity to generate dust emission during the operational period of the relevant project.

### ***Noise Level***

There is no activity to generate noise during the operational period of the relevant project.

### **5.3.1. Ecology and Biodiversity**

Due to the use of wide space in large-scale SPP, habitat loss and ecosystem change may happen. Therefore; in SPP projects, it should be shown ultimate attention that avoiding from the ecologically significant areas.

In this context, the project area has been analyzed and it was determined that the project area does not remain in the protected areas like national parks, nature parks, natural monuments, wildlife development areas, special environmental protection areas, gene conservation areas and so on.

It has been analyzed whether there are endemic species within flora and fauna found or possibly found in the project area. As a result, no endemic species were encountered in the field. The species present or possibly present in the area have a wide distribution throughout the country and are not among the species under the threat of extinction.

It is envisaged that there will be no any adverse effect on biodiversity due to the project activities.

### **5.3.2. Fauna**

There was not come across any endemic among the fauna species present or possibly present in the project area.

The assessment of species given in Table 4 fauna list were made according to the IUCN (Red List of Threatened Species) and it was determined that all the species are in the LC (Least Concern) species category.

Such an assessment is made for the mentioned species in accordance with the provisions of the Berne Convention. It was understood that 2 types are in Appendix II "Strictly Protected Fauna Species" category, 3 types are in Appendix III "Protected Fauna Species" category and the remaining 6 species are not involved any of the Appendixes.

According to the assessment of fauna elements based on the 2016-2017 Central Hunting Commission Decisions, it was determined that one species is in the list of Appendix-1 hunting animals protected by the Central Hunting Commission and 4 species are in the list of the Appendix-2 hunting animals allowed to hunt by Central Hunting Commission.

### **5.3.3. Flood Prevention and Drainage**

The dry stream is located approximately 15 m west of the project area and approximately 60 m to the east (see Appendix-2, 1/25.000 Scale Topographic Map). Since the project area is elevated as a level, it does not carry any underground or surface water potential.

In addition, there is Gediz River, which is located about 1 km west of the proposed project area. Demirköprü Dam and SPP is located about 4 km northeast of the project area for irrigation, flood control and energy production purposes (see Appendix-2, 1/25.000 Scaled Topographic Map).

Within the scope of the project, there is no risk of flooding and there is no need for any drainage work. If needed, drainage channels will be opened around the unit areas and the parcel.

#### **5.3.4. Deforestation and Erosion**

The land can be divided into 2 parts in terms of slope and soil structure. In the upper part has more steep slopes and stones. This part, which is located on the western side of the parcel is suffered from more erosion and the main material is came out to the surface. The less sloping lower part consists of the eastern and northern parts of the parcel. The stones is less and the depth is relatively higher in that parts. Erosion is also low due to low slope.

During landscape studies, the species that can be adapted to the vegetation cover of the region will be selected.

#### **5.3.5. Wastewater**

##### ***Domestic Wastewater Originated From Drinking and Potable Water of Personnel***

##### ***Land Preparation and Construction Stage***

25 people will be employed during the land preparation and construction period of the project. The average daily water consumption per capita is assumed 122 liters in the calculations (Source: [www.tuik.gov.tr](http://www.tuik.gov.tr), Turkish Statistical Institute Official Web Site, Municipal Wastewater Statistics, Manisa, 2014 Yearbooks).

$$\begin{aligned}\text{Potable Water Demand} &= \text{Person} \times \text{Ave. Water Consumption} = 25 \times 122 = \mathbf{3.050 \text{ lt/day}} \\ \text{Total Pollution Load} &= \text{Person} \times \text{Ave. Pollution Load} = 25 \times 54 = \mathbf{1.350 \text{ g BOD/day}}\end{aligned}$$

By assuming that 100% of the water used by the personnel will return as wastewater;

$$\begin{aligned}\text{Wastewater Amount} &= \text{Potable Water Demand} \times \text{Transition Percentage} \\ &= 3.050 \text{ lt/day} \times 1,0 \\ &= \mathbf{3.050 \text{ lt/day (3,05 m}^3\text{/day)}}\end{aligned}$$

Within the scope of construction works of the project, 25 people will work on the area and **3,05 m<sup>3</sup>/day** of wastewater will be generated.

Wastewater that will be generated as a result of domestic use (drinking and potable water) will contain physical and biological pollution.

##### ***Operational Stage***

10 people will be employed in maintenance-repair work to be carried out in certain periods and/or in case of failure in the operational stage of the project. The average daily water consumption per capita is assumed 122 liters in the calculations (Source: [www.tuik.gov.tr](http://www.tuik.gov.tr), Turkish Statistical Institute Official Web Site, Municipal Wastewater Statistics, Manisa, 2014 Yearbooks).

Potable Water Demand = Person x Ave. Water Consumption = 10 x 122 = **1,220 lt/day**  
Total Pollution Load = Person x Ave. Pollution Load = 10 x 54 = **540 g BOD/day**

By assuming that 100% of the water used by the personnel will return as waste water;

Wastewater Amount = Potable Water Demand x Transition Percentage  
= 1,220 lt/day x 1,0  
= **1,220 lt/day (1,22 m<sup>3</sup>/day).**

Within the scope of operational works of the project, 10 people will work on the area and **1,22 m<sup>3</sup>/day** of wastewater will be generated.

Wastewater that will be generated as a result of domestic use (drinking and potable water) will contain physical and biological pollution.

#### Disposal Method

Domestic wastewater that are generated in the land preparation and construction period of the project will be collected in a leak-proof septic tank which is installed around the construction site in accordance with the provisions of the Ministry of Health's "Regulation on Pits to be Used in Places Where Sewage Channel is not Possible" published in 1971. For the wastewater generated during the operational period, prefabricated toilet cabins ending with a leak-proof septic tank will be installed in the project area. When the septic tank used in land preparation and construction period and operational period is filled, Salihli Municipality water trucks will remove them from the area for a fee.

#### ***Wastewater Coming from Irrigation/Spraying Water to Prevent Dust***

##### Land Preparation and Construction Stage

In order to prevent the possible dust emissions from the excavation, loading, unloading and storage activities carried out during the land preparation and construction period and from the movements of the vehicles in the field; irrigation/spraying activities will be done with the water-tenders on the land according to the seasonal conditions.

##### Operational Stage

There is no activity to generate dust emission in the maintenance phase of the project during certain periods and/or in case of breakdown.

##### Disposal Method

Since the water used in the irrigation/spraying works for minimizing the dust that will be formed during the process of the preparation and construction period of the project will evaporate; any return as wastewater is expected.

### **5.3.6. Solid Wastes**

Possible solid wastes that form during the operation, land preparation and construction period of the proposed project are given in detailed in Section 5.2. and 5.3.



### **5.3.7. Soil Pollution Risks**

There is no risk of soil pollution in the proposed project. Against risks that may occur, necessary measures will be taken within the scope of The Soil Conservation and Land Use Law (numbered 5403) and related regulations and The Regulation on Soil Pollution Control and Point Sourced Contaminated Sites (dated 08.06.2010 and No. 27605, Official Gazette).

### **5.3.8. Topographic and Visual Impacts**

Severe erosion is present on the parcels, composed soil is carried by wind and water and causes the rocks to rise to the surface.

The surface of the parcel area is cleaned, lightly leveled and flattened in the current situation. For this reason, the surface looks like a smooth farming area.

## **5.4. OCCUPATIONAL HEALTH & SAFETY**

During the construction of the units there will be dangerous situations in terms of moving equipment. Therefore, the necessary studies and organizations will be made on occupational safety and health matters during construction. For security and efficient operation of all units of the facility maintenance and repair work will be done. There will be no any impact and damage of the maintenance and repair works to the existing infrastructure.

In an emergency situation caused by an accident that will be possible to communicate by telephone with the nearest health institution for needed help. Day and night security guard will be available. The required training will be given to the guard on how to establish the necessary contacts in the phone and do the necessary first aid in the case of emergency situations like sabotage, explosions, natural disasters, accidents, fire and civil defense measures and functions.

The electrical system will be controlled by the RCCBs (residual current circuit reaker) in the Master Control Center and in case of even a small amount of current leakage in the system the electrical power of the entire system will be interrupted immediately. There will be rubber protectors in the places where the workers work and current entry boards located.

All kinds of equipment and materials required for firefighting will be present and the staff working in the facility will be educated about measures to be taken prior to fire and what to do in case of a fire. First aid, rescue and extinguishers teams will be created to fight against possible fire and the required training will be given to them. The fire extinguishing equipment maintenance will be made periodically.

In all kinds of action for required environmental safety will be taken in the site and the required warning signs will be put around the entire field. The staff will be educated about the work and safety rules and they will be forced to obey the safety rules in order to prevent accidents at work. There will be adequate lighting in work and construction areas.

The area for the excess excavation materials will be closed to entry except allowed personnel and warning signs will be placed.

"Occupational Health and Safety Regulation on Construction Works" (dated 12.09.1974 and No. 15004, Official Gazette) shall apply for the measures to be taken against accidents that may occur in field operations during the construction of the facility. Under this statute, the materials used in construction works will have sufficient quality and durability and protection caps (hard hats) will be given to workers, the environment of the project area will be restricted accordingly and the warning signs will be placed in these limits visibly. All entry to the study area will be denied except officers. Despite the measures have been taken, the necessary first aid supplies against possible accidents will be in the site building and vehicles shall be ready during work hours to take the casualties to the nearest health facility. During the construction phase of the facility workers will be kept a close watch on and in order to give the necessary education in facility there will be occupational physicians and occupational health specialists.

Protective equipment will be delivered to all employees will work in operation phase and their use will be ensured. Other measures will also be taken in accordance with the provisions of "Occupational Health and Occupational Safety Regulations" and "Assessment and Management of Environmental Noise Regulations". Sufficient number of fire extinguisher tube will be available on the project area.

In order to avoid a negative impact of noise on the surrounding in construction and operation phase, noise generating activities will be limited during day time, 07: 00-19: 00, determined in Assessment and Management of Environmental Noise Regulations.

All necessary measures to keep the noise at a minimum level during all activities related to the project will be taken. It shall be complied with the General Hygiene Law (No. 1593), Labor Law (No. 1487) and all related regulations during the construction and operation activities of the project.

When it is deemed necessary during the land preparation and construction period, it shall be complied with legislation relating to occupational health and safety and employees use appropriate anti-noise protective tools such as special hats, headphones or ear buds equipment will be checked.

## **6. SOCIAL IMPACTS**

### **6.1. EXPROPRIATION**

Land title of the proposed project area with parcel numbered 2250 belongs to Agrolive Agriculture, Livestock, Tourism, Food Industry and Trade Inc. (See Appendix-3, Photocopy of Land Certificate) and MBK Energy Tourism Industry and Trade Inc. rent the project area (See Appendix-4, Rental Contract).

### **6.2. LAND DEGREDDATION AND NATURAL RESOURCES**

As a result of the inspection carried out by the Governorship of the Provincial Directorate of Food, Agriculture and Livestock in relation to the class application for the Solar Power Plant planned to be established in the relevant areas; it is stated that parcel numbered 2250 falls into the classification of "**Dry Marginal Agricultural Land**" (DAL). In accordance with Council Decision numbered 114/3: It is stated that the governorship is seen the request for the construction of "Solar Power Plant" as appropriate under the conditions that taking measures to prevent damage to the environment and the agricultural activities carried out in the region, and observance of the points indicated by the 2nd Regional Directorate of State Hydraulic Works dated 24.06.2014 and numbered 54495999-754-390543-149 of the opinion articles. (See Appendix-7, Opinion Article dated 08.07.2014 and numbered 8057 of Republic of Turkey Manisa Governorate Province Food, Agriculture and Livestock Directorate).

Currently there is no agricultural activity in planned project parcels. There is no fertile land cover on the parcels for the mentioned project.

Because of the given reasons given above, loss of land and natural resources will be at an ignorable level.

### **6.3. HEALTH RISKS**

The proposed project will not have any negative effect on the local population's health because renewable energy sourced power generation is concerned.

### **6.4. ECONOMIC IMPACTS**

With the proposed project, regional employment will be provided, the roads of the project area will be improved and economic results will be obtained, such as increasing the efficiency of the electricity in the regional districts and decreasing the power cuts to a minimum level.

The project area can be reached by the existing stabilized road, which is approximately 1,00 km, separated from Salihli-Simav Road (D-585) (See Figure 7). New road construction will not be the subject of the activity. Improvements have been made on the existing 1,00 km road.

## **6.5. PUBLIC DISTURBANCE**

Dust and noise emissions may occur from the excavation works carried out at the locations where the cable channels and panel posts of the project are constructed in the field preparation and construction period.

Since there is no settlement around the project area, closest settlements will not be influenced from dust emission and noise level. However, the precautions to be taken to reduce emissions in order to reduce the potential effects to a minimum level are mentioned in Chapter 5.2.

There is no activity to generate dust and noise during the operation period of the relevant project.

## **6.6. PUBLIC PARTICIPATION AND CONSULTATION**

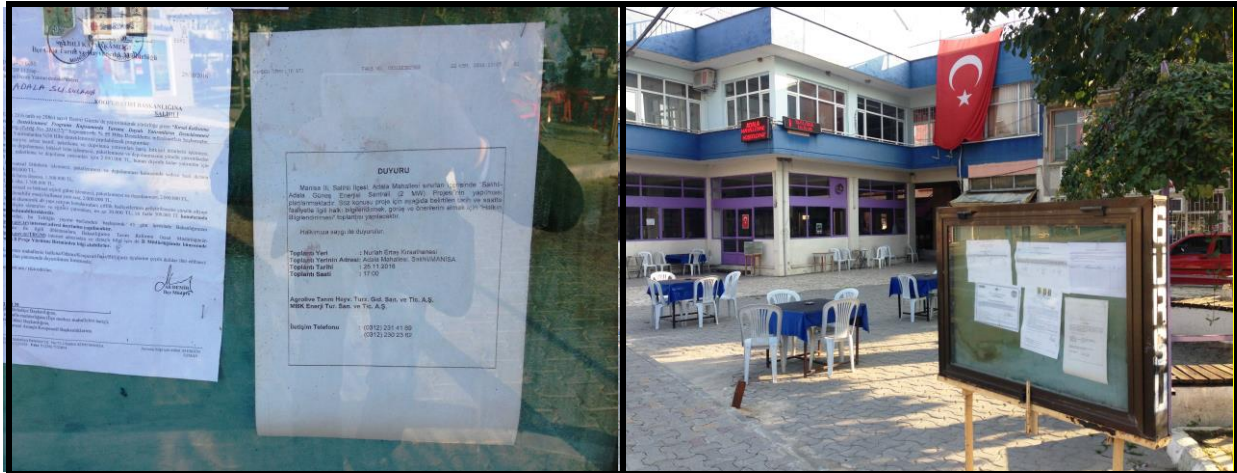
As regards to the project, the Adala District Headman and the local community were informed at "Nurlah Ertas Coffee House, Adala District, Salihli/MANİSA" at 17:00 on 25.11.2016 (See Figure 31).

Announcements related to the meeting were announced on the notice board of the Headman office between 22.11.2016-25.11.2016 (See Figure 32). Announcement report is given in Appendix-9 and Participant List is given in Appendix-10.

Environmental, economic and social benefits of the proposed project were explained in terms of the region; information about the related activities and environmental effects were represented; opinions and recommendations of the local people were taken and the questions of local people were answered.



**Figure 31.** Overview from Public Information Meeting



**Figure 32.** Meeting Text which is Announced in Billboard at Office of Headman

Some of the local people have a general concern about the activity whether the project will cause any adverse effect on the agricultural areas in the immediate vicinity or not. In this regard, the benefits of solar energy, clean energy, its installation and operation periods, and its technology has been mentioned and the meeting has been completed smoothly.



## **6.7. GRIEVANCE MECHANISM**

Complaints and suggestion forms will be put in the guard shack and headmen office at the planned facility and the requests, suggestions and complaints which is came from local people will be recorded. Recorded requests, suggestions and complaints will be answered within 2-3 weeks by the responsible personnel.

## **7. CUMULATIVE IMPACT ASSESSMENT**

### **7.1. GEOGRAPHICAL SCOPE OF POSSIBLE CUMULATIVE IMPACTS**

Salihli, Adala SPP Project consists of 2 projects each of which has 0.999 MW installed power. It is planned to be established and operated by Agrolive Agriculture, Livestock, Tourism, Food Industry and Trade Inc. and MBK Energy Tourism Industry and Trade Inc. on parcel 2250. Project Layout is given in Figure 8.

The nearest residential unit to the area where Salihli-Adala SPP Project is to be established is households located approximately 180 m to the southwest linked to Adala district, Salihli, Manisa. Rural settlements have a small number of population, and when considering the distance to the project site, these rural settlements are located at a safe and sufficient distance, and no adverse impact is expected on the rural settlements as a result of the project.

In accordance with Article 1, (3) of The Law, which is numbered as 6360, on the Amendment of Certain Laws and Legislative Decrees With the Establishment of Metropolitan Municipality and the Twenty Seven Province in the Fourteen State, the village legal entity was abolished and the villages participated in the municipality of the district where they were affiliated with as district. For this reason, according to this law Adala settlements are rural settlements converted into district status.

The closest settlements are the residences linked to the Adala District, which is approximately 180 m southeast of the project area. There are vineyards in the north of the project area, olive agriculture in the west, northeast and east of the project area, and fruit gardens in the south (pomegranate, apricot etc.)

In addition, Attalos Farm is located approximately 240 m in the east, olive oil factory is located approximately 230 m in the west and industrial zone is located approximately 120 m in the southwest of the project area (See Figure 7, 24, 25, 26, 27).

Use of solar energy technologies has significant socio-economic benefits such as providing diversity and reliability in energy supply, providing important business opportunities, supporting restructuring in the energy market, reducing imported fuel dependency, and accelerating the electrification of rural communities living in outside and isolated places.

The potential effects of mentioned projects are depended on the size, nature and location of the project as well as limited to the construction stage. Techniques and technologies which are used to eliminate or minimize potential environmental effects of solar energy technologies cover air emissions at construction stage, design tools for optimal design installation and construction place, best available practice guides, advanced equipment parts and a completely new design. Natural vegetation and habitat of the area where the system will be installed and a settlement integrated with the area without damaging is very important. It is also essential that the emissions from the equipment used in the system (gas, dust, noise) are kept under control.

Excavation activities will be carried out at the locations where the cable channels and panel posts are struck in the land preparation and construction period of the project. The excavation, loading, unloading and storage activities to be carried out and the movements of

the vehicles in the field may result in dust emissions. However, there will be a certain amount of noise from the construction equipment that are used for land preparation and construction period. Since the project area is an open and wide field; the level of noise will not continuous, due to the fact that noise level that may occur at certain time intervals and variabilities, it will keep at minimum level. However, the work to be done is not wide-ranging and the excavation activities will be carried out at the locations where the cable ducts and panel posts are struck and mechanical installations of the panels will be carried out. A small number of machines will be used for these operations and the land preparation and construction period will be completed by 4 months and will be put into operation period.

The activities to be carried out during the construction period will be temporary and will remain at a level that will not cause a negative effect. The mentioned settlements will not be adversely affected by the work done at the construction stage since the nearest settlements are located about 180 m from the project area.

There is no waste problem as the proposed project is about electricity generation from renewable energy source, solar energy. Therefore, there is no cumulative effect on the environment of the project area.

### **Interactions of Solar Power Plants with Each Other**

Currently there is no agricultural activity in planned project parcels. 30% of the parcel surface is covered with stones and 10% is covered with rocks which rise to the surface. Since the rocks and stones cover significant amount of the area, that prevents tillage farming.

Planning of 2 SPP projects together within the boundaries of parcel numbered 2250 in Adala District of Salihli, Manisa makes the projects more economical due to the fact that they use the same infrastructure and superstructure.

On the other hand, projects that are planned together will have a positive impact on waste management and waste disposal. It is more difficult to construct and manage separate waste storage sites with specific distances from each other. As in this project, there will be a single common landfill and management plan for 2 plants.

### **Interactions of Solar Power Plants with Nearby Facilities**

The closest settlements are the residences linked to the Adala District, which is approximately 180 m southeast of the project area. There are vineyards in the north of the project area, olive agriculture in the west, northeast and east of the project area, and fruit gardens in the south (pomegranate, apricot etc.), Attalos Farm in the east, olive oil factory in the west and industrial zone in the southwest of the project area (See Figure 7, 24, 25, 26, 27).

Rural settlements have a small number of population, and when considering the distance to the project site, these rural settlements are located at a safe and sufficient distance, and no adverse impact is expected on the rural settlements as a result of the project.

Some parts of the mentioned agricultural lands are located within the Attalos Farm boundaries belonging to the investor. Despite the planted area is around the project area, the parcel numbered 2250, which is not suitable for cultivation, is reserved for solar energy investments. Within the scope of the project, it is not expected that the work to be done will

have an adverse effect on the agricultural lands around the project area.

The mentioned report is given in the relevant sections of the environmental impact report of the SPP Project and does not involve interaction with the structures, facilities and agricultural lands in the vicinity, nor does it contribute positively to environmental impacts.

Since the proposed project is related with the generation of electricity from renewable solar energy, it will not have cumulative impact with the facilities in the close vicinity.

Comparing the environmental impacts resulting from the generation of same amount of clean energy with the traditional energy method known as fossil fuels, this project is an important project in terms of environmental pollution prevention.

## **7.2. TIME DIMENSION**

The cumulative impact of the proposed project is not in question in short, medium and long term.

## **7.3. IMPACT OF THE PROJECT ON THE OTHER ACTIVITIES IN ITS IMPACT AREA**

The environmental impacts resulting from the proposed project are given in Chapter 5.

The environmental impacts that will arise from the project will be temporary noise and dust emissions waste during the construction period. Additionally, when panels fill their service life, they will generate waste in the operational period.

In the current situation, the shrubs and bushes of the parcel areas were cleaned by cropping and the surface was evened. However, it has been observed that no construction activities have been started in the area. Solid and liquid wastes, dust emission and noise will be generated from the construction works. Dust spreading operations will be performed outside the vegetation period (planting). Irrigation/spraying works will be done in the area with the aid of water-tender depending on the seasonal conditions in order to keep the dust at minimum level during the dust emission works.

Environmental impacts during the operation period will be generated from solid and liquid wastes and will be checked in sealed enclosed areas within the parcel. Emission, noise and odor will not be generated during operation. The project will not have impact on the other activities in the vicinity.

## **7.4. MONITORING DURING OPERATIONAL PERIOD**

The Monitoring Plan to be carried out during the field preparation and construction and operational period of the proposed project is given below.

**Table 6.** Monitoring Plan

| <b>MONITORING PLAN</b>                                                     |                                                                                                                                                              |                                                                                                              |                                                                                 |                                                                                                                  |                       |
|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-----------------------|
| <b>Stage/Subject</b>                                                       | <b>Which parameter will be monitored?</b>                                                                                                                    | <b>Where will this parameter be monitored?</b>                                                               | <b>How will this parameter be monitored / what is the monitoring equipment?</b> | <b>When will this parameter be monitored / what is the monitoring frequency?</b>                                 | <b>Responsibility</b> |
| <b>Land Preparation and Construction Stage</b>                             |                                                                                                                                                              |                                                                                                              |                                                                                 |                                                                                                                  |                       |
| Positioning worksites and infrastructure services for workers' camp        | <p>Worksite location</p> <p>Agreements on water supply, domestic wastewater and domestic solid waste</p> <p>Is the camp site properly improved?</p>          | <p>On worksite</p> <p>On water supply area, cesspool and solid waste storage areas</p> <p>On worksite</p>    | Visual                                                                          | <p>Monthly periods; more often if an inappropriate application is observed</p> <p>At the end of construction</p> | Project Owner         |
| Solid waste management of construction (sand, rock, packaging waste, etc.) | <p>Recycling and disposal applications of packaging waste</p> <p>Re-use of excavation wastes and their disposal applications</p>                             | <p>On storage or disposal site of packaging waste</p> <p>On storage or disposal site of excavation waste</p> | Visual                                                                          | Monthly periods; more often if an inappropriate application is observed                                          | Project Owner         |
| Exhaust emissions of construction machines                                 | <p>Emission measurement records</p> <p>Equipment not used at idle mode</p>                                                                                   | At the project area                                                                                          | Visual                                                                          | <p>2-months periods; more often if an inappropriate application is observed</p> <p>Daily periods</p>             | Project Owner         |
| Storage of building machines                                               | <p>Did any tree cut down while the warehouse area is being prepared?</p> <p>Is the storage area far from the center of the population and surface water?</p> | At the equipment-machine storage area                                                                        | Visual                                                                          | Once before the site is prepared                                                                                 | Project Owner         |



| <b>MONITORING PLAN</b>    |                                                                                                                                                                                                        |                                                |                                                                                 |                                                                                                                          |                       |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------|
| <b>Stage/Subject</b>      | <b>Which parameter will be monitored?</b>                                                                                                                                                              | <b>Where will this parameter be monitored?</b> | <b>How will this parameter be monitored / what is the monitoring equipment?</b> | <b>When will this parameter be monitored / what is the monitoring frequency?</b>                                         | <b>Responsibility</b> |
|                           | Is the equipment placed on an impermeable surface?                                                                                                                                                     |                                                |                                                                                 |                                                                                                                          |                       |
| Noise                     | Construction hours<br><br>Are sound barriers necessary or already built?<br><br>Have local residents been informed about a week before they worked out any "off hours" (except during daylight hours)? | At the project site                            | Field observation<br><br>Visual<br><br>In consultation with local groups        | Monthly<br><br>A week before the "off-hour" works began                                                                  | Project Owner         |
| Dust Emission             | Do irrigation /spraying work need?                                                                                                                                                                     | At the project site and transportation         | Visual                                                                          | In hot, dry and windy conditions                                                                                         | Project Owner         |
| Worker Safety             | An acceptable health and safety plan has been created?<br><br>Is occupational safety equipment provided for employees?                                                                                 | At workers' working area                       | Visual<br>(With a copy of the health and safety plan)                           | Before any physical worker activity begins<br><br>Weekly periods; more often if an inappropriate application is observed | Project Owner         |
| Soil Erosion and Drainage | Is it necessary to take precautions for erosion and drainage?                                                                                                                                          | At the project site                            | Visual                                                                          | Before the construction began<br><br>During or immediately after the rain                                                | Project Owner         |
| Transportation            | Condition, cleanliness                                                                                                                                                                                 | Around 25 m of the site                        | Field visit/ Visual                                                             | Weekly periods; more often if an inappropriate application is observed                                                   | Project Owner         |

| <b>MONITORING PLAN</b>                                                               |                                                                                                                                                   |                                                                          |                                                                                                                                  |                                                                                                                                   |                       |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| <b>Stage/Subject</b>                                                                 | <b>Which parameter will be monitored?</b>                                                                                                         | <b>Where will this parameter be monitored?</b>                           | <b>How will this parameter be monitored / what is the monitoring equipment?</b>                                                  | <b>When will this parameter be monitored / what is the monitoring frequency?</b>                                                  | <b>Responsibility</b> |
| Possibility to find cultural objects, areas and structures with local cultural value | The appearance of works by excavation<br><br>The presence of any area, building or graveyard that has local value                                 | In any excavation area within the project site                           | Have authorities been informed and the correct procedure applied?<br><br>Have they been acted in consultation with local people? | During the construction                                                                                                           | Project Owner         |
| Raw material supply                                                                  | The validity of the license of the supplier                                                                                                       | At the entrance of the project site or at the supplier's office          | Visual inspection of license                                                                                                     | Before any contract is signed for the material supply                                                                             | Project Owner         |
| Management of hazardous materials (fuels, oils, explosives, etc.)                    | Are the landfill areas locked, surrounded, well ventilated and impermeable?<br><br>Is the location of it far from the settlements?                | At temporary solid waste storage area                                    | Visual inspection of the area                                                                                                    | Before construction began; monthly periods after the construction started; more often if an inappropriate application is observed | Project Owner         |
| <b>Operational Stage</b>                                                             |                                                                                                                                                   |                                                                          |                                                                                                                                  |                                                                                                                                   |                       |
| Noise                                                                                | There is no activity in the operation period of the project that will cause noise.                                                                |                                                                          |                                                                                                                                  |                                                                                                                                   |                       |
| Domestic wastewater                                                                  | Has a proper cesspool been established?<br><br>Is there any leaking problem? and Is it discharged to the sewage system which ends with treatment? | At the toilets and septic tank<br><br>At the area around the septic tank | Visual                                                                                                                           | Before the operations begin<br><br>2-weeks periods; more often if an inappropriate application is observed                        | Project Owner         |
| Solid Waste                                                                          | Are the wastes removed regularly?<br><br>Are temporary storage areas adequately protected?                                                        | At temporary solid waste storage area                                    | Visual                                                                                                                           | 2-weeks periods; more often if an inappropriate application is observed                                                           | Project Owner         |

## **8. ENVIRONMENTAL MITIGATION AND MONITORING**

The Environmental Management Plan for renewable energy projects is dealt with in two main categories as construction and operation stage.

The parameters of environmental management in construction stage;

- Positioning worksites and infrastructure services for workers' camp,
- Solid waste management of construction,
- Exhaust emissions of construction machines,
- Storage of building machines,
- Noise,
- Dust,
- Worker Safety,
- Soil erosion and silt flow,
- Available routes,
- Positioning and construction of transportation routes,
- Possibility to find cultural objects, areas and structures with local cultural value,
- Raw material supply,
- Management of hazardous materials (fuels, oils, explosives, etc.),
- Deforestation.

The parameters of environmental management in operational stage;

- Noise,
- Domestic wastewater,
- Domestic solid waste

have been evaluated under all these headings and mitigation measures have been described for the mentioned parameters.

However, in the Monitoring Plan, evaluations were made on where, how and when the parameters discussed in the construction and operation stages of Environmental Management Plan will be monitored. The Environmental Management Plan of the proposed project is given below and the Monitoring Plan is given in Chapter 7.

**Table 7.** Environmental Management Plan

| GENERAL ENVIRONMENTAL MANAGEMENT PLAN FOR RENEWABLE ENERGY PROJECTS |                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                |
|---------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Stage                                                               | Subject                                                                    | Mitigation Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Responsibility |
| Field Preparation and Construction Stage                            | Positioning worksites and infrastructure services for workers' camp        | <ul style="list-style-type: none"> <li>• Worksite and worker camp sites are selected outside the forest area.</li> <li>• It has been noted that positioning is carried out:               <ol style="list-style-type: none"> <li>(a) At least 5 km away from any protected area,</li> <li>(b) 50 m away from any surface water and</li> <li>(c) At a distance of at least 100 m from any country or region with cultural characteristics.</li> </ol> </li> <li>• Services               <ol style="list-style-type: none"> <li>(a) Potable water shall be provided from the surrounding villages, and drinking water shall be provided from the dispenser size bottled waters.</li> <li>(b) Domestic wastewater shall be collected in an impermeable septic tank that will be dig in the construction site. When the septic tank is filled, it will be taken away from the area by the sewage truck of Salihli Municipality. Organic solid wastes generated in the camps will be collected in closed vessels in daily period and collected by Salihli Municipality waste collection vehicles.</li> </ol> </li> <li>• The worksite will be improved in accordance with the initial situation when the project is completed.</li> </ul> | Project Owner  |
|                                                                     | Solid waste management of construction (sand, rock, packaging waste, etc.) | <ul style="list-style-type: none"> <li>• Packaging waste of electrical equipment will be collected separately and recycled by sending them to the licensed packaging waste collection and separation facilities. Non-recyclable wastes will be sent to authorize landfill facilities.</li> <li>• Since there is no agricultural activities and natural vegetation cover in the project area, there will not be vegetal soil as a result of excavation activities.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Project Owner  |
|                                                                     | Exhaust emissions of construction machines                                 | <ul style="list-style-type: none"> <li>• Exhaust emissions of construction machinery will be regularly measured by the competent authorities and certified that they provide the limit values set for exhaust emissions.</li> <li>• The operation of the engines at idle phase will be minimized by shutting down the machines which are not used more than 5 minutes</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Project Owner  |
|                                                                     | Storage of machines/equipment                                              | <ul style="list-style-type: none"> <li>• Any tree will be cut to make the storage area.</li> <li>• The equipment will be placed on the impermeable surface so that soil contamination from oil spills will be avoided.</li> <li>• The warehouse shall be located at least 50 meters away from the surface waters, far away from the villages and other settlements.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Project Owner  |
|                                                                     | Noise                                                                      | <ul style="list-style-type: none"> <li>• Construction will only be maintained during daytime hours.</li> <li>• When construction activities are needed to be carried out outside the daytime, local residents will be consulted at least one week in advance.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Project Owner  |
|                                                                     | Dust                                                                       | <ul style="list-style-type: none"> <li>• Humidification will be done in the project site and on the construction site</li> <li>• Speed limits will be applied to the vehicles.</li> <li>• With the region being rainy, sufficient irrigation will be carried out to ensure at least 10% moisture of soil top layer covering areas where excavation works will be done or excavation material will be poured.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Project Owner  |

| GENERAL ENVIRONMENTAL MANAGEMENT PLAN FOR RENEWABLE ENERGY PROJECTS |                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                |
|---------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Stage                                                               | Subject                                                                              | Mitigation Measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Responsibility |
|                                                                     | Worker Safety                                                                        | <ul style="list-style-type: none"> <li>A health and safety plan must be established two weeks before the contractor starts to work. Workers will undergo medical screening and health and safety training will be provided. The public health training will be part of the construction program. The use of helmets, occupational safety boots, ear protectors, dust filters and other necessary occupational safety equipment will be provided.</li> </ul>                                                                                                                                                            | Project Owner  |
|                                                                     | Soil Erosion and Drainage                                                            | <ul style="list-style-type: none"> <li>Avoid areas with high slopes (&gt; 30°), where they cannot be avoided, the structures will be designed to minimize excavation on the slope.</li> <li>If it is required, drainage channels will be built for rain water.</li> </ul>                                                                                                                                                                                                                                                                                                                                              | Project Owner  |
|                                                                     | Transportation                                                                       | <ul style="list-style-type: none"> <li>Additional traffic mobility will be minimized in existing roads.</li> <li>Project area can be reached by stable roads.</li> <li>There will be speed control on the roads and irrigation/spraying work will be done by water-tender to avoid dusting.</li> <li>Carriage vehicles will be checked for tonnage, overloading and deterioration of existing roads will be avoided.</li> <li>Damaged roads will be repaired before they become permanent.</li> <li>Sludge, residues, waste etc. materials will not be left on the road.</li> </ul>                                    | Project Owner  |
|                                                                     | Possibility to find cultural objects, areas and structures with local cultural value | <ul style="list-style-type: none"> <li>If any historical, cultural or archeological evidence is encountered during the excavation, the excavation will be stopped and local/regional museum directorates will be notified immediately. Nobody will remove the antiques from the site and will not hurt the area. The construction authorities will be able to continue after the inspections have been completed and the written consent of the relevant official has been received.</li> <li>The project area does not cross over any transmission line, connection road or constructed village graveyard.</li> </ul> | Project Owner  |
|                                                                     | Raw material supply                                                                  | <ul style="list-style-type: none"> <li>The raw material will be supplied from the places which have necessary permits.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Project Owner  |
|                                                                     | Management of hazardous materials (fuels, oils, explosives, etc.)                    | <ul style="list-style-type: none"> <li>All hazardous materials will be deposited on impermeable surfaces in well-ventilated, locked and enclosed structures. These buildings shall be located at least 50 m away from any surface water.</li> <li>It will be positioned as far as possible from settlement centers and forest lands.</li> </ul>                                                                                                                                                                                                                                                                        | Project Owner  |
| Operation Stage                                                     | Noise                                                                                | <ul style="list-style-type: none"> <li>There is no activity that will cause noise in the operation period of the project.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Project Owner  |
|                                                                     | Domestic wastewater                                                                  | <ul style="list-style-type: none"> <li>Domestic wastewater will be collected in a septic tank, and when it is filled, it will be taken by the sewage truck and removed from the area.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                       | Project Owner  |
|                                                                     | Solid Waste                                                                          | <ul style="list-style-type: none"> <li>Solid wastes are temporarily stored in impermeable containers that will be placed in the project area and domestic solid wastes are disposed to licensed facilities by the waste collection vehicles belonging to Salihli Municipality and other solid wastes (hazardous waste, packaging waste, etc.) will be disposed by sending them to the licensed facility with licensed vehicles and will be removed from the area.</li> </ul>                                                                                                                                           | Project Owner  |



## **9. EMERGENCY RESPONSE PLAN**

### **9.1. GOAL AND SCOPE**

The aim of the Emergency Response Plan is to explain what will be the chain of measures that the employees of the workplace should take in case of natural disasters, fire, sabotage, terrorist attacks, work accidents etc. and to take preventive and restrictive measures and related exercises to prevent adverse effects.

Emergencies:

- Rescue and treatment of sufferers,
- Reduction of damage to goods and materials,
- Prevention of spreading and control of the event,
- Ensuring that affected areas are in safe,
- Preservation and storage of equipment and records for similar processes that may cause any event and emergency case conditions,
- The provision of necessary information (health, safety, fire, security, risk management) to the administration and company experts.

Emergency description includes fire and natural disasters (earthquake, flood, landslide, stroke of lightning, etc.), work accidents, sabotage, terror, attack, assault and insurrection that may result in business interruption and damage of goods.

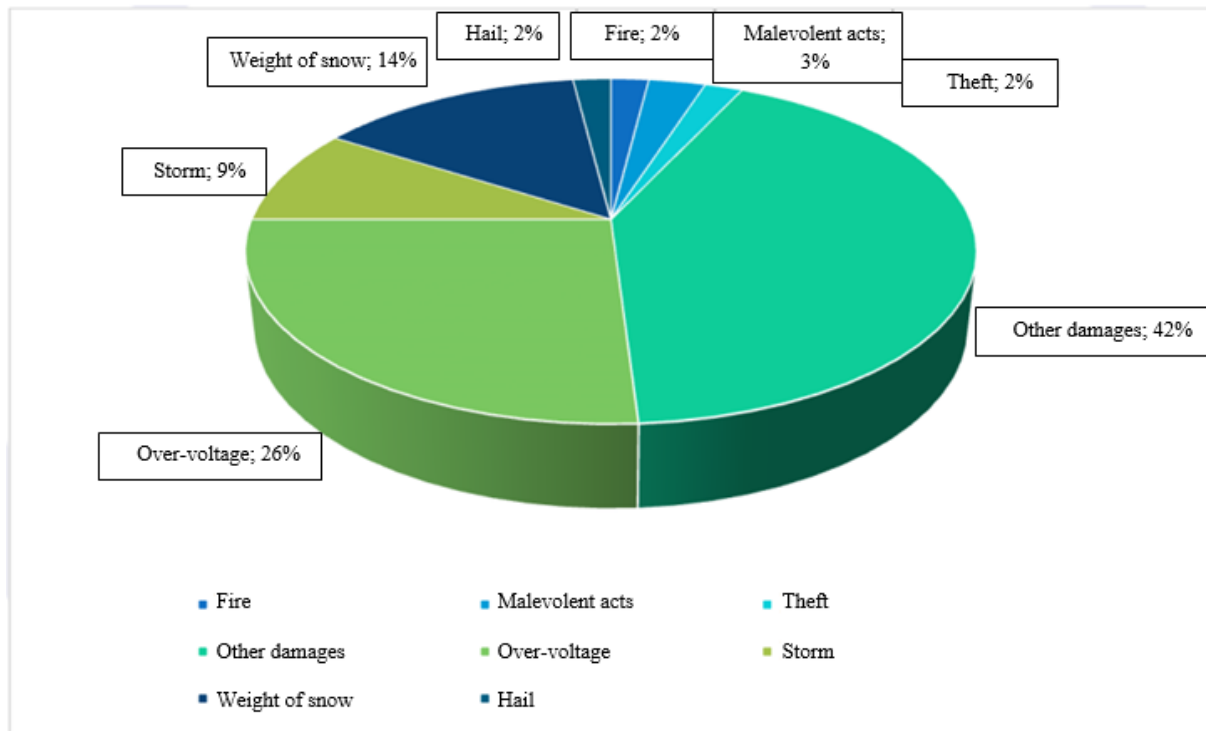
The intervention plan to be applied in case of natural disaster, accident, sabotage and similar situations in the project area is shown in Figure 34.

### **9.2. DUTIES AND RESPONSIBILITIES**

Activities undertaken within the scope of the facility are under the responsibility of the company owner and contractor. Implementation of such responsibilities must be ensured by the authority of the firm owner and contractor.

### **9.3. POSSIBLE EMERGENCY CASES**

When all processes are evaluated for the damages occur from Solar Power Plants; collected statistical data includes fire, malevolent acts, theft, overvoltage, storm, weight of snow, hail and other damages. When the graphical distribution given in Figure 33 is examined, it is clearly seen that the maximum damage is caused by overvoltage effects. Possible emergencies under the project are listed below.



**Figure 33.** Distribution of Damage Types in Solar Power Plants

### 9.3.1. FIRE

In the scope of the project; situations like malfunction of machine and equipment, short circuit etc. may cause fire probability.

If the conductors are not correctly screwed into the connectors; the keys and cables may overheat. Weak contact can cause an electric arc. As a result, the temperature of the weak cable is higher than expected. This increases wiring losses and risk of fire. Due to temperature changes, there may be loosening in the connections, so necessary maintenance must be done each year.

The electrical shock resulting from the disconnection of the breaker when under load can constitute a serious risk and may result in destruction of the equipment. The power must be cut before any intervention is made to the DC circuit.

#### Measures to be Taken

Fires coming out of solar power plants are usually electric fires. For this reason, the methods of fire-fighting need to be carefully determined. Fire safety measures to be taken in solar power plants can be listed as follows.

- The use of fire detection systems in transformer cubicles,
- Positioning of portable fire-extinguishing tubs throughout the facility, which can be used in electric fires in order to practice the first responder by personnel in a fire,

- Positioning of automatic gas extinguishing systems in the areas with critical precaution such as inverter sections,

- Design/positioning in accordance with recognized standards such as NFPA and FM GLOBAL,

- Careful training of personnel,

- Fire department coordination is required.

The biggest problem in the event of a possible fire is the increased amount of damage due to the inability to perform first responder. For this reason, the use of automatic extinguishing systems as much as possible and careful coordination with fire departments will reduce the amount of losses.

Apart from that, in a possible fire,

- The fire should be calmly intervened,

- The nearest fire department should be informed promptly,

- The project area should be closed to use and entrance is prevented,

- Business activities should be stopped in order to prevent any negative situation.

### **9.3.2. THEFT**

The assets of the solar power plants, especially the cable and electronic equipment, which have the material values, make the solar power plants a center of attraction for thieves.

There is no energy in the cabling during the construction/assembly periods so theft damage frequencies are higher, especially in these periods. However, this does not mean that the thieves will not come to the scene during the operating period.

#### Measures to be Taken

- Site monitoring with closed circuit camera system,

- Turning the area with wire fences,

- Possession of security personnel (guard etc.),

- Provide lighting,

- The use of motion-sensitive sensors around the transformer, etc.

### **9.3.3. DRAINAGE AND PROTECTION FROM WATER**

Although it can cause water, erosion and landslides; the connection of concrete foundation can disconnect with the ground substantially and cause fractures. If the cracks

occur at the concrete foundation; the structures can be separated from each other and cause break in the solar panels.

#### Measures to be Taken

Service buildings that include inverters, transformers, data monitoring systems, and other equipment must be waterproof to prevent electrical failures and equipment damage. Possible holes that may cause water entry to the building must be covered.

### **9.3.4. OCCUPATIONAL ACCIDENTS**

Occupational accidents that may occur in the scope of the project can result in injury or even death.

In possible occupational accidents,

- In the moment of accident; alarm is activated if there is. In the case of there is no alarm, the aural warnings are activated to set people around in motion.
- The wounded must be properly placed on the strap and latched tightly on to the straps,
- The necessary first aid response should be done if facilities are available,
- Ambulance should be provided immediately by informing the emergency aid organization,
- Authorized person should be informed about the situation,
- The occupational-work accident form records should be kept,
- Necessary precautions should be taken to prevent the occurrence of same accident again.

### **9.3.3. NATURAL DISASTER**

#### Earthquake

Earthquake is a displacement movement that occurs from rapid drawdown of deforming energy accumulated on the fault.

The earthquake is a completely natural event. It is necessary to take measures to reduce or minimize the negative effects, that makes earthquake is a disaster, of this natural phenomenon.

It is known that 92% of our country's lands have earthquake risks and 95% of our population lives on these regions. This means that the preparatory work on this subject in our country must be done continuously and effectively.

The project site and its surrounding are located within the 1<sup>st</sup> Degree Earthquake Zone according to the data of the Turkey Earthquake Zones Map (1996) prepared by the Earthquake Department of the Disaster and Emergency Management Presidency (See Figure 18).

In the case of possible earthquakes;

- The work should be stopped to determine if there is any damage on the equipment after the earthquake,

- After the determination is completed, the administration is informed about the situation,

- If the damage is observed, the issue should be reported immediately to administration. If there is no damage on the equipment, the technical studies and tests should be carried out and the production work should be continued if the operator decides the plant is safe.

#### Flood

No flood disaster is observed in the project area up to today.

In the case of possible flood disaster;

- Drainage channel should be controlled to prevent clogging,

- The connection between the equipment and the power line must be disconnected immediately,

- After the risk has been gone away, it should be determined whether there is any damage to the equipment. The equipment should be checked after the flood and storms are over, the situation should be reported to administration immediately.

#### **9.3.4. TERRORIST ATTACK, SABOTAGE, ETC.**

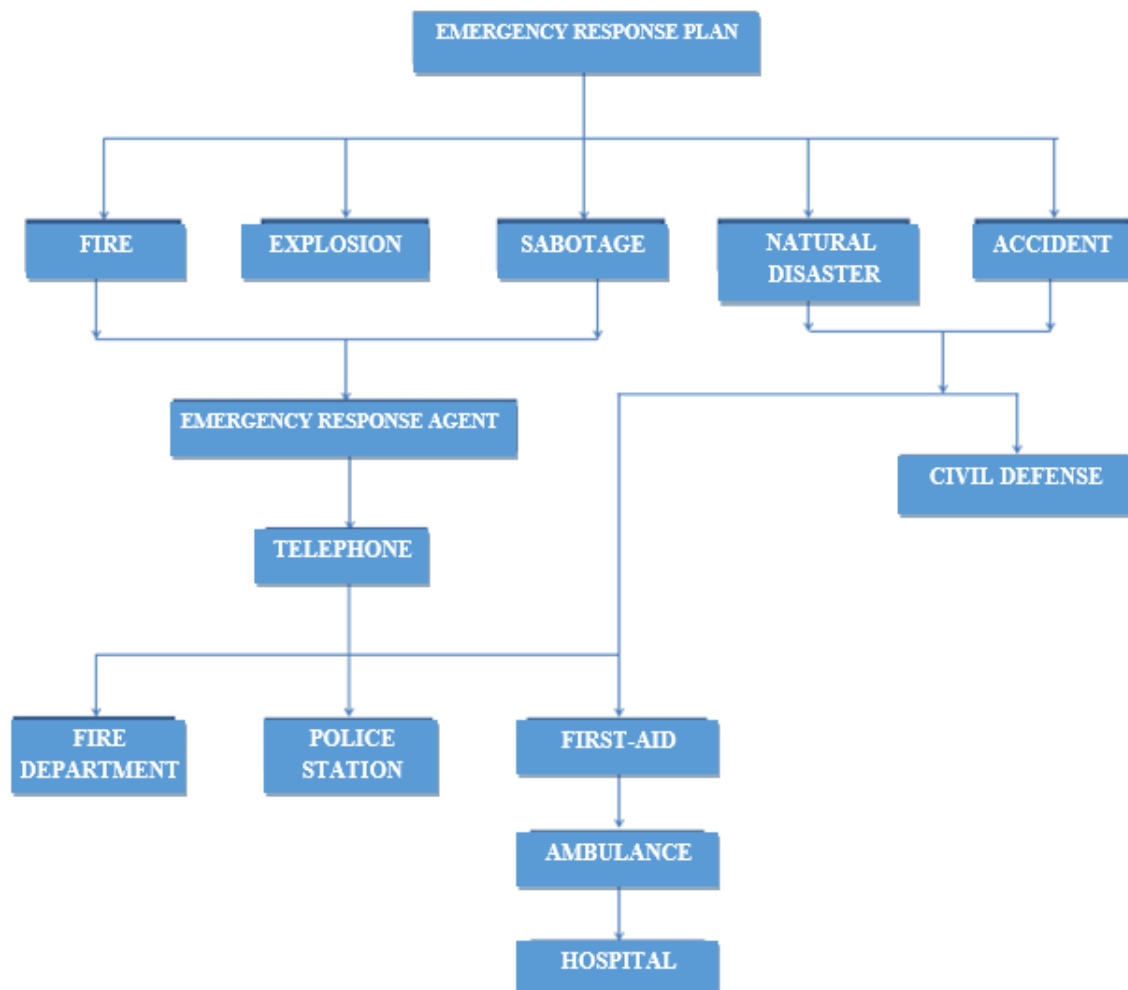
Within the scope of the project, training and information about the mentioned threats should be provided to personnel.

In case of possible terrorist attack, sabotage etc., the police and gendarmerie should be informed immediately about the situation and the entrance and exit of the project area should be controlled.

#### **9.4. EMERGENCY CONTACT**

A list of contact numbers for institutions and organizations that may be reached in case of an emergency should be constituted. This list includes the contact information of the company responsible, the headman of the neighborhood, the members, the municipality, the district governorship, the Provincial Disaster and Emergency Directorate, the fire department, the policemen, etc.





**Figure 34.** Response Plan to be Applied in Natural Disaster and Accident, Sabotage and Similar Situation

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## **APPENDIX**

- Appendix-1.** Opinion Article of Republic of Turkey Manisa Governorate Provincial Directorate of Environment and Urban Planning on Environmental Impact Assessment Regulation
- Appendix -2.** 1/25.000 Scale Topographic Map
- Appendix -3.** Photocopy of Land Certificate
- Appendix -4.** Rental Contract
- Appendix -5.** Opinions of Institutions in the Scope of the Construction Plan
- Appendix -6.** 1/100,000 Scale Environment Master Plan and Legend
- Appendix -7.** Opinion Article dated 08.07.2014 and numbered 8057 of Republic of Turkey Manisa Governorate Province Food, Agriculture and Livestock Directorate
- Appendix -8.** Opinion Article dated 18.10.2016 and numbered 11081 of Republic of Turkey Salihli Municipality Plan and Project Directorate
- Appendix -9.** Announcement Report
- Appendix -10.** Participant List
- Appendix -11.** Report Preparers and References

## **Appendix-1**

Opinion Article of Republic of Turkey Manisa  
Governorate Provincial Directorate of  
Environment and Urban Planning on  
Environmental Impact Assessment Regulation



Sayı : 34629761 E-2014400/10803-10804-10685/5781  
Konu : Güneş Enerji Santrali

20/06/2014

*Agrolive Tarım Hayv. Turizm Gıda San. ve Tic. A.Ş.*

- İlgi : a) Salihli Belediye Başkanlığı'nın 10.06.2014/3333 sayılı yazısı.  
b) 08/04/2014 tarihli ve "10534" Geçici Referans No'lu Başvuru.  
c) Çevre ve Şehircilik Bakanlığı, ÇED İzin ve Denetim Genel Müdürlüğü'nün 28.04.2014/6222 sayılı yazısı.

Manisa İli, Salihli ilçesi, Adala Beldesi, 2139 ve 2250 nolu parseller üzerinde **Agrolive Tarım Hayv. Turizm Gıda San. ve Tic. A.Ş.** tarafından her bir parselde yapılması planlanan **"Güneş Enerji Santrali (1 MW/16.500 m<sup>2</sup>)"** projesi ile ilgili dosyasında yapılan incelemede;

03/10/2013 tarih ve 28784 sayılı Resmi Gazete'de yayınlanarak yürürlüğe giren ÇED Yönetmeliği Listelerindeki eşik değerden az olduğu için kapsam dışı olarak değerlendirilmiştir.

Ancak, planlanan yatırım ile ilgili olarak, 2872 sayılı Çevre Kanunu ile 5491 sayılı Çevre Kanununda Değişiklik Yapılmasına Dair Kanuna istinaden çıkarılan Yönetmeliklerin ilgili hükümlerine uyulması ve diğer mer'i mevzuat çerçevesinde öngörülen gerekli izinlerin alınması, ekolojik dengenin bozulmamasına, çevrenin korunmasına ve geliştirilmesine yönelik tedbirlere riayet edilmesi,

Ayrıca sınırları belirtilen alanda sürdürülebilir kalkınmayı sağlayacak kentsel/kırsal gelişme ile sektörel gelişmelerin değerlendirildiği planlı kentleşmede doğru yerleşim kararları verilmesi amacıyla alt ölçekli imar planı çalışmasının ilgili idaresince değerlendirilmesi, proje kapsamında kapasite artışı planlanması durumunda Valiliğimize (Çevre ve Şehircilik İl Müdürlüğü) müracaat edilerek, verilecek karara göre hareket edilmesi gerekmektedir.

Bilgilerinizi ve gereğini arz/rica ederim.

  
Mustafa YILMAZ  
İl Müdür V.

DAĞITIM

- Salihli Belediye Başkanlığına
- Agrolive Tarım Hayv. Turizm Gıda San. ve Tic. A.Ş.  
(Doğanlar Mah. Adala Bulv. No:120 Attalos Çiftlikleri Adala/Salihli)

ASLI GİBİDİR  
Tarih: .../.../2014..  
  
Sami AKÇA  
Müdür Yrd. V.

109  
03.07.2014

ÇEVRE VE ŞEHİRCİLİK  
BAKANLIĞI

T.C.  
MANİSA VALİLİĞİ  
Çevre ve Şehircilik İl Müdürlüğü

Sayı : 34629761 E-2014402/10806-11046/  
Konu : Güneş Enerji Santrali

578

70. /06/2014

Salihli Belediye Başkanlığına

- İlgi : a) Salihli Belediye Başkanlığı'nın 20.06.2014/872 sayılı yazısı.  
b) 08/04/2014 tarihli ve "10791" Geçici Referans No'lu Başvuru.  
c) Çevre ve Şehircilik Bakanlığı, ÇED İzin ve Denetim Genel Müdürlüğü'nün 28.04.2014/6222 sayılı yazısı.

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Bilgilerinizi ve gereğini arz/rica ederim.

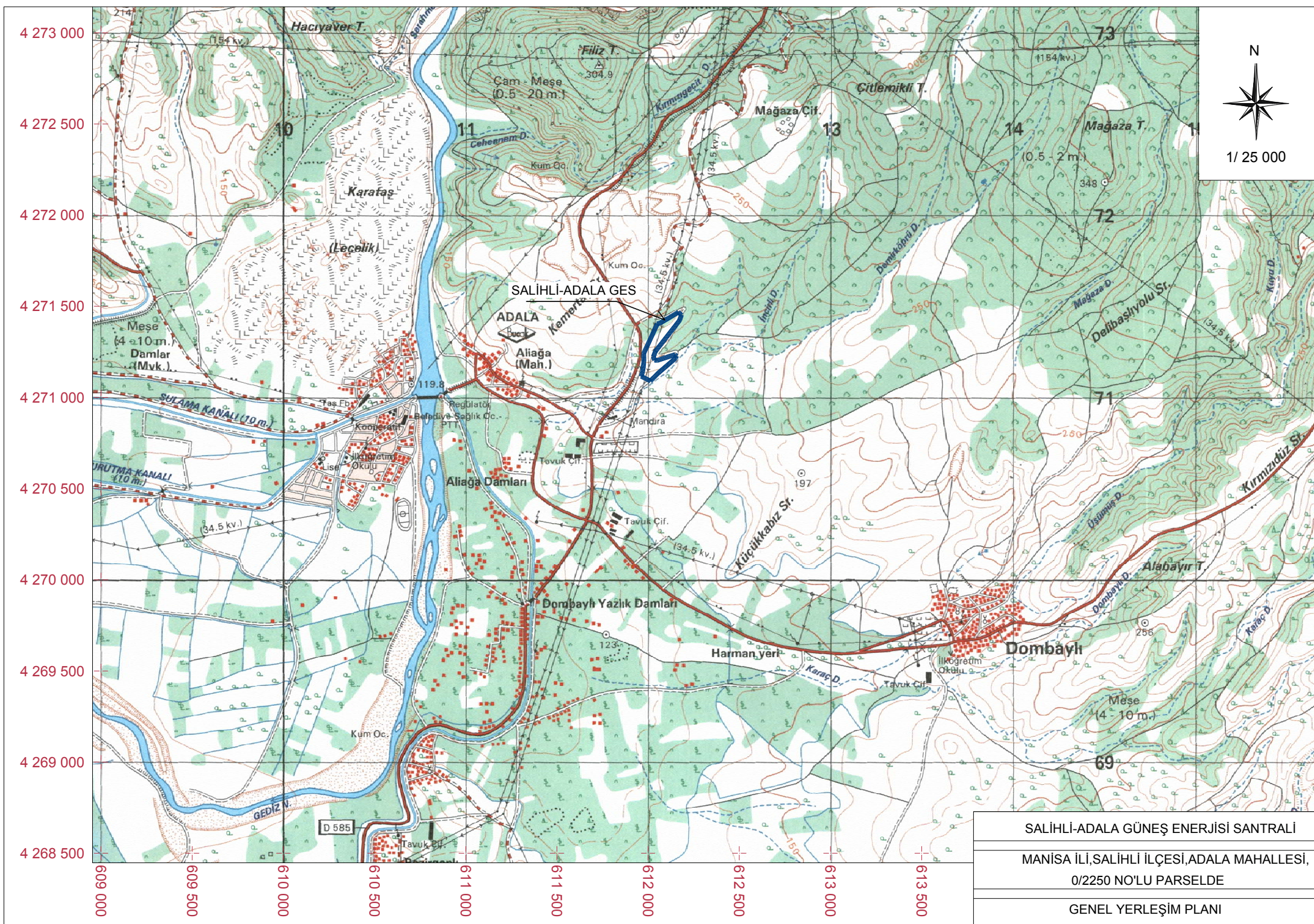
Mustafa YILMAZ  
İl Müdür V.

DAĞITIM

- Salihli Belediye Başkanlığına
  - MBK Enerji Tur. San. ve Tic. A.Ş.
- (Maya Meridyen İş Merkezi Ebulha Mardin Cad.  
No:16 K:5 Akatlar Beşiktaş İstanbul)

**Appendix-2**  
1/25.000 Scale  
Topographic Map







**Appendix-3**  
Photocopy of Land Certificate



|           |         |                                                                                                                                       |          |
|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------|----------|
| İli       | MANİSA  | <b>Türkiye Cumhuriyeti</b><br><br><b>TAPU SENEDİ</b> | Fotoğraf |
| İlçesi    | SALİHLİ |                                                                                                                                       |          |
| Mahallesi |         |                                                                                                                                       |          |
| Köyü      | ADALA   |                                                                                                                                       |          |
| Sokağı    |         |                                                                                                                                       |          |
| Mevkii    |         |                                                                                                                                       |          |

| Satış Bedeli | Pafta No. | Ada No. | Parsel No. | Yüzölçümü |                |                 |
|--------------|-----------|---------|------------|-----------|----------------|-----------------|
|              |           |         |            | ha        | m <sup>2</sup> | dm <sup>2</sup> |
| 12.250,00    | 12        |         | 2250       | 30.846,61 | m <sup>2</sup> |                 |

|               |               |                                                                                                                                      |
|---------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------|
| GAYRİMENKULÜN | Niteliği      | PALAMUTLUK                                                                                                                           |
|               | Sınırı        | Planındadır<br>Zemin Sistem No : 58503373                                                                                            |
|               | Edinme Sebebi | 1/8 pay MAKBULE : adına kayıtlı iken AGROLİVE TARIM HAYVANCILIK TURİZM GIDA SANAYİ VE TİCARET ANONİM ŞİRKETİ adına Satış işleminden. |
|               | Sahibi        | AGROLİVE TARIM HAYVANCILIK TURİZM GIDA SANAYİ VE TİCARET ANONİM ŞİRKETİ<br>Tam                                                       |

| Geldisi    | Yevmiye No. | Cilt No. | Sahife No. | Sıra No. | Tarihi     | Gittisi    |
|------------|-------------|----------|------------|----------|------------|------------|
| Cilt No.   | 2093        | 26       | 3024       |          | 11/02/2014 | Cilt No.   |
| Sahife No. |             |          |            |          |            | Sahife No. |
| Sıra No.   |             |          |            |          |            | Sıra No.   |
| Tarih      |             |          |            |          |            | Tarih      |

NOT : \* Mülkiyetin gayri aynı haklar ile şerhler için tapu kütüğüne müracaat edilmelidir.  
\*\* Tebliğat Kanunu Hükümleri gereğince adres değişikliği ilgili Tapu Sicil Müdürlüğüne bildirilecektir.

## **Appendix-4**

### **Rental Contract**

## KİRA SÖZLEŞMESİ

İLİ : MANİSA

İLÇESİ : SALİHLİ

MAHALLESİ : ADALA

NUMARASI : 12 PAFTA, 2250 PARSEL  
( EK-1 DE BELİRTİLEN KOORDİNATDAKİ  
ALAN)

KİRALANAN ŞEYİN CİNSİ : BOŞ TARLA

KİRAYA VERENİN  
ADI – SOYADI ve İKAMETGÂHI : AGROLİVE TARIM HAY. TURİZM GIDA  
SAN. VE TİC A.Ş  
DOĞANLAR MAH. ADALA BULVARI  
NO:20 ATTALOS ÇİTLİKLERİ-ADALA-  
SALİHLİ-MANİSA

KİRACININ  
ADI – SOYADI ve İKAMETGÂHI : MBK ENERJİ TURİZM SAN. VE TİC. A.Ş  
EBULULA MARDİN CAD. MAYA MERİD  
YENİ İŞ MERKEZİ NO:16 KAT-5 AKATLAR-  
BEŞİKTAŞ-İSTANBUL

BİR SENELİK KİRA KARŞILIĞI : EKTE BULUNAN ÖZEL ŞARTLARDA  
BELİRTİLMİŞTİR.

BİR AYLIK KİRA KARŞILIĞI : EKTE BULUNAN ÖZEL ŞARTLARDA  
BELİRTİLMİŞTİR.

KİRA KARŞILIĞININ  
NE ŞEKİLDE ÖDENECEĞİ : TAMAMI PEŞİN OLARAK

KİRA MÜDDETİ : 15 (ONBEŞ) YIL

KİRANIN BAŞLANGICI : 01.06.2014

KİRALANAN ŞEYİN  
ŞİMDİKİ DURUMU : BOŞ ARAZİ

NE İÇİN KULLANILACAĞI : GÜNEŞ ENERJİSİ ÜRETİMİ TESİSİ

MBK ENERJİ TURİZM SANAYİ VE TİCARET A.Ş.  
Maya Meridien İş Merkezi  
Ebulula Mardin Cad. No:16 Kat:5  
34398 Akatlar-Beyliktaş-İstanbul  
Beyliktaş V.D. 613 069 1830

AGROLİVE TARIM  
Hayvancılık Turizm Gıda Sanayii  
ve Ticaret Anonim Şirketi  
Doğanlar Mah. Adala Blv. No:120  
Attalos Çiftlikleri Adala SALİHLİ MANİSA  
Adil Oral V.D. 150 007 0416



## KİRA KONTRATI ÖZEL ŞARTLARI

- 1) Kiralanan yerlerin kullanım amacı Lisanssız Güneş Enerjisi Üretimi işletmesi olup bu faaliyet ile bağlantılı olarak gerekli hizmetlerde bulunabilir.
- 2) Kira Sözleşmesi tarihi 01.06.2014 tarihinden başlamak üzere 15 (onbeş) yıl sürelidir. OnBeş yıllık akdin hitamında taraflar en az 6 (altı) ay öncesinden kira akdini yenilemeyeceklerine dair karşı tarafa bir ihbarda bulunmadıkları takdirde akit 5 (beş) yıllık dönemler için otomatik olarak uzayacaktır.
- 3) Kiralanan boş arazinin 15 yıllık kira bedeli 3.000 TL+ Stopajdır.
- 4) 15 yıllık kira bedeli Agrolive Tarım Hay. Turizm Gıda San. ve Tic. A.Ş' nin banka hesabına peşin olarak yatırılacaktır.
- 5) Kiralanana ait tüm resmi giderler, vergiler, Kiracıya aittir.
- 6) Kiracı kiralananın içinde ve dışında her türlü tadilat, tamirat, inşaat, düzenleme, onarım, yenileme işlerini yapabilir. Kiracının yapacağı her türlü yenilemeler Kiraya Verene bırakılacaktır. Söz konusu inşaat, tamirat, tadilat ve değişiklikler yapılırken resmi kurumlardan alınması gereken izin ve ruhsatların alınması ve bu işlemlerin sorumluluğu Kiracıya aittir.
- 7) EK-1 de saha 1 olarak belirtilen 16.000 m2 boş alan Kiracı tarafından Güneş Enerjisi Üretimi yapılmak için kullanılacaktır.
- 8) Tarafların kira kontratında beyan ettikleri adresleri tebligat adresleri olup, bu adreslere yapılacak her türlü tebligat adreste bulunmasalar dahi kendilerine yapılmış sayılır. Adres değişiklikleri değişikliğin yapılmasından bir ay önce yazılı olarak diğer tarafa bildirecektir.
- 9) İşbu özel şartlardan birine uyulmaması veya tam ve zamanında yerine getirilmemesi akde muhalefet teşkil edip, herhangi bir ihtara gerek olmaksızın tahliye sebebidir.

İş bu dokuz madde ve üç sahifeden ibaret özel şartlar kira kontratının eki olarak hüküm ifade etmek üzere iki nüsha olarak kira kontratı ile birlikte tanzim ve teati edilecektir

### EKLER-

1- KİRALANAN YERİ GÖSTEREN HARİTA

### KİRACI

MBK ENERJİ TURİZM SAN.  
TİC.A.Ş

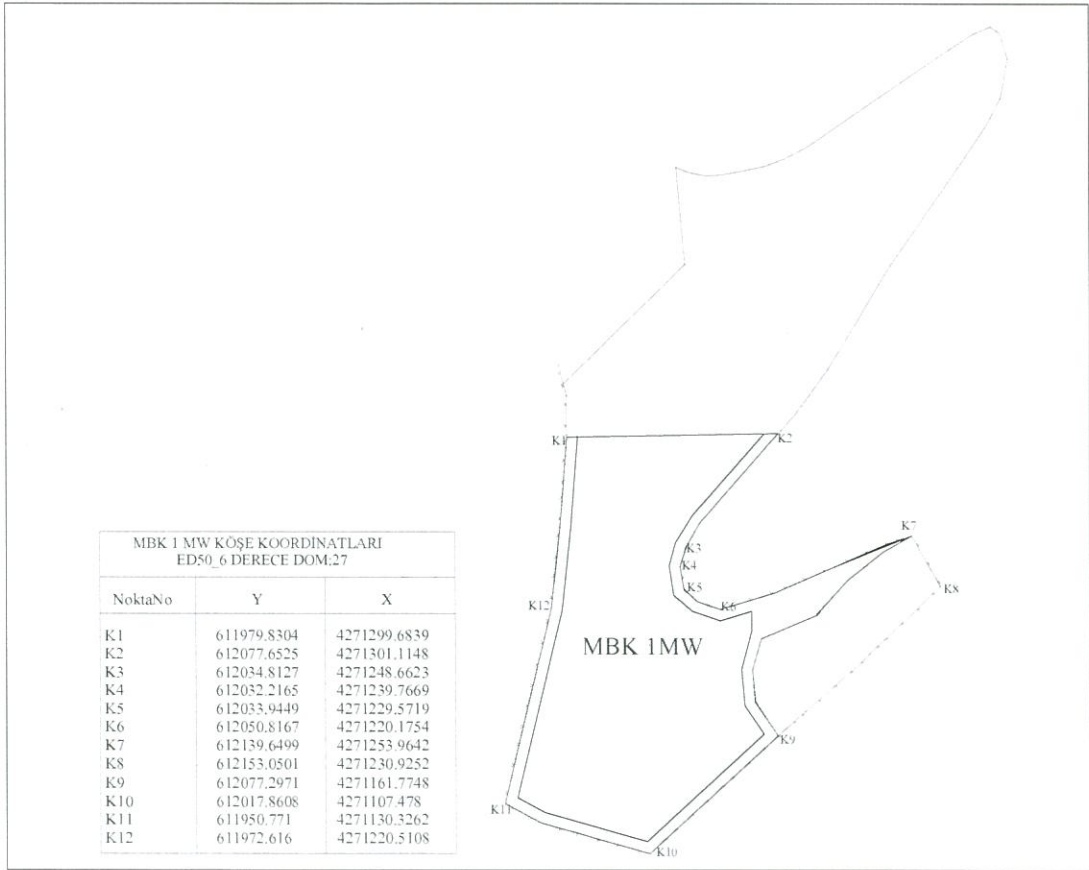
MBK ENERJİ TURİZM SANAYİ VE TİCARET A.Ş.  
Maya Meridien İş Merkezi  
Etiler/Medya Cad. No: 5 Kat: 5  
34633 Akatlar-Beşiktaş-İstanbul  
Beşiktaş V.D. 613 069 1830

### KİRAYA VEREN:

AGROLİVE TARIM HAY.TURİZM  
GIDA SAN. VE TİC. A.Ş

AGROLİVE TARIM  
Hayvancılık Turizm Gıda Sanayii  
ve Ticaret Anonim Şirketi  
Doğanlar Mh. Adana Bul. No:120  
Atatürk Çiftlikleri Adana SALIHLI MANİSA  
Adil Oral V.D. 150 007 0416

## SALİHLİ GES 2250 PARSEL MBK 1 MW HARİTA YERLEŞİM PLANI



MBK ENERJİ TURİZM SANAYİ ve TİCARET A.Ş.  
Meyan Meridyen İş Merkezi  
Etiler Mahallesi Cad. No:4 Kat:5  
Beşiktaş / Beşiktaş / İstanbul  
Beşiktaş V.D. 613 069 1830

AGROLİVE TARIM  
Hayvancılık Turizm Gıda Sanayii  
ve Ticaret Anonim Şirketi  
Doga Mah. Mh. Adana Bly. No:120  
Atatürk Çiftlikleri Adana SALİHLİ MANİSA  
Adil Oral V.D. 150 007 0416



**Appendix-5**  
Opinions of Institutions in the Scope of the  
Construction Plan



**T.C.**  
**MANİSA VALİLİĞİ**  
**İl Gıda Tarım ve Hayvancılık Müdürlüğü**



**Sayı:** 69335303/3064  
**Konu:** Güneş Enerji Santrali

17/03/2016

**SALİHLİ BELEDİYE BAŞKANLIĞINA**  
**(Plan ve Proje Müdürlüğü)**

**İLGİ :** a)10.06.2014 tarih ve 39317666-814-3329 sayılı yazınız.  
b) 08.07.2014 tarih ve 69335303/8057 sayılı yazımız.  
c) 10.03.2016 tarih ve 28246479-599-399 sayılı yazınız.

İlgi (a) yazınız ile İlimiz, Salihli İlçesi, Adala mahallesi, 2139 parsel, 12,426400 hektar yüzölçümlü, Tarla vasıflı, 2250 numaralı parsel, 3,084661 hektar yüzölçümlü, Palamutluk vasıflı, toplam 15,511061 hektar yüzölçümlü taşınmazlar üzerine mülkiyet sahibi Agrolive Tarım Hayvancılık Turizm Gıda Sanayi ve Ticaret Anonim Şirketi tarafından “Güneş Enerji Santralı Tesisi” yapılmak istendiği ifade edilerek, Kurumumuz mevzuatları açısından sakınca olup,olmadığı ile ilgili Kurum görüşümüz istenmiştir.İlgi (b) yazınız ile görüşümüz bildirilmiştir. İlgi (c) yazınız ile 2250 parsel numaralı, 3,084661 hektar yüzölçümlü, (Palamutluk) vasıflı taşınmaz üzerine mülkiyet sahibi Agrolive Tarım Hayvancılık Turizm Gıda Sanayi ve Ticaret Anonim Şirketi tarafından “Güneş Enerji Santralı Tesisi” yapılmak istendiği ifade edilerek, kurulacak tesis ile ilgili imar planına esas olmak üzere tekrar Kurum görüşümüz istenmiştir.

İlgi (b) tarih ve sayılı yazı ile verilen kurum görüşümüz geçerli olup , söz konusu 2250 no’lu parsel üzerinde “Güneş Enerji Santralı Tesisi” yapılması talebi çevre arazilere ve yörede yapılan tarımsal faaliyetlere zarar vermeyecek tedbirlerin alınması, DSİ II. Bölge Müdürlüğü’nün 24.06.2014 tarih ve 54495999-754-390543-149 sayılı görüş yazılarında belirtilen hususlara uyulması kaydıyla Valiliğimizce uygun görülmüştür.

Bilgilerinizi ve gereğini rica ederim.

Mehmet YÜCE  
Vali a.  
Vali Yardımcısı

EK: 08.07.2014 tarih ve 69335303/8057 sayılı yazımız.

45.2014/6 14.44

T.C.  
MANİSA VALİLİĞİ  
İl Gıda Tarım ve Hayvancılık Müdürlüğü

SAYI : 69335303/8057

08/07/2014

KONU: "Güneş Enerji Santral Tesis"

**SALİHLİ BELEDİYE BAŞKANLIĞINA**  
(İmar ve Şehircilik Müdürlüğü)

İLGİ : 10.06.2014 tarih ve 39317666-814-3329 sayılı yazınız.

İlgi yazınız ile İlimiz, Salihli İlçesi, Adala mahallesi, 2139 parsel, 12,426400 hektar yüzölçümlü,(Tarla)vasıflı, 2250 numaralı parsel, 3,084661 hektar yüzölçümlü, (Palamutluk) vasıflı, toplam **15,511061 hektar** yüzölçümlü taşınmazlar üzerine mülkiyet sahibi Agrolive Tarım Hayvancılık Turizm Gıda Sanayi ve Ticaret Anonim Şirketi tarafından "**Güneş Enerji Santral Tesis**" yapılmak istendiği ifade edilerek, Kurumumuz mevzuatları açısından sakınca olup,olmadığına ile ilgili Kurum görüşümüz istenmiştir.

Söz konusu 2139 ve 2250 no'lu parseller "**Kuru Marjinal Tarım Arazisi**" sınıfındadır.Söz konusu talep, 19.07.2005 tarih ve 25880 sayılı Resmi Gazete'de yayımlanarak yürürlüğe giren 5403 sayılı Toprak Koruma ve Arazi Kullanımı Kanunu hükümlerince kurulan İl Toprak Koruma Kurulu'nun 03.07.2014 tarihli toplantısında değerlendirilmiştir. Kurul'un 115/3 sayılı kararı gereğince; "**Güneş Enerji Santral Tesis**" yapılması talebi çevre arazilere ve yörede yapılan tarımsal faaliyetlere zarar vermeyecek tedbirlerin alınması, DSİ II. Bölge Müdürlüğü'nün 24.06.2014 tarih ve 54495999-754-390543-149 sayılı görüş yazılarında belirtilen hususlara uyulması kaydıyla Valiliğimizce **uygun görülmüştür**. Bilgilerinizi ve gereğini rica ederim.

Mehmet YÜCE  
Vali a.  
Vali Yardımcısı

**EKLER** \_\_\_\_\_ :

**EK.1-** Taahhütname (1 adet, 2 sahife)

**EK.2-** Vaziyet Planı (2 adet, 4 sahife)



T.C.

MANİSA VALİLİĞİ

İl Kültür ve Turizm Müdürlüğü

SAYI : 31218407-169.99 / 2364  
KONU:Salihli İlçesi,Adala Mahallesi,  
2244, 2114, 2139 ve 2250 parseller.



02 Haziran 2016

SALİHLİ KAYMAKAMLIĞINA  
(Belediye Başkanlığı)

İlgi:a)09.03.2016 tarih ve 418 sayılı yazınız.  
b)10.03.2016 tarih ve 402 sayılı yazınız.

İlimiz, Salihli İlçesi,Adala Mahallesi,2244, 2114, 2139 ve 2250 parseller ile ilgili İlimiz Müze Müdürlüğü uzmanlarınca hazırlanan 27.05.2016 tarihli raporu ve ekleri ilişikte gönderilmiştir.

Bilgilerinizi ve gereğini rica ederim.

Ünal ÇAKICI  
Vali a.  
Vali Yardımcısı

EKLER:

-Rapor ve ekleri

( 3 sayfa)



## RAPOR

### MÜZE MÜDÜRLÜĞÜNE MANİSA

**Rapor Tarihi :** 27.05.2016

**Rapor Konusu:** Salihli, Adala Mah. 2114,2139,2244 ve 2250 parsel  
(Güneş Enerji Santrali)

**İlgi:** a) İl Kültür ve Turizm Müdürlüğünün 21.03.2016 tarih ve 169.99/1246 sayılı yazısı  
b) İl Kültür ve Turizm Müdürlüğünün 21.03.2016 tarih ve 169.99/1247 sayılı yazısı

İlgi yazılar ekinde yer alan Salihli Belediyesi Plan ve Proje Müdürlüğünün 09.03.2016 tarih ve 418 sayılı yazısı ile 10.03.2016 tarih ve 402 sayılı yazısında; İlimiz Salihli İlçesi, Adala Mahallesi, 2114,2139,2244 ve 2250 parselde yer alan, yazı eklerinde tapu bilgileri ve koordinat değerleri verilen, harita üzerinde gösterilen alanlar üzerinde "Güneş Enerji Santrali" kurulmak istendiği belirtilmekte ve söz konusu alanlar ile ilgili Kurum görüşümüz sorulmaktadır.

Yazı eklerinde tapu bilgileri ve koordinat değerleri verilen, harita üzerinde gösterilen alanlarda 23.05.2016 tarihinde yaptığımız inceleme sonucunda alanların bir kısmının tarım arazisi vasfında, bir kısmının çalılıklarla kaplı olduğu görülmüştür. Alanların görülebilen kısımlarında yaptığımız inceleme sonucunda 2863 Sayılı Kültür ve Tabiat Varlıklarını Koruma Kanunu kapsamında herhangi bir Kültür Varlığına rastlanılmamıştır. Ayrıca Müdürlüğümüz kayıtlarında söz konusu alanla ilgili herhangi bir sit/tescil kaydı bulunmamaktadır. Ancak yapılacak olan çalışmalar sırasında herhangi bir kültür varlığına rastlanması durumunda 2863 sayılı yasanın 4. Maddesi gereği Müdürlüğümüze veya Mülki İdare Amirliğine haber verilmesi yasal zorunluluktur.

Bilgilerinize arz ederim.

  
**Feride AKAR**  
Uzman

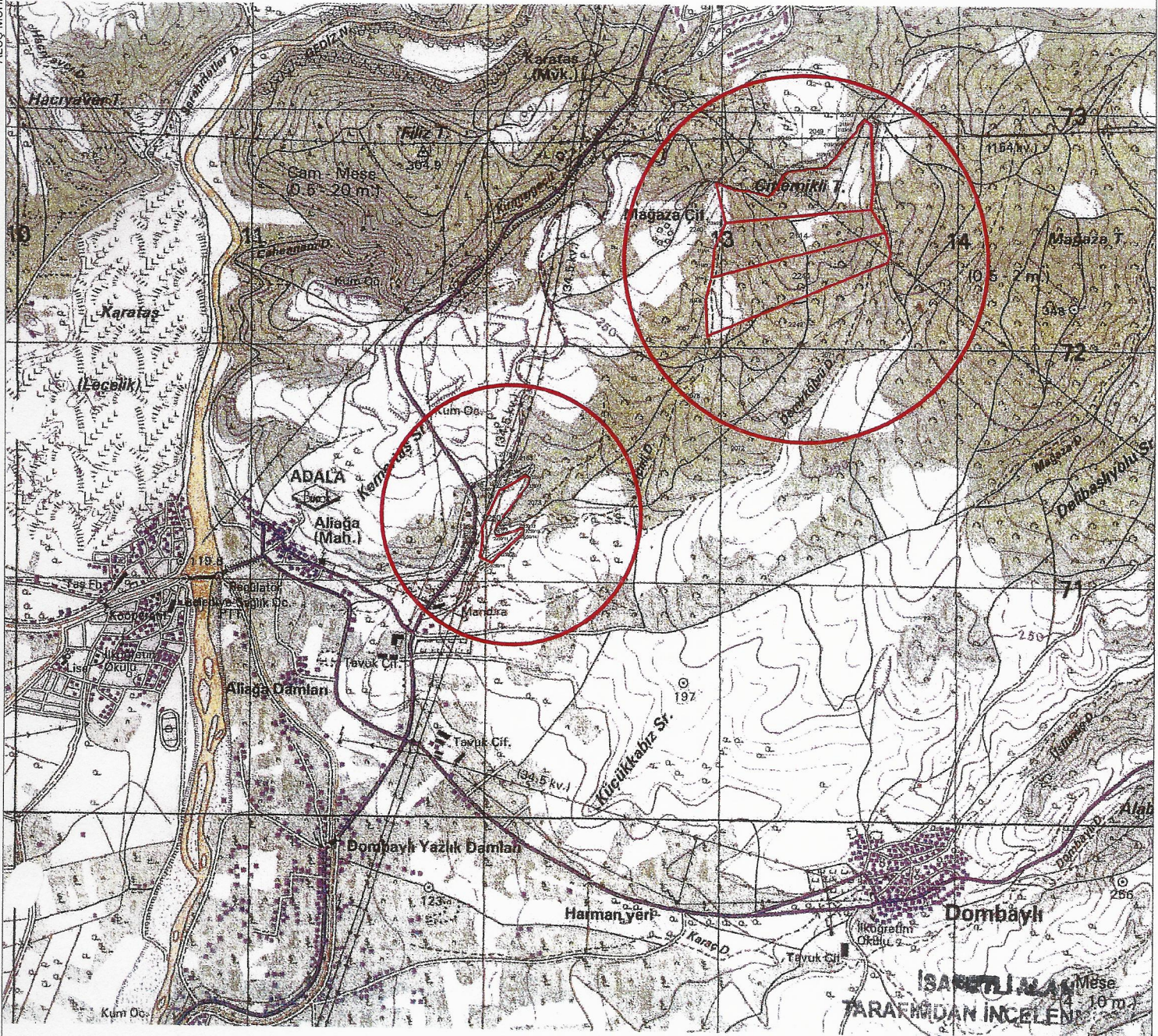
  
**Ali AKSAKAL**  
Arkeolog

**Ek: 1-** 1/25000 lik Harita ( 1 Sayfa )  
**2-** Fotoğraf Levhası ( 2 Sayfa )



# ADALA-AGROLİVE TAR.HAY.TURİZM GIDA SAN.TİC.A.Ş.NE AİT 2139-2114-2244-2250 NOLU PARSELLERİ GÖSTERİR HARİTA İZMİR - K20 - c4

1 / 25 000



2139 NOLU PARSELİN  
ED-50 6 ° KOORDİNE ÖZETİ

| NoktaNo | Y      | X       |
|---------|--------|---------|
| 2139/1  | 612976 | 4272715 |
| 2139/2  | 613054 | 4272686 |
| 2139/3  | 613116 | 4272682 |
| 2139/4  | 613200 | 4272658 |
| 2139/5  | 613244 | 4272702 |
| 2139/6  | 613264 | 4272746 |
| 2139/7  | 613288 | 4272780 |
| 2139/8  | 613305 | 4272763 |
| 2139/9  | 613339 | 4272768 |
| 2139/10 | 613379 | 4272774 |
| 2139/11 | 613408 | 4272776 |
| 2139/12 | 613444 | 4272780 |
| 2139/13 | 613489 | 4272825 |
| 2139/14 | 613514 | 4272866 |
| 2139/15 | 613577 | 4272930 |
| 2139/16 | 613582 | 4272948 |
| 2139/17 | 613610 | 4272979 |
| 2139/18 | 613637 | 4272957 |
| 2139/19 | 613647 | 4272718 |
| 2139/20 | 613638 | 4272608 |
| 2139/21 | 613020 | 4272548 |

2250 NOLU PARSELİN  
ED-50 6 ° KOORDİNE ÖZETİ

| NoktaNo | Y      | X       |
|---------|--------|---------|
| 2250/1  | 611985 | 4271238 |
| 2250/2  | 612041 | 4271369 |
| 2250/3  | 612056 | 4271402 |
| 2250/4  | 612077 | 4271410 |
| 2250/5  | 612170 | 4271468 |
| 2250/6  | 612187 | 4271454 |
| 2250/7  | 612179 | 4271425 |
| 2250/8  | 612049 | 4271252 |
| 2250/9  | 612038 | 4271223 |
| 2250/10 | 612045 | 4271203 |
| 2250/11 | 612058 | 4271202 |
| 2250/12 | 612157 | 4271236 |
| 2250/13 | 612165 | 4271228 |
| 2250/14 | 612161 | 4271217 |
| 2250/15 | 612066 | 4271132 |
| 2250/16 | 612025 | 4271085 |
| 2250/17 | 611974 | 4271113 |
| 2250/18 | 611980 | 4271138 |
| 2250/19 | 611982 | 4271149 |
| 2250/20 | 611984 | 4271162 |
| 2250/21 | 611985 | 4271181 |
| 2250/22 | 611986 | 4271201 |
| 2250/23 | 611988 | 4271215 |

2114-2244 NOLU PARSELİN  
ED-50 6 ° KOORDİNE ÖZETİ

| NoktaNo | Y      | X       |
|---------|--------|---------|
| 2114/1  | 613698 | 4272514 |
| 2114/2  | 612959 | 4272309 |
| 2114/3  | 612966 | 4272365 |
| 2114/4  | 612971 | 4272441 |
| 2139/20 | 613638 | 4272808 |
| 2139/21 | 613020 | 4272548 |
| 2244/1  | 613700 | 4272351 |
| 2244/2  | 612941 | 4272059 |
| 2244/3  | 613708 | 4272381 |
| 2244/4  | 613721 | 4272420 |
| 2244/5  | 612934 | 4272217 |

01.03.2016

Ali AKSAKAL  
Arkeolog

Feride AKAR  
Uzman



Manisa İli, Salihli İlçesi, Adala Mah. 2244 parsel



Manisa İli, Salihli İlçesi, Adala Mah. 2114 parsel



10/10/2021



Manisa İli, Salihli İlçesi, Adala Mah. 2139 nolu parsel



Manisa İli, Salihli İlçesi, Adala Mah. 2250 nolu parsel







T.C.  
ORMAN GENEL MÜDÜRLÜĞÜ  
İzmir Orman Bölge Müdürlüğü Manisa Orman İşletme Müdürlüğü



Sayı : 72994857-255.03[255.03]/622494  
Konu : Görüş-Salihli İlçesi, Adala Mah. 2250  
Parsel "Lisanssız Güneş Enerji Santrali"  
(14/G)

23.03.2016


SALİHLİ BELEDİYE BAŞKANLIĞI  
(Plan ve Proje Müdürlüğüne)

İlgi : 10.03.2016 tarih ve 28246479-599-387 S.Yazınız.

İlgi tarih ve sayılı yazınızla Kurum Görüşü sorulan alan İşletme Müdürlüğümüzce kurulan komisyon tarafından incelenmiş olup, düzenlenen inceleme raporunun sonuç bölümünde;

"Manisa İli, Salihli İlçesi, Adala Mahallesi, Narlıca Mevkii - Ada, 2250 nolu Parsel sayılı 30.846,61 m<sup>2</sup> lik taşınmaz 6831 Sayılı Orman Kanununun 1. Maddesine göre **Orman Sayılmayan Yerlerden** olup, "Lisanssız Güneş Enerji Santrali" yapılmasında Kurumumuz ve Mevzuatımız açısından bir sakınca bulunmamaktadır." denilmektedir.

Bilgilerinize arz ederim.

 e-imzalıdır

Yasin YAPRAK  
İşletme Müdürü

EK :

İnc. Rap. ve Ekleri.

Bu belgenin aslının 5070 sayılı kanun gereğince E-imza ile imzalandığı tasdik olunur.  
23.3/2016  
Vedat KURT  
Kadastro Memuru

Not: 5070 sayılı elektronik imza kanunu gereği bu belge elektronik imza ile imzalanmıştır.



832

30.03.2016

T.C.  
KARAYOLLARI GENEL MÜDÜRLÜĞÜ  
2. Bölge Müdürlüğü

Sayı : 16803100- 754 / E.67845  
Konu : Adala, 2250 parselde GES

23.03.2016

29.03.2016

SALİHLİ BELEDİYE BAŞKANLIĞINA  
(Plan ve Proje Müdürlüğü)  
Atatürk MH. Kurudere Cad. No:1 45300 Salihli/MANİSA

Nuri KAYA  
Başkan Yrd.

İlgi: 10/03/2016 tarihli 66944990/403 sayılı yazınız.

Manisa İli, Salihli İlçesi, Adala Mahallesi, 2250 parselde Güneş Enerji Santrali amaçlı 1/5000 ve 1/1000 ölçekli İmar Planı hazırlanacağı belirtilerek Kurum görüşümüzün bildirilmesi istenmektedir.

Görüş istenen parsel, Erişme Kontrollü Karayolu (otoyol) standartlarında inşa edilerek trafiğe açılacak olan İzmir-Ankara Otoyoluna cephe teşkil etmektedir. Söz konusu yolun projesi hazırlanmış olup, Kamulaştırma Planları henüz üretilmemiştir. Proje doğrultusunda yapılan incelemede 2250 parselin bir kısmının otoyol güzergahında kaldığı anlaşılmaktadır. İzmir-Ankara Otoyolunun ilgili kesimine ait proje yazımız ekinde sayısal olarak yer almakta olup, kamulaştırma sınırlarımız henüz belli olmadığından, proje doğrultusunda planlama yapılmalı ve Güneş Enerji Santralinin kurulacağı parsel ile otoyol arasında en az 10 m güvenlik payı bırakılmalıdır.

Erişme Kontrollü Karayolları 6001 sayılı "Karayolları Genel Müdürlüğü'nün Teşkilat ve Görevleri Hakkında Kanun" hükümlerine tabidir. Bununla birlikte; Planlama çalışmaları sırasında 2918 sayılı Karayolları Trafik Kanununun 18. Maddesi ve buna bağlı olarak çıkarılan "Karayolları Kenarında Yapılacak ve Açılacak Tesisler Hakkındaki Yönetmelik" in Yapı Yaklaşma Mesafesi başlıklı 41. Maddesinde belirlenmiş olan standartlar ile, yine 6001 sayılı Kanunun 17. Maddesinin (2) numaralı bendi hükümleri göz önünde bulundurulmalıdır. Bu doğrultuda Güneş Enerji Santrali içerisinde yer alan "güneş panelleri" için güvenlik payından sonra 5 m, bunun dışındaki yapılar için 25 m çekme mesafesi bırakılması uygun görülmüştür.

Yukarıda belirtilen hususlar dikkate alınacak şekilde söz konusu alanda İmar Planı hazırlanmasında sakınca yoktur. Ancak, İmar Planı hazırlandıktan sonra İdarelerimizden tekrar görüş alınmalıdır.

Bilgilerini rica ederim.

Çetin İNAN  
Bölge Müdürü a.  
Bölge Müdür Yardımcısı

EK:  
CD (1 ADET)

BELGENİN ASLI  
ELEKTRONİK İMZALIDIR

Faruk MİLDİŞ  
Kalfiye İşçi

"Bu belge, güvenli elektronik imza ile imzalanmıştır."

<http://www.kgm.gov.tr> adresinden, "voxu28E2D5F" DYS No ve evrak tarihi ile erişebilirsiniz.

Kazım Dirik Mahallesi Sanayi Cad. No : 41 Bornova/İZMİR

Bilgi için: Fatma Serap ARSLAN

Emlak ve İmar Şefi

Tel - Faks: 35206-

e-posta : farslan4@kgm.gov.tr

Telefon No : 232 4935000

Faks: 232 4935037

İnternet Adresi : [www.kgm.gov.tr](http://www.kgm.gov.tr)



İstanbul Büyükşehir Belediyesi  
İmar ve Şehircilik Dairesi Başkanlığı



T.C.  
BİLİM, SANAYİ VE TEKNOLOJİ BAKANLIĞI  
Sanayi Bölgeleri Genel Müdürlüğü

Sayı : 57540384 - 453.04E.1048  
Konu : İmar İşleri

18/03/2016

SALİHLİ BELEDİYE BAŞKANLIĞINA  
(Plan ve Proje Müdürlüğü)

İlgi : 10/03/2016 tarihli ve 389 sayılı yazınız

İlgi yazıda; Manisa İli Salihli İlçesi Adala Mahallesi 2250 parselde kayıtlı taşınmazların mülkiyeti Agrolive Tarım ve Hayvancılık Turizm Gıda Sanayi ve Ticaret A.Ş.'ne ait olduğu, söz konusu taşınmazın üzerinde Lisanssız Güneş Enerji Santrali kurulması için 1/5000 ve 1/1000 ölçekli imar planı hazırlanmasına yönelik Bakanlığımız görüşü istenilmektedir.

Talebiniz değerlendirilmiş olup, bahse konu parselin herhangi bir organize sanayi bölgesi (OSB) ve Endüstri Bölgesi sınırları içinde kalmadığı görüldüğünden, konunun kendi mevzuatı çerçevesinde değerlendirilmesinde Bakanlığımız görev ve yetkileri açısından bir sakınca bulunmamaktadır.

Bilgi edinilmesi ve gereğini rica ederim.

Hamit AKKAYA  
Bakan a.  
Daire Başkanı

  
Fatma BALAMAN BULUT  
Şehir Plancısı  
Güvenli Elektronik  
İmzalı Ash ile Aynıdır.  
...../...../20....

**"Bu belge, güvenli elektronik imza ile imzalanmıştır."**

Mustafa Kemal Mahallesi Dumlupınar Bulvarı Eskişehir Yolu Bilgi İçin İrtibat: Fatma BALAMAN BULUT .Şehir Plancısı  
2151.Cadde No:154 06510 Çankaya /ANKARA  
Telefon : 03122015922 Faks : 312 201 58 23  
e-posta : fatma.balaman@sanayi.gov.tr Elektronik Ağ : www.sanayi.gov.tr  
Evrak bilgisine www.sanayi.gov.tr adresindeki e-hizmetler bölümünden, "zwksk1158BC9" DYS No ve evrak tarihi ile erişebilirsiniz.zwksk1158BC9



**BOTAŞ**  
BORU HATLARI İLE PETROL TAŞIMA A.Ş.  
İzmir Şube Müdürlüğü

Sayı : 43940819-405.02.99-11920  
Konu : Kurum Görüşü

23/03/2016

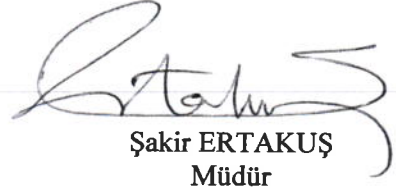
T.C.  
SALİHLİ BELEDİYE BAŞKANLIĞI  
(Plan ve Proje Müdürlüğü)

İlgi : 10/03/2016 tarih ve 390 sayılı yazınız

İlgi yazıya konu olan Manisa İli, Salihli İlçesi, Adala Mahallesi, 2250 parsel nolu taşınmazda "Lisanssız Güneş Enerji Santrali (GES)" kurulması talebine esas olmak üzere bahsi geçen taşınmaz harita üzerinde incelenmiş olup, söz konusu taşınmazda ve yakınında Kurumumuza ait Doğal Gaz alt ve üst yapı tesislerinin bulunmadığı görülmüştür.

Bilgilerinize arz ederiz.

  
Murat DEMİR  
Başmühendis

  
Şakir ERTAKUŞ  
Müdür

Adres : Uşak Yolu 32. Km. Sütçüler Köyü Mevkii  
Kemalpaşa / İZMİR  
Telefon : (232) 887 1720 Faks :  
İnternet Adresi : www.botas.gov.tr

Bilgi için : Murat DEMİR  
Başmühendis  
Telefon :  
e-posta : murat.demir@botas.gov.tr



**T.C.**  
**MANİSA VALİLİĞİ**  
**Halk Sağlığı Müdürlüğü**

MANİSA HALK SAĞLIĞI MÜDÜRLÜĞÜ - MANİSA HALK  
SAĞLIĞI MÜDÜRLÜĞÜ  
23/03/2016 08:40 - 93581782 - 129 - E.2138



00021091774

**Sayı** : 93581782/129  
**Konu** : Görüş

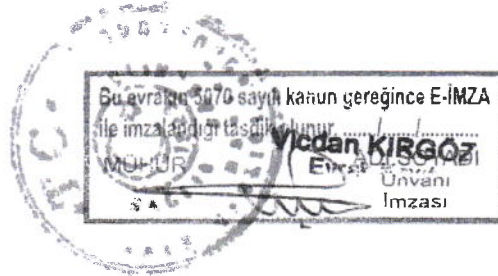
**SALİHLİ BELEDİYE BAŞKANLIĞINA**

**İlgi** : 10/03/2016 tarihli ve 66944990/401 sayılı yazı

İlgi yazınız ve ekleri incelenmiştir.İlimiz Salihli İlçesi Adala Mahallesi 2250 parselde kayıtlı taşınmaz üzerine sahibi Agrolive Tarım ve Hayvancılık Turizm Gıda Sanayi ve Ticaret A.Ş. tarafından Lisanssız güneş enerji santrali kurulması için yapılacak 1/5000 ve 1/1000 ölçekli imar planı hazırlanmasında diğer kurumlardan uygun görüş alınması koşulu ile kurumumuzca bir sakınca bulunmamaktadır.

Bilgilerinizi arz ederim.

**Dr. Özgür SEKRETER**  
**Müdür a.**  
**Halk Sağlığı Müdür Yardımcısı**



Çevre ve Çalışan Sağlığı Şube Müdürlüğü -Akmescit Mah. İzmir Cad. No:298 Yunusemre / MANİSA  
0 236 231 19 04-114 Fax: 0236 231 49 93 E-mail: hsm45.cevcal@sağlik.gov.tr

Evrakın elektronik imzalı suretine <http://e-belge.saglik.gov.tr> adresinden 1a944c4d-4da7-4baf-b223-055040991015 kodu ile erişebilirsiniz.  
Bu belge 5070 sayılı elektronik imza kanuna göre güvenli elektronik imza ile imzalanmıştır.



**T.C.**  
**MANİSA VALİLİĞİ**  
**İl Afet ve Acil Durum Müdürlüğü**

21 Mart 2016

../03/2016

Sayı : 40763783/251

874

Konu: Görüş

**T.C.**  
**SALİHLİ BELEDİYE BAŞKANLIĞI**  
**Plan ve Proje Müdürlüğü**

**İlgi:** 10.03.2016 tarih ve 400 sayılı yazınız;

İlgi yazıda Manisa İli Salihli İlçesi, Adala mahallesi 2250 nolu parselde, Müdürlüğümüz mevzuatı açısından bir sakınca olup olmadığının bildirilmesi istenilmektedir.

Söz konusu yer ile ilgili dosya üzerinden yapılan incelemelerde; 7269 sayılı Afet Kanunu gereğince Bakanlar Kurulu tarafından alınan Afete Maruz Bölge Kararına rastlanılmamıştır.

Bilgilerinize rica ederim.

**M.Şinasi YILMAZ**  
**İl Afet ve Acil Durum Müdürü**

...../03/2016 Jeof.Müh. :F.ŞENHİSAR

...../03/2016 Şb.Md. :G.KARAKAYA





Sayı : 35231609-260.01.03-E. 8908  
Konu : Güneş Enerjisi Santrali

23/03/2016

SALİHLİ BELEDİYE BAŞKANLIĞINA  
Salihli Belediyesi Salihli/MANİSA

31.03.2016  
Nuri KAYA  
Belediye Başkan Yrd.

İlgi : 10/03/2016 tarihli ve 397 sayılı yazınız.

İlgide kayıtlı yazı ile Manisa ili, Salihli ilçesi, Adala Mahallesi 2250 parselde kayıtlı taşınmazın mülkiyetinin Agrolive Tarım ve Hayvancılık Turizm Gıda Sanayi ve Ticaret A.Ş.'ye ait olduğu ve söz konusu taşınmazlar üzerinde lisanssız güneş enerji santrali kurulması için 1/5000 ve 1/1000 ölçekli imar planı hazırlanması talebinde bulunduğu bilgileri iletilerek kurulması planlanan tesis ile ilgili imar planına esas Genel Müdürlüğümüz görüşü talep edilmektedir.

Bilindiği üzere; 02.10.2013 tarih ve 28783 sayılı "Elektrik Piyasasında Lisanssız Elektrik Üretimine İlişkin Yönetmelik" kapsamında ilgili Şebeke İşletmecisi tarafından bağlantı başvurusu uygun bulunan rüzgar/güneş enerjisine dayalı başvurulara ilişkin Genel Müdürlüğümüz tarafından anılan alanda başvuru günü itibariyle rüzgar ve güneş enerjisine dayalı elektrik üretim tesisi kurmak için lisanslı ve/veya lisanssız herhangi bir başvuru olup olmadığı dikkate alınarak teknik değerlendirme yapılmaktadır.

Söz konusu parsel üzerine yapılması planlanan güneş enerjisi projelerine ait imar planı teklifinin Genel Müdürlüğümüz tarafından düzenlenmiş olumlu Teknik Değerlendirme Raporu ile birlikte İmar Planını onaylamaya yetkili ilgili makamlara 02.10.2013 tarih ve 28783 sayılı "Elektrik Piyasasında Lisanssız Elektrik Üretimine İlişkin Yönetmelik" hükümlerinde belirtilen süreler içinde iletilmesi durumunda; bahse konu talebin gerçekleştirilmesine engel bir hal bulunmamaktadır.

Bilgilerinizi ve gereğini rica ederim.

e-imza  
Ramazan USTA  
Bakan a.  
Genel Müdür Yardımcısı

Evrakı Doğrulamak İçin : <http://belgedogrulama.enerji.gov.tr/BelgeDogrulama.aspx?V=BEL953EUV>

Adres: Eskişehir yolu 7. km No:166 Posta kodu:06520 Çankaya - ANKARA  
Telefon No: +90 312 295 50 00 Faks No: +90 312 295 50 05  
e-Posta: bilgi.yegm@yegm.gov.tr İnternet Adresi: <http://www.yegm.gov.tr>

Bilgi için: Ümit ÇALIKOĞLU  
ETK Uzman Yardımcısı  
ucalikoglu@yegm.gov.tr  
Telefon No: (0312) 295 50 87



Bütün enerjimizle Türkiye için çalışıyoruz

T.C.

## MANİSA BÜYÜKŞEHİR BELEDİYE BAŞKANLIĞI

İmar ve Şehircilik Dairesi Başkanlığı Planlama ve Harita Şube Müdürlüğü

Sayı : 45938075-045.03-E.8413

Konu : Salihli İlçesi, Adala, Mahallesi, 2250  
parsel Hk.

23/03/2016

29.03.2016

Nuri KAYA

Belediye Başkanı Yrd.

## SALİHLİ BELEDİYE BAŞKANLIĞI PLAN VE PROJE MÜDÜRLÜĞÜNE

İlgi : 10.03.2016 Tarih ve 404 Sayılı yazı.

İlgi dilekçeniz ile; Manisa İli, Salihli İlçesi, Adala Mahallesi, 2250 parsellerde kayıtlı taşınmazın mülkiyeti Agrolive Tarım ve Hayvancılık Turizm Gıda Sanayi ve Ticaret A.Ş ne ait olup, söz konusu taşınmaz üzerinde Lisanssız güneş enerji santrali kurulması amacı ile hazırlanacak 1/5000 ve 1/1000 ölçekli imar planına ilişkin kurum görüşümüz talep edilmiştir.

Söz konusu parsel İzmir-Manisa Planlama Bölgesi 1/100.000 ölçekli Çevre Düzeni Planı kapsamında incelendiğinde; 'Tarım Alanında kaldığı tespit edilmiştir.

16.11.2015 tarih ve 18783 sayılı Bakanlık Makamı Olur'u ile onaylanan İzmir-Manisa Planlama Bölgesi 1/100.000 ölçekli Çevre Düzeni Planı Hükümlerinin 'Enerji Üretim Alanları ve Enerji İletim Tesisleri' bölümünün 8.18.7. maddesinde; "Yenilenebilir enerji (rüzgar, güneş, jeotermal, hidroelektrik) üretim alanlarında, ilgili kurum ve kuruluşlardan alınan izinler ve Enerji Piyasası Düzenleme ve Denetleme Kurulunca verilecek lisans kapsamında, Çevre ve Şehircilik Bakanlığı'nın uygun görüşünün alınması koşuluyla, 1/100.000 ölçekli Çevre Düzeni Planında değişikliğe gerek kalmaksızın, ilgili kurum ve kuruluş görüşleri doğrultusunda hazırlanan Nazım ve Uygulama İmar Planları, ilgili idaresince onaylanır ve planlar bilgi için Bakanlığa gönderilir." denilmektedir.

Söz konusu alanda Belediyemizce yürütülen herhangi bir plan çalışması bulunmamaktadır. Yapılacak olan plana esas teşkil etmesi amacı ile ilgili kurumlardan görüş alınması gerekmekte olup, görüş talep edilecek kurum listesi yazımız ekinde yer almaktadır. Ayrıca GES projesi ile ilgili asıl kurum görüşümüz imar planı teklifinin tarafımıza iletildiği aşamada verilecektir.

Bilgilerinize rica ederim.

BELGENİN ASLI  
ELEKTRONİK İMZALIDIR

23.03.2016

Aytaç YALÇINKAYA

Belediye Başkanı a.

Genel Sekreter Yardımcısı

Ek: Görüş Alınacak Kurumlar Listesi





**ELEKTRİK ÜRETİM AŞ GENEL MÜDÜRLÜĞÜ**  
**Çevre ve Kamulaştırma Daire Başkanlığı**  
**Emlak ve Kamulaştırma Müdürlüğü**



Sayı : 50031969 - 754 - E.13484  
Konu : Manisa Salihli Adala Mah. 2250  
Parsel GES İmar Planı

21.03.2016

**SALİHLİ BELEDİYE BAŞKANLIĞINA**  
(Plan ve Proje Müdürlüğü)  
Atatürk Mah. Kurudere Cad. No:1 Salihli/MANİSA

İlgi : 10/03/2016 tarihli ve 393 sayılı yazınız

Manisa İli, Salihli İlçesi, Adala Mahallesi 2250 nolu parselde Güneş Enerji Santrali kurulacağı bildirilerek 1/5000 ve 1/1000 ölçekli İmar Planlarına esas oluşturacak görüşümüz ilgi'de kayıtlı yazı ile istenmiştir.

Söz konusu parselde herhangi bir tesisimiz, plan yada projemiz olmadığından görüşümüz bulunmamaktadır. Ancak aynı Mahalle sınırları içerisinde Demirköprü Barajı ve HES, Lojman ve Sosyal Tesisler yer almaktadır. Bu nedenle; bu projede ve bu bölgede yapılacak diğer her türlü çalışma ve imar planında Kuruluşumuzdan görüş alınması gerekmektedir.

Gereğini bilgilerinize arz ederiz.

Murat KANAT  
Şube Müdürü

Mücahit SAV  
Daire Başkanı

**"Bu belge, 5070 sayılı Elektronik İmza Kanununun 5. maddesi gereğince güvenli elektronik imza ile imzalanmıştır."**

Nasuh Akar Mah. Türkocağı Cad. No:2/F-1 Bahçelievler Çankaya ANKARA/TÜRKİYE

**Telefon:** (312) 212 69 00/2521 **Faks:** (0 312) 222 34 19

Ayrıntılı Bilgi İçin: Selda Gülcan ÜNAL - Teknik Şef(G) **E-mail:** seldagulcan.unal@euas.gov.tr

Evrak bilgisine <http://ebays.euas.gov.tr/evraksorgulama/default.aspx> adresinden, "ystuyIE3B06E" DYS No ve evrak tarihi ile erişebilirsiniz. ystuyIE3B06E





TÜRK YE ELEKTRİK İLETİM ANONİM ŞİRKETİ  
3.BÖLGE MÜDÜRLÜĞÜ (ZM R)  
n aat Ve Emlak Müdürlüğü

Sermaye: 5 Milyar ₺  
Vergi D. Hiit  
Vergi No: 879 030 4314  
ASO: 5887 ATO:165458

Sayı : 49752846-754-E.140568

11.04.2016

Konu : İmar Planına Esas Kurum Görüşü

SALİHLİ BELEDİYE BAŞKANLIĞINA  
(Plan ve Proje Müdürlüğü)

İlgi : 10.03.2016 tarihli ve 66944990-385 sayılı yazınız.

İlgi yazınızda Manisa İli, Salihli İlçesi, Adala Mahallesi, 2250 nolu parselde Güneş Enerji Santrali yapımına yönelik hazırlanacak imar planı çalışmalarına esas Kurum Görüşümüz istenmektedir.

Müdürlüğümüzce yapılan inceleme neticesinde, bahse konu parselde Teşekkülümüz sorumluluğundaki herhangi bir enerji iletim tesisinin isabet etmediği tespit edilmiştir.

Ancak Ulusal İletim Sistemi Master Planında yer almakla birlikte henüz güzergâh seçimi yapılmayan projelerimizle ilgili olarak güzergâh yer seçimi işleri tamamlandığında ilgi yazı konusu planlama sahaları içine isabet edecek şekilde tesislerimiz gündeme geldiği takdirde, buna yönelik plan, imar planı tadilatları için gerekli müracaatlar ilgili idarelere yapılacaktır.

Bilgilerinize rica ederiz.



e-imzalıdır

Yunus YILMAZ  
Bölge Müdür Yardımcısı



e-imzalıdır

Necdet GÜRLER  
Bölge Müdürü

Not: 5070 sayılı elektronik imza kanununu gereği bu belge elektronik imza ile imzalanmıştır.





**T.C.**  
**ORMAN VE SU İŞLERİ BAKANLIĞI**  
**Devlet Su İşleri Genel Müdürlüğü 2. Bölge Müdürlüğü**

Sayı : 54495999-754-190906  
Konu : İmar İşleri

22.03.2016

**SALİHLİ BELEDİYE BAŞKANLIĞINA**  
**(Plan Proje Müdürlüğü)**

**İlgi** : 10.03.2016 tarihli ve 392 sayılı yazınız.

İlgi yazınızda; Manisa İli, Salihli İlçesi, Adala Mahallesi'nde yazınız ekinde ki krokide belirtilen 2250 no.lu taşınmaz üzerinde "Lisanssız Güneş Enerji Santrali" kurulması için 1/5000 ve 1/1000 ölçekli imar planı hazırlanacağı belirtilerek, yazınıza ekli haritada sınırları belirlenen alanlara ilişkin İdaremiz görüşünün bildirilmesi istenmektedir.

Yapılan inceleme neticesinde;

1. Söz konusu parselin bulunduğu sahada İdaremize ait mevcut ve mutasavver herhangi tarla içi geliştirme projesi ve sulama tesisi bulunmamaktadır. Ayrıca, Kurumumuzca inşa edilmiş gölet ya da barajların su toplama havzalarında yer almamaktadır.

2. Görüş sorulan parselin sınırından yazımız ekindeki 1/25000 ölçekli haritada mavi renkle işaretlenen dereler geçmektedir.

İmar uygulamaları sırasında, parselin sınırından geçen dere yatağı için taşkın debisini geçirebilecek ve hidrolik açıdan yeterli şeritvari alan ayrılmalı, ayrıca derenin parsel tarafında kalan kesiminde dere güzergahı boyunca 5.00 metre genişliğinde şeritvari alan ayrılarak, kullanılmayıp boş bırakılmalıdır.

3. Bahse konu taşınmazın, derenin olası taşkınlardan etkilenme ihtimali bulunmaktadır. Bu nedenle taşkından korunma tedbirleri (çevre duvarı, subasman vb.) arazi sahibince alınmalı ve iklimsel koşullar altında ilerleyen zaman içerisinde meydana gelebilecek herhangi bir taşkında İdaremizden zarar ziyan bedeli talebinde bulunulmayacağı hususu kabul edilmelidir.

4. İnşaat çalışmaları sırasında, her türlü malzemenin ve erozyonla oluşacak rüsubatın, dere yataklarına ve komşu parsellere ulaşması, saha içerisinde alınacak önlemlerle engellenmeli ve derelerin serbest akışını engelleyici her türlü müdahaleden kaçınılmalıdır.

5. Faaliyet kapsamında bu alanda gerçekleştirilmesi planlanan her türlü tesis, nakliye yolu ve benzeri altyapı ile ilgili olarak Bölge Müdürlüğümüzden yazılı görüş alınmalıdır.

6. Çevre sorunları göz önünde tutulmalıdır. Yeraltı suları Kanunu, Su Kirliliği Kontrolü Yönetmeliği, Atık Yönetimi Yönetmeliği ve ilgili mevzuat hükümlerine uyulması sağlanmalıdır.

İdaremiz görüşü, ilgi yazınız ekinde gönderilen harita ve koordinat bilgilerine göre verilmiştir. Yazımız ekindeki 1/25000 ölçekli haritada görüş belirttiğimiz 2250 no.lu taşınmaza ait alanın değişmesi, kayması halinde İdaremiz görüşü geçerli değildir.

Söz konusu alan ile ilgili Bölge Müdürlüğümüz görüşlerini içeren bilgiler teknik tespit niteliğindedir. Yasal mevzuat uyarınca; istenilen amaçla kullanılması yönünde, plan kararı alma yetkisine sahip, ilgili kamu kurum veya kuruluşun kararı öncesi değerlendirmeler için veri oluşturmayı amaçlamaktadır.

Bilgilerinizi ve gereğini arz ederim.

**Bu belge, 5070 sayılı Elektronik İmza Kanununun 5. Maddesi gereğince güvenli elektronik imza ile imzalanmıştır. Orjinal elektronik belge adresi: "https://evrakdogrula.dsi.gov.tr" Doğrulama Kodu: RCHM-ESN8-FA88-7184**

**Bilgi İçin:**

Sabahat TUZER Mimar  
Telefon : 232 435 51 00/1426  
e-posta : ismailtuzer@dsi.gov.tr



Sami GÜZEL  
Bölge Müdürü a.  
Bölge Müdür Yardımcısı

**EK/EKLER :**

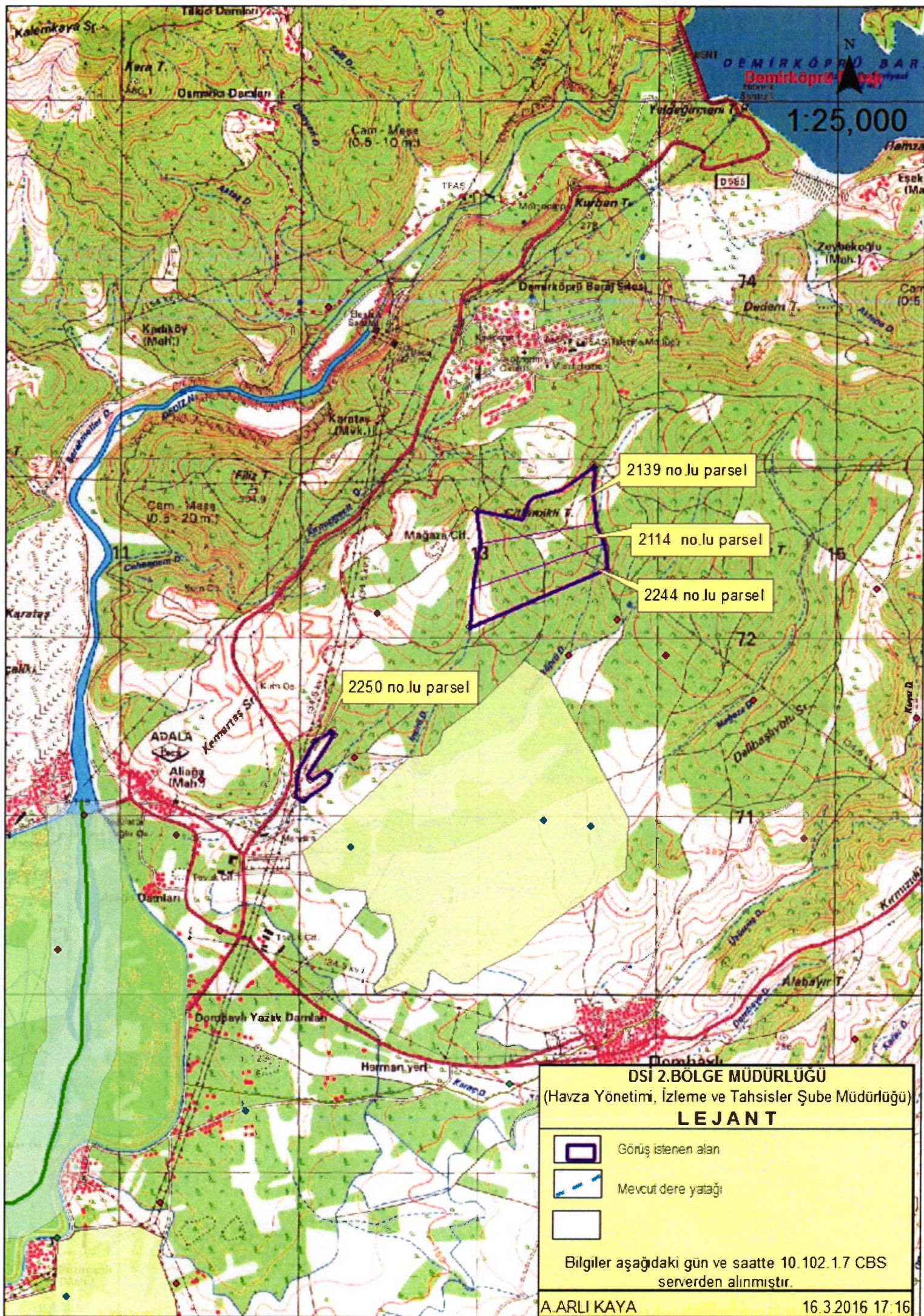
1- 1/25000 Ölçekli Harita (1 Adet)

**Bu belge, 5070 sayılı Elektronik İmza Kanununun 5. Maddesi gereğince güvenli elektronik imza ile imzalanmıştır.  
Orjinal elektronik belge adresi: 'https://evrakdogrula.dsi.gov.tr' Doğrulama Kodu: RCHM-ESN8-FA88-7184**




Adres : DSİ 2. Bölge Müdürlüğü Kazım Dirik Mahallesi Sanayi Cad. No:39  
35100 Bornova/İZMİR  
Telefon : (232) 435 51 00 Belgegeçer (Fax) : (232) 435 37 42 Elektronik  
Ağ: www.dsi.gov.tr

**Bilgi İçin:**  
Sabahat TUZER Mimar  
Telefon : 232 435 51 00/1426  
e-posta : ismailtuzer@dsi.gov.tr





DSİ 2.BÖLGE MÜDÜRLÜĞÜ  
(Havza Yönetimi, İzleme ve Tahsisler Şube Müdürlüğü)  
**LEJANT**

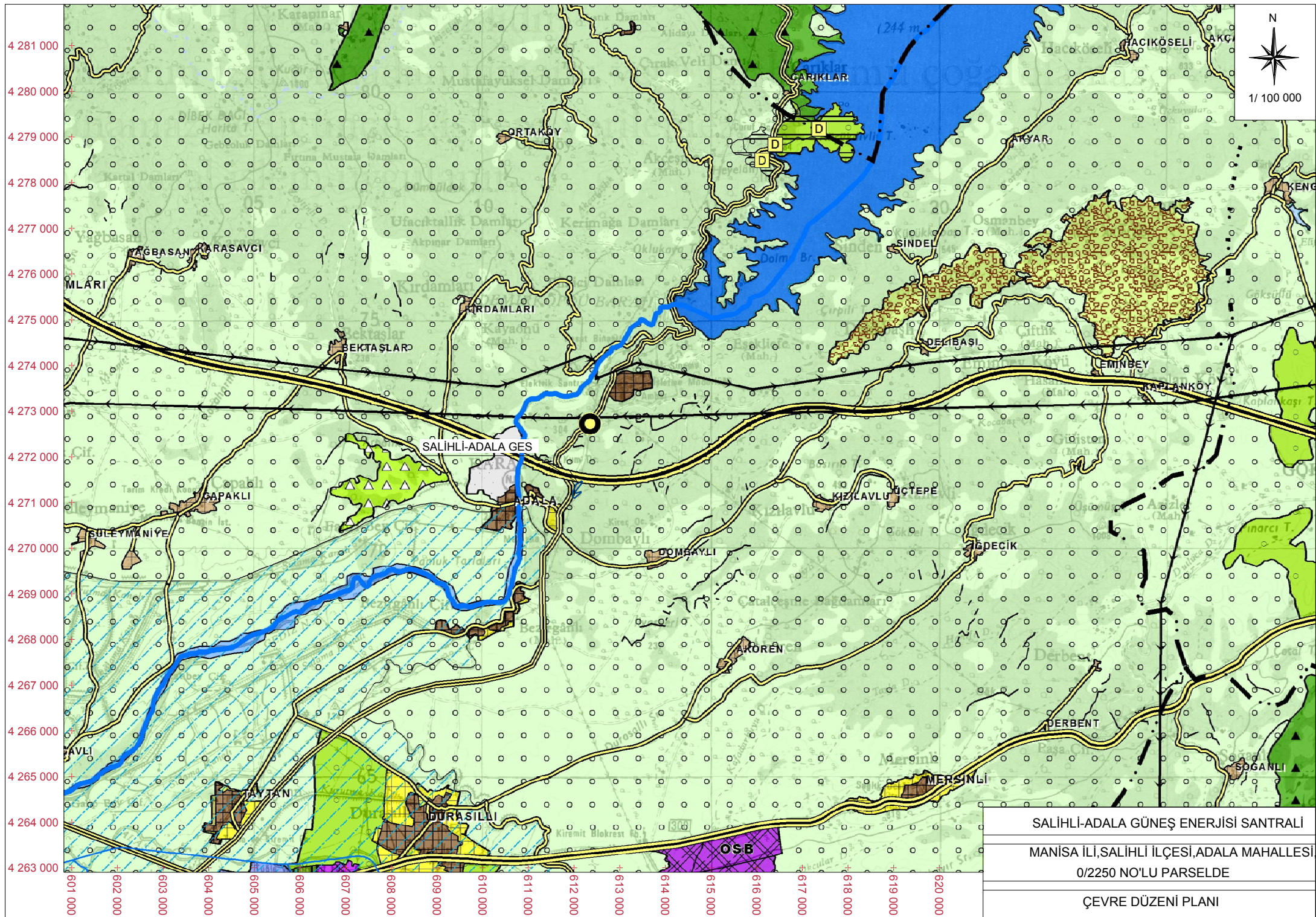
-  Görüş istenen alan
-  Mevcut dere yatağı
- 

Bilgiler aşağıdaki gün ve saatte 10.102.1.7 CBS  
serverden alınmıştır.



**Appendix-6**  
1/100,000 Scale Environment  
Master Plan and Legend







**T.C. ÇEVRE ve ŞEHİRCİLİK BAKANLIĞI**  
**MEKANSAL PLANLAMA GENEL MÜDÜRLÜĞÜ**

**İZMİR - MANİSA PLANLAMA BÖLGESİ 1/100.000 ÖLÇEKLİ ÇEVRE DÜZENİ PLANI**

**SINIRLAR**

**İDARİ SINIRLAR**

- İL SINIRI
- İLÇE SINIRI
- ooooo BÜYÜKŞEHİR BELEDİYE SINIRI
- BELEDİYE SINIRI
- ÖZEL PROJE ALANI SINIRI

**PLANLAMA SINIRLARI**

- PLAN ONAMA SINIRI

**ÖZEL KANUNLARA TABİ ALANLAR**

- KÜLTÜR VE TURİZM KORUMA VE GELİŞİM BÖLGESİ/TURİZM MERKEZİ
- ÖZEL ÇEVRE KORUMA BÖLGESİ
- MİLLİ PARK
- TABİAT PARKI/ TABİATİ KORUMA ALANI

**ARAZİ KULLANIMI**

**YERLEŞME ALANLARI**

- KENTSEL YERLEŞİK ALAN
- KENTSEL GELİŞME ALANI
- KIRSAL YERLEŞME ALANI

**ÇALIŞMA ALANLARI**

- BÜYÜK ALAN KULLANIMI GEREKTİREN KAMU KURULUŞ ALANI
- SANAYİ ALANI
- ORGANİZE SANAYİ BÖLGESİ
- SANAYİ VE DEPOLAMA ALANI
- DEPOLAMA ALANI
- SERBEST BÖLGE
- LOJİSTİK MERKEZ ALANLARI
- TARIM VE HAYVANCILIK GELİŞTİRME ALANLARI
- ORGANİZE ÇİÇEKÇİLİK BÖLGESİ

**TURİZM ALANLARI**

- TURİZM TESİS ALANI
- TERCİHLİ KULLANIM ALANI
- GÜNÜBİRLİK ALAN
- KIŞ TURİZMİ
- TERMAL TURİZM
- GOLF
- KAMPİNG

**BÜYÜK AÇIK ALAN KULLANIMLARI**

- ÜNİVERSİTE ALANI
- TEKNO PARK ALANI
- BÖLGE PARKI / BÜYÜK KENTSEL YEŞİL ALAN
- FUAR, PANAYIR, FESTİVAL ALANI
- BÖLGESEL / KENTSEL SPOR ALANI

**GÖSTERİM**

**TARIMSAL ARAZİ KULLANIMLARI**

- TARIM ARAZİSİ
- ÇAYIR-MERA
- SULAMA ALANI
- TEKNOLOJİK SERA BÖLGESİ
- SAKIZ AĞACI GELİŞTİRME BÖLGESİ

**DİĞER ARAZİ KULLANIM ALANLARI**

- ORMAN ALANI
- AĞAÇLANDIRILACAK ALAN
- MESİRE ALANI
- ASKERİ ALAN
- ASKERİ YASAK BÖLGE
- MADEN ÇIKARIM ALANI
- TUZLA ALANI

**KORUMA ALANLARI**

**SİT ALANLARI**

- DOĞAL SİT ALANI
- TARİHİ SİT ALANI
- KENTSEL SİT ALANI
- 2. VE 3. DERECE ARKEOLOJİK SİT ALANI
- KENTSEL VE ARKEOLOJİK SİT ALANI
- DOĞAL VE ARKEOLOJİK SİT
- 1. DERECE ARKEOLOJİK SİT ALANI

**SU KAYNAKLARI KORUMA ALANLARI**

- İÇME VE KULLANMA SUYU MUTLAK KORUMA ALANI SINIRI
- İÇME VE KULLANMA SUYU KISA MESAFELİ KORUMA ALANI SINIRI
- İÇME VE KULLANMA SUYU ORTA MESAFELİ KORUMA ALANI SINIRI
- İÇME VE KULLANMA SUYU UZUN MESAFELİ KORUMA ALANI SINIRI

**DOĞAL KARAKTERİ KORUNACAK ALANLAR**

- KAYALIK TAŞLIK ALAN
- SAZLIK BATAKLIK ALAN
- PLA-J-KUMSAL
- JEOLÖJİK ÖZELLİKLERİ NEDENİYLE KORUNACAK ALAN

**KORUMA STATÜSÜNE SAHİP DİĞER ALANLAR**

- YABAN HAYATI KORUMA/GELİŞTİRME ALANI
- AKDENİZ FOKU YAŞAM ALANLARI

- SULAK ALAN KORUMA BÖLGE SINIRI
- SULAK ALAN TAMPON BÖLGE SINIRI
- SULAK ALAN MUTLAK KORUMA BÖLGE SINIRI
- SULAK ALAN EKOLOJİK ETKİLENME BÖLGE SINIRI

**ALTYAPI**

**ULAŞIM**

**KARAYOLLARI**

- OTOYOL - EKSPRES YOL
- BİRİNCİ DERECE YOL
- İKİNCİ DERECE YOL
- ÜÇÜNCÜ DERECE YOL

**DEMİRYOLLARI**

- DEMİRYOLU - RAYLI SİSTEM

**DENİZYOLLARI VE KIYI YAPILARI**

- LİMAN / LİMAN GERİ SAHASI
- TERSANE
- BALIKÇI BARİNAĞI / YAT LİMANI

**HAVA YOLLARI**

- HAVA ALANI/ HAVA LİMANI
- MANİSA SINIRI

**ENERJİ - SULAMA**

- BARAJ
- TERMİK SANTRAL
- ENERJİ YATIRIM BÖLGESİ
- ENERJİ İLETİM HATTI
- DOĞALGAZ BORU HATTI

**SU YÜZEYLERİ**

- DENİZ
- GÖL / GÖLET
- NEHİR / DERE

**ATIK VE ARITMA TESİSLERİ**

- KATI ATIK BERTARAF VE GERİ KAZANIM TESİSİ
- TEHLİKELİ ATIK BERTARAF TESİSİ
- ÇÜRÜF DEPOLAMA VE GERİ KAZANIM ALANI
- ARITMA TESİSİ



T.C. ÇEVRE ve ŞEHİRCİLİK BAKANLIĞI  
MEKANSAL PLANLAMA GENEL MÜDÜRLÜĞÜ



Ölçek: 1/100.000

0 1 2 4 6  
Kilometre

## **Appendix-7**

Opinion Article dated 08.07.2014 and  
numbered 8057 of Republic of Turkey Manisa  
Governorate Province Food, Agriculture and  
Livestock Directorate

156  
10.07.2014

T.C.  
MANİSA VALİLİĞİ  
İl Gıda Tarım ve Hayvancılık Müdürlüğü

SAYI : 69335303/8057

08/07/2014

KONU: "Güneş Enerji Santralı Tesisi"

**SALİHLİ BELEDİYE BAŞKANLIĞINA**  
(İmar ve Şehircilik Müdürlüğü)

**İLGİ :** 10.06.2014 tarih ve 39317666-814-3329 sayılı yazınız.

İlgi yazınız ile İlimiz, Salihli İlçesi, Adala mahallesi, 2139 parsel, 12,426400 hektar yüzölçümlü,(Tarla)vasıflı, 2250 numaralı parsel, 3,084661 hektar yüzölçümlü, (Palamutluk) vasıflı, toplam 15,511061 hektar yüzölçümlü taşınmazlar üzerine mülkiyet sahibi Agrolive Tarım Hayvancılık Turizm Gıda Sanayi ve Ticaret Anonim Şirketi tarafından "Güneş Enerji Santralı Tesisi" yapılmak istendiği ifade edilerek, Kurumumuz mevzuatları açısından sakınca olup,olmadığına ile ilgili Kurum görüşümüz istenmiştir.

Söz konusu 2139 ve 2250 no'lu parseller "Kuru Marjinal Tarım Arazisi" sınıfındadır.Söz konusu talep, 19.07.2005 tarih ve 25880 sayılı Resmi Gazete'de yayımlanarak yürürlüğe giren 5403 sayılı Toprak Koruma ve Arazi Kullanımı Kanunu hükümlerince kurulan İl Toprak Koruma Kurulu'nun 03.07.2014 tarihli toplantısında değerlendirilmiştir. Kurul'un 114/3 sayılı kararı gereğince; "Güneş Enerji Santralı Tesisi" yapılması talebi çevre arazilere ve yörede yapılan tarımsal faaliyetlere zarar vermeyecek tedbirlerin alınması, DSİ İl. Bölge Müdürlüğü'nün 24.06.2014 tarih ve 54495999-754-390543-149 sayılı görüş yazılarında belirtilen hususlara uyulması kaydıyla Valiliğimizce **uygun görülmüştür**. Bilgilerinizi ve gereğini rica ederim.

11.07.2014  
H. Aydin

Mehmet YÜCE  
Vali a.  
Vali Yardımcısı

**EKLER** :

**EK.1-** Taahhütname (1 adet, 2 sahife)

**EK.2-**Vaziyet Planı (2 adet,4 sahife)



## **Appendix-8**

Opinion Article dated 18.10.2016 and  
numbered 11081 of Republic of Turkey Salihli  
Municipality Plan and Project Directorate



**T.C.**  
**SALİHLİ BELEDİYE BAŞKANLIĞI**  
**Plan Ve Proje Müdürlüğü**

**Sayı : 28246479-310.01.04-11081**

**Konu: Adala 2250 parselin İmar planı değişikliği**

**18.10.2016**

**MANİSA BÜYÜKŞEHİR BELEDİYESİ,**  
**İmar ve Şehircilik Daire Başkanlığı**  
**Planlama ve Harita Şube Müdürlüğü**  
**Merkez/MANİSA**

Salihli İlçesi Adala Mahallesi 2250 parselde kayıtlı taşınmaz üzerine Lisanssız Güneş Enerji Santrali kurulması için hazırlanan 1/5000 Ölçekli Nazım ve 1/1000 Ölçekli Uygulama İmar Planının onaylanmak üzere Büyükşehir Meclisine gönderilmesi Salihli Belediye Meclisinin 04.10.2016 tarih ve 2016/131 sayılı kararı ile onaylanmıştır.

Yukarıda konumu belirtilen alanda yapımı uygun görülen 1/1000 ölçekli uygulama imar planının 1/5000 Ölçekli Nazım İmar Planı ile birlikte değerlendirilmek üzere 5216 sayılı Büyükşehir Belediye kanununun 7/b bendi gereğince Büyükşehir Belediye meclisince incelenerek onaylanması hususu için;

Gereğini bilgilerinize arz ederim.

**E-İmza**  
**Yalın ŞENKAYA**  
**Belediye Başkan Yardımcısı**

**Ek: Tadilat dosyası 1 adet**

## **Appendix-9**

### Announcement Report

## TUTANAK

Manisa İli, Salihli İlçesi, Adala Mahallesi, 12 Pafta 2250 No'lu Parselde planlanan "Salihli-Adala Güneş Enerjisi Santrali Projesi" kapsamında halkı bilgilendirmek, görüş ve önerilerini almak için 25.11.2016 tarihinde saat 17:00'de "Nurlah Ertaş Kiraathanesi, Adala Mahallesi, Salihli/MANİSA" adresinde yapılacak olan Halkın Katılımı Toplantısı ile ilgili duyuru metni 22.11.2016-25.11.2016 tarihleri aralığında muhtarlığımız ilan panosunda askıda ilan edilmiştir.

Ayhan BABACAN  
Adala Mahallesi  
Muhtarı

The stamp is circular with a double border. The outer ring contains the text "MANİSA İLİ" at the top and "SALİHLİ İLÇESİ" at the bottom. The inner ring contains "ADALA MAHALLESİ" at the top and "MÜHTARLIĞI" at the bottom. In the center is a crescent moon and a star. A handwritten signature in blue ink is written over the stamp.



## **Appendix-10**

### Participant List

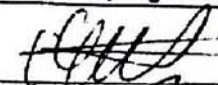
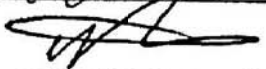






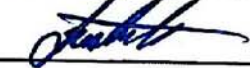


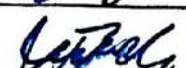

PROJE ADI: SALİHLİ-ADALA GÜNEŞ ENERJİSİ SANTRALİ PROJESİ  
PROJECT NAME: Salihli-Adala Solar Power Plant (SPP) Project

YER: MANİSA İLİ, SALİHLİ İLÇESİ, ADALA MAHALLESİ, NURULLAH ERTAŞ KIRAATHANESİ  
LOCATION: Nurullah ERTAŞ Kiraathanesi of Adala Village of Salihli District of Manisa

TARİH: 25.11.2016

DATE: 25.11.2016

**HALKIN KATILIMI VE BİLGİLENDİRİLMESİ TOPLANTISI KATILIMCI LİSTESİ**  
**PARTICIPANT LIST of PUBLIC PARTICIPATION AND CONSULTATION**

| NO | Adı Soyadı / Name Surname | Mahallesi /Village | İmza / Signature                                                                      |
|----|---------------------------|--------------------|---------------------------------------------------------------------------------------|
| 1  | Mehmet Ali Songur         | Adala              |    |
| 2  | Ahmet Songur              | Adala              |    |
| 3  | Mehmet Songur             | Adala              |    |
| 4  | Serhat GÜERYÖR            | Adala              |   |
| 5  | Nesime Özen               | Adala              |  |
| 7  | Mehmet Karacan            | Adala              |  |
| 8  | Enre AKÇAU                | Adala              |  |
| 9  | Sema DOKU                 | Adala              |  |
| 10 | Suat Karaduman            | Adala              |  |
| 11 | Dilek Fırkacı             | Adala              |  |
| 12 | Mehmet Ören               | Adala              |  |
| 13 | M. Ali Fırkacı            | Adala              |  |
| 14 | Necati Babacan            | Adala              |  |
| 15 |                           |                    |                                                                                       |
| 16 |                           |                    |                                                                                       |
| 17 |                           |                    |                                                                                       |
| 18 |                           |                    |                                                                                       |
| 19 |                           |                    |                                                                                       |
| 20 |                           |                    |                                                                                       |

## **Appendix-11**

### Report Preparers and References

## ÖZGEÇMİŞ

|                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ADI VE SOYADI</b>                                     | EROL DEMİRCİ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>DOĞUM YERİ VE YILI</b>                                | Ordu, 19.09.1972                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>MESLEĞİ</b>                                           | Çevre Y. Mühendisi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>YABANCI DİLİ</b>                                      | İngilizce                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>MEZUN OLDUĞU OKUL VE BÖLÜMÜ</b>                       | 1995-Ondokuz Mayıs Üniversitesi Çevre Mühendisliği Bölümü, Lisans<br>1998- Ondokuz Mayıs Üniversitesi Çevre Mühendisliği Bölümü, Yüksek Lisans                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>İŞ/EV ADRESİ</b><br><b>TELEFONU</b><br><b>E-POSTA</b> | Mustafa Kemal Mah. Dumlupınar Bulvarı No: 266,<br>Tepe Prime İş Merkezi Blok No:85, Çankaya/ANKARA<br>Tel: (312) 231 41 69 – 230 23 62<br>Fax: (312) 230 23 69<br>ppm@ppm.com.tr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>GÖREV YAPTIĞI KURUM/ KURULUŞLAR</b>                   | 2000- Halen, PPM Kirlilik Önleme ve Yönetimi Dan. Müh. Taah. San. ve Tic. Ltd. Şti.<br><i>Şirket Müdürü, ÇED Koordinatörü</i><br>1998-2000, Sarıcaoğlu Mühendislik Danışmanlık Ltd. Şti.<br><i>(Proje Mühendisi)</i><br>1997-1998, Ondokuz Mayıs Üniversitesi Fen Bilimleri Enstitüsü, Çevre Mühendisliği Bölümü<br><i>(Araştırma Görevlisi)</i><br>1996-1997, Tek-su Mühendislik Tic. Ltd. Şti.<br><i>(Altyapı Proje Mühendisi)</i>                                                                                                                                                                                                                                                                                                                                     |
| <b>KISA ÖZGEÇMİŞ</b>                                     | Aşağıda yer alan projelerin Çevresel Etki Değerlendirmesi Raporlarının, yer seçimine esas değerlendirme raporlarının ve atık yönetim planlarının hazırlanmasında proje yönetici olarak görev aldım. <ul style="list-style-type: none"><li>• Şırnak-Silopi Termik Santrali (2x135 MWe), Santrale Yakıt Sağlayan Asfaltit Sahası ve Kireçtaşı Sahaları Kapasite Artışı Projesi</li><li>• Şırnak (2x154 MWe) Termik Santrali, Malzeme Sahaları, Kül Depolama Tesisi Projesi,</li><li>• Kaptan Termik Santrali (354 MWe) Projesi</li><li>• Çebi Doğalgazlı Kombine Çevrim Santrali (2x600 MWe) Projesi,</li><li>• Gürenerji Doğalgazlı Kombine Çevrim Santrali Projesi</li><li>• Çankırı Eldivan Ekinne Göleti Kapsamındaki Malzeme Ocakları ve Kırma Eleme Tesisi</li></ul> |



- Kahramanmaraş-Helete (Düzbağ) Projesi
- Dilektaş Projesi
- Umutlu Barajı, HES Ve Malzeme Ocakları Projesi
- Çorum Sungurlu Barajı, Sulaması Ve Malzeme Ocakları Projesi
- Asmaca Barajı ve HES Projesi
- Silopi Güneş Enerjisi Santrali Projesi (7,0 MW)
- Çatak-Deliktaş Regülatörü ve HES Projesi
- 154 Kv Mersin Trafo Merkezi (TM) - Karacailyas Mevkii Enerji İletim Hattı (Yeni Hat + Yenileme)
- Serpinti-Çataloluk Barajı, Malzeme Ocakları, Kırma-Elleme Tesisi Projesi
- Adıyaman Göksu Araban Projesi (5 Baraj + 1 Gölet ve 65.000 Ha Alan Sulanması)
- Hasanali ve Söğütlü Barajı, Sulaması ve Malzeme Ocakları Projesi
- Merzifon Barajı ve Malzeme Ocağı Projesi
- Çankırı Devrez Kızlaryurdu Barajı
- Çimsa TM-Eskişehir TM3 Arası 12,966 Km'lik 154 Kv Elektrik İletim Hattı
- Adıyaman-Göksu-Araban Projesi (Çetintepe Barajı, İçmesuyu İsale Hattı ve Doğal Yapı Gereçleri Sahaları)
- Kars Barajı Sulama Projesi
- Tarihler I ve II Regülatör ve HES Projesi
- Kayabeyi Barajı ve Akıncı HES Projesi
- Rüzgar Enerjisi Santrali (RES) Projesi (60 adet)

Halen PPM Kirlilik Önleme ve Yönetimi Dan. Müh. Taah. San. ve Tic. Ltd. Şti.'nde Şirket Müdürü ve ÇED Koordinatörü olarak görev yapmaktadır.

## ÖZGEÇMİŞ

|                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ADI VE SOYADI</b>                                    | Merve Burcu YEŞİLDAĞ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>BABA ADI</b>                                         | Hacı                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>DOĞUM YERİ VE YILI</b>                               | Ankara 1987                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>MESLEĞİ</b>                                          | Uzman Biyolog                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>YABANCI DİLİ</b>                                     | İngilizce                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>MEZUN OLDUĞU OKUL VE BÖLÜMÜ</b>                      | 2005–2009 Ankara Üniversitesi Biyoloji Bölümü, Lisans<br>2010-2011 Ankara Üniversitesi, Biyoloji Bölümü, Tezsiz Y.Lisans                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>İŞ/EV ADRESİ</b><br><b>TELEFONU</b><br><b>E-mail</b> | Mustafa Kemal Mah. Dumlupınar Bulvarı No: 266,<br>Tepe Prime İş Merkezi B-85, Çankaya/ ANKARA<br>ppm@ppm.com.tr<br>Tel: 0312 231 41 69<br>Fax:0312 230 23 69                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>GÖREV YAPTIĞI KURUM/ KURULUŞLAR</b>                  | 2010- PPM Kirlilik Önleme ve Yönetimi Ltd. Şti.- <i>Biyolog</i><br>2010-2011 Ankara Üniversitesi Biyoloji Bölümü, Fen Bilimleri Enstitüsü, Tezsiz Yüksek Lisans Eğitimi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>KISA ÖZGEÇMİŞ</b>                                    | <p>2009 yılında Ankara Üniversitesi Biyoloji bölümünden mezun olmuştur.</p> <p>2011 yılında Ankara Üniversitesi Biyoloji Anabilim dalı /Zooloji bölümünde Tezsiz Yüksek Lisans öğrenimini tamamlamıştır.</p> <p>Çoğunluğu HES Projesi olmakla birlikte, Madencilik, Baraj ve Sulama, RES, Su Ürünleri Yetiştirme vs. projelerde Proje Tanıtım Dosyası ve Çevresel Etki Değerlendirmesi Raporları'nın format uygulamalarına yönelik flora ve fauna hazırlanmasında; gölet projeleri için değerlendirme format uygulamalarına yönelik olarak Ekosistem Değerlendirme Raporu hazırlanması aşamasında görev almıştır.</p> <p><b>Fauna çalışmalarında;</b><br/><u>Kullandığı arazi metotları:</u> Sürünge, Kuş ve Memeli hayvan gözlem ve yakalama metotları. Kuş için mistnet kullanma yöntemi.</p> <p><u>Laboratuvar teknikleri:</u> Omurgalı hayvanların tür teşhislerini yapabilmek için gerekli, morfolojik değerlendirme yöntemleri ve kafatası inceleme teknikleri.</p> <p><b>Flora çalışmalarında;</b><br/><u>Kullandığı arazi metotları:</u> Sahada bulunan bitki türlerini toplama, presleme, fotoğraflama.</p> <p><u>Laboratuvar teknikleri:</u> Sahada presleme yapılan bitkileri herbaryumda teşhis etme, Çekilen fotoğrafların ve elde edilen verilerin, geniş literatür çalışmalarıyla teşhisi.</p> |

## ÖZGEÇMİŞ

|                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ADI VE SOYADI</b>                                    | Mehmet Murat ERSÖZ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>BABA ADI</b>                                         | İbrahim Kaya                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>DOĞUM YERİ VE YILI</b>                               | Samsun, 1987                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>MESLEĞİ</b>                                          | Çevre Mühendisi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>YABANCI DİLİ</b>                                     | İngilizce                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>MEZUN OLDUĞU OKUL VE BÖLÜMÜ</b>                      | 2011-Ondokuz Mayıs Üniversitesi, Mühendislik Fakültesi Çevre Mühendisliği Bölümü                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>İŞ/EV ADRESİ</b><br><b>TELEFONU</b><br><b>E-mail</b> | Mustafa Kemal Mah. Dumlupınar Bulvarı No: 266,<br>Tepe Prime İş Merkezi B-85, Çankaya/ANKARA<br>Tel: (312) 231 41 69<br>Fax: (312) 230 23 69<br>bilgi@ppm.com.tr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>GÖREV YAPTIĞI KURUM/ KURULUŞLAR</b>                  | PPM Kirlilik Önleme ve Yönetimi Dan.<br>Müh. İnş. Taah. San. ve Tic. Ltd. Şti. (Ekim 2012-Devam)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>KISA ÖZGEÇMİŞ</b>                                    | <p>2011 yılında Ondokuz Mayıs Üniversitesi, Mühendislik Fakültesi, Çevre Mühendisliği Bölümü'nden mezun olmuştur.</p> <p>2012 yılından itibaren PPM Kirlilik Önleme ve Yönetimi Dan. Müh. İnş. Taah. San. ve Tic. Ltd. Şti.'de Çevre Mühendisi olarak Proje Tanıtım Dosyası ve Çevresel Etki Değerlendirmesi Raporları'nın hazırlanması, raporların hazırlanması aşamasında "Proje Koordinatörü" olarak görev alma ve proje takibinde bulunma, Bildirim Faaliyetleri'nde arazi çalışmalarında bulunma ve raporlama çalışmalarında görev almaktadır.</p> <p>Proje bazında özellikle atıklar ile ilgili bölümler olmak üzere, hava kalitesi dağılım modellemesi, akustik rapor, atık yönetim planı, çevresel durum raporu, çevre yönetim planı, bildirim faaliyetleri konularında bilgi ve beceriye sahiptir.</p> |

## ÖZGEÇMİŞ

|                                    |   |                                                                 |                      |
|------------------------------------|---|-----------------------------------------------------------------|----------------------|
| <b>Personelin Adı</b>              | : | <b>MUSTAFA ULUÇ</b>                                             |                      |
| <b>Mesleği</b>                     | : | Ziraat Yüksek Mühendisi                                         |                      |
| <b>Doğum Tarihi</b>                | : | 15.04.1957                                                      |                      |
| <b>Firmada Çalıştığı Yıllar</b>    | : | Taahhüt                                                         | <b>Uyruğu : Türk</b> |
| <b>Mesleki Kuruluşlara Üyeliği</b> | : | Ziraat Mühendisleri Odası<br>Ziraat Yüksek Mühendisleri Birliği |                      |

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### **Anahtar Nitelikleri :**

Dünya Bankası, AB Projeleri, KKYDP ve KBKYP Proje hazırlama ekibinin yetiştirilmesi ve proje hazırlama işleri, konusunda danışmanlık hizmetleri, Toprak ıslahı ve sulama, toprak koruma projeleri hazırlama, arazi toplulaştırma için arazi sınıflama ve derecelendirme, çiftçi eğitimi, arazi kullanım planlaması ve uzaktan algılama çalışması, arazi tahsis projeleri, ÇED raporlarında tarımsal danışmanlık, toprak araştırma ekiplerinin sevk ve idaresi, tarımsal proje etüdü, kırsal kalkınma ve kooperatif örgütlerinde muhasebe-finance-organizasyon işlerinin genel koordinatörlüğü, tarımsal kıymet takdiri (sigorta ekspertizliği).

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**Eğitim :** 1980 – Ankara Üniversitesi, Ziraat Fakültesi, Toprak Bilimi Bölümü, Ziraat Mühendisliği, Lisans  
1987 – Ankara Üniversitesi, Ziraat Fakültesi, Toprak Bilimi Bölümü, Ziraat Mühendisliği, Y. Lisans  
1989 – East Anglia Üniversitesi – Master Derecesi – İngiltere – Kalkınma Projeleri için Doğal Kaynak Takdiri ve Değerlendirilmesi  
1992 – Ankara Üniversitesi Fen Bilimleri Enstitüsü Toprak Anabilim Dalı – Doktora Derecesi – Toprak Etüdü ve Arazi Kullanım Planlaması

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### **Mesleki Deneyim :**

**01/2006-Devam İTÜ-MAP Tarımsal Mühendislik Ltd. Şti.**

Şirket Ortağı ve Genel Müdür, çalışanı

Arazi İşleri Daire Başkanlığı (Toprak Etüdüleri Arazi Sınıflaması ve Arazi Islahı İşleri)

#### **DSİ teşkilatı hizmetlerine yönelik yapılan bazı çalışmalar:**

1. Bingöl İli – Kiğı - Yedisu İlçesi Duru HES Alanı Su Hakları Raporu (Temmuz 2013)
2. Malatya Darende Gündül I Su Hakları Raporu (Mayıs 2012)
3. Malatya Gündül II. HES Projeleri Su Hakları Raporları (Mart 2013)
4. İzmir Ödemiş Beydağ Sulama Alanı Arazi Toplulaştırması için (Mart 2011- Haziran 2012) Arazi Sınıflama ve Derecelendirme Sınıflama (DSİ 2. Bölge Müdürlüğü) Derecelendirmesi
5. Adana ASO 8 YP1 Alanı Arazi Toplulaştırması için Arazi Sınıflaması ve Derecelendirme (DSİ 6. Bölge Müdürlüğü- Temmuz-Kasım 2012)
6. Taşoluk Sulama Alanı Arazi Toplulaştırması için Arazi Sınıflaması ve Derecelendirme (DSİ 25. Bölge Müdürlüğü - Nisan-Kasım 2013)
7. Aksu Deresi Islah Alanı Arazi Toplulaştırması için Arazi Sınıflaması ve Derecelendirme (DSİ 13. Bölge müdürlüğü - Mayıs-Aralık 2013)
8. Beypazarı - Dereli HES Alanı Ergöz Enerji Üretim A.Ş. (Mayıs 2010)
9. Bingöl - Durusu HES Alanı Su Hakları Raporu Durusu Enerji Üretim A.Ş. (Haziran 2011)
10. İstanbul - Beykoz Riva Arazi Islahı, Tarım İl Müdürlüğü- (Mayıs-Temmuz 2011)



11. Sinop Ayancık HES Alanı İlk Enerji Üretim A.Ş. (Tarım İl Müdürlüğü-Mayıs 2010)
12. Düzce Gölyaka HES Alanı Toprak Koruma Projesi Asu Enerji (Tarım İl Müdürlüğü Mayıs 2010)
13. Kastamonu-Cide HES Alanı Toprak Koruma ve Su Hakları Raporu (Tarım İl Müdürlüğü Temmuz 2010)

**10/2003-01/2006 TEDGEM (Teşkilatlanma ve Destekleme Gen. Md.)**

Proje Uygulama Dairesinde Ziraat Mühendisi

1.1.2006 devletten emekli serbest çalışma

**08/1997-10/2003 TARIM REFORMU GENEL MÜDÜRLÜĞÜ, Ankara**

**Daire Başkanı** - Arazi İşleri Daire Başkanlığı

**07/1992-08/1997 TARIM REFORMU GENEL MÜDÜRLÜĞÜ, Ankara**

**Şube Müdürü** –Araştırma, Toprak Etüd ve Arazi Kullanım Şubeleri

**10/1985-07/1992 TARIM REFORMU GENEL MÜDÜRLÜĞÜ - Ankara**

Ziraat Mühendisi

**01/1982-10/1985 TARIM BAKANLIĞI, Ankara**

Ziraat Mühendisi

**01/1982-11/1989 TARIM EFORMU MÜSTEŞARLIĞI KAYSERİ BÖLGE MÜDÜRLÜĞÜ – Kayseri**

Ziraat Mühendisi

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**Yabancı Diller :**

| <u>Lisan</u> | <u>Konuşma</u> | <u>Okuma</u> | <u>Yazma</u> |
|--------------|----------------|--------------|--------------|
| İngilizce    | İyi            | İyi          | İyi          |
| Türkçe       | Anadili        |              |              |

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**ENERJİ ÜRETİMİ, BARAJ VE SULAMA PROJELERİ**  
(BİTEN İŞLER LİSTESİ)

| <b>FAALİYET SAHİBİ</b>                                                         | <b>PROJE ADI</b>                                               | <b>İLİ</b>    |
|--------------------------------------------------------------------------------|----------------------------------------------------------------|---------------|
| DSİ 25. BÖLGE MÜDÜRLÜĞÜ                                                        | BAYRAMDERE BARAJ PROJESİ ÇED ÖN ARAŞTIRMA RAPORU               | ÇANAKKALE     |
| İÇTAŞ ENERJİ ÜR. LTD. ŞTİ.                                                     | KUMKÖY REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI                 | SAMSUN        |
| BAHÇIVAN GIDA SAN. TİC. A.Ş.                                                   | DOĞALGAZ ÇEVİRİM SANTRALİ PROJE TANITIM DOSYASI                | KIRKLARELİ    |
| EGELİ ENERJİ YATIRIM ÜRETİM İNŞ. VE TİC. LTD. ŞTİ.                             | YAYLA REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI                  | ARTVİN        |
| TG ENERJİ YATIRIM ÜRETİM İNŞ. VE TİC. LTD. ŞTİ.                                | TAŞKÖPRÜ REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI               | ARTVİN        |
| AES-İC İÇTAŞ ENERJİ A.Ş.                                                       | KEPEZKAYA REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI              | KARAMAN       |
| ASYA ENERJİ ELK. ÜR. SAN. A.Ş.                                                 | GÜNEŞLİ II REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI             | TRABZON       |
| EGELİ ENERJİ YATIRIM ÜRETİM İNŞ. VE TİC. LTD. ŞTİ.                             | DEMİRCİ REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI                | GİRESUN       |
| TG ENERJİ YATIRIM ÜRETİM İNŞ. VE TİC. LTD. ŞTİ.                                | ANGUTLU REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI                | KASTAMONU     |
| TEMMUZ ELEKTRİK LTD. ŞTİ.                                                      | MURAT REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI                  | ORDU          |
| TEMMUZ ELEKTRİK LTD. ŞTİ.                                                      | BAHAR REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI                  | ORDU          |
| ARMAHES MÜH. MÜŞ. ENJ. SAN. VE TİC. LTD. ŞTİ.                                  | MURATLI REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI                | GİRESUN       |
| SUATA ENERJİ MÜH. MÜŞ. SAN. VE TİC. LTD. ŞTİ.                                  | BURÇAK I-II REGÜLATÖRÜ VE HES ÇED RAPORU                       | GİRESUN       |
| BND ELEKTRİK ÜRETİM LTD. ŞTİ.                                                  | ÜÇGEN REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI                  | ORDU          |
| BND ELEKTRİK ÜRETİM LTD. ŞTİ.                                                  | GELİNCİK REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI               | GÜMÜŞHANE     |
| BND ELEKTRİK ÜRETİM LTD. ŞTİ.                                                  | GELİNCİK 2 REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI             | OSMANİYE      |
| FLOKSER POLİSER LTD. ŞTİ.                                                      | DOĞALGAZ ÇEVİRİM SANTRALİ PROJE TANITIM DOSYASI                | İSTANBUL      |
| FLOKSER SÜETSER LTD. ŞTİ.                                                      | DOĞALGAZ ÇEVİRİM SANTRALİ PROJE TANITIM DOSYASI                | İSTANBUL      |
| TÜRKER İNŞAAT SAN. TİC. A.Ş.                                                   | ERENKÖY REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI                | ARTVİN        |
| MODERN ENERJİ OTOPRODÜKTÖR A.Ş.                                                | DOĞALGAZ DÖNÜŞÜM TESİSİ PROJE TANITIM DOSYASI                  | TEKİRDAĞ      |
| DEĞİRMENÜSTÜ ENERJİ LTD. ŞTİ.                                                  | DEĞİRMENÜSTÜ REGÜLATÖRÜ VE KARGAÇAYIRI HES PROJESİ PTD         | KAHRAMANMARAŞ |
| KALEN ENERJİ A.Ş.                                                              | KALEN REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI                  | GİRESUN       |
| GÖZÜTOK ELEKTRİK ÜRETİM LTD. ŞTİ.                                              | AKSU I-II REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI              | ERZURUM       |
| HİDRODİZAYN MÜHENDİSLİK, MÜŞAVİRLİK, İNŞAAT, TURİZM VE TİCARET LİMİTED ŞİRKETİ | ORDU FATSA PROJESİ HİSARBAY VE TANYERİ BARAJ VE HES ÇED RAPORU | ORDU          |
| MODERN ENERJİ OTOPRODÜKTÖR A.Ş.                                                | ENERJİ İLETİM HATTI PROJE TANITIM DOSYASI                      | TEKİRDAĞ      |
| BM MÜHENDİSLİK VE İNŞAAT A.Ş.                                                  | TAHTA SUYU REGÜLATÖRÜ VE HES PROJESİ PTD                       | OSMANİYE      |
| CEYKAR ELEKTRİK ENERJİ A.Ş.                                                    | BAĞIŞLI REGÜLATÖRÜ VE HES PROJESİ PTD                          | HAKKARİ       |
| TEMMUZ ELEKTRİK LTD. ŞTİ.                                                      | ONUR REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI                   | TOKAT         |

| <b>FAALİYET SAHİBİ</b>                                                   | <b>PROJE ADI</b>                                                 | <b>İLİ</b>      |
|--------------------------------------------------------------------------|------------------------------------------------------------------|-----------------|
| PELİN ENERJİ YATIRIM ÜRETİM İNŞ. VE TİC. LTD. ŞTİ.                       | KAYABEYİ BARAJI VE AKINCI HES ÇED RAPORU                         | ARDAHAN         |
| PURE ENERJİ ÜRETİM A.Ş.                                                  | SEFAKÖY HES PROJE TANITIM DOSYASI                                | KARS            |
| BERKE ELKM. ENERJİ SAN. TİC. LTD. ŞTİ.                                   | EBRU I-II REGÜLATÖRÜ, HES VE MALZEME OCAKLARI PROJESİ ÇED RAPORU | KASTAMONU       |
| KALEN ENERJİ ELEKTRİK ÜRETİM A.Ş.                                        | AKSU REGÜLATÖRÜ VE HES PROJESİ                                   | GİRESUN         |
| MB ENERJİ LTD. ŞTİ.                                                      | MAHYADAĞ RES PROJE TANITIM DOSYASI                               | KIRKLARELİ      |
| AS-YEL ELEKTRİK ÜRETİM LTD. ŞTİ.                                         | ÇAYLAZ RES PROJE TANITIM DOSYASI                                 | KONYA           |
| HARE RÜZGAR ENERJİ ÜRETİM SAN. VE TİC. A.Ş.                              | TOZLU RES PROJE TANITIM DOSYASI                                  | İZMİR           |
| MODERN ENERJİ OTOPRODÜKTÖR A.Ş.                                          | ENERJİ ÜRETİM TESİSİ ÇED ÖN ARAŞTIRMA RAPORU                     | TEKİRDAĞ        |
| ERE HİDROELEKTRİK A.Ş.                                                   | KIZILDÜZ HES- GAZİPAŞA TM ELEKTRİK İLETİM HATTI ÇED RAPORU       | ANTALYA         |
| ERARI ELEKTROMEKANİK EN. ÜR. LTD. ŞTİ.                                   | DAMLA REGÜLATÖRLERİ I-II-III-IV VE HES PROJESİ ÇED RAPORU        | ARTVİN          |
| ELİF ENERJİ ÜRETİM LTD. ŞTİ.                                             | YAZILI REGÜLATÖRÜ VE HES PROJESİ PROJE TANITIM DOSYASI           | MERSİN          |
| ARG ENERJİ İÇ VE DIŞ TİC. LTD. ŞTİ.                                      | ARISU REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI                    | TRABZON         |
| MAR-EN ENERJİ ÜRETİM TİC. VE SAN. A.Ş.                                   | DOĞANKAYA HES PROJE TANITIM DOSYASI                              | ADIYAMAN        |
| CEVİZ ENERJİ ELEKTRİK ÜRETİM LİMİTED ŞİRKETİ                             | PAZARYERİ RES PROJE TANITIM DOSYASI                              | BİLECİK         |
| GÜNBATISI RÜZGAR ENERJİ ÜRETİM SAN. VE TİC. A.Ş.                         | DOĞANYURT RES PROJE TANITIM DOSYASI                              | KASTAMONU       |
| GÜNDOĞUSU RÜZGAR ENERJİ ÜRETİM SAN. VE TİC. A.Ş.                         | DALAKPINARI RES PROJE TANITIM DOSYASI                            | BURSA           |
| GÜNDOĞDU RÜZGAR ENERJİ ÜRETİM SAN. VE TİC. A.Ş.                          | DEMİRÖZÜ RES PROJE TANITIM DOSYASI                               | SİVAS           |
| ESİN RÜZGAR ENERJİ ÜRETİM SANAYİ VE TİC. A.Ş.                            | ÇAMINBAŞI RES PROJE TANITIM DOSYASI                              | ANTALYA         |
| CEVİZ ENERJİ ELEKTRİK ÜRETİM A.Ş.                                        | GÖLPAZARI RES PROJE TANITIM DOSYASI                              | BİLECİK-SAKARYA |
| CEVİZ ENERJİ ELEKTRİK ÜRETİM A.Ş.                                        | PAZARYERİ RES PROJE TANITIM DOSYASI                              | BİLECİK         |
| KÖPRÜBAŞI ENERJİ ELEKTRİK ÜRETİM A.Ş.                                    | FETHİYE RES PROJE TANITIM DOSYASI                                | MUĞLA           |
| GÜNDÜZ ENERJİ ÜRETİM LTD. ŞTİ.                                           | YAYLAKÖY RES PROJE TANITIM DOSYASI                               | İZMİR-MANİSA    |
| YERKÖY RÜZGAR ENERJİSİNDEN ELEKTRİK ÜRETİM SANTRALI LTD. ŞTİ.            | YERKÖY RES PROJE TANITIM DOSYASI                                 | YOZGAT          |
| ÇANAKKALE RÜZGAR ENERJİSİNDEN ELEKTRİK ÜRETİM SANTRALI LTD. ŞTİ.         | YENİKÖY RES PROJE TANITIM DOSYASI                                | ÇANAKKALE       |
| GÖKÇEADA RÜZGAR ENERJİSİNDEN ELEKTRİK ÜRETİM SANTRALI LTD. ŞTİ.          | GÖKÇEADA RES PROJE TANITIM DOSYASI                               | ÇANAKKALE       |
| KIRKLARELİ, RÜZGAR ENERJİSİNDEN ELEKTRİK ÜRETİM SANTRALI LİMİTED ŞİRKETİ | KIRKLARELİ RES PROJE TANITIM DOSYASI                             | KIRKLARELİ      |
| AS-YEL ELEKTRİK ÜRETİM LTD. ŞTİ.                                         | ÇAYLAZ RES PROJE TANITIM DOSYASI                                 | KONYA           |

| <b>FAALİYET SAHİBİ</b>                                                                | <b>PROJE ADI</b>                      | <b>İLİ</b> |
|---------------------------------------------------------------------------------------|---------------------------------------|------------|
| KARAYELRES, AYDIN-MANİSA RÜZGAR ENERJİSİNDEN ELEKTRİK ÜRETİM SANTRALI LİMİTED ŞİRKETİ | KARAYEL RES PROJE TANITIM DOSYASI     | AYDIN      |
| MİSTRALRES, ŞARKÖY RÜZGAR ENERJİSİNDEN ELEKTRİK ÜRETİM SANTRALI LİMİTED ŞİRKETİ       | MİSTRAL RES PROJE TANITIM DOSYASI     | TEKİRDAĞ   |
| ALADAĞ RÜZGAR ENERJİ ÜRETİM SANAYİ VE TİC. A.Ş.                                       | KUYULUKOYAK RES PROJE TANITIM DOSYASI | ANTALYA    |
| GÜNDOĞUSU RÜZGAR ENERJİ ÜRETİM SANAYİ VE TİC. A.Ş.                                    | KOÇAZ RES PROJE TANITIM DOSYASI       | KIRKLARELİ |
| ÇANAKKALE RÜZGAR ENERJİSİNDEN ELEKTRİK ÜRETİM SANTRALI LTD. ŞTİ.                      | BADEMLİ RES PROJE TANITIM DOSYASI     | ÇANAKKALE  |
| ÇANAKKALE RÜZGAR ENERJİSİNDEN ELEKTRİK ÜRETİM SANTRALI LTD. ŞTİ.                      | BEKTAŞ RES PROJE TANITIM DOSYASI      | ÇANAKKALE  |
| APOLLO RÜZGAR ENERJİSİNDEN ELEKTRİK ÜRETİM SANTRALI LTD. ŞTİ.                         | APOLLO RES PROJE TANITIM DOSYASI      | BURSA      |
| BORARES KARAMAN RÜZGAR ENERJİSİNDEN ELEKTRİK ÜRETİM SANTRALI LTD. ŞTİ.                | BORA RES PROJE TANITIM DOSYASI        | KARAMAN    |
| GEREDE RÜZGAR ENERJİSİNDEN ELEKTRİK ÜRETİM SANTRALI LTD. ŞTİ.                         | GEREDE RES PROJE TANITIM DOSYASI      | BOLU       |
| İMBATRES BEKİRLER RÜZGAR ENERJİSİNDEN ELEKTRİK ÜRETİM SANTRALI LTD. ŞTİ.              | İMBAT RES PROJE TANITIM DOSYASI       | MANİSA     |
| GÜNDÜZ ENERJİ ÜRETİM LTD. ŞTİ.                                                        | KORUCU RES PROJE TANITIM DOSYASI      | BALIKESİR  |
| TEG ENERJİ MÜH. DAN. A.Ş.                                                             | FIRAT RES PROJE TANITIM DOSYASI       | BALIKESİR  |
| KLF ENERJİ YATIRIM ÜRETİM İTHALAT İHRACAT SANAYİ VE TİC. A.Ş.                         | CİVAN RES PROJE TANITIM DOSYASI       | MANİSA     |
| UNİVERSAL WİND ENERJİ ELEKTRİK ÜRETİM A.Ş.                                            | İSTANBUL RES PROJE TANITIM DOSYASI    | İSTANBUL   |
| ARSLANRES ELEKTRİK ÜRETİM A.Ş.                                                        | ARSLAN RES PROJE TANITIM DOSYASI      | BALIKESİR  |
| MELTEMRES, DENİZLİ RÜZGAR ENERJİSİNDEN ELEKTRİK ÜRETİM SANTRALI LİMİTED ŞİRKETİ       | MELTEM RES PROJE TANITIM DOSYASI      | İZMİR      |
| DERBENT ENERJİ ÜRETİM PAZARLAMA İTHALAT VE İHRACAT A.Ş.                               | ÜÇPINAR RES PROJE TANITIM DOSYASI     | ÇANAKKALE  |
| ESERLİ ENERJİ ÜRETİM PAZARLAMA İTHALAT VE İHRACAT A.Ş.                                | ORTAOBA RES PROJE TANITIM DOSYASI     | BALIKESİR  |
| İLAD ENERJİ ÜRETİM PAZARLAMA İTHALAT VE İHRACAT A.Ş.                                  | KARACABEY RES PROJE TANITIM DOSYASI   | BURSA      |
| İSIDER ENERJİ ÜRETİM PAZARLAMA İTHALAT VE İHRACAT A.Ş.                                | AKSAZ RES PROJE TANITIM DOSYASI       | ÇANAKKALE  |



| <b>FAALİYET SAHİBİ</b>                                         | <b>PROJE ADI</b>                          | <b>İLİ</b>       |
|----------------------------------------------------------------|-------------------------------------------|------------------|
| ISIDER ENERJİ ÜRETİM PAZARLAMA İTHALAT VE İHRACAT A.Ş.         | KOCALAR RES PROJE TANITIM DOSYASI         | ÇANAKKALE        |
| KONBAY ENERJİ ÜRETİM PAZARLAMA İTHALAT VE İHRACAT A.Ş.         | KEMİKALAN RES PROJE TANITIM DOSYASI       | ÇANAKKALE        |
| KOVANCI ENERJİ ÜRETİM PAZARLAMA İTHALAT VE İHRACAT A.Ş.        | KUTLUOBA RES PROJE TANITIM DOSYASI        | ÇANAKKALE        |
| KOVANCI ENERJİ ÜRETİM PAZARLAMA İTHALAT VE İHRACAT A.Ş.        | HASANOBA RES PROJE TANITIM DOSYASI        | ÇANAKKALE        |
| KOVANCI ENERJİ ÜRETİM PAZARLAMA İTHALAT VE İHRACAT A.Ş.        | ÇAMOBA RES PROJE TANITIM DOSYASI          | ÇANAKKALE        |
| MENDİREK ENERJİ ÜRETİM PAZARLAMA İTHALAT VE İHRACAT A.Ş.       | ÇEŞMEALTI RES PROJE TANITIM DOSYASI       | ÇANAKKALE        |
| MENDİREK ENERJİ ÜRETİM PAZARLAMA İTHALAT VE İHRACAT A.Ş.       | TAHTALI RES PROJE TANITIM DOSYASI         | BALIKESİR        |
| OSPOLO ENERJİ ÜRETİM PAZARLAMA İTHALAT VE İHRACAT A.Ş.         | YENİOBA RES PROJE TANITIM DOSYASI         | ÇANAKKALE        |
| POLDEM ENERJİ ÜRETİM PAZARLAMA İTHALAT VE İHRACAT A.Ş.         | AKÇEŞME RES PROJE TANITIM DOSYASI         | ÇANAKKALE        |
| SONYAR ENERJİ ÜRETİM PAZARLAMA İTHALAT VE İHRACAT A.Ş.         | KARADAĞ RES PROJE TANITIM DOSYASI         | ÇANAKKALE        |
| SONYAR ENERJİ ÜRETİM PAZARLAMA İTHALAT VE İHRACAT A.Ş.         | KİRAZLI RES PROJE TANITIM DOSYASI         | ÇANAKKALE        |
| YERSU ENERJİ ÜRETİM PAZARLAMA İTHALAT VE İHRACAT A.Ş.          | DEDETEPE RES PROJE TANITIM DOSYASI        | ÇANAKKALE        |
| EFİL ENERJİ ÜRETİM TİCARET VE SANAYİ A.Ş.                      | KARTALDAĞI RES PROJE TANITIM DOSYASI      | GAZİANTEP        |
| DELSAY ELEKTRİK ÜRETİM SAN. VE TİC. A.Ş.                       | SABUNCUBELİ RES PROJE TANITIM DOSYASI     | İZMİR            |
| TÜRKERLER İNŞAAT ENERJİ ÜRETİM A.Ş.                            | 6 ADET RES PROJESİ PROJE TANITIM DOSYASI  | AYDIN            |
| KAYEN ALFA ENERJİ ÜR. A.Ş.                                     | TORTUM HES PROJE TANITIM DOSYASI          | ERZURUM          |
| BERKE ELEKTROMEKANİK ENERJİ SAN. TİC. LTD. ŞTİ                 | ÇİĞDEM I,II,III HES PROJE TANITIM DOSYASI | SİNOP            |
| MERAL ELEKTRİK ÜRETİM A.Ş.                                     | ESENDURAK HES PROJE TANITIM DOSYASI       | ERZURUM          |
| BODRUM ENERJİ ELEKTRİK ÜRETİM LİMİTED ŞİRKETİ                  | FETHİYE RES PROJE TANITIM DOSYASI         | MUĞLA            |
| CEVİZ ENERJİ ELEKTRİK ÜRETİM LİMİTED ŞİRKETİ                   | GÖLPAZARI RES PROJE TANITIM DOSYASI       | SAKARYA, BİLECİK |
| ANTAKYA RÜZGAR ENERJİSİNDEN ELEKTRİK ÜRETİM SANTRALİ LTD. ŞTİ. | ANTAKYA RES                               | ANTAKYA          |
| KÖPRÜBAŞI ENERJİ ELEKTRİK ÜRETİM A.Ş.                          | KURŞUNLU RES                              | BURSA            |

| <b>FAALİYET SAHİBİ</b>                                               | <b>PROJE ADI</b>                                                                                                                | <b>İLİ</b>                          |
|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| TAŞUCU, RÜZGAR ENERJİSİNDEN ELEKTRİK ÜRETİM SANTRALI LİMİTED ŞİRKETİ | TAŞUCU RES                                                                                                                      | MERSİN                              |
| KORDA ENERJİ ÜRETİM PAZARLAMA İTHALAT VE İHRACAT A.Ş.                | DENİZLİ RES                                                                                                                     | DENİZLİ                             |
| KORSAD ENERJİ ÜRETİM PAZARLAMA İTHALAT VE İHRACAT A.Ş.               | KARAMAN RES                                                                                                                     | MERSİN                              |
| TÜRKERLER İNŞAAT ENERJİ ÜRETİM A.Ş.                                  | 12 ADET RES PROJESİ                                                                                                             | ADAPAZARI, İSTANBUL, KOCAELİ, BURSA |
| ARMAHES ENERJİ ÜRETİM A.Ş.                                           | MURATLI HES ÇED RAPORU                                                                                                          | SİVAS, GİRESUN                      |
| ARG ENERJİ İÇ VE DIŞ TİC. LTD. ŞTİ                                   | ARISU HES PROJE TANITIM DOSYASI                                                                                                 | TRABZON                             |
| HORYAN ENERJİ ÜRETİM A.Ş.                                            | HORYAN REGÜTÖR VE HES PROJE TANITIM DOSYASI                                                                                     | TRABZON                             |
| AYONE ENERJİ ÜRETİM A.Ş.                                             | GÜRPINAR HES PROJE TANITIM DOSYASI                                                                                              | RİZE                                |
| AYDINLAR ENERJİ ÜRETİM SANAYİ VE TİCARET LTD. ŞTİ.                   | HANAK HES PROJE TANITIM DOSYASI                                                                                                 | ARDAHAN                             |
| NUR-TEK ELEKTRİK ÜRETİM A.Ş.                                         | TORTUM II HES ÇED RAPORU                                                                                                        | ARTVİN, ERZURUM                     |
| AY ELEKTRİK ÜRETİM LTD. ŞTİ.                                         | GEVNE-KARAPINAR REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI                                                                         | ANTALYA                             |
| ÖVÜNÇ ENERJİ VE ELEKTRİK ÜRETİM A.Ş.                                 | ÇERMİKLER BARAJI VE HES PROJESİ ÇED RAPORU                                                                                      | SİVAS                               |
| ARSAN ENERJİ A.Ş.                                                    | SOĞUKPINAR REGÜLATÖR VE HES PROJESİ PROJE TANITIM DOSYASI                                                                       | GİRESUN                             |
| KUTUP ENERJİ ELEKTRİK ÜRETİM LTD. ŞTİ.                               | BAYRA REGÜLATÖR VE HES PROJESİ PROJE TANITIM DOSYASI                                                                            | İĞDIR                               |
| MOGAN ENERJİ ELEKTRİK ÜRETİM LTD. ŞTİ.                               | KALE REGÜLATÖR VE HES PROJESİ PROJE TANITIM DOSYASI                                                                             | KARS                                |
| CANSU ELEKTRİK ÜRETİM A.Ş.                                           | CANSU REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI                                                                                   | ARTVİN                              |
| HED ELEKTRİK ÜRETİM A.Ş.                                             | CAN I HES PROJE TANITIM DOSYASI                                                                                                 | KARS                                |
| CİNER GROUP,<br>PARK ELEKTRİK ÜRETİM MADENCİLİK SAN. VE TİC. A.Ş.    | TARİHLER I VE II REGÜLATÖR VE HES PROJESİ (REGÜLATÖR I VE II, MALZEME OCAKLARI, KIRMA-ELEME TESİSİ, BETON SANTRALİ) ÇED RAPORU  | BİTLİS, SİİRT                       |
| CİNER GROUP,<br>SİLOPİ ELEKTRİK ÜRETİM A.Ş.                          | ŞIRNAK-SİLOPİ TERMİK SANTRALI, SANTRALE YAKIT SAĞLAYAN ASFALTİT SAHASI VE KİREÇTAŞI SAHALARI KAPASİTE ARTIŞI PROJESİ ÇED RAPORU | ŞIRNAK                              |
| DSİ XXIV. BÖLGE MÜDÜRLÜĞÜ                                            | KARS BARAJI SULAMA PROJESİ PROJE TANITIM DOSYASI                                                                                | KARS, MERKEZ                        |
| DSİ III. BÖLGE MÜDÜRLÜĞÜ                                             | YARALI SULAMA PROJESİ PROJE TANITIM DOSYASI                                                                                     | ANKARA, ESKİŞEHİR                   |
| DSİ XII. BÖLGE MÜDÜRLÜĞÜ                                             | YAMULA PROJESİ KALABA SEYFE GRUBU SULAMA PROJESİ (150.000 HA SULAMA SAHASI VE MALZEME OCAKLARI) PROJE TANITIM DOSYASI           | KIRŞEHİR, YOZGAT, NEVŞEHİR, KAYSERİ |
| DSİ II. BÖLGE MÜDÜRLÜĞÜ                                              | MANİSA SELENDİ PROJESİ (AYANLAR BARAJI VE SULAMASI, BETON SANTRALI, MALZEME OCAKLARI VE KIRMA ELEME TESİSİ) PTD                 | MANİSA, UŞAK                        |

| <b>FAALİYET SAHİBİ</b>                                               | <b>PROJE ADI</b>                                                                                                                | <b>İLİ</b>                          |
|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| TAŞUCU, RÜZGAR ENERJİSİNDEN ELEKTRİK ÜRETİM SANTRALI LİMİTED ŞİRKETİ | TAŞUCU RES                                                                                                                      | MERSİN                              |
| KORDA ENERJİ ÜRETİM PAZARLAMA İTHALAT VE İHRACAT A.Ş.                | DENİZLİ RES                                                                                                                     | DENİZLİ                             |
| KORSAD ENERJİ ÜRETİM PAZARLAMA İTHALAT VE İHRACAT A.Ş.               | KARAMAN RES                                                                                                                     | MERSİN                              |
| TÜRKERLER İNŞAAT ENERJİ ÜRETİM A.Ş.                                  | 12 ADET RES PROJESİ                                                                                                             | ADAPAZARI, İSTANBUL, KOCAELİ, BURSA |
| ARMAHES ENERJİ ÜRETİM A.Ş.                                           | MURATLI HES ÇED RAPORU                                                                                                          | SİVAS, GİRESUN                      |
| ARG ENERJİ İÇ VE DIŞ TİC. LTD. ŞTİ                                   | ARISU HES PROJE TANITIM DOSYASI                                                                                                 | TRABZON                             |
| HORYAN ENERJİ ÜRETİM A.Ş.                                            | HORYAN REGÜTÖR VE HES PROJE TANITIM DOSYASI                                                                                     | TRABZON                             |
| AYONE ENERJİ ÜRETİM A.Ş.                                             | GÜRPINAR HES PROJE TANITIM DOSYASI                                                                                              | RİZE                                |
| AYDINLAR ENERJİ ÜRETİM SANAYİ VE TİCARET LTD. ŞTİ.                   | HANAK HES PROJE TANITIM DOSYASI                                                                                                 | ARDAHAN                             |
| NUR-TEK ELEKTRİK ÜRETİM A.Ş.                                         | TORTUM II HES ÇED RAPORU                                                                                                        | ARTVİN, ERZURUM                     |
| AY ELEKTRİK ÜRETİM LTD. ŞTİ.                                         | GEVNE-KARAPINAR REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI                                                                         | ANTALYA                             |
| ÖVÜNÇ ENERJİ VE ELEKTRİK ÜRETİM A.Ş.                                 | ÇERMİKLER BARAJI VE HES PROJESİ ÇED RAPORU                                                                                      | SİVAS                               |
| ARSAN ENERJİ A.Ş.                                                    | SOĞUKPINAR REGÜLATÖR VE HES PROJESİ PROJE TANITIM DOSYASI                                                                       | GİRESUN                             |
| KUTUP ENERJİ ELEKTRİK ÜRETİM LTD. ŞTİ.                               | BAYRA REGÜLATÖR VE HES PROJESİ PROJE TANITIM DOSYASI                                                                            | İĞDIR                               |
| MOGAN ENERJİ ELEKTRİK ÜRETİM LTD. ŞTİ.                               | KALE REGÜLATÖR VE HES PROJESİ PROJE TANITIM DOSYASI                                                                             | KARS                                |
| CANSU ELEKTRİK ÜRETİM A.Ş.                                           | CANSU REGÜLATÖRÜ VE HES PROJE TANITIM DOSYASI                                                                                   | ARTVİN                              |
| HED ELEKTRİK ÜRETİM A.Ş.                                             | CAN I HES PROJE TANITIM DOSYASI                                                                                                 | KARS                                |
| CİNER GROUP,<br>PARK ELEKTRİK ÜRETİM MADENCİLİK SAN. VE TİC. A.Ş.    | TARİHLER I VE II REGÜLATÖR VE HES PROJESİ (REGÜLATÖR I VE II, MALZEME OCAKLARI, KIRMA-ELEME TESİSİ, BETON SANTRALİ) ÇED RAPORU  | BİTLİS, SİİRT                       |
| CİNER GROUP,<br>SİLOPİ ELEKTRİK ÜRETİM A.Ş.                          | ŞIRNAK-SİLOPİ TERMİK SANTRALI, SANTRALE YAKIT SAĞLAYAN ASFALTİT SAHASI VE KİREÇTAŞI SAHALARI KAPASİTE ARTIŞI PROJESİ ÇED RAPORU | ŞIRNAK                              |
| DSİ XXIV. BÖLGE MÜDÜRLÜĞÜ                                            | KARS BARAJI SULAMA PROJESİ PROJE TANITIM DOSYASI                                                                                | KARS, MERKEZ                        |
| DSİ III. BÖLGE MÜDÜRLÜĞÜ                                             | YARALI SULAMA PROJESİ PROJE TANITIM DOSYASI                                                                                     | ANKARA, ESKİŞEHİR                   |
| DSİ XII. BÖLGE MÜDÜRLÜĞÜ                                             | YAMULA PROJESİ KALABA SEYFE GRUBU SULAMA PROJESİ (150.000 HA SULAMA SAHASI VE MALZEME OCAKLARI) PROJE TANITIM DOSYASI           | KIRŞEHİR, YOZGAT, NEVŞEHİR, KAYSERİ |
| DSİ II. BÖLGE MÜDÜRLÜĞÜ                                              | MANİSA SELENDİ PROJESİ (AYANLAR BARAJI VE SULAMASI, BETON SANTRALI, MALZEME OCAKLARI VE KIRMA ELEME TESİSİ) PTD                 | MANİSA, UŞAK                        |

| <b>FAALİYET SAHİBİ</b>                                                       | <b>PROJE ADI</b>                                                                              | <b>İLİ</b>      |
|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------|
| EYMİR ELEKTRİK ÜRETİM A.Ş.                                                   | DİCLE ŞAHABAN REGÜLATÖR VE HES PROJESİ ÇED RAPORU                                             | DİYARBAKIR      |
| DSİ II. BÖLGE MÜDÜRLÜĞÜ                                                      | KARAREİS BARAJI, MALZEME SAHASI PROJESİ ÇED RAPORU                                            | İZMİR           |
| DSİ II. BÖLGE MÜDÜRLÜĞÜ                                                      | YEŞİLKAVAK BARAJI, SULAMASI VE MALZEME SAHASI PROJESİ ÇED RAPORU                              | MANİSA, SALİHLİ |
| BAŞAT ELEKTRİK ÜRETİM LTD. ŞTİ.                                              | ARMAĞAN REGÜLATÖRÜ VE HES PROJESİ ÇED RAPORU                                                  | TUNCELİ         |
| DSİ XXIV. BÖLGE MÜDÜRLÜĞÜ                                                    | VARLI BARAJI, SULAMA, MALZEME SAHASI, KIRMA ELEME TESİSİ VE BETON SANTRALİ PROJESİ ÇED RAPORU | KARS, DİĞOR     |
| AKME ELEKTRİK ÜRETİM TURİZM İNŞ. VE İHR. TİC. A.Ş.                           | GEÇİTLİ REGÜLATÖRÜ VE HES PROJESİ ÇED RAPORU                                                  | HAKKARİ         |
| ENEKS ENERJİ ÜRETİM SAN. VE TİC. A.Ş.                                        | DELİSAVA REGÜLATÖRÜ VE HES PROJESİ PTD RAPORU                                                 | GİRESUN         |
| MUY ENERJİ ELEKTRİK ÜRETİM LTD. ŞTİ.                                         | ÇORAKLI REGÜLATÖRÜ VE HES PROJESİ (2,6 MW) PTD                                                | ADANA           |
| ETİ ENERJİ A.Ş.                                                              | GELİNGÜLLÜ HES PTD                                                                            | YOZGAT          |
| TAYF ENERJİ YATIRIM ÜRETİM VE TİCARET A.Ş.                                   | ÖDEMİŞ RES PTD                                                                                | İZMİR           |
| ARSAN SOĞUKPINAR ELEKTRİK ÜRETİM A.Ş.                                        | SOĞUKPINAR REGÜLATÖRÜ VE HES PROJESİ PTD                                                      | GİRESUN         |
| KAYEN BETA ENERJİ ELEKTRİK ÜRETİM SAN. VE TİC. A.Ş.                          | BAĞBAŞI HES PROJE TANITIM DOSYASI                                                             | ERZURUM         |
| ARALIK ENERJİ ELEKTRİK ÜRETİM A.Ş.                                           | ARALIK REGÜLATÖRÜ VE HES PROJESİ PTD                                                          | ZONGULDAK       |
| DSİ VI. BÖLGE MÜDÜRLÜĞÜ                                                      | MERSİN SORGUN BARAJI, SULAMASI, HES I-II-III, MALZEME OCAKLARI PROJESİ ÇED RAPORU             | MERSİN          |
| DSİ XVIII. BÖLGE MÜDÜRLÜĞÜ                                                   | BALÇIKHİSAR SULAMA PROJESİ, MALZEME OCAKLARI PTD                                              | AFYONKARAHİSAR  |
| DSİ XVIII. BÖLGE MÜDÜRLÜĞÜ                                                   | İSCEHİSAR SULAMA PROJESİ, MALZEME OCAKLARI PTD                                                | AFYONKARAHİSAR  |
| T.M. ENERJİ ÜRETİM ELEKTRİK VE TİC. A.Ş.                                     | ŞİMŞİR REGÜLATÖRÜ VE HES PROJESİ ÇED RAPORU                                                   | KARABÜK         |
| BAŞKÖY ELEKTRİK ÜRETİM A.Ş.                                                  | KUZEY 1-2 REGÜLATÖRÜ VE HES PROJESİ ÇED RAPORU                                                | ORDU            |
| AÇAR ENERJİ YATIRIM ÜRETİM VE TİC. A.Ş.                                      | YAKAPINAR RES PROJESİ PTD                                                                     | ADANA           |
| PAMUK ELEKTRİK ÜRETİM TİC. VE SAN. LTD. ŞTİ.                                 | YANBOLU REGÜLATÖRÜ VE HES PTD                                                                 | TRABZON         |
| FLOKSER TEKSTİL SAN. TİC. A.Ş.                                               | ENERJİ ÜRETİM TESİSİ PTD                                                                      | İSTANBUL        |
| SAFİR ENERJİ ÜRETİM YATIRIM VE TİC. A.Ş.                                     | 50 MW KIRAZLI RES PROJESİ PTD                                                                 | İZMİR, AYDIN    |
| HACİM ENERJİ YATIRIM ÜRETİM VE TİC. A.Ş.                                     | GEYVE RES PROJESİ PTD                                                                         | SAKARYA         |
| DENİZHAN ENERJİ YATIRIM ÜRETİM VE TİC. A.Ş.                                  | MAHMUT ŞEVKET PAŞA-2 RÜZGAR ENERJİSİ SANTRALİ (RES) PROJESİ PTD                               | KOCAELİ         |
| KORDA ENERJİ ÜRETİM PAZ. İTH. VE İHR. A.Ş.                                   | DENİZLİ RES PTD                                                                               | DENİZLİ         |
| BARKAN ENERJİ YATIRIM ÜRETİM VE TİCARET ANONİM ŞİRKETİ                       | TİRE RES PTD                                                                                  | İZMİR           |
| AKARET ENERJİ ÜR. OT. İNŞ. İLT. SAN. VE TİC. LTD. ŞTİ.                       | KARAMENDERES HES PTD                                                                          | ÇANAKKALE       |
| YADE ELEKTRİK ÜRETİM VE TİCARET LTD. ŞTİ.                                    | POYRAZ I-II HES PROJE TANITIM DOSYASI                                                         | ERZİNCAN        |
| GÖKÇE ENERJİ ÜRETİM HİZMETLERİ İNŞAAT MADENCİLİK SANAYİ VE TİCARET LTD. ŞTİ. | ERKAN REGÜLATÖRÜ VE HES PROJESİ ÇED RAPORU                                                    | ORDU            |



| <b>FAALİYET SAHİBİ</b>                                        | <b>PROJE ADI</b>                                                                                                                                                           | <b>İLİ</b>                         |
|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| DSİ 20. BÖLGE MÜDÜRLÜĞÜ                                       | ADİYAMAN-GÖKSU-ARABAN PROJESİ (ÇETİNTEPE BARAJI, İÇMESUYU İSALE HATTI VE DOĞAL YAPI GEREÇLERİ SAHALARI) ÇED RAPORU                                                         | ADİYAMAN, GAZİANTEP, KAHRAMANMARAŞ |
| DSİ 24. BÖLGE MÜDÜRLÜĞÜ                                       | TUZLUCA PROJESİ ÜNLENDİ BARAJI, LALELİ, KURUAĞAÇ, KAMIŞLI VE GÖKTAŞ REGÜLATÖRLERİ, HALFELİ HES, SULAMA, KIRMA ELEME TESİSİ, BETON SANTRALİ VE MALZEME OCAKLARI PROJESİ ÇED | IĞDIR                              |
| DSİ 18. BÖLGE MÜDÜRLÜĞÜ                                       | HOCALAR ÇEPNİ GÖLETİ VE SULAMASI MALZEME OCAKLARI PTD                                                                                                                      | AFYONKARAHİSAR                     |
| DSİ 18. BÖLGE MÜDÜRLÜĞÜ                                       | SANDIKLI ÖRENKAYA GÖLETİ VE SULAMASI MALZEME OCAKLARI PTD                                                                                                                  | AFYONKARAHİSAR                     |
| DSİ 18. BÖLGE MÜDÜRLÜĞÜ                                       | MERKEZ ÇIKRIK GÖLETİ VE SULAMASI MALZEME OCAKLARI PTD                                                                                                                      | AFYONKARAHİSAR                     |
| DSİ 18. BÖLGE MÜDÜRLÜĞÜ                                       | SANDIKLI KARGIN GÖLETİ VE SULAMASI MALZEME OCAKLARI PTD                                                                                                                    | AFYONKARAHİSAR                     |
| DSİ 18. BÖLGE MÜDÜRLÜĞÜ                                       | DİNAR YIPRAK GÖLETİ VE SULAMASI MALZEME OCAKLARI PTD                                                                                                                       | AFYONKARAHİSAR                     |
| ALPCAR OTOMOTİV İNŞ. TUR. VE TİC. LTD. ŞTİ.                   | NAZHAN REGÜLATÖRÜ VE HES PROJESİ PTD                                                                                                                                       | KARS                               |
| DSİ 18. BÖLGE MÜDÜRLÜĞÜ                                       | AKDOĞAN GÖLETİ VE SULAMASI PROJESİ KAPSAMINDA KAYA OCAĞI (D KAYA GEREÇ ALANI) VE KIRMA-ELEME-YIKAMA TESİSİ PROJESİ PTD                                                     | ISPARTA                            |
| DSİ 5. BÖLGE MÜDÜRLÜĞÜ                                        | ACIÇAY SULAMA VE MALZEME OCAKLARI PROJESİ PTD                                                                                                                              | ÇANKRI                             |
| DSİ 18 BÖLGE MÜDÜRLÜĞÜ                                        | AYVALIPINAR GÖLETİ, SULAMA VE MALZEME OCAKLARI PTD                                                                                                                         | ISPARTA                            |
| DSİ 18. BÖLGE MÜDÜRLÜĞÜ                                       | YENİŞARBADEMLİ GÖLETİ, SULAMA VE MALZEME OCAKLARI PTD                                                                                                                      | ISPARTA                            |
| DSİ 18 BÖLGE MÜDÜRLÜĞÜ                                        | YALVAÇ-KIRKBAŞ GÖLETİ VE SULAMASI PROJESİ PTD                                                                                                                              | ISPARTA                            |
| DSİ 18 BÖLGE MÜDÜRLÜĞÜ                                        | EĞİRDİR-SORKUNCAK GÖLETİ VE SULAMASI PROJESİ PTD                                                                                                                           | ISPARTA                            |
| DSİ 20. BÖLGE MÜDÜRLÜĞÜ                                       | ADİYAMAN-GÖKSU-ARABAN II. MERHALE PLANLAMA YAPIMI ÇETİNTEPE BARAJI ÇED RAPORU                                                                                              | ADİYAMAN- KAHRAMANMARAŞ            |
| DSİ 18. BÖLGE MÜDÜRLÜĞÜ                                       | AKDOĞAN GÖLETİ VE SULAMASI PROJESİ KAPSAMINDA KUM-ÇAKIL OCAKLARI (C VE E GEÇİRİMLİ GEREÇ ALANI) PROJESİ                                                                    | ISPARTA                            |
| DSİ 18. BÖLGE MÜDÜRLÜĞÜ                                       | AKDOĞAN GÖLETİ, SULAMASI, KİL OCAĞI PROJESİ PTD                                                                                                                            | ISPARTA                            |
| ERGÖZ ELEKTRİK ÜRETİM İNŞ.SAN. VE TİC A.Ş.                    | TORTUM REGÜLATÖRÜ VE HES PROJESİ ÇED RAPORU                                                                                                                                | ERZURUM                            |
| TEİAŞ GENEL MÜDÜRLÜĞÜ                                         | AKHİSAR TM-META NİKEL TM ELEKTRİK İLETİM HATTI PROJESİ ÇED RAPORU                                                                                                          | MANİSA                             |
| BETİM ENERJİ YATIRIM ÜRETİM VE TİC. A.Ş.                      | ÖMERLİ RES PROJESİ PTD                                                                                                                                                     | İSTANBUL                           |
| YALOVA RÜZGAR ENERJİSİNDEN ELEKTRİK ÜRETİM SANTRALİ LTD. ŞTİ. | KARACABEY RES PTD                                                                                                                                                          | BURSA                              |
| ATLAS ENERJİ ELEKTRİK ÜRETİM SANAYİ VE TİCARET A.Ş.           | YAYLABAŞI REGÜLATÖRÜ VE HES PROJESİ ÇED RAPORU                                                                                                                             | TRABZON                            |
| ATLAS ENERJİ ELEKTRİK ÜRETİM SANAYİ VE TİCARET A.Ş.           | SAMAN REGÜLATÖRÜ VE HES PROJESİ ÇED RAPORU                                                                                                                                 | TRABZON                            |
| DSİ 18. BÖLGE MÜDÜRLÜĞÜ                                       | YAVAŞLAR BARAJI VE SULAMASI, MALZEME OCAKLARI ÇED RAPORU                                                                                                                   | AFYONKARAHİSAR                     |
| ÇEVİRİM ENERJİ YATIRIM ÜRETİM VE TİC. A.Ş.                    | ŞİLE RÜZGAR ENERJİSİ SANTRALİ (RES) PROJESİ PTD                                                                                                                            | İSTANBUL                           |

| <b>FAALİYET SAHİBİ</b>                                                         | <b>PROJE ADI</b>                                                                                                                                | <b>İLİ</b>                  |
|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| DSİ 21. BÖLGE MÜDÜRLÜĞÜ                                                        | KIZILDERE GÖLETİ, SULAMASI VE MALZEME OCAKLARI PROJESİ                                                                                          | DENİZLİ                     |
| DSİ 21. BÖLGE MÜDÜRLÜĞÜ                                                        | ÇAMRAK GÖLETİ, SULAMASI VE MALZEME OCAKLARI PROJESİ                                                                                             | DENİZLİ                     |
| DSİ 21. BÖLGE MÜDÜRLÜĞÜ                                                        | BOĞAZIÇI GÖLETİ, SULAMASI VE MALZEME OCAKLARI PROJESİ                                                                                           | DENİZLİ                     |
| DSİ 21. BÖLGE MÜDÜRLÜĞÜ                                                        | BEYAĞAÇ-BÖVET GÖLETİ VE SULAMASI KAPSAMINDA KUM-ÇAKIL OCAKLARI (C VE D GEÇİRİMLİ MALZEME ALANLARI) VE YIKAMA-ELEME TESİSİ PROJESİ               | DENİZLİ                     |
| DSİ 21. BÖLGE MÜDÜRLÜĞÜ                                                        | BEYAĞAÇ-BÖVET GÖLETİ VE SULAMASI KAPSAMINDA KİL (A GEÇİRİMSİZ MALZEME ALANI), KAYA OCAĞI (K-1 KAYA MALZEME ALANI) VE KIRMA-ELEME TESİSİ PROJESİ | DENİZLİ                     |
| DSİ 21. BÖLGE MÜDÜRLÜĞÜ                                                        | GÖKÇEBURUN GÖLETİ, SULAMASI VE MALZEME OCAKLARI PROJESİ                                                                                         | AYDIN                       |
| DSİ 21. BÖLGE MÜDÜRLÜĞÜ                                                        | ÇAMLIBEL GÖLETİ, SULAMASI VE MALZEME OCAKLARI PROJESİ                                                                                           | MUĞLA                       |
| DSİ 21. BÖLGE MÜDÜRLÜĞÜ                                                        | KAZAN GÖLETİ, SULAMASI VE MALZEME OCAKLARI PROJESİ                                                                                              | MUĞLA                       |
| DSİ 19. BÖLGE MÜDÜRLÜĞÜ                                                        | ÖRENLİCE SULAMA VE MALZEME OCAKLARI PROJESİ PTD                                                                                                 | SİVAS                       |
| DSİ 7. BÖLGE MÜDÜRLÜĞÜ                                                         | DOLUCA GÖLETİ VE SULAMASI KAPSAMINDA MALZEME OCAKLARI PROJESİ                                                                                   | SAMSUN                      |
| ARSAN ENERJİ A.Ş.                                                              | DEĞİRMENÖNÜ REGÜLATÖRÜ VE HES PROJESİ ÇED RAPORU                                                                                                | KASTAMONU                   |
| DSİ 7. BÖLGE MÜDÜRLÜĞÜ                                                         | YUKARI ÇEKEREK PROJESİ SULAMA VE MALZEME OCAKLARI PTD                                                                                           | TOKAT                       |
| DSİ 5. BÖLGE MÜDÜRLÜĞÜ                                                         | ÇANKIRI DEVREZ KIZLARYURDU BARAJI ÇED RAPORU                                                                                                    | ÇANKIRI, ÇORUM VE KASTAMONU |
| DSİ 7. BÖLGE MÜDÜRLÜĞÜ                                                         | GÖLÇAY GÖLETİ, SULAMASI VE MALZEME OCAKLARI PROJESİ PTD                                                                                         | SAMSUN                      |
| KADOOĞLU İTHALAT İHRACAT VE ELEKTRİK ENERJİSİ TOPTAN SATIŞ A.Ş.                | KALE REGÜLATÖRÜ VE HES REVİZE PROJESİ PTD                                                                                                       | KARS                        |
| TEKNO DOĞALGAZ ÇEVİRİM ENERJİ ELEKTRİK ÜRETİM A.Ş.                             | DOĞALGAZ KOMBİNE ÇEVİRİM SANTRALİ PTD                                                                                                           | BİLECİK                     |
| BAŞAK KLİMA RÜZGAR ENERJİSİNDEN ELEKTRİK ÜRETİMİ SANTRALİ VE SERVİSİ LTD. ŞTİ. | GÖZTEPE RES                                                                                                                                     | ÇANAKKALE                   |
| KIVANÇ TEKSTİL A.Ş.                                                            | İLAVE KOJENERASYON TESİSİ (2,2 MWM / 2,145 MWE) PROJESİ                                                                                         | ADANA                       |
| BATEN ENERJİ ÜRETİMİ A.Ş.                                                      | TUZKÖY REGÜLATÖRÜ VE HES PROJESİ EDR                                                                                                            | NEVŞEHİR                    |
| ARTVİN ENERJİ ELEKTRİK ÜRETİM LTD. ŞTİ.                                        | BUCUR REG VE HES PROJESİ PTD                                                                                                                    | ARTVİN                      |
| BATEN ENERJİ ÜRETİMİ A.Ş.                                                      | TUZKÖY HES PROJESİ SULAK ALAN İZNİNİN ALINMASI                                                                                                  | NEVŞEHİR                    |
| TEİAŞ GENEL MÜDÜRLÜĞÜ                                                          | ÇİMSA TM-ESKİŞEHİR TM3 ARASI 12,966 KM'LİK 154 KV ELEKTRİK İLETİM HATTI PTD                                                                     | ESKİŞEHİR                   |
| TEİAŞ GENEL MÜDÜRLÜĞÜ                                                          | ÇİMSA TM-BÖZÜYÜK TM ARASI 14,46 KM'LİK 154 KV ELEKTRİK İLETİM HATTI PTD                                                                         | ESKİŞEHİR, BİLECİK          |
| BERKE ELEKTRİK ÜRETİM A.Ş.                                                     | ÇİĞDEM I-II-III VE HES I-II-III PROJESİ PTD                                                                                                     | SİNOP                       |

| <b>FAALİYET SAHİBİ</b>                                     | <b>PROJE ADI</b>                                                                                                                | <b>İLİ</b>        |
|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-------------------|
| İZAYDAŞ A.Ş.                                               | KIRAZDERE HES PROJESİ PTD                                                                                                       | İZMİT             |
| KURTAL ELEKTRİK ÜRETİM DAĞITIM PAZ. SAN. VE TİC. LTD. ŞTİ. | ÇİLEKLİ HES PROJESİ NİHAİ ÇED RAPORU İZLEME FORMUNUN HAZIRLANMASI                                                               | ARTVİN            |
| ARSAN ENERJİ A.Ş.                                          | BAYRA, KAYAKÖPRÜ, ARSAN SOĞUKPINAR, KIY REGÜLATÖRLERİ VE HES PROJELERİ SULAK ALAN İZNİ ALINMASI                                 | GİRESUN, TRABZON  |
| ELİF GRUP ENERJİ ELEKTRİK ÜRETİM LİMİTED ŞİRKETİ           | SULAK ALAN İZNİ ALINMASI                                                                                                        | MERSİN            |
| SILA ENERJİ ÜRETİM A.Ş.                                    | ÜTÜK REGÜLATÖRÜ VE HES PROJESİ PTD                                                                                              | SİVAS             |
| SILA ENERJİ ÜRETİM A.Ş.                                    | YENİ REGÜLATÖRÜ VE HES PROJESİ PTD                                                                                              | SİVAS, TOKAT      |
| TEİAŞ GENEL MÜDÜRLÜĞÜ                                      | 154 KV MERSİN TRAFO MERKEZİ (TM) - KARACAILYAS MEVKİİ ENERJİ İLETİM HATTI (YENİ HAT + YENİLEME) PROJE TANITIM DOSYASI           | MERSİN            |
| AKFEN ENERJİ ÜRETİM A.Ş.                                   | ÇAMLICA 3 HES PROJESİ SU HAKLARI RAPORU                                                                                         | KAYSERİ           |
| PRESTİJ ENERJİ ÜRETİM SAN. VE TİC. A.Ş.                    | KOÇAK HES PROJESİ PTD                                                                                                           | GİRESUN           |
| KUTUP ENERJİ ELETRİK ÜRETİM LTD. ŞTİ.                      | BAYRA REGÜLATÖRÜ VE HES PROJESİ ÇED GÖRÜŞÜ ALINMASI                                                                             | KARS              |
| BERKE ELEKTRİK ÜRETİM A.Ş.                                 | EBRU HES KAPASİTE ARTIŞI PROJESİ PTD                                                                                            | KASTAMONU         |
| DSİ 7. BÖLGE MÜDÜRLÜĞÜ                                     | GÖYNÜCEK-KARATUZLA GÖLETİ, SULAMASI, MALZEME SAHALARI, KIRMA-ELEME-YIKAMA TESİSİ VE HAZIR BETON SANTRALİ PROJESİ ÇED RAPORU     | AMASYA, TOKAT     |
| DSİ 7. BÖLGE MÜDÜRLÜĞÜ                                     | TAŞOVA-ÖZBARAKLI GÖLETİ KAPSAMINDA MALZEME SAHALARI, KIRMA-ELEME-YIKAMA TESİSİ VE HAZIR BETON SANTRALİ PROJESİ ÇED RAPORU       | AMASYA, TOKAT     |
| DSİ 7. BÖLGE MÜDÜRLÜĞÜ                                     | TAŞOVA-TATLIPINAR GÖLETİ, SULAMASI, MALZEME SAHALARI, KIRMA-ELEME-YIKAMA TESİSİ, VE HAZIR BETON SANTRALİ PROJESİ ÇED RAPORU     | AMASYA            |
| DSİ 7. BÖLGE MÜDÜRLÜĞÜ                                     | AMASYA MERKEZ-DURUCA GÖLETİ KAPSAMINDA MALZEME SAHALARI, KIRMA-ELEME-YIKAMA TESİSİ VE HAZIR BETON SANTRALİ PROJESİ PTD          | AMASYA            |
| DSİ 5. BÖLGE MÜDÜRLÜĞÜ                                     | AYAŞ GÖLETLERİ (TEKKE) SULAMASI KAPSAMINDA MALZEME OCAKLARI VE KIRMA-ELEME-YIKAMA TESİSLERİ PROJESİ ÇED RAPORU                  | ANKARA            |
| DSİ 3. BÖLGE MÜDÜRLÜĞÜ                                     | ESKİŞEHİR-YUKARI SAKARYA ISLAHI VE SULAMA PROJESİ (GÖKSU SULAMASI, GÖKPINAR BARAJI, İLYASPAŞA VE KAVUNCU SULAMALARI) ÇED RAPORU | ESKİŞEHİR, ANKARA |
| DSİ 7. BÖLGE MÜDÜRLÜĞÜ                                     | SOĞUCAK GÖLETİ, SULAMASI VE MALZEME OCAKLARI PROJESİ PTD                                                                        | SAMSUN            |
| DSİ 5. BÖLGE MÜDÜRLÜĞÜ                                     | ÇANKIRI ELDİVAN EKİNNE GÖLETİ KAPSAMINDAKİ MALZEME OCAKLARI VE KIRMA ELEME TESİSİ ÇED RAPORU                                    | ÇANKIRI           |
| DSİ 5. BÖLGE MÜDÜRLÜĞÜ                                     | AYAŞ GÖLETLERİ (BAŞAYAŞ VE GÖKLER) VE SULAMALARI PROJESİ                                                                        | ANKARA            |

| <b>FAALİYET SAHİBİ</b>                            | <b>PROJE ADI</b>                                                                            | <b>İLİ</b>      |
|---------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------|
|                                                   | KAPSAMINDA MALZEME OCAKLARI VE KIRMA-ELEME TESİSLERİ PROJESİ ÇED RAPORU                     |                 |
| TM ENERJİ ÜRETİM ELEKTRİK VE TİC. A.Ş.            | AKTAŞ REGÜLATÖRÜ VE HES PROJESİ PTD                                                         | IĞDIR           |
| DSİ 7. BÖLGE MÜDÜRLÜĞÜ                            | TAŞKELİK GÖLETİ, SULAMASI VE MALZEME OCAKLARI PROJESİ ÇED RAPORU                            | SAMSUN          |
| GÜRPINAR ENERJİ ÜRETİM A.Ş.                       | GÜRENERJİ DOĞALGAZ/TERMİK- KOMBİNE ÇEVİRİM SANTRALİ PROJESİ ÇED RAPORU                      | TEKİRDAĞ        |
| DSİ 20. BÖLGE MÜDÜRLÜĞÜ                           | KAHRAMANMARAŞ-HELETE (DÜZBAĞ) PROJESİ ÇED RAPORU                                            | KAHRAMANMARAŞ   |
| ATASU ENERJİ ÜRETİM A.Ş.                          | DİLEKTAŞI PROJESİ ÇED RAPORU                                                                | HAKKÂRİ         |
| SULTAN MURAT ENERJİ ÜRETİM A.Ş.                   | KARAKAYA REGÜLATÖRÜ VE HES PROJESİ PTD                                                      | TRABZON         |
| UYGUN ENERJİ YATIRIM ÜRETİM VE TİC. A.Ş.          | ADAPAZARI RÜZGAR ENERJİSİ SANTRALİ (RES) PROJESİ PTD                                        | ADAPAZARI, BOLU |
| NUR-EN ENERJİ ÜRETİM VE SAN. TİC. A.Ş.            | UMUTLU BARAJI, HES VE MALZEME OCAKLARI PROJESİ ÇED RAPORU                                   | KAHRAMANMARAŞ   |
| DSİ 5. BÖLGE MÜDÜRLÜĞÜ                            | ÇORUM SUNGURLU BARAJI, SULAMASI VE MALZEME OCAKLARI PROJESİ ÇED RAPORU                      | ÇORUM           |
| KADOOGLU ENERJİ ELEKTRİK ÜRETİM A.Ş.              | KALE REGÜLATÖRÜ VE HES PROJESİ ÇEVRE YÖNETİM PLANI VE KÜMÜLATİF ETKİ DEĞERLENDİRMESİ RAPORU | KARS            |
| PARK TEKNİK ELK. MADENCİLİK TURZ. SAN. TİC. A.Ş.  | ASMACA BARAJI VE HES PROJESİ ÇED RAPORU                                                     | ADANA           |
| PARK TEKNİK ELEKTRİK MADENCİLİK SAN. VE TİC. A.Ş. | SİLOPI GÜNEŞ ENERJİSİ SANTRALİ (GES) PROJESİ (7,0 MW) PROJE TANITIM DOSYASI                 | ŞIRNAK          |
| PAKSU ENERJİ A.Ş.                                 | TÜĞSÜS REGÜLATÖRÜ VE HES PROJESİ ÇED RAPORU                                                 | VAN             |
| ATLAS ENERJİ A.Ş.                                 | SAMAN REGÜLAÖTRÜ VE HES REVİZE PROJESİ PTD                                                  | TRABZON         |
| PAKSU ENERJİ A.Ş.                                 | BEŞİK REGÜLATÖRÜ VE HES PROJESİ ÇED RAPORU                                                  | VAN             |
| SKY ENERJİ ÜRETİMİ VE TİC. A.Ş.                   | ÇATAK-DELİKTAŞ REGÜLATÖRÜ VE HES PROJESİ ÇED RAPORU                                         | VAN             |
| YADE ELEKTRİK ÜRETİM VE TİCARET LTD. ŞTİ.         | UMUT HES PROJE TANITIM DOSYASI                                                              | ERZİNCAN        |

**ENERJİ ÜRETİMİ, BARAJ VE SULAMA PROJELERİ**  
(DEVAM EDEN İŞLER LİSTESİ)

| <b>FAALİYET SAHİBİ</b>                                                             | <b>PROJE ADI</b>                                                                                         | <b>İLİ</b>                            |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------|
| ELİF ENERJİ YATIRIM ÜRETİM İNŞ. TİC. LTD. ŞTİ.                                     | SEDEF HES PROJE TANITIM DOSYASI                                                                          | BURSA                                 |
| ELİF ENERJİ YATIRIM ÜRETİM İNŞ. TİC. LTD. ŞTİ.                                     | SELÇUK HES PROJE TANITIM DOSYASI                                                                         | BURSA                                 |
| AY ELEKTRİK ÜRETİM LİMİTET ŞİRKETİ                                                 | ÇÜRÜKİÇİ HES PROJE TANITIM DOSYASI                                                                       | ISPARTA                               |
| HİLAL ENERJİ ÜRETİM SAN. VE TİC. A.Ş.                                              | ARI HES PROJESİ ÇED RAPORU                                                                               | RİZE                                  |
| CEYKAR ELEKTRİK ÜRETİM A.Ş.                                                        | KAYA BARAJI VE HES PROJESİ ÇED RAPORU                                                                    | KASTAMONU                             |
| ARAS ENERJİ ÜRETİMİ SAN. VE TİC. A.Ş.                                              | GÖKAY REGÜLATÖRLERİ I-II VE HES I-II PROJESİ ÇED RAPORU                                                  | BİTLİS                                |
| USTA ENERJİ SAN. VE TİC. LTD. ŞTİ.                                                 | ÇOŞKUN REGÜLETÖRÜ VE HES PROJESİ ÇED/PTD                                                                 | ANTALYA                               |
| DSİ 7. BÖLGE MÜDÜRLÜĞÜ                                                             | MERZİFON BARAJI VE MALZEME OCAĞI PROJESİ ÇED RAPORU                                                      | AMASYA                                |
| DSİ 19. BÖLGE MÜDÜRLÜĞÜ                                                            | SERPİNTİ-ÇATALOLUK BARAJI, MALZEME OCAKLARI, KIRMA-<br>LEME TESİSİ PROJESİ ÇED RAPORU                    | SİVAS                                 |
| DSİ 20. BÖLGE MÜDÜRLÜĞÜ                                                            | ADİYAMAN GÖKSU ARABAN PROJESİ ÇED RAPORU (5 baraj + 1<br>Gölet ve 65.000 ha Alan Sulanması)              | KAHRAMANMARAŞ,<br>ADİYAMAN, GAZİANTEP |
| DSİ 20. BÖLGE MÜDÜRLÜĞÜ                                                            | HASANALİ VE SÖĞÜTLÜ BARAJI, SULAMASI VE MALZEME<br>OCAKLARI PROJESİ ÇED RAPORU                           | KAHRAMANMARAŞ                         |
| ÇEBİ ENERJİ A.Ş.                                                                   | ÇEBİ DOĞALGAZ KOMBİNE ÇEVİRİM SANTRALİ PROJESİ ÇED<br>RAPORU                                             | TEKİRDAĞ                              |
| ELİF GRUP ENERJİ ELEKTRİK ÜRETİM LTD. ŞTİ.                                         | SELÇUK REGÜLATÖRÜ VE HES PROJESİ PTD                                                                     | BURSA                                 |
| PELİN ENERJİ YATIRIM ÜRETİM ve TİC. A.Ş.                                           | KAYABEYİ BARAJI VE AKINCI HES KAPASİTE ARTIŞI PROJESİ PTD                                                | ARDAHAN                               |
| MAM Enerji Petrol ve Ürünleri Taşımacılık Madencilik İnşaat San. Tic.<br>Ltd. Şti. | ŞIRNAK TERMİK SANTRALİ (2X135 MWe), MALZEME OCAKLARI,<br>DÜZENLİ ATIK DEPOLAMA SAHASI PROJESİ ÇED RAPORU | ŞIRNAK                                |
| KAPTAN DEMİR ÇELİK A.Ş.                                                            | KAPTAN TERMİK SANTRALİ ÇED RAPORU                                                                        | TEKİRDAĞ                              |
| USTA ELEKTRİK ÜRETİM A.Ş.                                                          | ARISU REGÜLATÖRÜ VE HES PROJESİ KAPASİTE ARTIŞI<br>PROJESİ PTD                                           | TRABZON                               |
| TEİAŞ GENEL MÜDÜRLÜĞÜ                                                              | ENERJİ NAKİL HATTI PROJESİ ÇED RAPORU                                                                    | KAHRAMANMARAŞ,<br>ADİYAMAN            |
| DSİ 1. BÖLGE MÜDÜRLÜĞÜ                                                             | ÇUKURKÖY GÖLETİ, SULAMASI VE MALZEME OCAKLARI PROJESİ<br>PTD                                             | BURSA, YALOVA                         |
| DSİ 7. Bölge Müdürlüğü                                                             | ÖZBARAKLI PROJESİ TAŞ OCAĞI PATLATMILI ÜRETİM FAALİYETİ<br>PTD                                           | AMASYA                                |
| DSİ 21. BÖLGE MÜDÜRLÜĞÜ                                                            | KAYACIK GÖLETİ VE SULAMA PROJESİ PTD                                                                     | MUĞLA                                 |
| DSİ 21. BÖLGE MÜDÜRLÜĞÜ                                                            | NOSTAR GÖLETİ, NIKFER HAVUZU VE SULAMASI PTD                                                             | MUĞLA                                 |
| DSİ 21. BÖLGE MÜDÜRLÜĞÜ                                                            | ZEYTİNKÖY GÖLETİ VE SULAMA PROJESİ PTD                                                                   | AYDIN                                 |



| <b>FAALİYET SAHİBİ</b>  | <b>PROJE ADI</b>                                                     | <b>İLİ</b> |
|-------------------------|----------------------------------------------------------------------|------------|
| DSİ 21. BÖLGE MÜDÜRLÜĞÜ | YAYLAKÖY GÖLETİ VE SULAMA PROJESİ PTD                                | MUĞLA      |
| DSİ 21. BÖLGE MÜDÜRLÜĞÜ | KURTULUŞ GÖLETİ VE SULAMASI PTD                                      | AYDIN      |
| DSİ 21. BÖLGE MÜDÜRLÜĞÜ | GÜNEYKÖY GÖLETİ VE SULAMASI PTD                                      | DENİZLİ    |
| DSİ 21. BÖLGE MÜDÜRLÜĞÜ | EMİRÇAY GÖLETİ VE SULAMASI PTD                                       | DENİZLİ    |
| DSİ 21. BÖLGE MÜDÜRLÜĞÜ | ÖMERBEYLİ GÖLETİ VE SULAMASI PTD                                     | AYDIN      |
| DSİ 20. BÖLGE MÜDÜRLÜĞÜ | ADİYAMAN AKPINAR - ATAKENT SULAMASI PROJESİ                          | ADİYAMAN   |
| DSİ 19. BÖLGE MÜDÜRLÜĞÜ | MALATYA SULAMALARI PROJESİ KAPSAMINDA MALZEME<br>OCAKLARI ÇED RAPORU | MALATYA    |