TÜRKİYE PUBLIC AND MUNICIPAL RENEWABLE ENERGY PROJECT (PUMREP)

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

4.787,2 MWp / 4 MWe Solar (Photovoltaic) Power Plant Project of Karaman Municipality

24 March, 2025

Document History

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This Environmental and Social Management Plan has been prepared by Ardea Energy Engineering and Consulting on behalf of Karaman Municipality within the scope of Türkiye Public and Municipal Renewable Energy Project (PUMREP) supported by the World Bank (WB) with ILBANK as the financial intermediary.

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Abbreviations

AF	Associated Facility
CIMER	Cumhurbaşkanlığı İletişim Merkezi (Presidential Communication Center)
CSR	Corporate Social Responsibility
E&S	Environmental and Social
EHS	Environmental, Health and Safety
EHSG	Environmental, Health and Safety Guidelines
EIA	Environmental Impact Assessment
ESA	Environmental and Social Assessment
ESAP	Environmental and Social Action Plan
ESF	Environmental and Social Framework
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ESS	Environmental and Social Standards
ESP	Environmental and Social Policy
ETL	Energy Transmission Line
EU	European Union
GBV	Gender-Based Violence
GFI	Ground Fault Interrupter
GIIP	Good International Industry Practice
GM	Grievance Mechanism
HS	Health and Safety
IFIs	International Financial Institutions
IFC	International Finance Corporation
ILBANK	İller Bankası A.Ş.
ICSC	International Chemical Safety Cards
KPI	Key Performance Indicator
kWe	Kilo Watt Electric
kWh	Kilo Watt Hour
kWp	Kilo Watt Peak
LEL	Lower Explosive Limit
LMP	Laber Management Plan
MSDS	Materials Safety Data Sheets
MoEUCC	Ministry of Environment, Urbanization and Climate Change
MW	Mega Watt
MWe	Mega Watt Electric
MWh	Mega Watt Hour
MWp	Mega Watt Peak
OG	Official Gazette
OHS	Occupational Health and Safety
PAP	Project Affected People
PIU	Project Implementation Unit
PPE	Personal Protective Equipment
Project	The Public and Municipal Renewable Energy Project (PUMREP)
RD	Regional Directorate
RE	Renewable Energy
SDS	Safety Data Sheets
SEP	Stakeholder Engagement Plan
Subproject	4.787,2 MWp / 4 MWe Solar (Photovoltaic) Power Plant Project of Karaman Municipality
WB	World Bank

Glossary of Terms

Associated facilities	Facilities or activities that are not funded as part of the Subproject and are: (a) directly and significantly related to the project; (b) carried out, or planned to be carried out, contemporaneously with the project; and (c) necessary for the project to be viable and would not have been constructed, expanded or conducted if the project did not exist. For facilities or activities to be Associated Facilities, they must meet all three criteria.
Contractor	A person or organization providing services to an employer at the client worksite in accordance with agreed specifications, terms and conditions.
Excavated material	Materials/soils that are generated as a result of excavation and other similar activities carried out prior to construction
Legally protected area	Designated terrestrial, aquatic or marine ecosystems managed under the related legislation to protect and sustain the biodiversity features, natural and associated cultural resources. Legally protected areas of Türkiye include a diversity of natural ecosystems and associated features ranging from coastal zones to mountains, deltas, forests, plains, steppe, lakes, river systems, deep valleys, canyons, and glaciers.
Material borrow site	Sites, where loose material containing gravel, sand, silt, and clay, which is formed by the natural and geological processes of rock fracturing, fragmentation, alteration, transportation, and/or in-situ sedimentation, and which has the characteristics of slope debris, are extracted to be used as fill material.
Off-site accommodation	Accommodation of workers at hotels, rented housing, etc. available in the vicinity of Subproject area.
On-site accommodation	Accommodation of workers at temporary exploration camps, construction camps, dormitories, etc. established for the Subproject on site.
Risk	A combination of the likelihood of an occurrence of a hazardous event and the severity of injury or damage to the health of people caused by this event.
Topsoil	Part of soil that provides organic and inorganic materials, air and water required for vegetative growth, and is required to be stored separate from the subsoil.

EXECUTIVE SUMMARY

The Public and Municipal Renewable Energy Project (PUMREP), financed by the World Bank (WB) with İller Bankası A.Ş. (ILBANK) as the Financial Intermediary (FI), marks a significant step towards sustainable energy solutions and enhanced energy security for the public sector in Türkiye. The solar power plant project in Karaman by Karaman Municipality has been initiated with the support of the World Bank. The project aims to increase the share of renewable energy sources in the country's energy mix and reduce greenhouse gas emissions. The project site is located in the Pirireis neighborhood in the Karaman center district in Türkiye. The installed capacity of the plant is 4787,2 kWp/4000 kWe, and it is expected to generate 8,577 MWh of electricity annually. The sub-project site is located on a 10-hectare land allocated by Karaman Municipality. The solar panels used in the project are of high quality and have a lifespan of 30 years. The sub-project was designed and constructed by a team of experienced engineers and technicians. The project developer has ensured that the project adheres to international standards of quality and safety. The plant is equipped with state-of-the-art technology, including inverters, transformers, and monitoring systems. The plant is connected to the national grid which will be constructed as a part of the project. This plan is essential for ensuring that the projects adhere to national and international environmental regulations and social safeguards. According to the EIA Regulation (Official Gazette dated 29.07.2022 and numbered 31907), the Project is within the scope of Annex-I of the EIA Regulation. The EIA Not Required Certificate for the Project was received in January 2020. EIA Not Required Certification is given in B.1. The Sub-project is not required any expropriation activities. The sub-project area is located in the Karaman Center district, Pirireis Neighborhood on 4883 Block 1 Lot, and the sub-project area is owned by the Karaman Municipality since 2015. Title deed document is given in Annex C. The sub-project will also contribute to the development of the local infrastructure, including the construction of the substation and the transmission line. The energy transmission line, extending 550 meters with an underground 3x150mm² AL XPLE Cable, will follow the existing road. This strategic routing ensures that neither the energy transmission line nor the project site necessitates any expropriation, as the infrastructure is already in place and the land is municipally owned.

According to the letter from Karaman Governorship Agricultural and Forestry Provincial Directorate, the sub- project land located on block 4883, parcel no. 1 could not be classified as land and does not fall within the scope of the implementation of the provisions of the Regulation on the Protection, Utilization and Planning of Agricultural Lands (Annex B.2).

1. INTRODUCTION

1.1. Background

The Public and Municipal Renewable Energy Project (PUMREP) (hereinafter referred to as "the **Project**") aims to increase the use of renewable energy through self-generation in public facilities. The Project will contribute to expanding the distributed RE market in public facilities and help demonstrate leadership in the public sector to use sustainable energy solutions to deliver on the country's climate mitigation commitment and enhance energy security.

The PUMREP is financed by World Bank (WB) to support introducing RE technologies in municipalities. İller Bankası A.Ş. Department of International Relations (ILBANK) acts as the Financial Intermediary (FI). The project will be implemented through 4 components:

Component 1: Renewable energy investments in central government facilities

Component 2: Renewable energy investments in municipalities

Component 3: Technical assistance and project implementation support

Component 4: Contingent Emergency Response Component (CERC).

Karaman Municipality (hereinafter referred to as "the **Sub-borrower"**) has applied to ILBANK for sub-financing of 4.787,2 MWp / 4 MWe Solar (Photovoltaic) Power Plant Project of Karaman Municipality (herein after referred to as "the **Subproject**") under **Component 2**. The Subproject is located in insert Karaman Province, Center District, Pirireis Neighborhood.

ILBANK has established an **Environmental and Social Management System (ESMS)** effective on **24th of Dec 2023**. The ESMS is aligned with the requirements of World Bank (WB) Environmental and Social Framework (ESF, 2018) including Environmental and Social Standards (ESSs) forming part of the ESF, and E&S polices and standards of other International Financial Institutions (IFIs) ILBANK collaborates with. It will be applicable to all ILBANK projects and Subproject financed through International Financial Institutions (IFIs).

The ESMS is aimed at ensuring systematic identification, assessment, management, monitoring, and reporting of the environmental and social (E&S) risks and impacts of the **projects and Subproject financed by the International Finance Institutions (IFIs)**. This process will be implemented on an ongoing basis throughout their loan duration in line with the requirements of the national legislation, international agreements and conventions ratified by Türkiye and E&S standards of lending **IFIs** (World Bank for the PUMREP). As a critical element of the ESMS,

ILBANK has adopted and published an **E&S Policy**[1] applicable to all ILBANK projects and Subproject financed through IFIs.

Within the scope of the ILBANK's ESMS and World Bank Environmental and Social Framework (ESF), Subproject are classified as High Risk, Substantial Risk, Moderate Risk or Low Risk taking into account relevant potential risks and impacts, such as the type, location, sensitivity and scale of the Subproject; the nature and magnitude of the potential E&S risks and impacts; the capacity and commitment of the sub-borrower; and other relevant areas of risks that may result in unintended impacts.

ILBANK considers financing the Sub-project under the PUMREP. In line with the ESMS, ILBANK carried out an E&S screening and risk classification of the subproject and rated the activity as having "**Moderate**" E&S risk. The Sub-borrower has retained a third-party consultancy company for the preparation of the E&S instruments required as per the E&S risk category assigned to the subproject.

This **Environmental and Social Management Plan** (ESMP) has been prepared by Ardea Energy Engineering & Consulting Company for the Subproject in line with the applicable E&S requirements as set out in Section 1.3. List of the Individuals/Organizations that Prepared or Contributed to the ESMP development is presented in Annex A.

A stand-alone Stakeholder Engagement Plan (SEP) has also been developed for the subproject.

[1] https://www.ilbank.gov.tr/sayfa/ilbank-environmental-and-social-policy
https://www.ilbank.gov.tr/sayfa/ilbank-cevresel-ve-sosyal-politika-dokumani

1.2. Objective of the ESMP

This ESMP has been prepared to detail the measures to be taken during the implementation and operation (throughout the sub-financing agreement life cycle) of the Subproject to eliminate or offset adverse E&S impacts, or to reduce them to acceptable levels; and the actions needed to implement these measures.

1.3. Overview of E&S Requirements Applicable to the Subproject

The Subproject will be implemented in compliance with the requirements of the applicable national legislation and international agreements and conventions to which Türkiye is a party of, and in accordance with the following international requirements:

- WB Environmental and Social Framework (ESF, 2018) and the Environmental and Social Standards (ESSs) forming part of the ESF,
- WB Group General Environmental, Health and Safety Guidelines (EHSGs) (2007)
- GIIP

Table 1 identifies the relevance of the WB ESSs to the Subproject.

Table 1. Relevance of the WB ESSs to the Subproject

ESSs	Definition	Relevance to the Subproject
ESS 1	Assessment and Management of E&S Risks and Impacts	Relevant
ESS 2	Labor and Working Conditions	Relevant
ESS 3	Resource Efficiency and Pollution Prevention and Management	Relevant
ESS 4	Community Health and Safety	Relevant
ESS 5	Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
ESS 6	Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
ESS 7	Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not relevant in Türkiye
ESS 8	Cultural Heritage	Relevant
ESS 9	Financial Intermediaries	Relevant
ESS 10	Stakeholder Engagement and Information Disclosure	Relevant

When national requirements differ from the levels and measures presented in the EHSGs, the Subproject will achieve or implement whichever is more stringent.

A summary of the national legislation and international standards applicable to the management of environmental, social, health, and safety aspects of the sub-project is provided in Annex D.

1.4. Review and Update

This ESMP will be reviewed and updated by the Sub-borrower during Subproject implementation as necessary to reflect changes in national legislative framework, ILBANK's policies and other developments or in specific circumstances such as in case there are changes in the organization structure, following significant incidents, following incorporation of new tools, software or database into the ILBANK E&S Risk Management System, etc.

The Sub-borrower will notify ILBANK of any update to the ESMP.

The Sub-borrower will ensure that changes to the ESMP do not result in deviation from the requirements set forth by the national legislation and the E&S requirements applicable to the subproject.

1.5. Implementation Arrangements

The Sub-borrower will hold ultimate responsibility for the implementation of this ESMP by the Sub-borrower and contractor teams (engaged in connection with the Subproject – including sub-contractors) throughout the sub-financing agreement life cycle.

The Sub-borrower will ensure that adequate financial and human resources for effective ESMP implementation are available at sub-borrower, supervision consultant and contractor organizations throughout the sub-financing agreement life cycle.

The Sub-borrower will decide on the arrangements for the operation of the Subproject and be responsible for ensuring that operations are compliant with the national legislation and Operation ESMP.

The roles and responsibilities of the Sub-borrower, contractor and sub-contractor teams regarding the ESMP implementation are described in Chapter 5.

2. SUBPROJECT DESCRIPTION

2.1. Subproject Information

Key technical information on the Subproject is summarized in **Table 2**. Further information on the construction and operation phase activities and facilities is provided in the following sections in this Chapter.

Unlicensed solar power plant project with an installed capacity of 4782,2kWp / 4000 kWe belonging to Karaman Municipality. The plant will meet the energy of more than 7.147 households with 8.577 MWh of electrical energy production, save the municipality more than 17.7 million EU in energy costs within 30 years, and prevent the release of more than 1.820 tons of CO2 per year into the atmosphere.

When the economic life of the plant expires after 30 years, it will be decommissioned, and the cost of decommissioning is calculated for EU 32.000,00/MWp. So, the overall power plant decommissioning cost will be, EUR 153.190,00.

The planned Sub-project will be equipped with Topcon N-type modules with 550 Wp MonoPerc Half-Cut modules with **30° tilt, 25° azimuth angle** ° azimuth angle and will include various elements to capture solar energy and convert it into electricity:

- Solar Panels (Photovoltaic Cells): These are the primary components that capture sunlight and convert it into electricity through the photovoltaic effect.
- Steel Structures: Steel structures are erected to support the solar panels, which are then installed on these structures.
- Anti-reflective coating (ARC) : It will be applied to the photovoltaic cells in order to help minimize the amount of light reflected from the surface, thereby reducing glare.

Table 2. Key Technical Information on Subproject

Information	Remarks/ Notes
Technology	**Photovoltaic**
Installed Power	4.787,2 kWp
Connection Power	4000 kWe
Annual Electricity Generation	8.577 MWh
Solar Panel Type	Monocrystalline Monoperc
Annual Carbon Emission Reduction	1820 tons
Lifetime Carbon Emission Reduction	54.600 tons
Households Powered	7147
Economic Life of the Power Plant (Operation Duration)	30 years

2.1.1.Subproject Location

The Sub-project is located in the Pirireis neighborhood of the Central District of Karaman Province. The Sub-project is located on parcel 4883/1 which belongs to the Karaman Municipality within the Karaman Organized Industrial Zone. Information on the Subproject location is presented in Table 3.*Table 3. Subproject Location*

Information	Remarks/ Notes
Province	Karaman
District	Center District
Neighborhood/ Village	Pirireis Neighborhood
Land Area (ha)	94.079,03 m2
Land Use Type according to Title Deed	Land – Karaman Municipality Owned
Current Land Use	The project parcel is classified as vacant land, with no agricultural or livestock activities taking place on it. The project area is located around an organized industrial zone, and the sole owner of the parcel is the Karaman Municipality. Within an area of 94079,03 m² corresponding to parcel 4883, block 1, the Solar Power Plant Project will be realized by increasing the capacity of the Solar Power Plant (999 kW - 20.000 m² area) operated by Karaman Municipality (installed power 4000 kWe (4MWe)) with a total installed power of 4999 kWe.
Other Nearby Facilities and Activities	The project area is located near the Karaman Organized Industrial Zone on 10-hectare land allocated by Karaman Municipality. There is an existing SPP on the project land, and the SPP Sub-project will be constructed northwest of the existing SPP on the same land.

A map of the Sub-project location is presented in **Figure *1***.

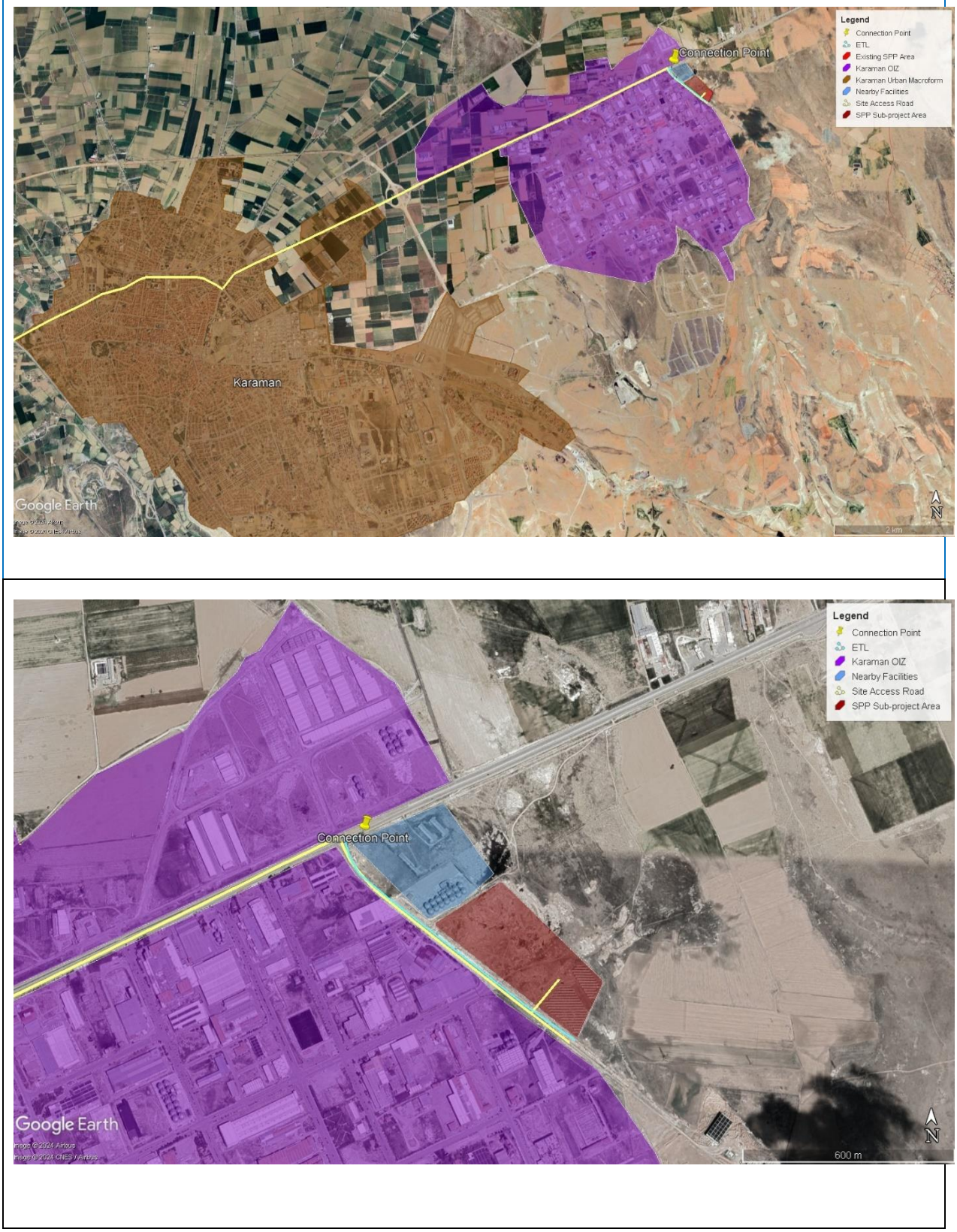

Figure 1. Map of Subproject Location

Table 4. Coordinates of the Project Area

Unit	Coordinates (WGS84 in decimals)	
	Y	X
Sub-project Area 4883/1	K1 (37,2235308)	K1 (33,3196355)
	K2 (37,2235235)	K2 (33,3197231)
	K3 (37,2209771)	K3 (33,3229851)
	K4 (37,2209051)	K4 (33,3230010)
	K5 (37,2195177)	K5 (33,3221620)
	K6 (37,2195050)	K6 (33,3220932)
	K7 (37,2223883)	K7 (33,3175035)
	K8 (37,2224517)	K8 (33,3175075)

* K represents the corner points of the Sub-project area

2.1.2.Site Access Route

Karaman-Ereğli State Highway is located 320 meters from the Sub-project area. Karaman Organized Industrial Zone is located at a distance of 70 meters from the activity area. The access road to the site will be provided by the existing road coming from the center of Karaman, passing through the Organized Industrial Zone and going to the project area in the southeast direction from the junction where the Cold Storage is located. The road is asphalt and does not need improvement. Site access road is shown in Figure 2.

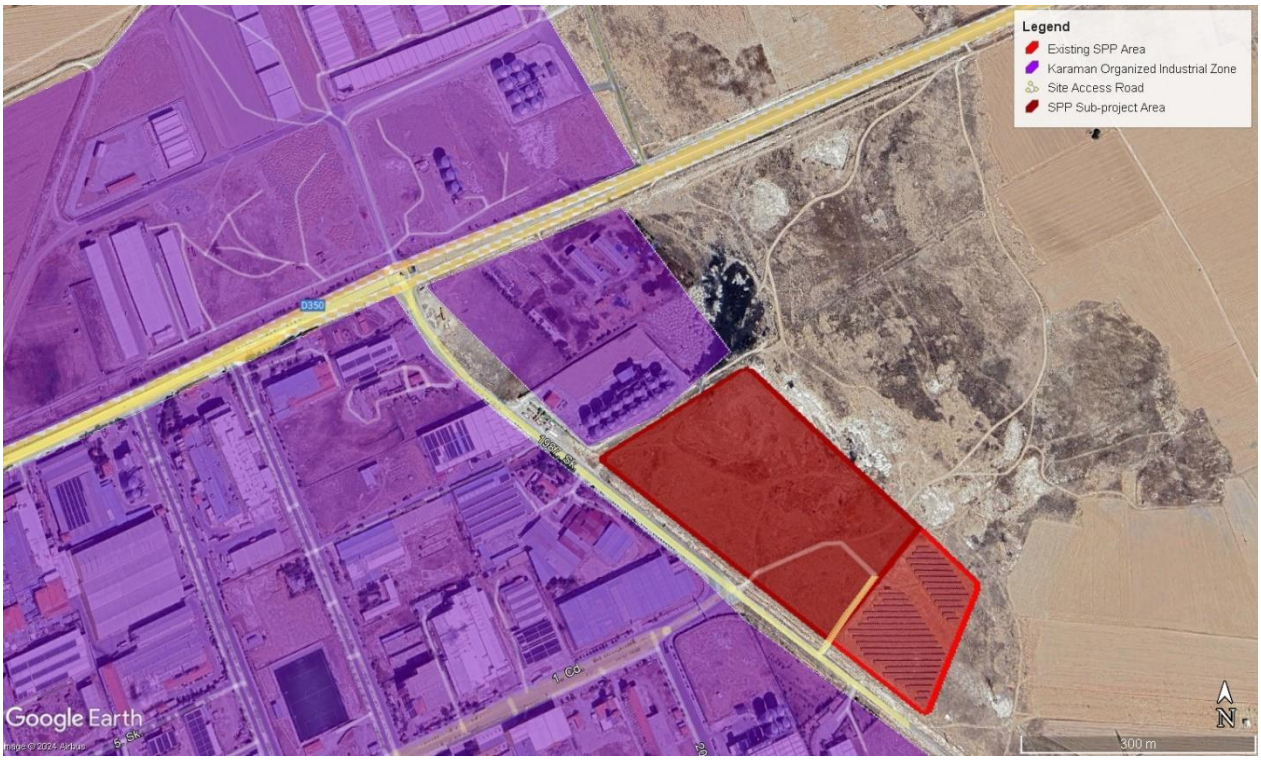

Figure 2:SPP Sub-project Area Site Access Road

2.1.3.Energy Transmission Line (ETL)

Technical information on ETL is presented in **Table 5**. A map showing the ETL route and the national grid connection location is provided in Figure 3.

The energy transmission line for the Karaman Municipality Solar Power Plant Project will extend 550 meters using 3x150mm² AL XPLE Cable, which will be installed underground. The line will connect the solar power plant directly to the local substation. This underground route is planned alongside the existing road, ensuring that no land expropriation is required. The installation will involve precise excavation and cable laying, followed by connection and testing to ensure seamless integration with the substation and efficient energy transmission from the solar plant to the local grid.

ETL is included in the Sub-project budget. Status of land acquisition for ETL is described below in Section 3.4.

Table 5:Technical Information on the ETL

Information	Remarks/ Notes
Status of ETL	ETL will be newly constructed.
Transformer station (for national grid connection)	N/A
Length of the route (km)	0,55 km
Voltage level (kV)	33 kV
Number of ETL towers (pylons)	N/A – underground cable connection
Total footprint area per each ETL tower (m2)	N/A
Number of parcels subject to expropriation	N/A
Number of parcels subject to easement rights	N/A

Figure 3:Map of ETL Route

2.2. Sub-project Impact Area

The Sub-project Impact Area refers to the geographic region where the environmental and social effects of the project are expected to occur. This area includes locations affected by construction, operation, and maintenance activities, such as local ecosystems, nearby settlements, and infrastructure. Identifying the impact area is crucial for the Environmental and Social Management Plan (ESMP), as it allows for a comprehensive assessment of potential risks and helps develop mitigation strategies to minimize adverse effects on both the environment and communities. Appropriate management measures will be implemented within the defined area to address these impacts effectively.

The SPP Sub-project is located in the Pirireis Neighborhood, but it is far away from the residential areas. It is located near the Karaman Organized Industrial Zone at a distance of 70 meters. The interviews with official from Karaman Municipality and Mukhtar of Pirireis Neighborhood, and the Regional Manager of Rana Farm provide a comprehensive overview of the Sub-project's impacts. Detailed information has been obtained on the project site's utilization status, its surroundings, and the facilities in the vicinity. The Sub-project is located in the OIZ, and there are no educational, health, religious, or cultural facilities within or around the Sub-project area. In the interview with the Karaman Municipality official, information on the usage status of the project site was provided by the official. At the same time, information on the economic and social profile of Karaman Center, the accessibility of the project site and its surroundings, and no negativity regarding the project has been stated.

The interview with Mukhtar of Pirireis Neighborhood provides a comprehensive overview of the impact of the Sub-project. He stated that the Sub-project site is not used for any agricultural activities. Due to its proximity to OIZ and the parcel's land status, there is no grazing activity within and around the subproject site. Mukhtar stated that the project will not impact settlements due to its location. He stated that the people living in the neighborhood do not have a negative approach to the project. Also, an interview was conducted with the Regional Manager of Rana Farm. Rana Farm is located near the SPP Sub-project, and it may be affected by project impacts. The regional manager stated that they do not expect any significant impact on their facilities from the project and that they do not have a negative opinion. He stated that they do not expect any risks to arise from the project, except for the necessary mitigation measures against dust and noise risks that may occur during the construction phase of the project.

In addition, since the Sub-project will be constructed in the Karaman Organized Industrial Zone, a meeting was held with the Director of the Karaman Organized Industrial Zone, and their opinions

were taken. During the meeting with the Director of Karaman Organized Industrial Zone, evaluations regarding the Project were discussed. The Director foresees that the Project will not create any infrastructure, social, and environmental problems during construction and operation phases. He stated that no major problems are expected during the construction phase other than potential traffic congestion. He was also informed that the necessary measures for traffic congestion are included in the ESMP report and will be implemented accordingly.

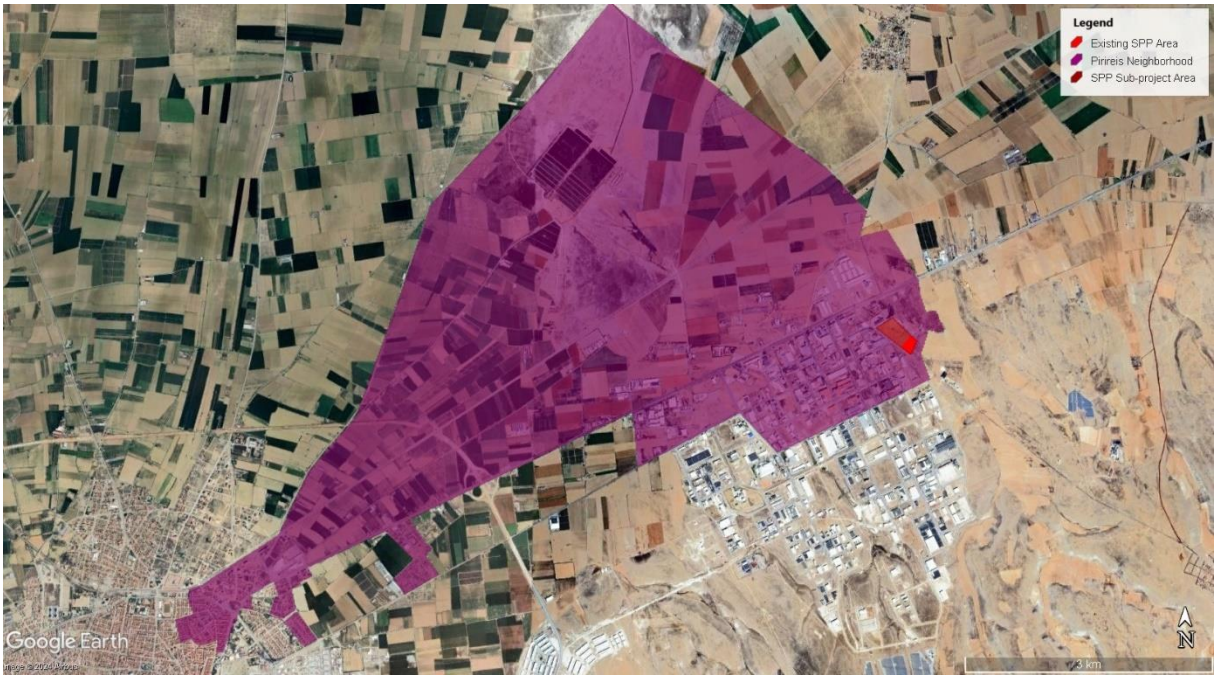

Figure 4: Sub-project Impact Area

2.3. Environmental and Social Baseline

The social baseline serves as the foundation for assessing the current social situation, identifying risks and impacts, and developing mitigation measures. Social baseline studies are conducted through two methods: desk studies and field studies. The desk review involves an assessment of existing environmental and social documents, strategic-level assessments, and supporting materials. This review also includes an examination of existing project documents to understand the work completed thus far and to identify key issues that need further evaluation in this report.

In this study, various data collection methods were employed to characterize the environmental and social baseline conditions. Conversations with officials from Karaman Municipality and project identification document provided valuable insights into the local situation for social baseline and environmental baseline. These discussions yielded information about agricultural practices, social structures, environmental issues, and local governance activities.

Also, reports and permits from institutions give essential information about the project's impacts. By combining these methods, a rich and diverse dataset was created to understand the environmental and social conditions of the project area. The information obtained forms the basis for the assessments conducted within the Environmental and Social Management Plan (ESMP).

Interviews were conducted with an official from Karaman Municipality, Mukhtar of Pirireis Neighborhood, and the Regional Manager of Rana Farm. They were informed about the project and their opinions on the project were received. The official from Karaman Municipality gave general information about Karaman Province and the Sub-project site. The official stated that the land title deed belongs to the municipality and that the Sub-project area is productive in terms of solar energy but inefficient in terms of agriculture and pastureland. Mukhtar of Pirireis Neighborhood stated that the SPP Sub-project is located in the OIZ, and away from settlements and therefore is not expected to have a negative impact. Also, he stated that the SPP Sub-project site is not used for grazing activities. The regional manager of Rana Farm did not express any negativity about the project and stated that no situation would affect their facilities due to the project.

Table 6 presents a summary of the baseline field studies conducted as part of the ESMP study.

Table 6:Summary of Baseline Field Studies

Subject	Date of the Field Study	Experts who Participated in the Field Study
Social and Environmental Baseline	28 May 2024	Staff from Karaman Municipality Plan and Project Directorate - Civil Engineer
Social and Environmental Baseline	26 November 2024	Mukhtar of Pirireis Neighborhood

Social and Environmental Baseline	04 December 2024	Regional Manager of Rana Farm
Social and Environmental Baseline	05 February 2025	Director of the Karaman Organized Industrial Zone

2.3.1.Physical Environment

2.3.1.1. Topography

The topography of Karaman is generally mountainous and rugged. In the south, the influence of the Taurus Mountains is evident, these mountains form the natural borders of the province and attract attention with their high altitude. According to the foundation ground investigation report prepared by Anko Drilling Mining Construction2, the slope of the study area is quite low and there is no topographical abnormality in the study area. The topography of the Project area consists of very flat ground. There are no rivers in the region and there is no morphology to cause flooding. There is Yeşildere Dam Lake approximately 8 km away from the Project site.

2.3.1.2. Geology

Karaman generally looks like a plain. The surface area of the plain is 1400 km2. The project area is located in the south of the Karaman plain. The south, west, southwest, southwest and southeast are mountainous and the north is flat. Two thirds of the land within the borders of Karaman province is mountainous. There are no significant elevations in the immediate vicinity of the project area.

2.3.1.3. Tectonics and Seismicity

The SPP Sub-project area is located in the Karaman central district, Pirireis Neighborhood. There are no active fault lines in the district center and around the project area. Karaman province is in the 5th-degree earthquake risk area. Therefore, the earthquake risk in the area is low. According to the Türkiye Earthquake Hazard Map, Karaman is located around 0.1-0.2 in terms of seismicity. When the Sub-project area is examined based on the "Türkiye Earthquake Hazard Map" that came into effect with the Cabinet's decision dated 22.01.2018 and numbered 2018/11275, it is observed that the largest ground acceleration value is approximately around 0.101 PG.

[2] Anko Sondaj Madencilik İnşaat, 4883 Ada 1 Parsel Zemin Etüt Raporu, 02.05.2015

Figure 5:Earthquake Hazard Map of SPP Sub-project Area, Earthquake Hazard Maps Interactive Web Application, 2023, (https://tdth.afad.gov.tr)[3]

* Türkiye Earthquake Zones Map, which came into force with the decision of the Council of Ministers dated 18.4.1996 and numbered 96/8109, was abolished on 01.01.2019. The New Türkiye Earthquake Hazard Map and Building Earthquake Regulation was published in the Official Gazette No. 30364 on 18 March 2018 and entered into force on 01.01.2019.

2.3.1.4. Soil and Land Composition

The oldest formation around the project area is Permo-Carboniferous marbles. These form the basis of the Akçaşehir plain. The basis of Karaman plain is composed of serpentine limestone complex belonging to the Cretaceous. Miocene marls and Neogene conglomerates, limestones, marls and clay stones come on top of these. Pliocene formations start with conglomerate. It consists of alluvium, sand, clay, gravel and is over 300 m thick. The project area and its surroundings are affected by tectonism from Paleozoic to the end of Pliocene. They are represented by crystallized limestones of Permo - Carboniferous age. Their colors vary from milky white to gray and black. They are very crystalline. They contain dispersed limestone grains, sliced calcite crystals and quartz micro crystals. The formation is very folded. In the Sub-project area, generally fractured, fractured clayey limestone units are crossed.

2.3.1.5. Meteorology and Climatic Characteristics

Karaman has continental climatic characteristics. Summers are hot and dry, and winters are cold and snowy. The spring and autumn seasons are usually short-lived. In high-altitude regions, winters are harsher and colder, while in low-lying areas, the climate is relatively milder. This climate structure significantly affects agricultural and livestock activities. Precipitation is usually in the form of rain and snow in winter and spring. Highest temperature: 39^0 Celcius, Lowest temperature:

[3] Hazard map showing the PGA value created for a 10% probability of exceedance in 50 years (475 years of recurrence)

-26.8^0 Celcius, Number of rainy days (Average):71, Average relative humidity: %63, Highest rainfall in one day: 89.8 mm, Average annual rainfall: 346.3 mm.

Rainfall is usually in the winter months, with the most in December, January, and February. The least precipitation is in June, July, and August.

2.3.1.6. Air Quality

The air quality level in Karaman province is moderate and generally acceptable for most people. The province's air quality index is 56 on average. According to the information obtained from the National Air Quality Monitoring Network, NO2, PM2.5 and PM10 values are at moderate levels in the provincial center and around the project site. Also, "Sensitive Pollution Zones" defined in Article 49 of the Regulation on the Protection of Air Quality published in the Official Gazette dated 2/11/1986 and numbered 19269, the project area is not located within the above-mentioned areas. In case of dust formation in the facility; the provisions of the "Regulation on the Control of Industrial Air Pollution"[4] published in the Official Gazette dated 03.07.2009 and numbered 27277 and the "Regulation on the Amendment of the Regulation on the Control of Industrial Air Pollution"[5] published in the Official Gazette dated 30.03.2010 and numbered 27537 will be complied with.

2.3.1.7. Noise

The SPP Sub-project is located in the Karaman Organized Industrial Zone. The noise limit value of the project area is evaluated within the scope of "for each facility within the Organized Industrial Zone or Specialized Industrial Zone". As can be seen in **Table 7**, the daytime noise level given for these areas in the "Regulation on the Assessment and Management of Environmental Noise" is defined as 70 dBA. The noise level that may occur during the work to be carried out in the area should not exceed this limit value in the nearest settlement. The distance to the nearest affected facility to the activity area is 70 m, and the Lden(L day, evening, night) value that will occur at this distance is 70 m, as amended by the Amendment published in the Official Gazette dated 04.06.2010 and numbered 27601 and entered into force with the Amendment published in the Official Gazette dated 27.04.2011 and numbered 27917.

Calculated as follows with the formula given in Annex-1 of the "Regulation on Environmental Noise Assessment and Management".

According to 70 meters;

[4] https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=13184&MevzuatTur=7&MevzuatTertip=5

[5] Amended on November 6, 2020, with the "Regulation Amending the Regulation on the Control of Industrial Air Pollution" published in the Official Gazette No. 31926.
https://www.resmigazete.gov.tr/eskiler/2020/11/20201106-2.htm

Lden = 10 log [1/24 ((12 * 10Lday/10) + (4 * 10(Evening+5/10) + (8 * 10(Lnight+10)/10))]

Lden = 10 log [1/24 ((12 * 10 66,486/10) + (4 * 10(0+5)/10) + (8 * 10(0+10)/10))]

Lden = 64 dBA

According to this calculation, the net noise level to be felt at the facility located at a distance of 70 m during the operation phase is Lpg= 64 dBA. This value is below the 70 dBA limit value given in the table.

The provisions of the "Regulation on the Assessment and Supervision of Environmental Noise"[6] published in the Official Gazette dated June 04, 2010 and numbered 27601 and the "Regulation Amending the Regulation on the Assessment and Supervision of Environmental Noise"[7] dated 27.04.2011 and numbered 27917 will be complied with regarding the noise that may occur in the project.

Table 7:Environmental Noise Limit Values for Industrial Facilities

Areas	**$L_{morning}$ (dBA)**	**$L_{evening}$ (dBA)**	**L_{night} (dBA)**
Noise-sensitive uses such as education, culture and health areas and areas where summer houses and camping sites are concentrated	60	55	50
Areas where commercial buildings and noise-sensitive uses coexist, and areas with a high concentration of residential buildings	65	60	55
Areas where commercial buildings and noise-sensitive uses coexist, including areas where workplaces are densely populated	68	63	58
Industrial Areas	70	65	60

2.3.1.8. Water Resources

No groundwater was encountered in the study area during geological observations and basic soil drilling in the project area. According to State Hydraulic Work (SHW) data and water wells in the vicinity, it is known that the groundwater level for Karaman is at an average depth of 30-40 m. There are no rivers in the region and no morphology to cause flooding.

[6] Regulation on the Assessment and Supervision of Environmental Noise
https://www.resmigazete.gov.tr/eskiler/2010/06/20100604-5.htm

[7] Amended on January 7, 2022, with the Regulation Amending the Regulation on Assessment and Management of Environmental Noise and the Official Gazette No. 31712.
https://www.resmigazete.gov.tr/eskiler/2022/01/20220107-8.htm

2.3.1.9. Natural Hazards (such as flooding, landslides, fire, etc.)

There are no erosion areas, landslide areas, afforestation areas, and aquifers to be protected in and around the Sub-project area. The project area is on flat ground and there are no natural disaster risks such as rock falls, landslides, flooding, liquefaction, avalanches, etc.

2.3.2. Biodiversity

According to the project identification file[8], the project area is not located within the areas defined in Article 2 of the National Parks Law No. 2873 dated 9/8/1983[9] and designated as "National Parks", "Natural Parks", "Natural Monuments" and "Natural Protection Areas" as defined in Article 3 of this Law, and areas designated and declared as "Special Environmental Protection Areas" by the Council of Ministers in accordance with Article 9 of the Environmental Law No. 2872 dated 9/8/1983[10]. Also, as shown in Figure 6, according to Karaman 1/100000 scale Environmental Plan, the Sub-project area is not located site and conservation area. Therefore, the project area is not located in areas that are important for scientific research and/or habitats of endangered or endangered species and species endemic to our country, biosphere reserves, biotopes, biogenetic reserve areas, and areas with unique geological and geomorphological formations. As a result of the continental climate characteristics in and around the study area, the steppe-type plant community is observed as vegetation cover.

The immovable property (94079 m2), is subject to the Soil Conservation and Land Use Law No. 5403 and the provisions of the Regulation on the Protection, Use and Planning of Agricultural Lands published in the Official Gazette dated 9.12.2017 and numbered 30265 in accordance with this Law. 2017 dated 9.12.2017 and numbered 30265 published in the Official Gazette dated 9.12.2017 and numbered 30265 do not fall within the scope of the implementation of the provisions of the Regulation on the Protection, Use and Planning of Agricultural Lands. Land class determination has not been made due to the fact that the title deed of the immovable, parcel 4883 block 1 (94079 square meters), located within the borders of Pirireis Neighborhood registered to Karaman Municipality, is land. According to decision number 69306553 220-02 E-20203, 07.01.2020 dated EIA document, EIA is not required for the project area.

[8] Karaman İli, Merkez İlçesi, Pirireis Mahallesi (4883 Ada 1 No'lu Parsel) 4MWe Güneş Enerji Santrali Kapasite Artırımı Nihai Proje Tanıtım Dosyası, STK Madencilik İş Sağlığı ve Güvenliği Müşavirlik Mühendislik İnş. Taah. San. Tic. Ltd. Şti., 2019
[9] National Parks Law No.2873 dated 11.8.1983
https://www.mevzuat.gov.tr/mevzuatmetin/1.5.2873.pdf
[10] Environmental Law No. 2872 dated 9/8/1983
https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=2872&MevzuatTur=1&MevzuatTertip=5

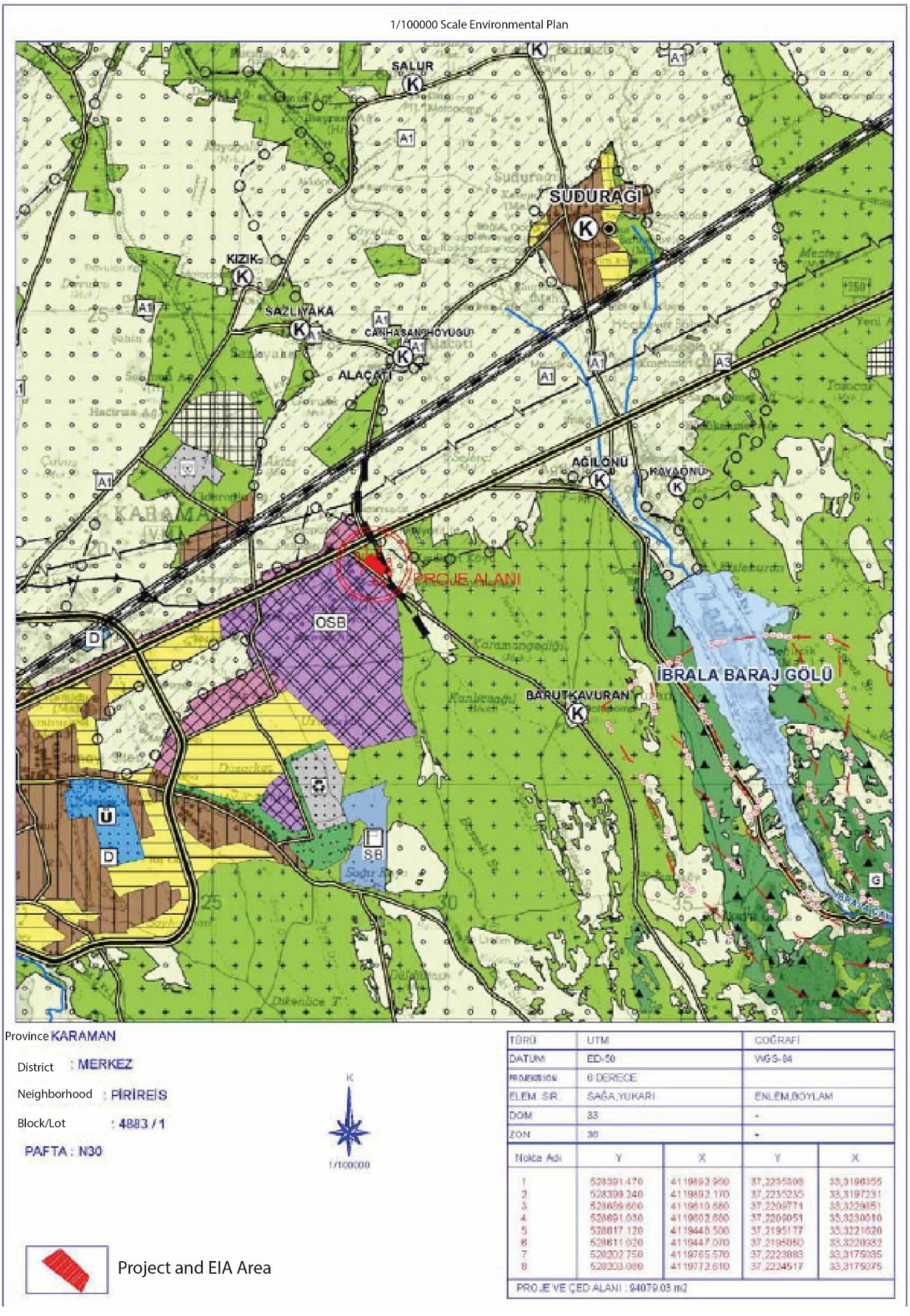

Figure 6:Karaman 1/100000 Scale Environmental Plan

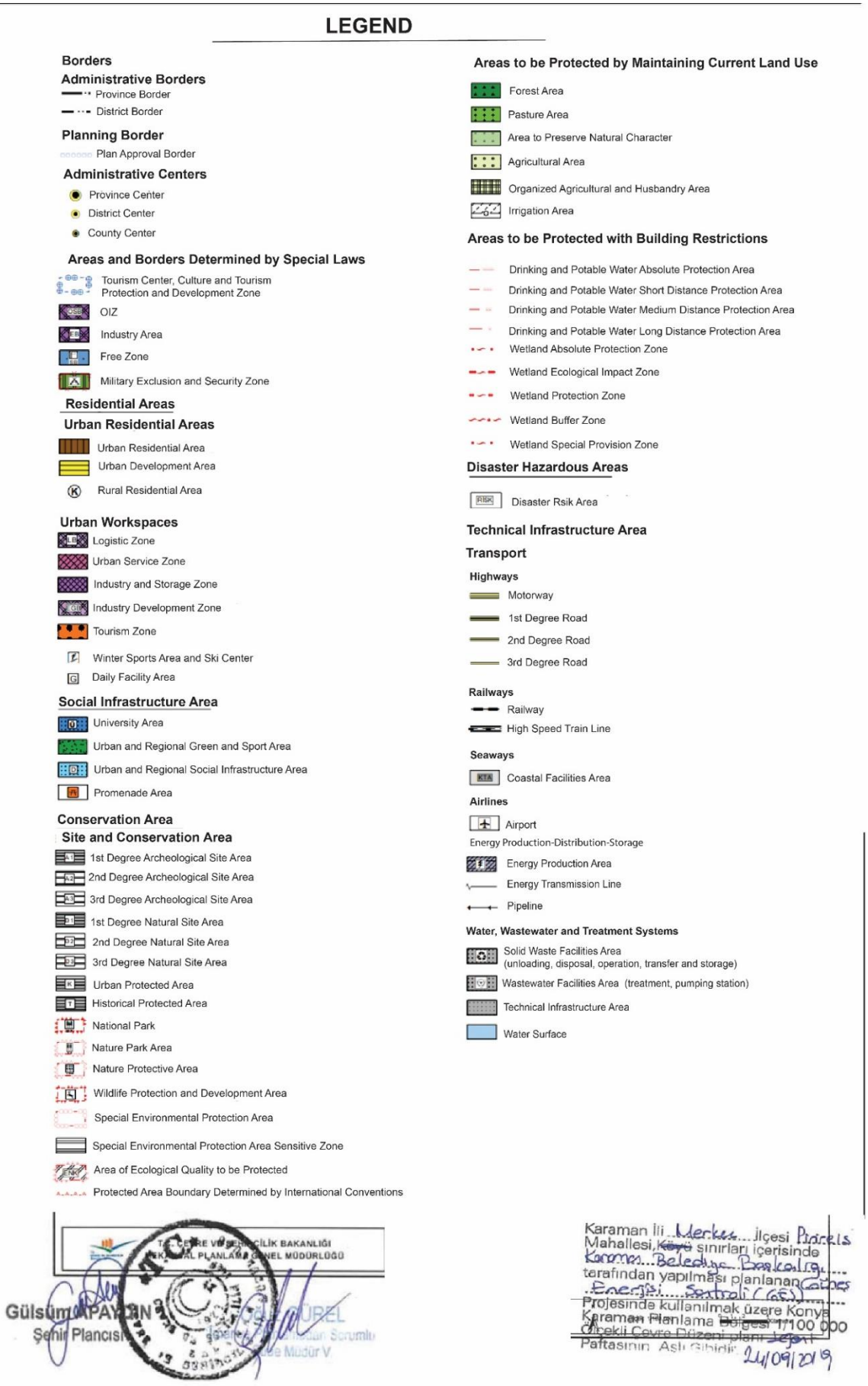

Figure 7:Karaman 1/100000 Scale Environmental Plan Legend

2.3.2.1. Flora

The Sub-project area is located within the Karaman Organized Industrial Zone, which has low plant diversity due to intensive human and industrial activities. According to the information in the project identification file, the project area is not located in areas that are important for scientific research and/or habitats of endangered or endangered species and species endemic to our country, biosphere reserves, biotopes, biogenetic reserve areas, areas with unique geological and geomorphological formations. Also, as shown in the **Figure *6***, the Sub-project is not located in the special environmental protection area, and area of ecological quality to be protected. Therefore, there are no endemic species in and around the activity area. There is no danger of extinction as a result of destruction in the activity area. Therefore, the Sub-project activities are not expected to cause any disturbance in this area.

The sub-project site is currently vacant and not used for any agricultural or livestock activities and has a predominantly flat topography. The Project area is arid and poor in natural vegetation, with no vegetation other than sparse grass vegetation in places. In particular, there are no water sources or moist meadows in or around the project area.

Figure 8: An Overview of the SPP Sub-project Site

2.3.2.2. Fauna

As the Sub-project is located around an industrial area, local animal species cannot find adequate habitat to shelter in industrial zones and the number of animal species living in the area decreases. According to the review of the final project identification document of the SPP project[11], the Sub-project area is not within the protected areas as per the "Convention on the Protection of Wetlands of International Importance, Especially as Waterfowl Habitat" (RAMSAR Convention), which entered into force after being published in the Official Gazette dated 17/5/1994 and numbered 21937. At the same time, the Sub-project area is not located within the Protected Areas I and II of the "Important Sea Turtle Breeding Areas" and the "Mediterranean Monk Seal Habitat and Breeding Areas", which are protected areas as per the "Convention on the Conservation of European Wildlife and Habitats" (BERN Convention) published in the Official Gazette dated 20/2/1984 and numbered 18318. Also, according to Karaman 1/100000 Scale Environmental Plan in **Figure *6***, the SPP Sub-project area is not located in the Wildlife Protection and Development Area.

[11] KARAMAN İLİ, MERKEZ İLÇESİ, PİRİREİS MAHALLESİ (4883 ADA 1 NOLU PARSEL) 4MWe GÜNEŞ ENERJİ SANTRALİ KAPASİTE ARTIRIMI NİHAİ PROJE TANITIM DOSYASI, STK MADENCİLİK İŞ SAĞLIĞI VE GÜVENLİĞİ MÜŞAVİRLİK MÜHENDİSLİK İNŞ. TAAH. SAN. TİC. LTD. ŞTİ., 2019

2.3.3. Socio-economic Environment

In this section, which includes social and economic structure assessments of the Project Impact Area, the social basis for determining the current social situation, risks, impacts, and mitigation measures is presented. The socio-economic environment of the project area includes various aspects of human life such as population dynamics, land ownership, employment, education, health services, and infrastructure. This section will examine key socio-economic indicators such as demography and population, land use and tenure, livelihoods and the provision of basic services such as education, health and infrastructure, and will also pay attention to transportation, cultural heritage (both tangible and intangible) and the needs of vulnerable and disadvantaged groups. The examination of these factors will assess the potential impact of the project on the area of influence.

2.3.3.1. Demography and Population

According to the Turkish Statistical Institute (TÜİK) Address Based Population Registration System results for 2023, the population of Karaman province in 2023 is 263,960 people. Over the past ten years, the population has consistently increased from 232,633 in 2010 to 263,960 in 2023, primarily due to rapid industrial development, especially in the food sector. The female population is 132,389, and the male population is 131,571. There are 84,745 households with an average household size of 3.0. The youth population is 42,934, and migration data indicates that young people generally stay in the province.

Table 8:Population Values of Pirireis Neighborhood[12]

Population	Pirireis Neighborhood
Female Population	2.706
Male Population	2.697
Total	5.403

2.3.3.2. Land Ownership Status and Land Use by Affected People

The project area for the Karaman Municipality Solar Power Plant is located in the Karaman Merkez district, specifically in the Pirireis neighborhood. It is situated on 4883 Block and 1 Parcel. The total area of the project's parcel is 94.079,03 m^2, and the SPP Sub-project will be built on 74.079,03

[12] TÜİK, Adrese Dayalı Nüfus Kayıt Sistemi Sonuçları, 2024
https://biruni.tuik.gov.tr/medas/?kn=95&locale=tr

m^2 of this parcel. This land has been owned by the municipality since 2015. The Title Deed, which verifies the municipality's ownership of the land, is provided in Annex C. This ensures that the project is situated on municipally owned land, facilitating smooth implementation and management of the solar power plant without any legal or expropriation issues.

2.3.3.3. Employment and Means of Livelihood

An interview was conducted with a resident who is also an official of Karaman Municipality, and he gave information about the economic profile of the region. Karaman's economy is primarily based on agriculture and food manufacturing. The region is a significant center for biscuit and chocolate production, contributing about 35% of Türkiye's biscuit production.[13] The province has 3,399,213 hectares of agricultural land, with wheat, barley, sugar beets, and corn as the primary crops. Apple production is also significant. Seasonal agricultural workers, mainly from southeastern Türkiye, live in tents near agricultural fields. Livestock farming is also prevalent, with 60,959 cattle and 712,471 sheep and goats in 2023.[14]

According to an interview conducted with the Mukhtar of Pirireis Neighborhood, the economy of residents of Pirireis Neighborhood is mostly based on agriculture and industry. He stated that the people living in the neighborhood are generally farmers and work in OIZ. Those engaged in agriculture generally grow crops such as apples, corn, and beans. Approximately 25-30 households in the neighborhood are engaged in animal husbandry. He stated that the project site is not used by the public because it is an unproductive land and located in an industrial area.

2.3.3.4. Education and Health Services

There are 284 schools in the province with a high attendance rate and a total student population of 55,773. Karaman province has a literacy rate of 98.21% in terms of basic education.[15] The province has five state hospitals and two private hospitals, with two private hospitals and one training and research hospital in the central district.

There are 2 primary schools in the Pirireis Neighborhood and the total number of students in the neighborhood is 1851[16]. It was stated by the Mukhtar of Pirireis Neighborhood that the schools in the neighborhood and the access road to the project site do not overlap. There is 1 health facility in the neighborhood.

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[13] Karaman'da Yatırım, Mevlana Kalkınma Ajansı,2024
https://www.karamandayatirim.gov.tr/karaman/ekonomi

[14] Karaman Sanayi ve Ekonomi Analizi Çalışması 2021, Mevlana Kalkınma Ajansı

[15] Karaman'da Yatırım, Mevlana Kalkınma Ajansı,2024
https://www.karamandayatirim.gov.tr/karaman/egitim

[16] https://ilyaskucukerilkokulu.meb.k12.tr/
https://karamanpirireis.meb.k12.tr/

Table 9: Number of Social Infrastructure in Pirireis Neighborhood

Neighbourhoods	Health Facility (PHC)	Number of Schools	Number of Students
Pirireis	1	2	1423

2.3.3.5. Infrastructure Services

According to the interviews with an official from Karaman Municipality, information on infrastructure services is as follows. Natural gas is widely used in the province. The waste of the province and the project area is collected in Karaman Municipality waste storage facilities. There is a sewerage system in the city and septic tanks are not used in the city center and around the project area. Wastewater reaches the Karaman Municipality wastewater treatment plant. Underground water wells and the Yeşildere Dam provide the water supply of the city. There are also wells used by individuals and organized industrial zones in the vicinity of the project site.

2.3.3.6. Transportation and Traffic

The transportation infrastructure is adequate, with access to Konya, Mersin, and Ereğli via state highways and a high-speed train. There is no significant traffic problem in the province and transportation is provided by asphalt roads open to traffic in all seasons. The SPP sub-project area is 320 meters from the Karaman-Ereğli State Highway.

2.3.3.7. Cultural Heritage (Tangible and Intangible)

The SPP Sub-project area in Karaman does not have any notable cultural heritage or historical landmarks of significance. The important cultural heritages around the Sub-project site are Canhasan Mound which is 4.5 km away from the Sub-project site, Sudurağı Train station which is 7.3 km far away from the Sub-project site. Karaman city center is very rich in cultural heritage and some of the cultural heritages closest to the Sub-project area are Kazım Karabekir Statue, Küllük Fountain, Yiğen Ağalar Fountain, Kızlar Tomb, Migration Monument (**Figure 9**). According to the assessment made by Karaman Provincial Directorate of Culture and Tourism, there is no registration in the area in question. It has been stated that no movable/immovable cultural assets or parts have been encountered within the project area and no objection has been found for the construction of SPP in the area in question (Annex B3).

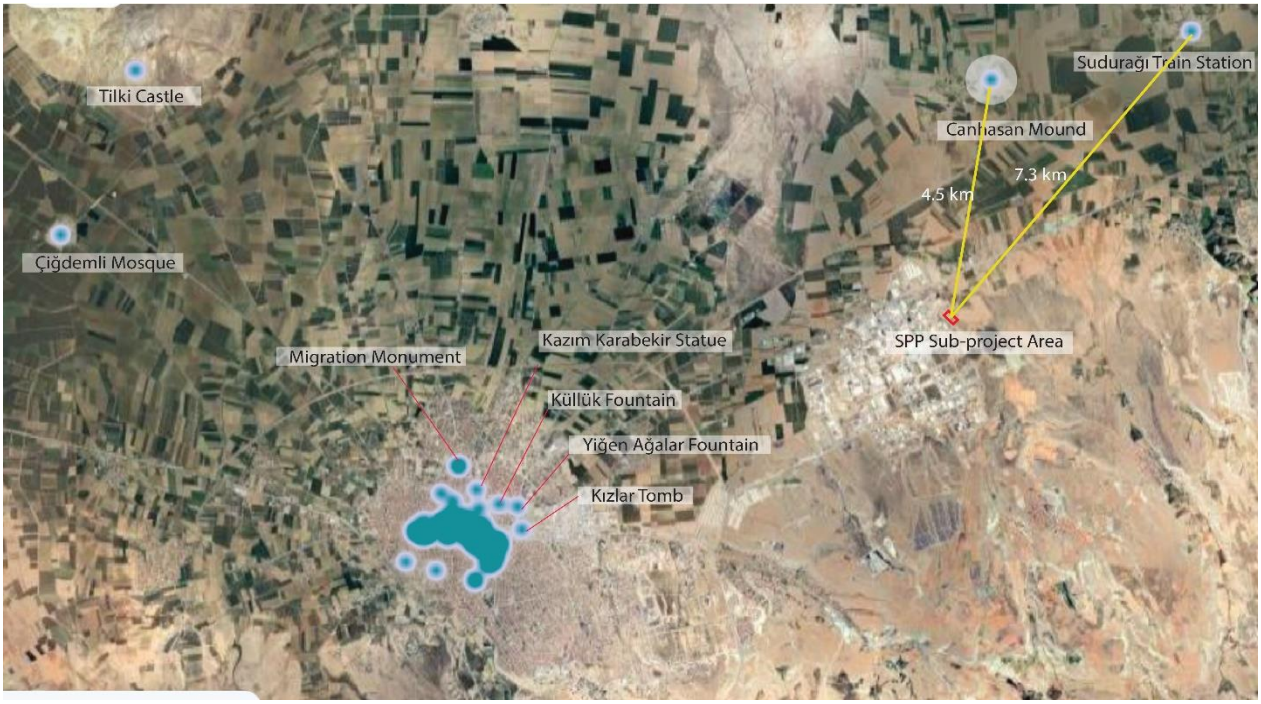


Figure 9: Cultural Heritage in the SPP Sub-project Site

2.3.3.8. Vulnerable and Disadvantage Groups

A general assessment was made for Pirireis Neighborhood, where the Sub-project site is located, and the neighborhood mukhtar was interviewed and information was obtained about the disadvantaged individuals living in the neighborhood. There are vulnerable groups in the Pirireis Neighborhood, but the Sub-project is not expected to impact these groups since the project site is located in the Organized Industrial Zone away from settlements. As a result of the assessments made, it is understood that there are no disadvantaged groups around the project site and the Sub-project will not have a negative impact on these groups.

3. SUBPROJECT ACTIVITIES

3.1. Construction Phase

3.1.1. Construction Activities

Construction activities is expected to be completed in 9 months. The detailed implementation schedule envisaged for the construction phase activities (including provisional acceptance) is presented in Chapter 6.

Construction phase activities are briefly described below:

- Pre-construction activities:

  The Sub-project site belongs to the municipality and the municipality will prepare the site prior to the construction phase, wastes such as excavation, marble, plastic etc. will be disposed of properly by the Municipality prior to the construction phase.

- Construction/ installation activities:

  The installation of the solar panels will primarily focus on ensuring the stability of the panel supports. If the ground consists of rock or stony terrain, the legs of the solar panels will be mounted on concrete foundations since they cannot be driven 120 cm into the ground. However, if the terrain is soil-based without rocks or stones, the legs will be driven 120 cm into the ground (a process known as "ramming"), eliminating the need for concrete foundations. The core components include the assembly of photovoltaic panels, steel construction for support, inverters, transformers, and cabling. No blasting or pile driving is anticipated. Basic concrete work may be required in the case of rocky terrains. Construction machinery and equipment:

The machinery and equipment is expected to be used during the construction phase include:

-2 units of lifting equipment (Manitou)

-1 transportation truck

-1 pickup truck

-1 JCB (excavator)

-1 ramming machine (for driving supports into the ground).

- Water use and wastewater management:

Water will primarily be used for dust suppression and other construction-related purposes. The water will be supplied through water tankers as the site does not have an existing water infrastructure. Wastewater generated on-site will be managed through a septic system, where sewage will be collected and handled both during the construction and operation phases.

- Waste and hazardous materials management:

Waste generated during construction will include general construction debris, packaging materials, and damaged and unused panels which contain hazardous materials. Hazardous materials will mainly involve fuels and lubricants used for machinery. All waste will be managed according to local regulations, and hazardous materials will be safely stored and disposed of in compliance with environmental standards.

- Use of other resources and materials:

The construction phase will require concrete (for rocky terrain), steel structures, gravel (if necessary for stabilization), fuel for machinery, and other necessary construction materials. Asphalt may be needed for access roads, but this depends on site-specific conditions.

- Supply of materials and equipment:

All materials except the inverters will be sourced domestically. The primary materials include photovoltaic panels, steel construction elements, transformers, cables, control panels, lighting equipment, and CCTV components. The inverters will be imported.

- Test and commissioning

Once installation is completed, the system will undergo a series of tests to ensure proper functioning. This includes testing the photovoltaic panels, inverters, transformers, and other electrical systems to confirm efficiency and compliance with project specifications.

- Decommissioning of temporary construction facilities

Upon completion of construction, any temporary facilities or structures, such as storage containers or worker accommodations, will be dismantled and removed from the site. Waste materials generated during decommissioning will be managed according to waste management plans.

3.1.2. Construction Facilities

The information in the **Table *10*** provides detailed information about temporary and permanent facilities to be used during the construction process. When construction is complete, all temporary facilities (such as labor camps, machine parks, and material storage facilities) will be dismantled and removed from the site. If subcontractor camps or temporary material storage areas are used outside the project area, these areas will also be restored to their former condition at the end of construction. Permanent facilities will be used only for the storage of equipment and spare parts needed during the operation phase, and no other long-term storage areas are planned Information on AFs is separately provided in Section 2.2.

Table 10:Construction Facilities

Type	On-site or Off-site	Temporary or Permanent	List of Facilities
Construction Camp Site	On-site	Temporary	• Prefabricated worker accommodations (e.g., dormitory, kitchen, dining area)
Storage Facility	On-site	Temporary	• Storage containers for construction materials (e.g., steel, cables, electrical components) • Fuel storage tanks (with safety measures for hazardous materials)
Machinery Parking Area	On-site	Temporary	• Designated area for parking heavy machinery (e.g., JCB, trucks, ramming machine)
Sub-contractor Camp Site	Off-site	Temporary	• Sub-contractor worker accommodations located outside the project area (if applicable, e.g., nearby rented facilities)
Laydown Area	Off-site	Temporary	• Off-site laydown areas for storing large equipment or materials temporarily before use (if necessary)
Permanent Storage Area	On-site	Permanent	• Permanent storage for spare parts and maintenance tools after project completion (if applicable)

A layout of the construction camp site is to be provided by the Contractor as a mobilization plan.

3.2. Operation Phase

3.2.1. Operation Activities

Within the project's operation and maintenance framework, a dedicated team of 3 personnel will be responsible for ensuring the smooth functioning and upkeep of the facility. This team consists of one plant manager, who will oversee the entire operation, and one operation personnel, who will handle the daily operation of the plant. Additionally, one maintenance personnel will be tasked with the routine upkeep, ensuring that all equipment and systems remain in optimal working condition.

Regular inspection and preventive maintenance will be carried out to monitor the performance of photovoltaic panels, inverters, and other electrical systems, allowing for prompt identification and repair of any malfunctions. The solar panels will be cleaned frequently to maintain maximum energy output. Water for cleaning will be sourced locally and used responsibly to avoid wastage, with mechanical cleaning tools such as soft brushes or automated systems employedClean water will be used sparingly, ensuring no harm to the environment.

The site will be secured with fencing and gated access points to prevent unauthorized entry. CCTV security cameras will be installed throughout the site, and remote monitoring will be implemented to enhance security. Unarmed security personnel may be present on-site, or remote surveillance could be utilized depending on Sub-project needs. If there is a security personnel assigned depending on personnel is armed or unarmed Community Health and Safety Plan will be prepared by contractor. control building will house monitoring systems, allowing for real-time tracking of energy production and troubleshooting of any issues. Vegetation control will be conducted to prevent shading on the panels, primarily through manual trimming. Herbicides are not anticipated to be used. Waste generated during operations, such as packaging materials or cleaning waste, will be handled responsibly, with recycling prioritized wherever possible. Together, these operation and maintenance activities will ensure the safe, efficient, and environmentally conscious functioning of the solar power plant.

3.2.2. Operation Facilities

Operation facilities are described in **Table *11***. Information on AFs is separately provided in Section 2.2.

Table 11:Operation Facilities

Component	Characteristics
Solar panels	550 Watt Photovoltaic Panels
Mounting structures	143,61 ton steel structure

Inverters, transformers, etc.	40 pcs of 100 kVA Inverter, 2 transformers with a nominal power of 2500 kVA
Control room, building, system, etc.	Plant SCADA System
Energy monitoring system	SCADA systems collect real-time data from sensors, equipment, and devices in the plant and provide operators with comprehensive information to supervise and control processes.
Grounding system	A grounding system is essential to protect equipment and people from electrical faults and hazards. It involves creating a low-resistance path for electrical current to flow into the ground (earth) in the event of a fault, such as a short circuit or lightning strike.
Lightning protection system	Lightning Rods
Fire preparedness and firefighting facilities	**Fire preparedness and firefighting facilities** are critical to ensuring the safety of the infrastructure, personnel, and nearby communities. - [Fire Alarm System] - Fire Extinguisher - Fire Detection System
Security facilities	CCTV, Site Fence, Lighting System

3.3. Labor Requirements

Number of workers (at peak) that will work on-site during the construction and operation phases of the Sub-project are provided in **Table *12***. Prefabricated temporary accommodation will be provided within the construction site where workers can meet their daily needs.

Table 12:Labor Requirements of the Subproject

Phase	Number of Workers (including contractors and subcontractors)	Planned Accommodation Arrangement
Construction Workers (at peak)	35	On-site temporary accommodation (prefabricated camp or temporary facilities for workers)
Operation Workers (at peak)	3	Off-site accommodation (no permanent on-site housing, workers commute as needed)

3.4. Land Acquisition Status

The parcel to be used for the SPP Sub-project in Karaman is 4883 Lot 1 Parcel, and it is owned by Karaman Municipality. The title deed document of the Sub-project parcel is given in Annex C.

Also, there is no need for expropriation for the access road and ETL. The existing Karaman – Ereğli State Highway will be used during the project construction and operation phase. ETL will be installed with the underground route, and this underground route is planned alongside the existing road. Therefore, no need for expropriation is required.

Land acquisition status of the parcel to be used by the Subproject is summarized in **Table *13***.

Table 13: Land Acquisition Status for the Subproject

Subproject Component &AF	Lot/ Parcel No.	Current Land Ownership	Type of Parcel (according to Title Deed)	Land Acquisition Method	Title Deed Area of the Parcel (m^2)	Area to be Used by the Subproject (m^2)	Status of Land Acquisition
SPP Area	**4883/1**	Karaman Municipality Ownership	Land Status	Karaman Municipality Owned	94.079,03	70.112,56	Land owned by the Karaman Municipality

3.5. Permitting Status

Status of permits, licenses, and approvals required to be in place before start construction is presented in **Table *14***.

Table 14:Status of Permits for the Construction Phase

Permit, License, Approval	Status	Remarks/ Notes

	(In place, Not in place)	
EIA Decision for the Power Plant	EIA is not Required Decision	The decision number 69306553 220-02 E-20203, 07.01.2020 dated EIA Exemption Decision states that the project falls under the annexed list of the EIA Regulation (published in the Official Gazette on 25.11.2014, No. 29186). After reviewing the Project Identification File, it was determined that the proposed mitigation measures for environmental impacts are sufficient. As a result, it was concluded that there is no need to prepare an EIA report, and the project was exempted from further environmental review under Article 17 of the regulation. The relevant decision is given in Annex B1.
Zoning plan approval	There is an approved 1/1000 scale zoning plan.	The zoning permit was obtained and stated in Annex B6.
Permit for non-agricultural land use	There is a decision of Karaman Governorship Provincial Directorate of Agriculture and Forestry.	The land status is not located in the agricultural land class, and relevant permit is given in Annex B2.
Official Decision of Karaman Governorship Provincial Directorate of Culture and Tourism	The sub-project area is not located cultural heritage area.	The relevant document is given in Annex B3..
Connection Agreement with Electricity Distribution Company (MEDAŞ)	The relevant agreement has been made.	Details of the agreement is given in Annex B7.

4. ESMP MATRIX: RISK AND IMPACTS, MITIGATION AND MONITORING

As the Subproject involves both construction and operation activities, the ESMP consist of two components applicable to respective Subproject phase, as follows:

- Construction ESMP Matrix
- Operation ESMP Matrix

Roles and responsibilities related to the implementation of this ESMP is defined in Section 5.2.

Implementation arrangements for ESMP implementation are described in Section 1.5.

The contractor's E&S management plans and procedures that will support the implementation of the E&S assessment documents are listed in Section 4.6.

4.1. E&S Risk and Impacts of the Subproject

This section identifies the potential environmental and social impacts and risks that could arise from the activities of the Sub-project either during the construction phase or the operational phase. The highlighted impacts listed below are broad and envisaged as cutting across most of the Subproject. The specific potential impacts and risks for each Subproject will be provided in the E&S assessment section of its feasibility report.

Typical Subproject activities to be implemented are broadly categorized into:

- Construction phase,
- Operation phase,

General, cross-cutting potential environmental impacts, which could be expected for all Sub-project, are presented below.

4.2. Construction Phase

4.2.1. Environmental Impacts and Risks

4.2.1.1. Soil erosion, loss and contamination

The major impact on soil could be the potential topsoil loss at the footprints of the Sub-project where excavation will be carried out. Excavated soil may be exposed to agents of erosion, mostly water and wind. Due to the involvement of heavy machinery during the construction phase, soil contamination may be seen due to accidental oil leakages in the areas. The impacts on soil will be minimal and localized in the areas where construction will take place only.

The potential impacts of the Sub-project on soil environment are summarized below:

- Soil compaction as a result of topsoil stripping, leveling, excavation and filling activities, work of construction machinery,
- Mixing of soil layers as a result of excavation and filling activities,
- Soil contamination as a result of oil or fuel leaks or spillage that may result from incidents and unexpected events,
- Soil pollution which may occur in case of uncontrolled storage or disposal of solid and/or liquid waste to be generated within the scope of the Subproject, and
- Erosion potential due to earthworks.

The fact that the project site is not used for agricultural, or livestock purposes reduces the general environmental impacts of risks such as soil loss, erosion, or contamination. Necessary measures will be taken to minimize risks such as soil loss and soil contamination, and precautions will be implemented for soil stabilization and prevention of contamination.

4.2.1.2. Impacts on Natural Habitats

There might be tree and other vegetation loss during the construction phase for each Sub-project either to pave way for access roads or for the actual Sub-project construction area. The vegetation will be cleared so that the area where the construction work is to take place is clear for the construction work to be performed. The construction work will involve direct land take of productive pastureland and agricultural lands, bush clearing, removal of topsoil, excavation and mass haulage. These activities will also expose the land to elements of erosion such as wind and water and thus will trigger the process of land degradation. The impacts may occur due to spillage/leakage of chemicals and hazardous materials and poor waste/wastewater handling and disposal. These issues may create negative impacts on ecosystem services from low significance to high significance considering the magnitude (amount of spillage, toxicity level of spilled chemical, etc.) of the impact. The impact of Sub-project activities on ecological components is related to the size of the impact and the vulnerability of the recipient.

Dust and exhaust gases emission

During construction, there will be material handling and movement of construction equipment at the Subproject sites. In addition to the fugitive dust emissions, there will be exhaust emissions of heavy construction machinery. Primary emissions from exhaust gases of vehicles are NO_2, CO, HC, SO_2 and PM. Also, bio-aerosols, and odors, could cause deterioration of air quality during waste collection and transportation.

Moreover, if there are any indications of detrimental impacts on air exhaust gas emissions, ESS-3 and ESS-4 protocols must be thoroughly assessed and, if deemed necessary, implemented prior to commencing any project-related activities.

Noise Pollution

During the construction phase noise pollution may occur, necessary precautions will be taken and procedures will be followed. It is anticipated that the since the project is in the industrial zone of the city Karaman, Merkez district, Pirireis Ngh., will not be highly adversely affected in terms of environmental noise level.

Impacts associated with water, energy and raw materials use

Employees' needs and dust suppression will create water supply requirements. Construction phase activities will require resource consumption such as concrete, reinforcement, structural steel, ferrocement, prestressed concrete, energy etc. Civil works at the Sub-project site could be a risk of contaminating the clear river water with cement and muddy waters or soil movement. Increase in suspended particles due to construction works, risk of human contamination from construction camps and production of wastewater originated from the workers might affect the surface water and groundwater quality especially where the Sub-project are close to natural water bodies.

Waste

During construction phase of the Sub-project, activities such as vegetation clearance, levelling, construction and installation of main operation and auxiliary units, procurement, transportation and assembly of units and equipment will be carried out. Solid waste types expected to be generated within the scope of these activities are municipal wastes, packaging wastes of system equipment (e.g. wood, cardboard, plastic, etc.), hazardous wastes, special wastes, excavation and construction wastes (e.g. scrap metal, wood, concrete waste, etc.), and waste system equipment (panels, cables, electronic components). Hazardous and special wastes may contain chemical substances (e.g. paint, solvent, panels, inverters etc.) or packaging materials and cloths contaminated with oils, waste oils resulting from operation and maintenance of machinery and vehicles, solvents, accumulators, batteries, filters, machine parts.

During construction works encounter of asbestos containing materials might happen which may cause potential impacts due to inhalation from asbestos containing material (lung disease, mesothelioma).

Biodiversity

The Sub-project area is not located in an area with significant vegetation cover or natural habitat area, therefore impacts from Sub-project activities will be very low. Also, the Sub-project area is not pastureland or agricultural land. Due to the nature of the project site, the construction activities are not expected to have a notable impact on biodiversity. There are no rare or vulnerable species in the area that would be affected by the construction works. No significant impact on biodiversity is expected as the impact on ecological components is minimal and the project site is located in an industrial area away from settlements.

Water Resources

The Sub-project area is not close to any natural water bodies, so the risk of contamination or negative impacts on water resources is low. Although construction activities will involve some water usage for dust suppression and employee needs, there is no significant risk of polluting rivers or other water sources due to the absence of nearby watercourses. Preventive measures will still be taken to ensure that wastewater and any runoff are managed properly, but the overall impact on water resources is expected to be minimal.

4.2.1.3. Social Impacts and Risks

Occupational Health and Safety and Labor

Construction works can cause incidents and accidents that may threaten the health and safety of workers if measures are not taken proactively.

Potential health and safety risks during the construction have been listed below.

- Working at height,
- Moving objects,
- Slips and trips,
- Noise vibration and exposure to dust,
- Materials handlings,
- Unintended collapse,
- Electricity,
- Traffic related risks due to increased traffic,
- Associated risk of occupational accidents, injuries and diseases,
- Hazards to workers due to unhygienic or unsanitary living conditions, etc.

Details and area specific risks will be obtained during site studies and will be assessed under social impact and risks sections of respective ESA documents. Mitigation measures and occupational health and safety issues are managed in line with the Labor Management Procedure of the Subproject which is in compliance with the national legislation, Occupational Health and Safety Law (Law No: 6331, Date of Enactment: 20/06/2012), World Bank ESS2 and World Bank Group General Environmental Health and Safety Guidelines.

Community Health and Safety

Project should bring benefits to the community in terms of improved access to municipal services which in turn may enhance local business opportunities and new infrastructure opportunities in the region. However, there may also be impacts arising from accidents, structural failures, release of hazardous materials, impacts on water quality and quantity, pressure on existing social infrastructure and SEA/SH risk due to labor influx, construction impacts on natural resources, exposure of disease. The Subproject identified the following potential Community Health Safety (CHS) impacts due to the construction phase.

- Road damage of transportation and traffic; increased traffic and risk of road traffic accidents and injuries,
- The emergency situations due to contextual risks (i.e., flooding, landslides, earthquakes, fires etc.)
- Damage to existing underground public utility cables and pipes and disruption of services,
- Noise and vibration,
- Increased demand on existing community health and sanitation infrastructure due to influx of temporary workers & camp followers,

- Threat to community culture, safety and security associated with presence of construction workers and business opportunists,
- Impacts due to labor influx and interaction of temporary workers with the community (such as sexually transmitted diseases (STDs), SEA/SH risk),
- Impacts on the accessibility of the community to their houses, business, schools, etc.,
- Impacts on potential vulnerable groups,

Labor and Working Conditions

During the construction phase, labor conditions should align with the World Bank's Environmental and Social Standard 2 (ESS2) to ensure fair treatment, non-discrimination, and protection of workers' rights. Several risks may arise, including:

Occupational Health and Safety Risks

- Electrical Hazards: Workers may face risks related to installing electrical systems and high-voltage cables. Proper electrical safety training and protective equipment are essential.
- Working at Heights: Installing solar panels often involves working at heights, either on elevated structures or raised ground platforms, which increases the risk of falls. Workers must use proper fall protection measures as required by ESS2 guidelines
- Heavy Equipment and Machinery: The use of cranes, forklifts, and other machinery to move panels and other equipment could lead to accidents or injuries if safety protocols aren't strictly followed. A robust occupational health and safety (OHS) plan should be implemented.
- Heat Exposure: Since solar power plants are typically located in areas with high solar intensity, workers may be exposed to extreme heat, leading to heat-related illnesses such as dehydration, heatstroke, or exhaustion. Adequate water supplies, shaded rest areas, and proper scheduling to avoid peak heat hours are necessary.

Risks Related to Working Conditions

- Irregular Working Hours: Exposure of workers to long working hours due to intensive construction activities
- Unfair Remuneration and Loss of Rights: Risk of workers working below the minimum wage or not being paid for overtime work
- Labor Rights and Contracts: Employing workers without formal contracts and depriving them of social rights
- Inadequate living conditions (lack of clean water, hygiene, food and recreational facilities)
- Risk of infectious diseases due to crowded and unhealthy housing environments
- Lack of an independent mechanism for workers to submit their grievance and demands
- Prevention of workers' rights to unionize and organize

Traffic

Traffic congestion and temporary interruptions from construction phases of the investments which could potentially cause annoyance, disruption, health and safety impacts, as well as economic impacts. The use of construction vehicles and machineries in the Sub-project site may cause traffic reducing movement and flow of vehicles. This is likely to cause increased frequency and severity of accidents.

Loss of Land and Livelihoods

The potential impacts of the Sub-project on land use are expected to be minimal compared to more extensive infrastructure projects. While there may be minor alterations due to the construction of access roads or temporary facilities, the Sub-project will not cause significant land or livelihood loss. The Sub-project area is not used for farmland or grazing, and the lack of cultivation further reduces the impact on local assets or livelihoods. Vegetation loss will be limited, and soil erosion is expected to be minimal. Potential impacts and risks of the Subproject regarding loss of land and livelihoods will be managed and monitored in accordance with the national legislation and requirements of ESS5.

Vulnerable groups

The SPP Sub-project is located in the Karaman Organized Industrial Zone, and far away from residential areas. There are vulnerable groups in the Pirireis Neighborhood, but the Sub-project does not impact these groups due to its location. Therefore, there are no vulnerable groups in the Sub-project impact area.

Cultural Heritage

The SPP Sub-project is not located in and around the cultural heritage area. Therefore, the Sub-project is not expected to have an impact on cultural assets. Nevertheless, all necessary precautions will be taken in case any cultural heritage is encountered during the construction phase.

Technical and Social Infrastructure Services

The SPP Sub-project project is expected to have minimal negative impacts on existing technical and social infrastructure services. The construction phase may temporarily increase demand for local utilities, such as water and electricity, but this is likely to be manageable within the capacity of existing services. Additionally, the project will not significantly strain social infrastructure, such as healthcare or educational facilities, due to the limited number of workers and the absence of permanent settlements. In the long term, the project may contribute positively by improving the reliability of the regional power supply, potentially creating opportunities for new infrastructure development and enhancing local services.

4.2.2. Operation Phase

4.2.2.1. Environmental Impacts and Risks

Waste

During the operation phase, waste generation will primarily include maintenance-related waste, such as packaging materials from equipment and potentially hazardous materials like used lubricants, cleaning agents, and damaged solar panels. Proper waste management protocols will be in place to ensure safe handling, storage, and disposal of such waste in accordance with environmental regulations.

Air Quality, Odor

The GES project does not emit air pollutants such as carbon dioxide (CO_2), sulfur dioxide (SO_2), or nitrogen oxides (NO_x), as it does not use fossil fuels during energy production. Therefore, no negative impact on air quality is expected during the operation phase. As one of the renewable and environmentally friendly energy production methods, the GES project carries very low risks in terms of air pollution and odor.

Noise

Noise levels during the operation phase will be minimal, primarily limited to the occasional maintenance activities, such as the cleaning or repair of solar panels and inverters. The noise generated will be negligible and is not expected to cause any disturbance to the surrounding communities.

Soil and Water Pollution

The risk of soil and water pollution during the operation phase is low, as there will be no significant use of chemicals or water. Any potential leaks from equipment (e.g., transformers or inverters) will be managed through preventive maintenance and containment measures to ensure that the project does not contribute to soil or water contamination.

Climate Change

The Sub-project will contribute positively to the fight against climate change by producing clean, renewable energy. By offsetting greenhouse gas emissions from fossil fuel-based energy sources, the project will play a role in reducing the region’s carbon footprint.

Water Resources

Water usage during the operation phase will be minimal, mostly limited to cleaning solar panels at periodic intervals. As no nearby water bodies will be affected and water consumption will be low, the project will not have any significant impact on local water resources.

Biodiversity

The operation of the Sub-project project is not expected to impact biodiversity significantly. The minimal disturbance caused by occasional maintenance activities will not threaten local wildlife or habitats. Vegetation within the project area will remain stable, and no additional habitat loss is expected.

4.2.2.2. Social Impacts and Risks

Occupational Health and Safety

During the operation phase, the main occupational health and safety risks will be associated with routine maintenance and inspections. Workers will be trained in the safe handling of electrical equipment and working at heights, ensuring compliance with safety regulations. PPE will be mandatory, and regular safety audits will be conducted to minimize risks.

Labor and Working Conditions

Labor conditions during the operation phase will adhere to national regulations and international standards. Employment opportunities will be limited to maintenance and monitoring roles, with fair wages and proper working conditions ensured. No significant labor influx is anticipated during this phase.

Traffic

Traffic impacts will be minimal during the operation phase, with occasional vehicle movements for maintenance purposes. This is expected to have a negligible effect on local traffic patterns and road safety.

Vulnerable groups

The operation phase will not adversely affect vulnerable groups in the community, as the project will operate with minimal disruption to daily life. In fact, by providing a stable energy supply, the project could indirectly support vulnerable groups through improved access to electricity.

Cultural Heritage

No additional impacts on cultural heritage sites in the operational phase.

Technical and Social Infrastructure Services

The Sub-project will contribute positively to technical infrastructure by providing renewable energy to the grid, supporting regional energy demands. In the long term, the project could improve

local power supply reliability, enhancing the potential for new infrastructure development in the region.

4.3. Construction ESMP Matrix

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures
	ESS2 - Labor and Working Conditions			
1	**OHS - Physical Hazards: Electrical Hazards** Electric Shock Spark and Fire Risk Communication and Security Systems Failure Equipment Failure	• Construction workforce • Employees • Community	**General Measures** • Ensure that all energized electrical devices and lines are marked with warning signs • Ensure that the devices are locked (de-charging and leaving open with a controlled locking device) and labeled (warning sign placed on the lock) during service or maintenance. • • Ensure that high-voltage equipment ('electrical hazard') and service rooms where access is controlled or prohibited are properly labeled. • Ensure that all buried electrical cables are thoroughly identified and marked prior to any excavation work. **Site-specific Measures** • Ensure that special training programs should be organized for employees on electrical hazards and safety precautions. • Ensure that rapid response teams and emergency plans should be established for electrical accidents. • Ensure that regular electrical safety inspections should be conducted in the Sub-project area. • Ensure that continuous inspections should be conducted to ensure that employees use appropriate personal protective equipment (PPE). • Ensure that emergency communication plans should be developed in the event of electrical accidents.	• OHS Management Plan • LMP • Emergency Response Plan
2	**OHS - Physical Hazards: Rotating and Moving Equipment** Fall Risk and Injury Risk	• Construction workforce	**General Measures** • If a machine or equipment has an exposed moving part or an exposed pinch point that could endanger the safety of any worker, ensure that the machine or equipment is equipped with and protected by a guard or other	• OHS Management Plan • Emergency Response Plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures
	Equipment Failure		device that prevents access to the moving part or pinch point. Guards should be designed and installed in conformance with appropriate machine safety standards. • Where possible, ensure that equipment is designed and installed to enable routine servicing, such as lubrication, to be carried out without removing guarding devices or mechanisms **Site-specific Measures** • . • Ensure that before operating the equipment, all employees should be required to comply with safety protocols; necessary checklists should be used before operating the machine.	
3	**OHS - Physical Hazards: Welding and Hot Works** Fire Risk Physical Injuries Smoke and Gas Exposure Fall or Injury Risk	• Construction workforce	**General Measures** • Ensure that appropriate eye protection, such as welder's goggles and/or a full-face eye shield, is provided for all personnel involved in or assisting with welding operations. • If welding or hot cutting is performed outside of established welding workstations, ensure that special hot work and fire prevention precautions and Standard Operating Procedures (SOPs) are in place, including "Hot Work Permits, stand-by fire extinguishers, stand-by fire watch and maintaining fire watch for up to one hour after welding or hot cutting is finished". **Site-specific Measures** • Ensure that fire safety equipment such as fire extinguishers, water or foam guns should be readily available in the welding area. Accessible areas for fire safety equipment should be clearly marked. • Ensure that all employees should be trained and informed about welding operations and the safe management of hot work. In addition, drills should be organized on emergency action plans.	• Safety procedures • OHS Management Plan • Emergency Response Plan
4	**OHS - Physical Hazards: Industrial Vehicle Driving and Site Traffic**	• Construction workforce	**General Measures** • Make sure drivers undergo medical supervision	• Safety procedures • OHS Management Plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures
	Traffic Accident Damage to project equipment		• Ensure that rights of way, site speed limits, vehicle inspection requirements, operating rules and procedures (e.g. prohibiting operation of forklifts with forks down), and control of traffic patterns or direction are established **Site-specific Measures** • Develop and implement a traffic management plan for the construction site that defines vehicle routes, speed limits, and restricted areas. Ensure that this plan is communicated to all employees and that rapid response procedures for traffic accidents or emergencies are in place and understood. • Ensure that pedestrian paths and safe crossing points should be determined within the construction site, and the use of these paths should be encouraged. • Ensure that obstacles to visibility in areas where vehicles move should be removed and the entire area should be well lit. . • Ensure that regular inspections of all industrial vehicles should be carried out and their safe operation should be ensured.	• LMP • Emergency Response Plan • Traffic Management Plan
5	**OHS - Physical Hazards: Ergonomics, Repetitive Motion, Manual Handling Lifting** Lifting Operations OHS Risks	• Construction workforce	**General Measures** • Ensure that mechanical assists are used to eliminate or reduce the effort required to lift materials, hold tools and work objects, and that more than one person is lifting if weights exceed thresholds • Ensure that rest and stretch breaks are incorporated into work processes and job rotation is in place **Site-specific Measures** • Ensure that Areas should be created near the work area where employees can rest and stretch • Ensure that all equipment used is well-maintained to support safe and efficient operations.	• Safety procedures • OHS Management Plan • LMP • Emergency Response Plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures
6	**OHS - Chemical Hazards** Chemical Exposure Fire and Explosion Risks Environmental Pollution	• Construction workforce	**General Measures** • Ensure that chemical hazards are communicated to workers through labeling and marking according to nationally and internationally recognized requirements and standards, including International Chemical Safety Cards (ICSC), Material Safety Data Sheets (MSDS/SDSs) or equivalent. Any means of written communication should be in an easily understood language and be readily available to exposed workers and first-aid personnel • Ensure that employees are trained in the use of available information (such as MSDSs/SDSs), safe working practices and proper use of PPE **Site-specific Measures** • Ensure that an effective emergency response plan should be prepared for chemical spills or accidents, and regular drills should be conducted to ensure the applicability of this plan. • Ensure that appropriate disposal methods should be determined for the waste of the chemicals used, and these methods should be implemented. • Ensure that appropriate PPE should be provided to employees when working with chemicals, and a culture that encourages the use of this equipment should be created.	• Emergency Response Plan
7	**Working Conditions** **General Working Conditions** Unfair wages, inappropriate working hours, not usage of leave entitlements, and no protection against unfair treatment, Inadequate Accommodation Conditions.	• Construction workforce	**General Measures** • Ensure that all legal rights of workers are guaranteed and that obligations between employers and workers are clearly defined by fair contracts. • Ensure that workers toolbox trainings will be implemented on weekly basis to consist of the OHS Plan and Labor Conditions. • Ensure that Child labor, forced labor and unregistered labor will be prohibited as of the LMP. • Ensure that workers' rights to form and join unions are supported and that workers will not be discriminated against in this process.	• SEP • Safe work procedures • Sub-contractor agreement templates • OHS Management Plan • Labor Management Procedure (LMP)

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures
			• Ensure that design and construction of accommodation facilities for construction workers in accordance with national and international standards (World Bank's IFC Performance Standards). **Site-specific Measures** • Ensure that the Grievance Mechanism for workers will be implemented. The workers will be informed about the grievance mechanism at the time of recruitment, and it will be made easily accessible to them. • Ensure that in cases where workers need accommodation, safe, hygienic and adequate living standards will be provided. • Ensure that adequate accommodation will be provided to site personnel. Accommodation will be planned such that clean, comfortable, and secure living quarters are provided for workers, including sleeping areas with proper ventilation, lighting, and insulation to promote rest and relaxation after work hours. Adequate sanitation facilities will be provided including toilets, showers, hand-washing stations, and wastewater disposal systems, to maintain hygiene and sanitation standards.	
8	**Gender-based violence (GBV); sexual exploitation and abuse/sexual harassment (SEA/SH) on employees; gender inequality**	• Construction workforce	**General Measures** • Ensure that sensitization of the Managements of Construction Contractor and both Consultants on GBV and SEA/SH issues will be provided. • Ensure that all workers will sign and be informed about the Code of Conduct. **Site-specific Measures** • Ensure that a Worker's GM will be implemented to capture GBV and SEA/SH related complaints. • Ensure that training regarding GBV and SEA/SH will be provided to all workers. • Ensure that awareness Meetings will be conducted with the workers.	• SEP

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures
	ESS3 - Resource Efficiency and Pollution Prevention and Management			
9	**Air Emissions and Ambient Air Quality**			
	Temporary nuisance on surrounding industrial facilities due to dust emissions during earthworks and gaseous emissions from vehicles and machinery	• Construction workforce • Communities • Flora and fauna	**General Measures** • Implement dust suppression measures, such as water spraying on unpaved roads and loose materials, to control dust emissions during construction activities. **Site-specific Measures** • Ensure that air quality standards and permits to be applied in the project area should be determined and adhered to in accordance with local and national regulations. • Modern equipment and vehicles will be used to meet the relevant emission standards in construction works, • Grievance mechanism will be processed. Works will be stopped in case of a grievance, until measures are in place.	• Construction Plan and Schedule • SEP
10	**Energy Conservation**			
		• Communities	**General Measures** • Ensure that all materials and equipment used in the project comply with international energy efficiency standards. **Site-specific Measures** • Ensure that the positioning of solar panels should be optimized to receive maximum sunlight. • Ensure that Energy efficiency should be ensured that the equipment and machinery used in the Sub-project are selected.	• Construction Plan and Schedule
11	**Wastewater and Ambient Water Quality**			
	Generation and discharge of wastewater due to	Surface water resources	**General Measures**	•

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures
	construction activities		• Ensure water is used efficiently to reduce the amount of wastewater generation • Ensure that waste minimization and process modification, including reduction of the use of hazardous substances, is carried out to reduce the load of pollutants requiring treatment. • If septic systems are to be used for wastewater disposal and treatment, ensure that the following requirements are met: ○ Well maintained to allow effective operation. **Site-specific Measures** • Ensure that a specific plan for wastewater management during construction should be established and implemented. This plan should include arrangements for the collection, storage and discharge of wastewater. • Ensure that workers should be trained on wastewater management and protection of environmental water quality.	
12	**Hazardous Materials Management**			
	Generation of hazardous waste during construction activities	• Construction workforce • Communities • Flora and fauna	**General Measures** • Ensure that workers are provided with hazard communication and training to prepare them to recognize and respond to chemical hazards in the workplace. Programs should include aspects of hazard identification, safe operating and materials handling procedures, safe work practices, basic emergency procedures, and special hazards unique to their jobs. • Ensure that permitted maintenance activities such as hot work or confined space entries are defined and implemented • Ensure that appropriate PPE (footwear, masks, protective clothing and goggles in appropriate areas), emergency eyewash and shower stations, ventilation systems and sanitary facilities are provided • Ensure that accident and incident reports, as well as occupational hazard monitoring and audit records, are maintained for atleast five years o verify the effectiveness of prevention and control measures.	• Waste Management Plan • Emergency Response Plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures
			Site-specific Measures • Ensure that specific areas should be allocated for the safe storage of hazardous chemicals and these areas should be marked with relevant signs. • Ensure that special training modules should be prepared and implemented at regular intervals to ensure that workers receive specific training on hazardous substances.	
13	**Waste Management**			
	Generation of waste during construction activities	• Construction workforce • Communities • Flora and fauna	**General Measures** • Ensure that a waste management hierarchy is established that considers prevention, reduction, reuse, recovery, recycling, removal and finally disposal of waste • Ensure that waste segregation and storage in temporary waste storage areas is managed according to the standards set out in the GIIP and relevant legislation **Site-specific Measures** • Ensure that specific areas should be created for temporary storage of waste and these areas should be marked with appropriate signs. • Ensure that Special training programs should be prepared for employees on waste management and separation procedures and should be implemented at regular intervals. • Ensure that recycling processes and facilities should be developed in cooperation with local recycling facilities and these processes should be integrated into project activities.	• Waste Management Plan
14	**Noise**			
	Noise generation due to	• Local community	**General Measures**	• Stakeholder Engagement Plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures
	construction	• Project Site Surroundings	• Manage the potential impact of noise, selecting equipment with lower sound power levels • Ensure implementation of Subproject-specific SEP in order to address any noise-related grievance and plan/take corrective actions, where necessary. • Ensure consultation with PAPs prior to the start of and during the construction activities to be conducted at this location in order to inform stakeholders about the scope and duration of the activities and mitigate the potential impacts for the period of construction **Site-specific Measures** • Ensure that construction schedules should be planned to reduce noise production during the early hours of the day or away from residential areas. • Ensure that rest periods and rotation schedules should be implemented to minimise worker exposure to noise. • Ensure that regular community meetings should be held to collect feedback on noise management for the project.	
	ESS4 - Community Health and Safety			
15	**Risks related with Gender Based Violence (GBV) Sexual Exploitation Abuse/Sexual Harassment (SEA/SH)**	• Communities	**General Measures** • Ensure that ethical rules and public communication training will be provided to all employees to prevent gender-based violence, harassment, abuse, etc. in the workplace. • Ensure that workers will be required to sign and adhere to the code of conduct. • Ensure that regular awareness-raising sessions will be conducted on site in GBV prevention and other social issues. • Ensure that grievance mechanism will be implemented to receive any complaints in this aspect.	• SEP • Code of Conduct
16	**Labor Influx**			

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures
	Impacts on local economy, livelihood sources and employment	• Communities	**General Measures** • Ensure that local employment will be prioritized as much as possible for unskilled, semi-skilled and skilled workers within the scope of the Sub-project. • Ensure that SEP will be implemented for regularly engaging with communities and running the grievance mechanism.	• SEP Grievance Mechanism
	Impacts on **vulnerable** and **disadvantaged** individuals and groups	• Communities	**General Measures** Ensure that recruitment policy will include non-discriminatory hiring practices, training programs tailored to the needs of vulnerable groups, implementing and providing support services such as transportation or childcare to facilitate participation in the workforce	• SEP Grievance Mechanism
17	**Structural Safety of Subproject Infrastructure**			
	Injuries suffered as a consequence of falls or contact with heavy equipment	• Local communities • Employees	**General Measures** • Ensure use of buffer strips or other methods of physical separation around project sites to protect the public from major hazards associated with hazardous materials incidents or process failure, as well as nuisance issues related to noise, odors, or other emissions • Ensure incorporation of siting and safety engineering criteria to prevent failures due to natural risks posed by earthquakes, tsunamis, wind, flooding, landslides and fire. To this end, all project structures should be designed in accordance with engineering and design criteria mandated by site-specific risks, including but not limited to seismic activity, slope stability, wind loading, and other dynamic loads • Develop Subproject specific hazard analysis that is required to include management actions applicable to hazardous materials storage and use. • Manage the potential impacts of off-site impacts of releases through measures intended to contain explosions and fires, alert the public, provide for evacuation of surrounding areas, establish safety zones around a site, and ensure the provision of emergency medical services to the public	• Waste Management Plan • Safety procedures • OHS Management Plan • Emergency Response Plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures
	Burns and smoke inhalation from fires	• Local communities • Employees	**General Measures** • Ensure use of buffer strips or other methods of physical separation around project sites to protect the public from major hazards associated with hazardous materials incidents or process failure, as well as nuisance issues related to noise, odors, or other emissions • Ensure incorporation of siting and safety engineering criteria to prevent failures due to natural risks posed by earthquakes, tsunamis, wind, flooding, landslides and fire. To this end, all project structures should be designed in accordance with engineering and design criteria mandated by site-specific risks, including but not limited to seismic activity, slope stability, wind loading, and other dynamic loads • Develop Subproject specific hazard analysis that is required to include management actions applicable to hazardous materials storage and use. • Manage the potential impacts of off-site impacts of releases through measures intended to contain explosions and fires, alert the public, provide for evacuation of surrounding areas, establish safety zones around a site, and ensure the provision of emergency medical services to the public	• Waste Management Plan • Safety procedures • OHS Management Plan • Emergency Response Plan
18	**Traffic Safety**			
	Road safety Traffic density caused by heavy tonnage vehicles -Transportation of hazardous materials from the construction site to the relevant locations	• Local Communities • Road Users • Road Infrastructure	**General Measures** • Emphasizing safety aspects among drivers • Improving driving skills and requiring licensing of drivers • Adopting limits for trip duration and arranging driver rosters to avoid overtiredness • Roads passing through settlements will be avoided whenever alternative routes are available. If Project traffic routing through the settlements is not avoidable, all necessary traffic management measures will be taken. The local communities and if necessary local authorities will be informed about the transportation routes and schedule • Scheduling of traffic will be undertaken to avoid the peak hours on the local road network wherever practicable (e.g. early in the morning with	• Stakeholder Engagement Plan

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures
			the daylight). Scheduling information and planned traffic disruptions will be communicated well in advance to all related parties including authorities, local communities and nearby businesses • Develop Sub-project specific "Hazard Assessment and Management Actions" in order to identify the potential hazard involved in the transportation of hazardous materials and actions/ preventive measures and emergency response procedures by reviewing: ○ the hazard characteristics of the substances identified, ○ The history of accidents, both by the company and its contractors, involving hazardous materials transportation ○ The existing criteria for the safe transportation of hazardous materials, including environmental management systems used by the company and its contractors • Develop Subproject specific Emergency Preparedness and Response Plan that is required to cover: ○ Planning Coordination ○ Emergency equipment ○ Training • Ensuring adequate transport vehicle specifications. •	
19	**ESS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources**			
	Disturbance on biodiversity	• Flora and fauna	• Ensure that construction work will be scheduled for periods of low wildlife activity, such as avoiding bird nesting seasons or hibernation periods for mammals. • Ensure that vegetation removal will be minimized by conducting a thorough survey to avoid unnecessary clearing. • Project construction sites and access roads will be separated from other areas with appropriate signboards, signs, and fences. personnel and vehicle access to this area will be limited with the construction site.	• Construction Plan and Schedule
20	**ESS8 - Cultural Heritage**			

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures
	Impacts on cultural heritage	• Cultural heritage	• Ensure that Chance Finds Procedure will be applied in order to ensure timely identification and appropriate management of chance findings during Sub-project implementation. • Ensure that Chance Finds Procedure will be made a part of toolbox trainings during construction. • Ensure that construction work will be stopped immediately in case of any chance finds. • Ensure that the relevant Preservation Board or Museum Directorate will be informed immediately and the security of the area will be ensured by the Contractor. Construction work will not continue until official notification is received.	• ESMP
21	**ESS10 - Stakeholder Engagement and Information Disclosure**			
	Insufficient stakeholder engagement activities and public consultation during construction - Incomplete information about the social and environmental impacts of the project during construction. - Difficulty accessing information due to language barriers - Risk of conflicts arising	• Communities	• Ensure that interaction / communication will be established with communities, and adequate timing will be planned for engagement activities. Additionally, regular consultations will be carried out with the authorities and communities regarding the subproject management. • Ensure that preparing of documents in understandable and local language. • Ensure that organizing periodic information meetings. • Ensure that there is preparation of clear and transparent information materials. • Establishing effective grievance mechanisms.	• SEP

4.4. Operation ESMP Matrix

No	Impact Description		Receptor	Proposed Mitigation Measure	Implementation Plans
		ESS2 - Labor and Working Conditions			
1	**OHS - Physical Hazards: Electrical Hazards** - Improper Working Conditions - Work Injuries and Electricity Shock		Employees	• Ensure that relevant safety procedure will be implemented to prevent the risk of any injury to the workers by electricity shock during installation of electric equipment. • Ensure that danger signage will be installed in the electrical hazard areas and apply all safety measures to prevent exposures. • Ensure periodic inspections of electrical equipment to prevent malfunctions and hazards.	• Safety procedures • OHS Management Plan • Emergency Response Plan
2	**OHS - Physical Hazards: Rotating and Moving Equipment** Lifting Operations OHS Risks		Employees	Ensure that workers will be provided with all necessary PPE and safety materials.	• Safety procedures • OHS Management Plan • Emergency Response Plan • LMP
3	**OHS - Physical Hazards: Welding and Hot Works** - Improper Working Conditions - Work Injuries		Employees	• Employees will be trained for their responsibility to report dangers • Sources of ignition will be controlled • Employees will be well trained in the firefighting measures.	• Safety procedures • OHS Management Plan • Emergency Response Plan
4	**OHS - Physical Hazards: Ergonomics, Repetitive Motion, Manual Handling Lifting** Lifting Operations OHS Risks		Employees	• Ensure that application of safe handling techniques will be ensured. • Ensure that the use of appropriate PPE and safety materials will be ensured.	• Safety procedures • OHS Management Plan • LMP • Emergency Response Plan

No	Impact Description		Receptor	Proposed Mitigation Measure	Implementation Plans
5	**General Improper Working Conditions**		Employees	• Ensure that child labor, forced labor and unregistered labor will be prohibited as of the Labor Management Plan. • Ensure that employees will be provided with documented information that is clear and understandable, regarding their rights under national labor law; including collective agreements, their rights related to hours of work, wages, overtime, compensation, and benefits as of startup of working relationship and when any material changes occur. • Ensure that the Grievance Mechanism for employees will be implemented. The employees will be informed about the grievance mechanism at the time of recruitment, and it will be made easily accessible to them.	• ESMP • SEP • LMP • OHS Management Plan
6	**Gender-based violence (GBV); sexual exploitation and abuse/sexual harassment (SEA/SH) on employees; gender inequality**		Employees	• Ensure that all workers will sign and be informed about the Code of Conduct. • Ensure that GM will be operated to capture GBV and SEA/SH related complaints. • Ensur that basic awareness training on workplace respect and equality, including GBV and SEA/SH, is provided to all employees during inducton.	• Code of Conduct • Grievance mechanism
		ESS3 - Resource Efficiency and Pollution Prevention and Management			
7	**Air Emissions and Ambient Air Quality**				
	Air Pollution (related to gases released into the air in the event of a possible fire or similar) Dust Generation Odor Emissions		Communities Flora and fauna	• Ensure that regularly inspect and maintain equipment to ensure optimal performance. . . • Ensure emergency response plans include measures for hazardous gas emissions. • Provide fire-resistant materials where possible to reduce harmful gas emissions during fire.	• Emergency Response Plan
8	**Energy Conservation**				

No	Impact Description		Receptor	Proposed Mitigation Measure	Implementation Plans
	Energy inefficiency		Communities Flora and fauna	• Ensure that implement energy-efficient technology in all phases of the SEP project (e.g., inverters, transformers). • Ensure that monitor energy consumption regularly to detect and address inefficiencies. • Ensure that encourage the use of renewable energy in project-related auxiliary systems (e.g., lighting).	
9	**Wastewater and Ambient Water Quality**				
	Wastewater generation		Communities Flora and fauna	Ensure that septic tanks are regularly maintained and emptied to prevent overflow and contamination risks	
	Water use		Communities Flora and fauna	• Water will be used efficiently while cleaning the panels in order to avoid wasting water. • The solar panel cleaning will be wiper cleaning and water saving practice by using rubber blade water sprayers with very little amount of water.	
10	**Hazardous Materials Management**				
	Hazardous Substances		Communities Operation Workforce Flora and fauna	• Types, quantities, and properties of materials to be stored will be documented. • A designated storage area will be established, equipped and used in order to safely store hazardous and toxic materials. • Appropriate containers, tanks, and bunding systems will be used in order to contain hazardous materials and prevent spills, leaks, or releases. • Proper disposal or recycling of hazardous materials will be implemented through licensed facilities.	• Emergency Response Plan • Waste Management Plan
11	**Waste**				

No	Impact Description		Receptor	Proposed Mitigation Measure	Implementation Plans
	Management				
	Waste generation (General)		Communities Flora and fauna	• A Temporary Waste Storage Area will be established on-site for storing wastes generated by site personnel. Wastes will be segregated and stored according to their types (e.g., domestic, packaging, hazardous). • Domestic waste will be collected in designated trash bins and transported to the municipal landfill in compliance with the Waste Management Regulation. • Recyclable wastes, including packaging wastes, will be collected and temporarily stored in designated areas protected from precipitation. Licensed recycling companies will handle these wastes, following the Packaging Waste Control Regulation. • Waste batteries, accumulators, tires, medical wastes, and personal hygiene material wastes will be collected, stored, and managed separately in compliance with relevant regulations. • All waste will be collected, segregated, labeled, and stored on-site according to Turkish Environmental Regulations.	
	Other wastes		Communities Flora and fauna	• A recycling program will be implemented for damaged panels to recover valuable materials and minimize landfill waste. • Agreements will be set with e-waste recycling facilities to ensure responsible disposal of electronic waste from inverters, batteries, etc. • The storage conditions for hazardous materials, such as lead-containing components in solar panels and electronic waste from inverters, will be managed by designating a clearly marked storage area. • Lead-containing components and electronic waste will be stored in robust, leak-proof containers that are labeled with appropriate hazard symbols and handling instructions. • For vehicles and machinery to be used, their maintenance, including tasks like oil changes and battery replacements, will be conducted outside the Sub-project area by qualified service providers. • Waste batteries and accumulators will be collected, stored, and managed separately in compliance with relevant regulations.	Waste Management Plan
		ESS4 - Community Health and Safety			

No	Impact Description		Receptor	Proposed Mitigation Measure	Implementation Plans
	Glare from solar panels which can be a safety hazard for drivers, pedestrians, and nearby residents, particularly if it impairs visibility or causes discomfort	•	• Communities	Periodic monitoring of glare impact will be conducted based on community feedback, and adjustments will be made if necessary.	SEP
	Impacts on local economy, livelihood sources and employment	•	• Communities	• Existing roads leading to the Sub-project site will be improved such that the Sub-project will not restrict access to grazing land for local livestock grazers. • SEP will be implemented for regularly engaging with communities and running the grievance mechanism.	SEP
	Impacts on vulnerable and disadvantaged individuals and groups	•	• Communities	• Recruitment policy will include non-discriminatory hiring practices, training programs tailored to the needs of vulnerable groups, implementing and providing support services such as transportation or childcare to facilitate participation in the workforce. • Corporate Social Responsibility (CSR) will be designed and implemented to contribute positively to the communities based on their needs such as improvement of roads and utilities.	SEP
12	**Risks related with Gender Based Violence (GBV) Sexual Exploitation Abuse / Sexual Harassment (SEA/SH)**	•	• Communities	• Ethical rules and code of conduct will be provided to all employees to prevent gender-based violence, harassment, abuse, etc. in the workplace. • Employees will be required to sign and adhere to the code of conduct. • Regular awareness raising sessions will be conducted on site in GBV prevention and other social issues Grievance mechanism will be implemented to receive any complaints in this aspect.	• SEP Code of Conduct
		ESS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources			
13	**Disturbance on biodiversity**		Flora and fauna	• No specific biodiversity measures are required as the site is in an industrial zone; however, any vegetation used for landscaping	

No	Impact Description		Receptor	Proposed Mitigation Measure	Implementation Plans
				purposes will be maintained to avoid erosion and improve site aesthetics.. • Fencing will be maintained around the site to ensure safety and prevent unauthorized access. Wildlife-friendly fencing will not be required as the site is located in an industrial zone. • Bird carcass will be counted, if there is increase in numbers precautions will be taken.	
		ESS10 - Stakeholder Engagement and Information Disclosure			
14	**Insufficient stakeholder engagement activities and public consultation.**		Communities	Interaction / communication will be established with communities, and adequate timing will be planned for engagement activities. Additionally, regular consultations will be carried out with the authorities and communities regarding the project management.	• SEP

4.5. Monitoring and Reporting

The sub-borrower will conduct internal monitoring of Subproject's E&S performance and submit Periodic Monitoring Reports to ILBANK in line with the sub-financing agreement requirements. The information to be provided as part of reporting for the respective monitoring period will include the following:

- Up-to-date information on the Subproject and progress with Subproject implementation (e.g. status of construction, Subproject timeline, etc.),
- Status of compliance with legal requirements (e.g. Subproject permitting status, status and outcomes of audits done by national authorities, fines imposed by national authorities if any, etc.)
- Details of how the requirements of the IFI standards (e.g. WB ESSs) are being met on the basis of compliance with Subproject level Environmental and Social Action Plans (ESAPs),
- Incident and accident reports and statistics,
- Current Subproject level E&S organization and capacity (including information on capacity building and training),
- Progress with Subproject level stakeholder engagement activities and management of grievances, and
- Records on E&S non-conformities identified and general status of Corrective Action Plan implementation at Subproject level (in case of non-conformities).

Key performance indicators (KPIs) of this procedure will be monitored, verified, and evaluated within the scope of the Subproject monitoring stage. The KPIs for both construction and operation phases of the Subproject are presented in **Table *15***.

Table 15:Key Performance Indicators for Both Construction and Operation Phases of the Subproject

Monitoring Focus	**KPI**
Documentation	
Following ESMP Project specific plans will be developed and be in place.	Full compliance with Subproject's ESMP
Air Quality	
Air Quality incidents	Minimization and continued improvement in the number of the reported air quality related incidents.
Non-Compliance with air quality standards	Zero grievances per year
Community grievances	Minimization and continued improvement in the number of air quality related community grievances
Violation on speed limit	Minimization and continued improvement in the number of reported violations on speed limit

Monitoring Focus	KPI
Noise	
Noise and Vibration incidents	Minimize and continued improvement in number of reported noise and vibration related incidents
Non-Compliance with Project standards	Zero Non-Compliance Reports (NCRs) per year
Number of noise-related community grievances	Zero grievances per year
Community grievances	Minimization and continued improvement in the number of noise related community grievances
Water / Wastewater	
Spill incident	Minimization and continued improvement in the number of the reported water quality related incidents.
Non-Compliance with Subproject standards	Zero NCRs per year
Wastewater collection system	Zero grievances per year
Groundwater levels of the community/private wells	No significant adverse impact
Water quality analyses	Meeting set national and international water quality standards for surface and groundwater impacted and/or near the Subproject
Flood incidents	No infrastructure damage and damage to loads/humans
Wastewater and Water loss records in network	Sustainable low wastewater and water loss records
Waste	
Waste Generation	Minimization of total waste generated Decrease in the ratio of hazardous waste generated to total waste (by contamination + by generation)
Waste Disposal	Increase in the ratio of recovered/reused/recycled waste to total waste generated
Soil Quality	
Spill incident	Minimization and continued improvement in the number of the reported soil quality related incidents
Non-Compliance with Subproject standards	Zero NCRs per year
Soil quality accidents	Zero accident per year
Number of soil-related community grievances	Zero grievances per year
Traffic	
Number of non-compliances against the mitigation controls identified in Traffic and Transport Management Plan	Decreasing number/ continuous improvement in number of reported non-compliances
Number of drivers found to be exceeding speed limits or driving unsafely	Zero exceedance per year
Number of road traffic accidents involving: Accidental injuries and deaths, Spillages (such as cargo or fuel), Wildlife-vehicle collisions.	Zero accidents per year
Number of traffic-related grievances	Zero grievances per year
Health, Safety and Environment	
% of scheduled HSE Inspection	>90
% of attendance at HSE meetings	>90
% of closing of NCRs	100

Monitoring Focus	KPI
Reporting safe observations	100%
Reporting unsafe observations	100%
Reporting near misses	100%
Reporting number of incidents	100%
Reporting number of accidents	100%
Reporting day-loss	100%
% of Toolbox attending	>90
% of Risk Assessment compliance	>90
% of Legal Requirements compliance	100%
Results of scheduled audits	>85
HSE training carried out to training matrix > 90% of all training to matrix	>90
% of attendance at scheduled trainings	>90
Engagement in HSE program by individual managers and supervisors	>90
Engagement in HSE program by contractor's	>90
Labor and Working Conditions	
Number of worker grievances closed out within the target timeframe	100% compliance with labor laws and regulations Zero unresolved health and safety incidents within the target timeframe 100% availability of required PPE 90% or higher worker satisfaction rate
Community Health and Safety	
Number of communicable and non-communicable diseases and injuries.	Negative Trend/No significant increase in communicable and non-communicable disease and injury rates per 1,000 residents per annum.
Number of community health safety & security grievances from local communities as recorded in the grievance management system.	Decreasing number/ continuous improvement in number of grievances
Number of reported community health & safety incidents	Zero incidents per year
Number of reported air quality or noise incidents	Zero incidents per year
Direct and indirect threats posed by construction activities against traffic and pedestrians	Zero number of drivers found to be exceeding speed limits or driving unsafely Zero accidental injuries and deaths, Zero traffic-related grievances
Access to the Construction Site - Security Fence/ Protection Tape	Zero Number of unauthorized accesses to the Subproject area
Trainings	
Training records	Trainings on ESMP and SEP documents. Providing all trainings (including GM, GBV, SEA/SH) to all employees. 100% of scheduled training sessions conducted 80% or higher participant satisfaction rate Zero participants without completion certificates if applicable
Disclosure	

Monitoring Focus	KPI
Grievance Records, Disclosure meeting participant records, ESMP, SEP, GM will be disclosed at Project web site in two languages (English and Turkish).	All grievances closed-out within the target timeframe ESMP, Project specific SEP and GM will be prepared and disclosed at the Project web site
Vulnerable groups:	
Incidents, Grievances, Toolbox talks and trainings, Information/ disclosure	All grievances closed-out within the target timeframe Sufficient information provided to the VGs
Grievance mechanism	
Grievance Records, GM disclosure	All grievances closed-out within the target timeframe GM disclosure to the PAPs, stakeholders GM disclosure at Subproject web site
Cultural Heritage	
Existence of a Chance Find	Zero Grievance Records

Table 16:Construction Environmental and Social Monitoring Table

Subject	**Parameter to be Monitored**	**Monitoring Location**	**Monitoring Method**	**Monitoring Frequency**	**Reference / Threshold Level (if applicable)**	**Responsibility for Monitoring**	**Key Performance Indicators (KPIs)**	**Cost (If not included in the Subproject Budget)**
Labor Force	• Employment records • Induction Training Plan • Accommodation conditions	Project office at the site Camp site Accommodation area and rooms	• Document review • Visual observations • Interviews with workers	Monthly	100% compliance with labor laws and regulations 100% completion rate for induction and health and safety training 100% compliance with international accommodation standards (e.g., IFC/EBRD)	Karaman Municipality Supervision Consultant Contractor	100% compliance with labor laws and regulations 100% completion rate for induction and health and safety training 90% or higher worker satisfaction rate 100% compliance with international accommodation standards 100% availability of required PPE	Included in the sub-project budget
	• Workers GM	Project office Camp site Accommodation	• Grievance records • Interviews with workers	Daily	Zero unresolved health and safety incidents within the target timeframe	Karaman Municipality Supervision Consultant Contractor	Zero unresolved health and safety incidents within the target timeframe 90% or higher satisfaction rate with grievance resolution process	Included in the sub-project budget

Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Key Performance Indicators (KPIs)	Cost (If not included in the Subproject Budget)
Working Conditions • General OHS Risks • Lifting risks • Electricity Shock Risks • Fire risks • Manual handling risks	• PPE usage • OHS Trainings	Project office at the site Camp site	• Document review for safety procedures • Visual observations to check measures are in place • Accident records Grievance records	Daily		Karaman Municipality Supervision Consultant Contractor	% of scheduled HSE Inspection % of attendance at HSE meetings % of closing of Non Compliance Reports (NCRs) Reporting safe and unsafe observations % of Toolbox attending % of Risk Assessment compliance % of Compliance with Legal Requirements Results of scheduled audits HSE training carried out to training matrix	Included in the sub-project budget
Waste management • Waste Storage Area • Waste management practices	• Adequate storage conditions • Leakages	Waste storage area	Visual observations Waste records	Daily visual observations	Zero leakage incidents allowed	Karaman Municipality	No overfill of bins Amount of waste stored	Included in the subproject budget

Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Key Performance Indicators (KPIs)	Cost (If not included in the Subproject Budget)
				Monthly records control		Supervision Consultant Contractor	Amount of waste collected	
Soil protection from spills and leakages of oil and chemicals	• Oil stains on soil • Chemical spills on soil • Conditions of storage area for hazardous/toxic and wastes substances and wastes • Stormwater management system	Material storage locations and waste storage area within Sub-project site Car park area	Visual observations	Daily	Zero visible oil/chemical stains on soil	Karaman Municipality Supervision Consultant Contractor	Number of accidents and incidents of spills and leakages reported	Included in the subproject budget
Dust from construction activities and vehicle traffic	• Grievances of disturbance from dust and emissions	Sub-project Site	• Measurement in case of grievance • Visual observations for mitigation measures	• In case of grievance • Daily	%100 Compliance with National Air Quality Standards	Karaman Municipality Supervision Consultant Contractor	Number of grievances received Number of grievances resolved	Included in the subproject budget
Wastewater pollution	• Wastewater	Septic tanks	• By recording wastewater	Daily		Karaman	No leakages	Included in the

Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Key Performance Indicators (KPIs)	Cost (If not included in the Subproject Budget)
			receipts (sewage vacuum truck transportation receipt).			Municipality Supervision Consultant Contractor	No overfilling (Septic tank occupancy rate not exceeding 90%) Regular maintenance (Keeping monthly maintenance records of all equipment and tanks (100% completion)) No odor	subproject budget
Noise from site machinery	• Grievances of disturbance from noise generation from site machinery	Sub-project Site	• Grievance records	Daily		Karaman Municipality Supervision Consultant Contractor	Number of grievances received Number of grievances resolved	Included in the subproject budget
Hazardous materials	• Labelling • Storage conditions	• Hazardous material storage area • Hazardous waste storage area	• Visual observations for mitigation measures	Daily		Karaman Municipality Supervision Consultant Contractor	?Number of spills and leakages reported	Included in the subproject budget

Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Key Performance Indicators (KPIs)	Cost (If not included in the Subproject Budget)
Community roads Traffic risks	• Approvals from government authorities • Traffic management plan • Damage on roads • Emergency Response Plan •	• Project office at the site • Along the transportation routes • Grievance records	• Grievance records review • Visual observations • Interviews with mukhtar of Area of influence	Daily		Karaman Municipality Supervision Consultant Contractor	Number of incidents/accidents Number of grievances received Number of grievances resolved Zero damage on roads	Included in the subproject budget
Risks related with Gender Based Violence (GBV) Sexual Exploitation Abuse / Sexual Harassment (SEA/SH)	• Accommodation conditions • Ethical rules and public communication training • Workers code of conduct. • Grievance mechanism	• Area of Influence Neighborhoods • Camp site	• Grievance records review • Code of Conduct • Training Plan to include GBV and SEA/SH • Visual observations • Interviews with Muhtars of Area of influence	Daily	%100 of workers trained on GBV/SEA/SH prevention measures Code of conduct signed by %100 of workers	Karaman Municipality Supervision Consultant Contractor	Number of incidences reported Number of incidences resolved Number of grievances	Included in the subproject budget

Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Key Performance Indicators (KPIs)	Cost (If not included in the Subproject Budget)
Vulnerable and disadvantaged individuals and groups	• Recruitment policy • CSR	• Camp site • Nearby settlements	• Employment records • Visual observations • Interviews with Muhtars of Area of influence	Monthly		Karaman Municipality Supervision Consultant Contractor	Number of grievances received Number of grievances resolved	Included in the subproject budget
Biodiversity disturbance	• Animal carcasses in the nearby surroundings • Vegetation cover • Follow-up surveys during to detect any burrows, nests and other signs of mammal activity	• Sub-project Site and environs	• Visual observations by conducting systematic visual inspections of the site to identify signs of burrows and nests such as burrow entrances, tracks, droppings, and other signs of mammalian activity.	Bi-monthly	Minimum 90% vegetation cover retention within designated areas	Karaman Municipality Supervision Consultant Contractor	Number and variety of mammal species observed around the project site Number of burrows/nests detected and identified Number of reported incidents where construction activities disturbed mammal habitats	Included in the subproject budget

Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Key Performance Indicators (KPIs)	Cost (If not included in the Subproject Budget)
Cultural Heritage	• Chance Finds procedure	• Project site office	• Document review	On Occurrence		Karaman Municipality Supervision Consultant Contractor	Number of chance finds and records	Included in the subproject budget

Table 17:Operation Environmental and Social Monitoring Table

Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Key Performance Indicators (KPIs)	Cost (If not included in the Subproject Budget)
Labor Force	• Employment records • Induction Training Plan • Employee GM •	Sub-project office at the site	• Document review • Visual observations • Grievance records • Interviews with employees	Monthly	100% compliance with labor laws and regulations 100% completion rate for induction and health and safety training 100% compliance with international accommodation	Karaman Municipality	Number of grievances received Number of grievances resolved No incompliance reported	Included in the subproject budget

Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Key Performance Indicators (KPIs)	Cost (If not included in the Subproject Budget)
					standards (e.g., IFC/EBRD)			
Working Conditions • General OHS Risks • Lifting risks • Electricity Shock Risks • Fire risks • Manual handling risks	• PPE usage • OHS Trainings	Sub-project office at the site	• Document review for safety procedures • Visual observations to check measures are in place • Accident records Grievance records	.Monthly	Zero unresolved health and safety incidents within the target timeframe	Karaman Municipality	% of scheduled HSE Inspection % of attendance at HSE meetings % of closing of Non Compliance Reports (NCRs) Reporting safe and unsafe observations Reporting near misses % of Toolbox attending % of Risk Assessment compliance % of Compliance with Legal Requirements	Included in the subproject budget

Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Key Performance Indicators (KPIs)	Cost (If not included in the Subproject Budget)
							Results of scheduled audits HSE training carried out to training matrix	
Waste management Waste Storage Area Waste management practices	• Adequate storage conditions • Leakages	Waste storage area	Visual observations Waste records	Monthly records control As Needed	Zero leakage incidents allowed No overflow of bins; bins should be leak-proof	Karaman Municipality	No overfill of bins Amount of waste stored Amount of waste collected	Included in the subproject budget
Soil protection from spills and leakages of oil and chemicals	• Oil stains on soil • Chemical spills on soil • Conditions of storage area for hazardous/toxic and wastes substances and wastes • Stormwater management system	Material storage locations and waste storage area within Sub-project site Car park area	Visual observations	As Needed	Zero visible oil/chemical stains on soil	Karaman Municipality	Number of accidents and incidents of spills and leakages reported	Included in the subproject budget
Dust from vehicle traffic	• Grievances of disturbance from dust and emissions	Sub-project Site	• Grievance records • Visual observations	As Needed	Dust levels must comply with national air quality standards	Karaman Municipality	Number of grievances received	Included in the subproject budget

Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Key Performance Indicators (KPIs)	Cost (If not included in the Subproject Budget)
			for mitigation measures				Number of grievances resolved	
Wastewater pollution	• Wastewater	Septic tanks	• By recording wastewater receipts (sewage vacuum truck transportation receipt).	As Needed		Karaman Municipality	No leakages No overfilling Regular maintenance No odor	Included in the subproject budget
Noise from site machinery	• Grievances of disturbance from noise generation from site machinery	Sub-project Site	• Grievance records • Visual observations for mitigation measures	As Needed		Karaman Municipality	Number of grievances received Number of grievances resolved	Included in the subproject budget
Hazardous materials	• Labelling • Storage conditions	• Hazardous material storage area • Hazardous waste storage area	• Visual observations for mitigation measures	As Needed		Karaman Municipality	Number of spills and leakages reported	Included in the subproject budget

Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Key Performance Indicators (KPIs)	Cost (If not included in the Subproject Budget)
Community roads Traffic risks	• Approvals from government authorities • Traffic management plan • Emergency Response Plan •	• Project office at the site • Along the transportation routes • Public's Grievance records	• Grievance records review • Visual observations • Interviews with muhtars of Area of influence	As Needed		Karaman Municipality	Number of grievances received Number of grievances resolved	Included in the subproject budget
Risks related with Gender Based Violence (GBV) Sexual Exploitation Abuse / Sexual Harassment (SEA/SH)	• Ethical rules and public communication training • Workers code of conduct. • Awareness on GBV • Grievance mechanism	• Neighborhoods in the social impact zone and environs • Camp site	• Grievance records review • Code of Conduct • Training Plan to include GBV and SEA/SH • Visual observations • Interviews with Muhtars of Area of influence •	As Needed	100% of workers trained on GBV / SEA/SH prevention measures Code of conduct signed by 100% of workers	Karaman Municipality	Number of grievances received Number of grievances resolved	Included in the subproject budget

Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Key Performance Indicators (KPIs)	Cost (If not included in the Subproject Budget)
Vulnerable and disadvantaged individuals and groups	• Recruitment policy • CSR	• Nearby settlements	• Employment records • Visual observations • Interviews with Muhtars of Area of influence	As Needed		Karaman Municipality	Number of grievances received Number of grievances resolved	Included in the subproject budget
Biodiversity disturbance	• Animal carcasses in the nearby surroundings • Vegetation cover • follow-up surveys during to detect any burrows, nests and other signs of mammal activity	• Sub-project Site and environs	Visual Observations by conducting systematic visual inspections of the site to identify signs of burrows and nests such as burrow entrances, tracks, droppings, and other signs of mammalian activity.	Semi-annually	Minimum 90% vegetation cover retention within designated areas	Karaman Municipality	Number and variety of mammal species observed around the project site Number of burrows/nests detected and identified Number of reported incidents where operation activities disturbed	Included in the subproject budget

Subject	Parameter to be Monitored	Monitoring Location	Monitoring Method	Monitoring Frequency	Reference / Threshold Level (if applicable)	Responsibility for Monitoring	Key Performance Indicators (KPIs)	Cost (If not included in the Subproject Budget)
							mammal habitats	

4.6. List of Associated Plans and Procedures

The E&S management plans and procedures to be prepared by Contractor/s are listed in **Table *18***.

Table 18:Plans and Procedures associated

Management Plan or Procedure	Relevant Subproject Phase (Construction only, Operation only, both Construction and Defect Liability Period (DLP))
Waste Management Plan	Construction and Operation
Emergency Response Plan	Construction and Operation
Labor Management Procedure	Construction and Operation
Construction Plan and Schedule	Construction only
Energy Efficiency	Construction and Operation
Safe Driving	Construction only
Occupational Health and Safety	Construction and Operation
OHS Management Plan	Construction and Operation
Chance Find Procedure	Construction only
Induction regarding Code of Conduct, GBV & SEA/SH, Grievance Mechanism, EHS and WB Requirements, and	Construction and Operation
Stakeholder Engagement Plan	Construction and Operation
Traffic Management Plan	Construction only

The plans/procedures will be reviewed and revised in any major change and/or at least every 6 months.

4.7. Management of Change

Sub-borrower shall notify ILBANK of material changes in Subproject (including those that stem from sub-borrower and/or contractor activities) using ILBANK's Change Notification Form template (Annex İ). Such changes may include, inter alia, the following:

- Administrative/ organizational structure changes at the decision-making level
- Changes in assigned environmental, social and/or OHS staff
- Legislative changes impacting Subproject implementation (e.g. new permitting processes).

- Design changes (e.g. any changes in the Subproject description, footprint such as new temporary or permanent sites/facilities – on-site or off-site, changes in number of workforce involved, changes in on-site/off-site worker accommodation arrangements).
- Schedule changes.
- Changes related to E&S issues (e.g. new biodiversity features or cultural heritage assets identified, additional resettlement need, etc.)

Contractor or construction supervision consultants changes at any phase of the Subproject requiring (i) E&S commitments and E&S roles and responsibilities to be clarified with the new contractor or supervision consulting firm, and (ii) contractor E&S training to be reorganized and redelivered to new contractor or supervision consulting firm's staff.

5. CAPACITY DEVELOPMENT AND TRAINING

5.1. Organizational Capacity

The organization structure of the PIU to be established by the Sub-borrower is presented in Figure 10. The PIU will have qualified staff and resources to the satisfaction of ILBANK.

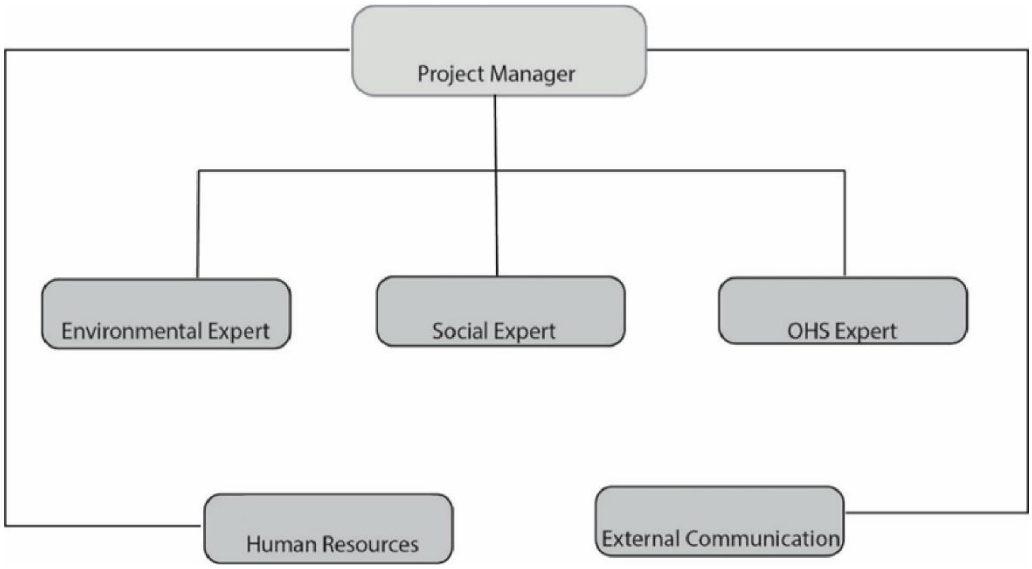


Figure 10:Organization Structure – Project Implementation Unit (PIU)

The Sub-borrower will maintain the PIU by ensuring that there is qualified staff assigned and serving on the duty throughout the sub-financing agreement life cycle.

At minimum, the E&S team at the Sub-borrower PIU will include the following personnel who shall support management and monitoring of Subproject E&S risks and impacts and ensure full compliance with the ESMP and other relevant E&S instruments:

- **Environmental Specialist(s):** to address environmental risks and impacts identified under the Environmental and Social Assessment (ESA) reports, such as Environmental and Social Impact Assessment (ESIA), Environmental and Social Management Plan (ESMP), etc.
- **Social Expert/ Grievance Mechanism (GM) Focal Point:** to address social risks and impacts under the ESA reports, land acquisition, and labor issues, including stakeholder engagement and grievance redress; and
- **Occupational Health and Safety (OHS) Specialist(s)** to address OHS risks and impacts under the ESA reports.

If the necessary staff is not available within its own organizational structure, the Sub-borrower shall receive support/ consultancy services from outside.

Contractors

The Sub-borrower will require awarded contractors to establish and maintain throughout the contract duration an organizational structure with qualified staff and resources.

This will be achieved through assigning the following personnel under the contractor's organization:

- Environmental Specialist(s)
- Social Specialist(s) who will also act as the GM Focal Point
- Occupational Health and Safety (OHS) Specialist(s)

If the necessary staff is not available within its own organizational structure, contractors shall receive third-party support/ consultancy services.

5.2. Roles and Responsibilities

The roles and E&S related responsibilities of the Sub-borrower and other key parties are described in **Table *19***.

Table 19:Roles and E&S related Responsibilities of Key Parties associated with ESMP Implementation

Party	Role	Key Responsibilities
Sub-borrower		
Karaman Municipality	Sub-borrower Management	• Hold ultimate responsibility for the E&S performance of the Subproject to the satisfaction of the ILBANK, including the performance of Subproject contractors throughout the sub-financing agreement life cycle. • Establish Project Implementation Unit (PIU) following the execution of sub-financing agreements to carry out operational and administrative tasks to oversee the implementation of the E&S instruments and monitoring progress; allocate resources for the recruitment of in-house environmental, social and OHS staff under the PIU • Ensure that ESMP, SEP and other E&S management plans and procedures required by ILBANK is prepared within the timeframes agreed with ILBANK and allocate adequate financial and human resources – either from the Sub-borrower's own resources or from the Subproject loan and implement. • Cooperate with the ILBANK representatives to discuss and agree on the ESAP and other E&S covenants for incorporation into sub-financing agreements to be executed between the ILBANK and the sub-borrower (with support from RD E&S team as necessary) • Ensure that EHSS requirements of ILBANK are incorporated into relevant contractor tender and agreement documents to be prepared in collaboration with the construction supervision consultant • Hold and use the authority and responsibility to stop any Subproject related work activity if it poses an imminent danger to health, safety, or the environment. • Allocate resource to ensure monitoring of Subproject E&S performance and reporting to ILBANK at IFI standards in line with the sub-financing agreement conditions • Facilitate monitoring visits and audits by ILBANK and their consultants • Notify the ILBANK RD – E&S Teams of any significant E&S incident or accident within maximum 24 hours of the accident/incident; contractually require the supervision consultants and/or contractors to promptly report such incident and accidents (timeframe to be defined by ILBANK) (Annex F) • Prepare and submit a detailed E&S Incident Investigation Form, supplemented by an RCA to be conducted pursuant to GIIPs, to ILBANK within **30 days** of the accident/incident date for significant accidents or incidents (in line with the template presented in the E&S Supervision, Monitoring and Reporting Procedure). The investigation will be supplemented by a Root Cause Analysis (RCA) (Annex G).
	E&S Team - Environmental staff - Social staff - OHS staff	• Participate in the training to be organized by ILBANK as part of ILBANK ESMS Training Procedure implementation • Ensure that satisfactory ESMP, SEP and as required other E&S assessment documentation required by ILBANK is prepared by qualified independent specialists and submitted to ILBANK for appraisal and credit decision-making for High and Substantial risk Subproject, as well as for Moderate risk Subproject where the sub-borrower has limited E&S capabilities, coordinate commissioning independent third-party specialists (such as external E&S consultancy companies, individual consultants) to carry out the E&S assessment and prepare the E&S documentation required for ILBANK's appraisal and credit decision-making processes • Provide ILBANK with relevant adequate information to undertake the E&S due diligence in accordance with the ESMS (e.g. duly completed sub-borrower questionnaire and supporting documentation to be requested by ILBANK in accordance with the E&S Screening and Risk Classification and ESDD procedures)

Party	Role	Key Responsibilities
		• Support the sub-borrower management as required in the review and evaluation of ESAP and other E&S covenants for incorporation into sub-financing agreements to be executed between the ILBANK and the sub-borrower • Ensure compliance of Subproject operations (including contractor activities on site) with national legislation and E&S requirements of the lending IFIs as included in the sub-financing agreements, ESAP and Subproject-specific E&S documentation (such as ESMP, SEP and other E&S management plans and procedures required by ILBANK) • Undertake monitoring of Subproject E&S performance and reporting to ILBANK at IFI standards in line with the sub-financing agreement conditions • Ensure implementation of corrective actions in case of E&S non-compliances in coordination and agreement with ILBANK DG and RD E&S teams over reasonable timeframes • Coordinate the construction supervision consultants, contractors and/or external E&S consultants for collection of the monitoring data and compilation of or providing input to periodic monitoring reports as necessary and appropriate • Allow ILBANK representatives (including individual consultants) to access Subproject facilities and records.
Construction Supervision Consultants	Management and E&S staff	Carry out the following tasks on behalf of the sub-borrowers: • Participate in the training sessions to be organized by sub-borrowers in line with the requirements of ILBANK ESMS Training Procedure • Supervise the construction works of contractors on-site, including implementation of Subproject-specific E&S requirements (requirements stemming from ESMP, SEP and other E&S management plans and procedures required by ILBANK as applicable) by contractors on a daily basis • Ensure sufficient E&S capacity for implementation of E&S requirements as set out in the sub-financing agreements between the sub-borrower and ILBANK • Support the sub-borrowers for the supervision and review of E&S management documentation prepared by construction contractors and submit them to sub-borrowers upon finalization • Review monthly self-monitoring reports prepared by the construction contractors for early identification of E&S issues and/or non-compliances and submit them to municipalities/municipal utilities upon finalization • Identify E&S non-compliances on site and enforce construction contractors to undertake corrective actions within defined and agreed timeframes • Support the sub-borrowers (as requested) in the preparation of periodic E&S monitoring reports to be submitted to ILBANK in line with the ILBANK E&S Supervision, Monitoring and Reporting Procedure • Notify the sub-borrower of any significant E&S incident or accident that have taken place in Subproject related operations within 24 hours
Construction Contractor	Management and E&S staff	• Ensure sufficient E&S capacity for implementation of E&S requirements as set out in the construction contracts • Participate in the training sessions to be organized by sub-borrowers in line with the requirements of ILBANK ESMS Training Procedure • Prepare Subproject-specific E&S management plans and procedures prior to start of construction works as required by the construction contracts • Comply with the requirements of national legislation and implement the E&S requirements as set out in the sub-financing agreements (executed between ILBANK and the sub-borrowers) and construction contracts • Submit periodic (in frequencies to be set by ESAP) E&S self-monitoring reports to the municipalities/municipal utilities through construction supervision consultants – in line with the format provided by ILBANK. • Fill in monthly occupational health and safety (OHS) forms – reviewed by construction supervision consultants. • Implement corrective actions in case of E&S non-compliances under the supervision of sub-borrower's construction supervision consultant • Promptly notify the sub-borrower of any significant E&S incident or accident that have taken place in Subproject related operations (timeframe to be defined by ILBANK no later than 24 hours)

5.3. Capacity Building and Training

Sub-borrower staff (trained by ILBANK) will deliver E&S training to contractors. Training contents are summarized in **Table *20***. Sub-borrower will identify specific training to be conducted in line with these modules and submit this to ILBANK prior to commencement of works.

Sub-borrower will ensure that E&S training programs are expanded to subcontractors by contractors in case their involvement in Subproject implementation.

Table 20:Training Components for Training of Contractor Staff

Module	Training Name	Training Duration	Key Training Content
Module 1	ILBANK E&S Requirements	1 hour	- Overview of ILBANK E&S requirements: o ILBANK E&S Policy (including but not limited to the guiding principles on human rights, labor rights and working conditions, community health, safety and well-being, cultural heritage, gender equality, etc.) o External Communications (including stakeholder engagement, grievance management, etc.) o Monitoring, Review and Reporting o Labor Management, Contractor Management - ILBANK Code of Conduct
Module 2	Sub-project level E&S Requirements for contractors as per sub-financing agreement conditions	3 hours	- Subproject specific requirements: o E&S covenants included in sub-loan agreements o Subproject ESAP requirements o Subproject-level E&S assessment and management documentation (such as ESMP, SEP and other E&S management plans and procedures as applicable); o Emergency Preparedness and Response Plan including a training program for emergency responders including drills at regular intervals; o Specific training (such as driver training in case of involvement of vehicles or fleets of vehicles in Subproject-operations, training of security forces in the use of force (and where applicable, firearms), and appropriate conduct toward workers and affected communities, etc.). - Preparation and implementation of Labor Management Plans.

6. IMPLEMENTATION SCHEDULE AND COST ESTIMATES

6.1. Implementation Schedule

Duration of the construction and operation phase activities are listed in Table *21*.

Table 21:Duration of Activities

Phase	Remarks/ Notes
Construction Duration (from site mobilization until provisional acceptance)	7 months
Defect Liability Period	12 months / 1years
Operation Duration	30 years

6.2. Cost Estimates

Detailed information on the amount of ESMP implementation costs to be estimated is given in the table below.

Table 22: ESMP Implementation Cost

Component	Estimated Cost (€)
OHS Observation Training	40,000
Stakeholder Engagement Activities	40,000
Materials and Resources	20,000
Monitoring and Reporting	10,000
Contingency Fund	10,000
Total	**120,000**

List of Annexes

Annex A – List of the Individuals/Organizations that Prepared or Contributed to the ESMP

Name of the Individual/ Organization	Company/ Institution	Profession/ Expertise
Abdulhamit Turgut Bağdat	Ardea Project & Consultant	Energy Expert
Didar Güngör	Ardea Project & Consultant	Social Expert
Burak Tuncer	Ardea Project & Consultant	Urban Planner
Burcu Kalkan	Ardea Project & Consultant	Environmental Engineer
Arslan Mehmet	Ardea Project & Consultant	Financial Expert

Annex B – Existing Permitting Documentation

B.1 EIA Decision of the Sub-project

T.C.
ÇEVRE ve ŞEHİRCİLİK BAKANLIĞI
Çevresel Etki Değerlendirmesi, İzin ve Denetim Genel Müdürlüğü

T.C.
KARAMAN VALİLİĞİ
ÇEVRE ve ŞEHİRCİLİK İL MÜDÜRLÜĞÜ

Karar Tarihi : 07-01-2020
Karar No : 69306553 220-02 E-20203

ÇEVRESEL ETKİ DEĞERLENDİRME BELGESİ

25.11.2014 tarih ve 29186 sayılı Resmi Gazete'de yayımlanarak yürürlüğe giren Çevresel Etki Değerlendirmesi Yönetmeliği'nin Ek-II listesinde yer alan **'4MWe GÜNEŞ ENERJİ SANTRALİ KAPASİTE ARTIRIMI'** projesi ile ilgili olarak inceleme-değerlendirme yapılmış ve Proje Tanıtım Dosyasında çevresel etkilere karşı alınması öngörülen önlemler yeterli görülmüştür. Ayrıca ÇED Raporu hazırlanmasına gerek bulunmadığı tespit edilmiş olup, söz konusu projeye ÇED Yönetmeliğinin 17. Maddesi gereğince Valiliğimizce **"Çevresel Etki Değerlendirmesi Gerekli Değildir"** kararı verilmiştir.

Hacı İbrahim TÜRKOĞLU
Vali a.
Vali Yardımcısı

Proje Sahibi : KARAMAN BELEDİYE BAŞKANLIĞI
Proje Yeri : Karaman İli, Merkez İlçesi, Pirireis MAh. - N30c1 pafta - 4883 Ada - 1 Parsel (94079,03m2)
Kapasite : 4.999 kWe

B.2 Official Decision of Karaman Governorship Provincial Directorate of Agriculture and Forestry

T.C.
KARAMAN VALİLİĞİ
İl Tarım ve Orman Müdürlüğü

Sayı : 70261189-230.99-E.2850362 19.09.2019
Konu : Arazi Sınıfı (Pirireis 4883/1 Parsel)

KARAMAN BELEDİYE BAŞKANLIĞINA
(Plan Ve Proje Müdürlüğü)

İlgi : 17.09.2019 tarihli ve 62614786-E.118855-36-5396 sayılı yazınız.

İlgi dilekçenizde, Pirireis Mahallesi Tatlıkuyu Sırtları Mevkii sınırları içerisinde bulunan ve arsa vasfı ile Karaman Belediyesi adına kayıtlı tapunun 4883 ada 1 nolu parselde güneş enerjisinden elektrik üretmek amacıyla lisanssız güneş enerjisi santrali (GES) kurulmasının planlandığı belirtilmekte ve ilgili elektrik dağıtım şirketine verilmek üzere Kurum görüşümüzün bildirilmesi istenmektedir

GES yatırımı yapılmak istenen ve mülkiyeti Karaman Belediyesine kayıtlı Pirireis mahallesi sınırları içerisinde bulunan arsa niteliğindeki 4883 ada 1 nolu parsel (94079 m^2) taşınmaz, 5403 sayılı Toprak Koruma ve Arazi Kullanımı Kanunu ile bu Kanuna bağlı olarak 9.12.2017 tarihli ve 30265 sayılı Resmi Gazete' de yayımlanan Tarım Arazilerinin Korunması Kullanılması ve Planlanmasına Dair Yönetmelik hükümlerinin uygulanması kapsamına girmemektedir

Karaman Belediyesine kayıtlı Pirireis mahallesi sınırları içerisinde bulunan, tapunun 4883 ada 1 nolu parsel taşınmazın vasfının ***arsa*** olması nedeniyle arazi sınıf tespiti yapılmamıştır.

Bilgilerinizi arz ederim.

Abdullah KAYA
İl Müdürü V.

Not: 5070 sayılı Elektronik İmza Kanunu gereği bu belge elektronik imza ile imzalanmıştır.

Cumhuriyet Mahallesi 703 Sokak No:11 70100 KARAMAN
Tel: 0 (338) 213 16 53 Faks: 0 (338) 213 49 80
E-Posta: karaman@tarim.gov.tr Kep: karaman@gthb.hs01.kep.tr

Bilgi için:Ayhan İNAN
Tekniker
Telefon No:(338) 213 16 53-307

B.3 Official Decision of Karaman Governorship Provincial Directorate of Culture and Tourism

T.C.
KARAMAN VALİLİĞİ
İl Kültür ve Turizm Müdürlüğü
Karaman Müze Müdürlüğü

Sayı : 69050383-150-E.1022448 10.12.2019
Konu : 4MWe Güneş Enerji Santrali Kapasite Artırımı Projesi

KARAMAN İL KÜLTÜR VE TURİZM MÜDÜRLÜĞÜNE

İlgi : 27.11.2019 tarihli ve 15354129-150-E.979390 sayılı yazınız.

İlgi yazıda; İlimiz, Merkez İlçesi, Pirireis Mahallesi civarında bulunan 4883 ada 1 nolu parsele tekabül eden 94079,03 m²lik bir alan içerisinde Karaman Belediye Başkanlığı tarafından işletilen Güneş Enerjisi Santraline (999 kW - 20.000 m²lik alan) kapasite artırımı yapılarak (kurulu gücü 4000 kWe (4MWe)) toplam kurulu gücü 4999 kWe olacak olan Güneş Enerji Santrali Projesi için kurum görüşü talep edildiği, konu ile ilgili Karaman Valiliği Çevre ve Şehircilik İl Müdürlüğü'nün bila tarih ve E.12299 sayılı yazısının ekte gönderildiği belirtilerek Proje Tanıtım Dosyasının e-ÇED (http://eced.csb.gov.tr/) sistemi üzerinden incelenerek söz konusu alanın 2863 sayılı Kanun kapsamında kalıp kalmadığının bildirilmesi istenmektedir.

Müdürlüğümüz arşivinde yapılan incelemede; İlimiz, Merkez İlçe, Pirireis Mahallesi civarında bulunan 4883 ada 1 nolu parsele tekabül eden söz konusu alanın herhangi bir tescilinin olmadığı anlaşılmıştır. Bahse konu taşınmaza yönelik Müdürlüğümüz uzmanlarınca hazırlanan 10.12.2019 tarihli raporda; 2863 sayılı Kanun kapsamına giren herhangi bir korunması gerekli taşınır/taşınmaz kültür varlığı veya parçasına rastlanılmadığı belirtilmiş olup bahse konu alanda Güneş Enerjisi Santrali Projesi yapılmasında mevzuatımız açısından bir sakınca bulunmamaktadır. Ancak taşınmaz üzerinde yapılacak olan çalışmalar sırasında (hafriyat vb.) ortaya çıkabilecek herhangi bir taşınır yada taşınmaz kültür varlığının çıkması durumunda yada bulunması halinde 2863 sayılı Kanun'un 4. maddesi gereği çalışmaların durdurularak Müdürlüğümüze veya köyde muhtara diğer yerlerde ise mülki idare amirine haber verilmesi gerekmektedir.

Yazımızın Karaman Çevre ve Şehircilik İl Müdürlüğü'ne iletilmesi hususunda;
Bilgilerinizi ve gereğini arz ederim.

e-imzalıdır
Ercan ER
Müze Müdürü

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

Adres: İmaret Mah. Turgut Özal Cad. No:3 Merkez / KARAMAN
Tel: (0338) 213 15 36 Faks: (0338) 212 98 61
E-posta: karamanmuzesi@kultur.gov.tr

Bilgi için:Funda KOCAKAPLAN
Müze Araştırmacısı

B.4 Karaman Organized Industrial Zone Directorate Institututional Opinion

KARAMAN ORGANİZE SANAYİ BÖLGESİ
Organize Sanayi Bölgesi Müdürlüğü

Sayı : O.S.B.M.70-19/1109
Konu: Kurum Görüşü

13 -12- 2019

T.C.
KARAMAN VALİLİĞİ
Çevre ve Şehircilik İl Müdürlüğü

İLGİ: 26.11.2019 tarih ve E.12299 sayılı yazınız.

İlgi yazımızda; Karaman İli Merkez İlçe Pirireis Mahallesi 4883 ada 1 nolu parselde Karaman Belediye Başkanlığınca işletilen Güneş Enerji Santraline (999kW – 20.000m^2 lik alan) kapasite artırımı yapılarak (kurulu gücü 4000 kWe (4MWe)) toplam kurulu gücü 4999 kWe olacak olan "Güneş Enerji Santrali Projesine" ÇED Yönetmeliği kapsamında kurumunuza başvuru yapıldığı belirtilerek, ÇED süreci başlamış olan proje hakkında kurum görüşümüz talep edilmektedir.

Karaman Organize Sanayi Bölgesinin doğu cephesinde yer alan tapunun Pirireis Mahallesi 4883 ada 1 nolu parselde Karaman Belediye Başkanlığınca işletilen Güneş Enerji Santraline kapasite artırımı ile toplam kurulu gücü 4999 kWe olacak olan Güneş Enerji Santrali Projesinin yapılmasında kurumumuz açısından bir sakınca yoktur.

Gereğini rica ederiz.

YUNUS KÜÇÜKCİCİBIYIK
Yönetim Kurulu Başkan V.

ALİ KEMAL BOYNUKALIN
Yönetim Kurulu Başkanı

Adres: Organize Sanayi Bölgesi 5.Cad. No:32 KARAMAN
Tel: 0 338 224 14 97 – 223 Fax: 0 338 224 14 98

İrtibat: Mehmet Ali ÖZEN – Hrt Kad.Teknikeri
e-posta: maozen@karamanosb.org.tr
Elektronik Ağ: www.karamanosb.org.tr

B.5 Ministry of Energy and Natural Resources General Directorate of Energy Affairs Institutional Opinion

T.C.
ENERJİ VE TABİİ KAYNAKLAR BAKANLIĞI
Enerji İşleri Genel Müdürlüğü

Sayı : 35231609-611.02-E. 23117 02/12/2019
Konu : Kurum Görüşü

KARAMAN VALİLİĞİNE
(Çevre ve Şehircilik İl Müdürlüğü)
Başakşehir Mah. 2020 Sk. No.3 Karaman

İlgi : 25/11/2019 tarihli ve 12299 sayılı yazınız.

İlgi yazınız ile Karaman Belediye Başkanlığı tarafından Karaman ili, Merkez ilçesi, Pirireis mahallesi 4883 ada 1 nolu parselde yapılması planlanan 4 MWe kurulu gücünde lisanssız güneş enerji santrali projesi ile ilgili olarak Çevresel Etki Değerlendirmesi (ÇED) sürecinin başladığı belirtilerek bahsi geçen projenin ÇED Başvuru Dosyası hakkında Genel Müdürlüğümüz görüşü talep edilmektedir.

Bilindiği üzere 12.05.2019 tarih ve 30772 sayılı Resmi Gazetede yayımlanan "Elektrik Piyasasında Lisanssız Elektrik Üretim Yönetmeliği" kapsamında İlgili Şebeke İşletmecisi tarafından bağlantı başvurusu uygun bulunan rüzgâr/güneş enerjisine dayalı başvurulara ilişkin Genel Müdürlüğümüz tarafından anılan alanda başvuru günü itibariyle rüzgâr 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 ÇED Proje Tanıtım Dosyasında belirtilen parsel içerisinde yapılması planlanan Karaman Belediyesine ait lisanssız elektrik üretimine dayalı 4 MWe kurulu gücünde güneş enerji santrali için Genel Müdürlüğümüz tarafından düzenlenmiş olumlu Teknik Değerlendirme Raporu ile birlikte ilgili makamlara 12.05.2019 tarih ve 30772 sayılı Resmi Gazetede yayımlanan "Elektrik Piyasasında Lisanssız Elektrik Üretim Yönetmeliği" hükümlerinde belirtilen süreler içinde iletilmesi durumunda bahse konu talebin gerçekleştirilmesine engel bir hal bulunmamaktadır.

Bilgilerinizi rica ederim.

e-imza
Sebahattin ÖZ
Bakan a.
Genel Müdür Yardımcısı V.

Mühendis : Derya ÖZTÜRK
Grup Koordinatörü : Dr. Muhammed Necip ERİM
Daire Başkanı : Mustafa ÇALIŞKAN

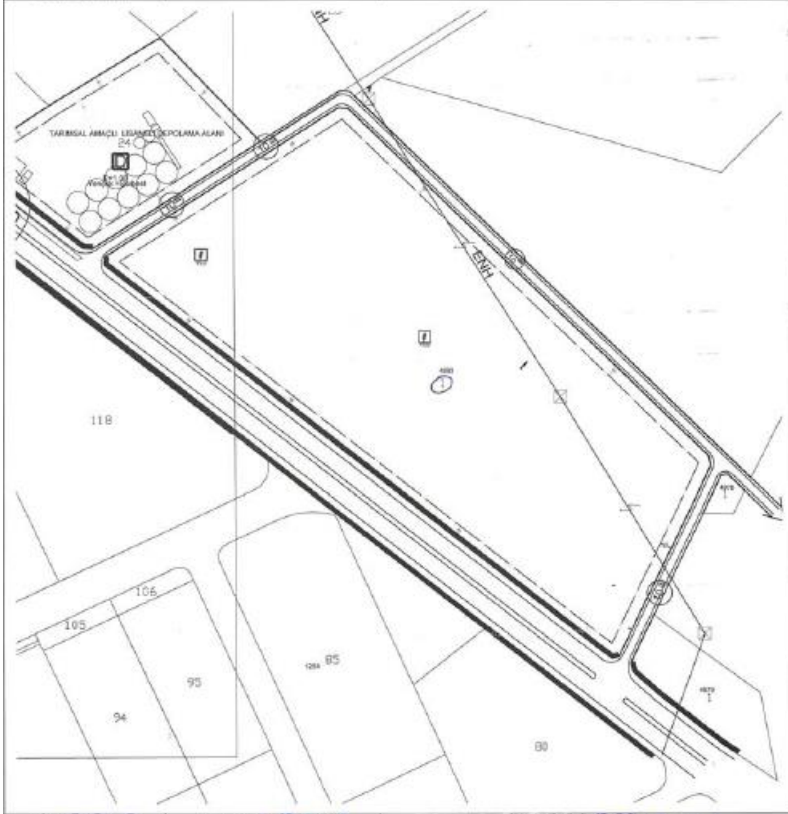
B.6 1/1000 Scale Approved Zoning Plan

T.C.
KARAMAN BELEDİYESİ
İMAR ve ŞEHİRCİLİK MÜDÜRLÜĞÜ
SAYI: 524 TARİH: 18/9/2019

ADI ve SOYADI : KARAMAN BELEDİYESİ
ADRES : PLAN PROJE MÜDÜRLÜĞÜ

☐ KURUM HİZMETİNE AYRILAN SAHADADIR ☐ YERLEŞİM DIŞI SAHADADIR ☐ SANAYİ SAHASINDADIR ☐ O.S.B ☐ [illegible] ☐ T1 ☐ T4
☐ [illegible] ☐ GELİŞME SAHASINDADIR ☐ TİCARET SAHASINDADIR ☐ PETROL YERİ ☐ TOPLU KONUT ☐ T2 ■ Y.E.D
☐ [illegible] ☐ YERLEŞİM SAHASI [illegible] ☐ KÜÇÜK SANAYİ ☐ [illegible] ☐ K.D.K.Ç.A ☐ T3

İMAR DURUMU



ÇİZEN 18/9/2019 — Ayfer ÖZER, Tekniker
KONTROL EDEN 18/09/2019 — Meltem UYSAL, Şehir Plancısı
İMAR MÜDÜRÜ 18/09/2019 — Muzaffer ŞAHİNER, İmar ve Şehircilik Müdür V.

Bina Yüksekliği	-		İnşaat Nizamı	AYRIK
Kat Adeti (Bodrum Hariç)	-		Meri İmar Planı Ölçeği	1/1000
Ön Bahçe Mesafesi	-10.00 m-		Meri İmar Planı Paftası	N30-C-02-D-2-A
Komşu Mesafesi	-		Gayrimenkulün Mahhallesi	PİRİREİS
Arka Bahçe Mesafesi	-		Gayrimenkulün Cinsi	ARSA
KADASTRO	Pafta No.	Ada No.	Parsel No	Gayrimenkulün Miktarı	94079.03 m²
	N30-C-02-D	4883	1	Makbuz No	E.138858-97 SAYI VE
				Makbuz Tarihi	18/09/2019 TARİHLİ
AYIRMA ÇEKME VEYA ÇATI KATI YAPILAMAZ				Dilekçe Tarihi	YAZIYA İSTİNADEN

Not: TAMAMI YENİLENEBİLİR ENERJİ KAYNAKLARINA DAYALI ÜRETİM TESİSİ ALANINDA KALMAKTADIR.

B.7 Connection Agreement With MEDAŞ

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LİSANSSIZ ÜRETİCİLER İÇİN DAĞITIM SİSTEMİNE BAĞLANTI ANLAŞMASI

LİSANSSIZ ELEKTRİK ÜRETİCİLERİ İÇİN DAĞITIM SİSTEMİNE BAĞLANTI ANLAŞMASI

Üretici No:

Tarih: **15.04.2020** Sayısı: **8 70 02 13 1821**

Bu Anlaşma; isim veya unvanı ile kanuni ikametgah adresi aşağıda belirtilen Üreticiye ait Elektrik Piyasasında Lisanssız Elektrik Üretimine ilişkin Yönetmelik kapsamında kurulmuş üretim tesisinin 4628 sayılı Elektrik Piyasası Kanunu (Kanun) ve 5346 sayılı Yenilenebilir Enerji Kaynaklarının Elektrik Enerjisi Üretimi Amaçlı Kullanımına İlişkin Kanun (YEK Kanunu) ile bu kanunlar uyarınca çıkarılmış ikincil mevzuat uyarınca dağıtım sistemine bağlanması için gerekli hüküm ve şartları içermektedir.

Taraflar	Dağıtım Şirketi:	Üretici:
	Meram Elektrik Dağıtım A.Ş.	**T.C. Karaman Belediyesi**
		(Karaman 5180050587)
Kanuni Adresleri	**Sancak Mah. Yeni İstanbul Cad. No:92 42003 Selçuklu/KONYA Tel : 0850 251 3000 Fax: 0332 255 0082**	**Kirişçi Mah. Atatürk Bulvarı No:79 70100 Karaman Tel: (535)589-7289 Fax: (338)226-4172**
KEP:	**meram.dagitim@hs02.kep.tr**	**karamanbelediyesi@hs03.kep.tr**
Temsile Yetkili Kişiler	Aziz ÖZERLİ	Kazım GÜCÜYENER Belediye Başkan Yardımcısı
İmzalar	Tuğçe KARATEKE	

Bu anlaşma, genel hükümleri içeren Birinci Bölümü ve özel hükümleri ve ekleri içeren İkinci Bölümü ile birlikte ayrılmaz bir bütündür.

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BİRİNCİ BÖLÜM

MADDE 1 - TARAFLAR

(1) Bu anlaşma dağıtım şirketi ile Elektrik Piyasasında Lisanssız Elektrik Üretimine İlişkin Yönetmelik (Yönetmelik) kapsamında elektrik üretim tesisi kuran gerçek veya tüzel kişiler (Üretici) arasında imzalanır. Bu anlaşmanın tarafları Dağıtım Şirketi ile Üretici'dir.

MADDE 2. ANLAŞMA KONUSU VE BAĞLANTI BİLGİLERİ:

(1)Bu anlaşma Elektrik Piyasasında Lisanssız Elektrik Üretimine İlişkin Yönetmelik kapsamında üretim tesisi kuran kişilerin dağıtım sistemine bağlanmasına ilişkin hükümleri içerir.

(2)Bağlantı bilgileri Ek-1'de belirtilmiştir.

MADDE 3 – ANLAŞMANIN YORUMLANMASI

(1)Bu Anlaşma öncelikle Elektrik Piyasasında Lisanssız Elektrik Üretimine İlişkin Yönetmelik (Yönetmelik) ve Elektrik Piyasasında Lisanssız Elektrik Üretimine İlişkin Yönetmeliğin Uygulanmasına Dair Tebliğ'e (Tebliğ) uygun olarak yorumlanır ve uygulanır. Yönetmelik ve Tebliğ'de hüküm bulunmaması halinde Kanun ve YEK Kanununa göre çıkarılmış ikincil mevzuata (ilgili mevzuat) uygun yorum ve uygulama yoluna gidilir.

MADDE 4. ANLAŞMA GÜCÜ:

(1) Üretici; bu anlaşma, Elektrik Piyasasında İletim ve Dağıtım Sistemlerine Bağlantı ve Sistem Kullanım Hakkında Tebliğ hükümleri uyarınca revize edilmeden bağlantı noktasına anlaşma gücünün üzerinde elektrik enerjisi veremez.

(2) Üreticinin anlaşma gücünü ihlal etmesi durumunda Dağıtım Şirketi ihlalin giderilmesi için bildirimde bulunarak 15 (onbeş) günlük ihlali giderme süresi verir ve bu anlaşmanın 16 ncı maddesi kapsamında ilgili yaptırımı uygular. Üreticiye Dağıtım Şirketi tarafından kesilen faturalar, anlaşma gücüne ve bu gücün aşıldığına dair kayıt içermesi halinde bildirim yerine geçer, bu durumda ayrıca bildirim yapılması gerekmez. İhlal bildirim alındığında derhal sona erdirilir veya tebligat tarihinden itibaren en geç öngörülen süre içinde giderilir. İhlalin en geç verilen süre içinde giderilmemesi/giderilememesi halinde Dağıtım Şirketi üreticinin sisteme elektrik enerjisi vermesini engelleyebilir. Bu halde dahi tüketim tesisinin sistemden enerji alması engellenemez. Elektrik enerjisinin kesilmesi ve tekrar verilmesi durumunda ortaya çıkan masraf ve maliyetler, üretici tarafından Dağıtım Şirketine ödenir.

(3) Dağıtım Şirketi, üreticinin anlaşma gücü üzerinde elektrik enerjisi vermesini önlemek amacıyla otomatik enerji kesme sistemleri tesis edebilir. Bu sistemlerin teçhizi üreticiden istenemez.

(4) Üreticinin anlaşma gücünü ihlal etmesi durumunda, Dağıtım Şirketi ile üretici arasında bu anlaşmanın 16 ncı maddesi hükümleri uyarınca işlem yapılır.

MADDE 5. MÜLKİYET SINIRLARI:

(1)Dağıtım Şirketi ile üretici arasındaki tesis ve/veya teçhizatın mülkiyet sınırları Yönetmelik ve ilgili mevzuat hükümlerine göre belirlenir ve Ek-2'de belirtildiği şekildedir.

(2)Taraflar, Ek-2 de belirtilen mülkiyet sınırlarına göre kendi tesis ve teçhizatın bakım onarımı, işletilmesi ve korunması ile yetkili ve sorumludurlar.

(3)Dağıtım Şirketi ve üretici tarafından işletme sınırlarında yer alan tesis ve/veya teçhizatın bakım/onarımı, işletilmesi ve korunması ile ilgili olarak yetki ve sorumluluğun hangi tarafta olduğunu belirleyen yetki çizelgesi ve dağıtım sistemi ile üretici tesisleri ve/veya iletim sistemi arasındaki işletme sınırlarında veya ortak sorumluluğun bulunduğu yerlerde uygulanacak güvenlik yönetimi sistemine ilişkin hususlar, dağıtım sistemine bağlanmak için başvuruda bulunanlar için, bağlantının tesis edilmesinden 15 (onbeş) gün önce Dağıtım Şirketi tarafından üretici ile müzakere edilmek suretiyle düzenlenir ve bu anlaşmanın ayrılmaz bir parçası olarak kabul edilir.

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MADDE6. KARŞILIKLI YÜKÜMLÜLÜKLER:

A. Dağıtım Sistemi Varlıklarının Tesis Edilmesi ve Müşteri Mülkiyetindeki Tesisten Faydalanma:

(1) Dağıtım Sistemi Varlıklarının Üretici Tarafından Tesis Edilmesi veya Ettirilmesi:

(1) Dağıtım sistemine bağlantı yapılmasının dağıtım şirketi tarafından ilave yatırım gerektirdiği hallerde veya sistem kullanımı açısından kapasitenin yetersiz olması nedeniyle genişleme yatırımı veya yeni yatırım yapılmasının gerekli olduğu hallerde yatırım dağıtım şirketince yapılır. Ancak yeterli finansmanın mevcut olmaması halinde üretim tesisi tüketim tesisi ile aynı yerde olan üreticiler, bu nitelikteki yatırımlar için AG/YG'den Bağlantı Yapan Tüketiciler İçin geçerli Dağıtım Sistemine Bağlantı Anlaşmasında öngörülen hükümlere göre işlem yapabilirler. Ancak üretim tesisi tüketim tesisi ile aynı yerde olmayan üreticiler yeterli finansmanın mevcut olmaması halinde dağıtım şirketi ile akdedecekleri özel hukuka tabi bir sözleşme kapsamında bu yatırımı yapabilir. Bu sözleşme kapsamında yapılan genişleme ve/veya yeni yatırımın gerçekleşen bedelinin veya ne kadarının geri ödeneceği, geri ödemenin esas ve usulleri ile bu anlaşmanın ve yapılacak özel hukuka tabi anlaşmanın feshedilmesi halinde tarafların hak ve yükümlülükleri taraflar arasında akdedilecek anlaşma ile belirlenir.

(2) Bir Başka Üretici Mülkiyetindeki Tesisten Faydalanma:

(1) Dağıtım sistemine bağlı bir üretici tarafından bağlantı noktasına kadar müstakilen tesis edilmiş branşman hattından Elektrik Piyasası Müşteri Hizmetleri Yönetmeliği çerçevesinde üçüncü şahıslar da yararlanabilir.

B. Mali Yükümlülükler:

1. Bağlantı Bedeli:

(1) Dağıtım Şirketinin Kurul tarafından onaylı tarifesindeki yönteme göre hesaplanan bağlantı bedeli üretici tarafından Dağıtım Şirketine ödenir.

2.İşletme ve Bakım Masraflarının Karşılanması:

(1) Bağlantı varlıklarının işletme ve bakım masrafları, mülkiyet sınırları dahilinde ilgili taraflarca karşılanır.

3.Diğer Masraflar:

(1) Bu anlaşmadan doğan vergi, resim, harç gibi yükümlülükler ile diğer masrafların tamamı üreticiye aittir.

4.Tazminat:

(1) Üretici ve işletme sorumlusu, bu anlaşma ve ilgili mevzuata aykırı kusurlu davranışları sonucunda Dağıtım Şirketinin uğradığı zararları tazmin eder. Dağıtım şirketi de kusurlu davranışından kaynaklanan üreticinin zararını ödemekle yükümlüdür.

C. Teknik Hükümler:

1.Veri Sağlama:

(1) Üretici, bağlantının gerçekleştirilmesi için talep edilen her türlü bilgi ve belgeyi Dağıtım Şirketine verir.

2.Koruma ve Ölçüm Sistemi:

Koruma:

(1)Üretici; uygulanacak koruma sistemi ile ilgili tasarımlarını ilgili mevzuat çerçevesinde belirtilen şartlara uygun olarak hazırlayarak Dağıtım Şirketine sunar ve koruma ayarlarını Dağıtım Şirketi ile varacağı mutabakat uyarınca Dağıtım Şirketinin kontrol ve koordinasyonu altında yapar. Dağıtım Şirketi ile üreticinin mutabakata vardığı koruma sistemi ayarları ile ilgili ayrıntılar Ek-3'de belirtilmiştir.

(2)Üretici, bağlantı noktasında, bölgenin çevre şartları da göz önüne alınarak tespit edilen ilgili teknik mevzuata ve TS/EN/IEC öncelik sırasına uygun olarak standartlarına uygun malzeme kullanır.

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Ölçüm Sistemi:

(1)Ölçüm sisteminde ilgili mevzuatta tanımlanan sayaçlar kullanılır.

(2)Ölçüm sistemi ile ilgili projeler, mevzuata uygun olarak üretici tarafından hazırlanır ve Dağıtım Şirketi tarafından kontrol edilir.

(3)Üretici, ölçüm sisteminin karşılıklı kayıt altına alınması, ölçüm sistemini oluşturan teçhizatın projeye göre kontrolü ve hassasiyet testleri için Dağıtım Şirketine başvuruda bulunur.

(4)Üretici, üretim tesisinin tüketim tesisiyle aynı yerde olması halinde bu Anlaşmada belirlenen yere ilgili mevzuatta dengeleme ve uzlaştırma sisteminin gerektirdiği haberleşmeyi sağlayabilecek çift yönlü ölçüm yapabilen saatlik sayaç tesis eder. Ayrıca üretim tesisinin üretimini ölçmek amacıyla müstakil bir sayaç daha tesis edilir. Üretici, üretim tesisinin tüketim tesisiyle aynı yerde olmaması halinde ise bu Anlaşmada belirlenen yere ilgili mevzuatta dengeleme ve uzlaştırma sisteminin gerektirdiği haberleşmeyi sağlayabilecek ana sayacı tesis eder. Ancak aynı yerde birden çok kaynağa dayalı üretim tesisinin bulunması halinde, her bir üretim tesisi için ayrı yedek sayaç teçhiz edilir.

(5)Ölçüm sisteminde yer alan sayaçlarla ilgili devreye alma ve periyodik muayene işlemleri Ek-4'e uygun olarak gerçekleştirilir.

(6) Taraflardan birisi test tarihleri dışında sayacın/sayaçların hatalı ölçüm yaptığını iddia ederse, 3516 sayılı Ölçüler ve Ayar Kanunu ve Ölçü ve Ölçü Aletleri Muayene Yönetmeliği ve Elektrik Piyasası Müşteri Hizmetleri Yönetmeliği hükümleri uyarınca işlem yapılır.

(7)Taraflardan biri, sayaçların hatalı ölçme yaptığını iddia eder ve test sonucunda söz konusu cihazların hassasiyet sınıfı içerisinde çalıştığı anlaşılırsa, yapılan bu testin masrafları, talepte bulunan tarafça karşılanır; aksi durumda test masrafları ölçüm teçhizatı hatalı olan tarafça karşılanır.

(8)Ölçme sistemine dahil olan tüm sayaçlara ilişkin olarak mühür kopartıldığı veya sayaçların normal ölçüm yapmasına engel olacak mahiyette herhangi bir müdahalenin yapılmış olduğu tespit edilirse veya sayaçlar kayıt yapmıyorsa veya kontrol ve test sonucu ana sayacın yanlış ölçüm yaptığı tespit edilirse, ana sayaç grubu kayıt değerlerinin yedek sayaç grubu kayıt değerleri ile aynı olduğu son ölçümden itibaren doğru enerji miktarları yedek sayaç grubu üzerinden tespit edilir. Yedek sayaç grubunun da mührünün kopartıldığı veya sayacın normal ölçüm yapmasına engel olacak mahiyette herhangi bir müdahalenin yapılmış olduğu tespit edilirse veya yedek sayaç da kayıt yapmıyorsa veya kontrol ve test sonucu yedek sayacın yanlış ölçüm yaptığı tespit edilirse ilgili mevzuat hükümleri uygulanır.

3. İletişim:

(1) Üretim tesisinin kurulu gücü 11 kW'ın üzerinde olan üreticiler, dağıtım şirketi tarafından gerekli alt yapının kurulmuş olması kaydıyla, dağıtım şirketi tarafından yapılacak bildirim üzerine bu anlaşmada belirtilen mülkiyet sınırı dahilinde uzaktan izleme ve kontrol için gerekli ekipman ve altyapıyı teçhizle yükümlüdür. Dağıtım şirketi bildirimde uzaktan izleme ve kontrol sisteminin gerekli teknik özelliklerini de bildirir.

(2) Üretici ile iletişimin temin edilmesi için; ilgili mevzuat kapsamında öngörülen donanımlar, üretici tesisinin dağıtım sistemine bağlanması aşamasında Dağıtım Şirketi ile görüşülmek suretiyle belirlenir. İletişim sistemine ilişkin bilgiler Ek-5'de belirtilmiştir.

4. Kompanzasyon:

(1) Kompanzasyona ait uygulamalar ilgili mevzuat hükümlerine göre yapılır.

(2) Üreticinin her bir ölçüm noktasından çekeceği endüktif reaktif enerjinin/vereceği kapasitif reaktif enerjinin, aktif enerjiye oranı ilgili mevzuata uygun olmak zorundadır.

5. Harmonik Bozulmalar, Fliker Şiddeti, Faz Dengesizliği:

(1) Harmonik bozulmalar, fliker şiddeti ve faz dengesizliğinin giderilmesine ilişkin uygulamalar ilgili mevzuata uygun olarak yapılır.

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6. Üretim Tesislerinin Tasarım ve Performans Şartları:

(1) Üretim tesisleri mevzuata uygun olarak tasarlanır, devreye alınır ve işletilir.

7. Talep Kontrolü:

(1) Dağıtım Şirketi, üreticinin talep kontrolünden etkilenme olasılığı bulunması halinde etkilenen tarafı mümkün ise önceden haberdar eder. Üreticinin talep kontrolü uygulamalarına ilişkin hak ve yükümlülükleri Ek-6'da yer almaktadır.

8. Periyodik Bakım

(1) Üretici, üretim tesisinin koruma, bağlantı ve diğer kısımlarını periyodik (teçhizatın özelliğine göre aylık, üç aylık, altı aylık veya yıllık) olarak kontrol ettirir ve tutanak altına alır. Tutanaklara tarih sırası verilir ve bir nüshası dağıtım şirketine ibraz edilir.

(2) Dağıtım şirketi istediği zaman üretim tesisinin bağlantı ekipmanı, koruma düzenekleri ve diğer kısımlarının kontrolünü talep edebilir. Bu durumda üretici makul süre içinde muayene yaptırmak ve tutanağı dağıtım şirketine ibrazla mükelleftir. Üretici, denetimlerde ibraz edilmek üzere muayene ve bakım personelinin yeterlik belgelerinin bir örneğini bulundurur.

MADDE 7. ERİŞİM ve MÜDAHALE HAKLARI:

(1) Dağıtım Şirketi, mülkiyetin gayri ayni haklar da dahil olmak üzere;

a) Bağlantı ve dağıtım sistemi varlıklarının tesisi, işletmesi, bakımı, kontrolü, test edilmesi ve sökülmesi,

b) Ölçüm sistemlerine zaman sınırlaması olmaksızın erişim, hakkına sahiptir. Taraflar, temsilcileri, çalışanları ve taraflarca davet edilen diğer kimseler;

a) Can ve mal güvenliğinin sağlanması için yapılması gereken acil durum müdahaleleri,

b) Dağıtım Şirketinin, dağıtım sistemini ilgili mevzuatta yer alan hükümler uyarınca işletebilmek amacıyla yapacağı müdahaleler, dışında diğer tarafın tesis ve/veya teçhizatına müdahale edemez.

MADDE 8. PARALELE GİRME

(1) Üretim tesislerinin paralele girme işlemlerine ilişkin alınması gerekli tüm tedbirler (koruma, kilitleme, iletişim gibi), üretim yapan üretici tarafından alınacak ve paralele girme işlemleri dağıtım şirketinin komuta ve talimatları doğrultusunda üretim yapan üretici tarafından üretici tesislerinde gerçekleştirilecektir.

MADDE 9. MÜCBİR SEBEP HALLERİ:

(1) Taraflar bu anlaşmadan kaynaklanan bir yükümlülüğünü mücbir sebeplerden dolayı yerine getirememeleri halinde; mücbir sebebe yol açan koşulları, mahiyetini ve tahmini süresini açıklayan mücbir sebep bildirim raporunu, mücbir sebebin süresi boyunca yükümlülüklerini yerine getirememe durumunu ortadan kaldırmak için aldığı önlemleri ve güncel bilgileri içeren bir raporu veya süregiden olaylarda periyodik raporları diğer tarafa gönderir.Dağıtım şirketinin raporu ya da raporları resmi internet sitesinde derhal yayımlaması yeterlidir. Ancak raporun bir suretinin istenmesi halinde üreticiye derhal gönderilir/ibraz edilir.

MADDE 10. ÜRETİCİ BAĞLANTISININ VE/VEYA ENERJİSİNİN KESİLMESİ:

(1) Dağıtım Şirketi;

a) a) Bu anlaşma ve ilgili mevzuat hükümleri gereğince enerji kesilmesini gerektiren durumlarda en az 2 (iki) gün önceden bildirimde bulunmak suretiyle,

b) Dağıtım sisteminin herhangi bir bölümünün Dağıtım Şirketi tarafından test ve kontrolünün, tadilatının, bakımının, onarımının veya genişletilmesinin gerektirdiği durumlarda en az 5 (beş) gün önceden bildirimde bulunmak suretiyle,

c) Mücbir sebep hallerinden birine bağlı durumlarda,

d) Can ve mal güvenliğinin sağlanmasının gerektirdiği durumlarda,

e) Dağıtım sistemini veya enerji alınan veya verilen başka bir sistemi etkileyen veya etkileme ihtimali olan kaza, sistem arızası veya acil durumlarda,

üreticinin tesis ve/veya teçhizatının bağlantısını kesebilir.

(2) Enerji kesintisine neden olan durumun ortadan kalkmasından sonra üreticiye ait tesis ve/veya teçhizat ilgili mevzuat hükümlerine göre yeniden enerjilendirilir.

(3)Üreticinin bağlantı noktasında enerjisinin kesilmesine ilişkin yazılı talebi Dağıtım Şirketi tarafından varılan mutabakat çerçevesinde yerine getirilir. Bu kapsamda dağıtım şirketinin enerjiyi kesme ve tekrar verme işlemleri ile ilgili olarak yaptığı harcamalar, üretici tarafından üstlenilir.

MADDE 11. DAĞITIM SİSTEMİNDEN AYRILMA:

(1) Üretici, bu anlaşmaya konu tesis ve/veya teçhizatını sistemden ayırma talebini en az iki ay önceden Dağıtım Şirketine yazılı olarak bildirir.

(2) Dağıtım Şirketi ile üretici farklı bir süre için mutabık kalmadıkları takdirde, sisteme bağlantının fiziki olarak kesilmesini takip eden dört ay içerisinde birbirlerinin arazisi içinde bulunan varlıklarını kaldırırlar.

MADDE 12. DEVİR, TEMLİK VE REHİN:

(1) Üretici, bu anlaşma kapsamındaki haklarını veya yükümlülüklerini başkalarına devir, temlik ve rehne konu edemez.

MADDE 13. HİZMET ALIMI:

(1) Dağıtım Şirketi ile üretici, önceden birbirlerinin yazılı onayını almaksızın, bu anlaşma kapsamındaki yükümlülüklerini hizmet alımı yoluyla başkalarına gördürebilir. Hizmet alımı yoluna gidilmesi, bu anlaşma kapsamındaki yükümlülüklerin devri anlamına gelmez. Hizmet alımında bulunan üretici, bu durumu uygulamanın başlamasından en az 3 (üç) iş günü öncesinden Dağıtım Şirketine yazılı olarak bildirir.

MADDE 14. GİZLİLİK:

(1) Taraflar, ilgili mevzuatın uygulanması sonucu veya piyasa faaliyetleri yahut bu anlaşmanın uygulanması sonucunda sahip oldukları ticari önemi haiz bilgilerin gizli tutulması için gerekli tedbirleri almak ve kendi iştirakleri ve/veya hissedarları olan tüzel kişiler dahil üçüncü şahıslara açıklamamak ve ilgili mevzuat ile öngörülen hususlar dışında kullanmamakla yükümlüdür. Taraflar, yeni başlamış veya yürüyen projeleri kapsamında danışmana yahut bağımsız denetim kuruluşuna, işlem denetçisine veya sigorta şirketine sunulan veya kamuya mal olmuş bilgiler ile yürürlükte olan kanun ve düzenlemeler ya da verilmiş olan bir mahkeme kararı, idari emir gereğince açıklanması gereken bilgilerin gizli bilgi tanımına girmediğini kabul ederler.

MADDE 15. FERAGAT:

(1) Üretici yazılı olarak haklarından feragat etmediği sürece; ilgili mevzuat ve bu anlaşma kapsamındaki hakların kullanılmasındaki gecikme, bu haklarını kısmen veya tamamen ortadan kaldırmaz ve bu haklardan feragat edildiği anlamına gelmez. Bir hakkın kısmen kullanılması, bu hakkın veya başka bir hakkın ileride kullanımını engellemez.

MADDE 16. CEZAİ ŞARTLAR:

(1) Üreticinin ilgili mevzuat ve bu anlaşma hükümlerinin herhangi birini ihlal etmesi durumunda, Dağıtım Şirketi, yazılı bildirim yaparak aşağıda yer alan cezai şartları uygular.

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İhlalin Tanımı	Üretici Tarafından Dağıtım Şirketine Ödenmesi Gereken Ceza
a) Üreticinin bağlantı noktasına anlaşma gücü üzerinde elektrik enerjisi vermesi	Her takvim yılında; üreticinin sisteme verdiği gücün anlaşma gücünü aşması halinde, sisteme verilen gücün anlaşma gücünü aştığı değerlerin en yükseği dikkate alınarak, ilk aşımın gerçekleştiği aydan itibaren ilgili takvim yılı sonu veya ilgili takvim yılı sonundan önce ise bu anlaşmanın yürürlükte olduğu dönem sonuna kadar ceza uygulanır. Bu ceza, anlaşma gücünü aşan kısım için (kW), ilgili takvim yılının en yüksek Sistem Kullanım Fiyatı üzerinden hesaplanan bedelin dört misli olarak hesaplanır. Anlaşma gücü üzerinde sisteme verilen enerji miktarı, destek ödemesi hesabında dikkate alınmaz.
b) Üreticinin tesis ve/veya teçhizatının bu anlaşma ve ilgili mevzuatta belirtilen bozucu etkilere ilişkin sınır değerlerini aşması	İçinde bulunulan aya ait Sistem Kullanım Fiyatına göre hesaplanan bedelin %5'i oranında ceza uygulanır. Bu oran aylık olarak toplam %30 u geçemez. Ceza, 00.00-24.00 saatleri arasında bir defadan fazla uygulanmaz.
c) Üreticinin ilgili mevzuatta tanımlanan emniyet tedbirlerini almaması, yanlış manevrası, test ve işletme hatası veya teçhizat arızası gibi nedenlerle Dağıtım Şirketi çalışanlarının, tesislerinin, dağıtım sisteminin olumsuz yönde etkilenmesi	İçinde bulunulan aya ait Sistem Kullanım Fiyatına göre hesaplanan bedelin %5'i oranında ceza uygulanır. Ceza, 00.00-24.00 saatleri arasında bir defadan fazla uygulanmaz.
ç) Üreticiye ait arızalı iletişim teçhizatının Dağıtım Şirketinin yazılı uyarısına rağmen onarılmaması/değiştirilmemesi ve bu durumu ile kullanılmaya devam edilmesi	Gerekli onarımın/değişikliğin yapılmayıp ihlalin devam ettiği her gün için içinde bulunulan aya ait Sistem Kullanım Fiyatına göre hesaplanan bedelin %1'i oranında ceza uygulanır.
d) Üreticinin dağıtım sisteminin her bir ölçüm noktasında çekecekleri endüktif reaktif enerjinin/verecekleri kapasitif reaktif enerjinin, aktif enerjiye oranının ilgili mevzuata uygun olmaması	Üreticinin o ayki Sistem Kullanım Fiyatına göre hesaplanan bedelin % 0,25'i oranında ceza uygulanır. Ceza, her uzlaştırma periyodu için yapılacak ölçümlerin sonucuna göre 00.00-24.00 saatleri arasında bir defadan fazla uygulanmaz.
e) Üreticiye ait üretim tesisi ile bağlantı ekipmanının, şebeke kaybı olması veya kısa devre arızası oluşması durumlarında, dağıtım sistemiyle bağlantısının kesilmediğinin veya bağlantısı kesik olduğu halde enerjisiz şebekeye çok kısa, kısa veya uzun süreli enerji verildiğinin tespit edilmesi (ilgili kilitleme sistemlerinin çalışmaması)	Her bir ihlal için anlaşma gücü üzerinden hesaplanacak aylık sistem kullanım bedeli kadar ceza uygulanır.

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(2) Dağıtım Şirketinin kendisinden kaynaklanan bir nedenle bu anlaşma kapsamında üreticiye taahhüt ettiği anlaşma gücünü sağlayamaması durumunda bu gücün sağlanamadığı süreye karşılık gelen ve ilgili aya ait toplam sistem kullanım bedeli üzerinden hesaplanan bedel üreticiye ödenir. Elektrik Piyasasında Dağıtım Sisteminde Sunulan Elektrik Enerjisinin Tedarik Sürekliliği, Ticari ve Teknik Kalitesi Hakkında Yönetmelikte tanımlanan, geçici, kısa ve uzun süreli kesintiler ile iletim sisteminden kaynaklanan nedenler ve mücbir sebepler sonucu oluşan kesintiler için ilgili mevzuattaki hükümler geçerlidir.

MADDE 17. EK PROTOKOLLER/EK SÖZLEŞMELER:

(1) Taraflar, karşılıklı mutabakat sağlamaları halinde ve mevzuat çerçevesinde, aralarında bu anlaşmaya ek olarak ilave ve/veya değişiklik protokolleri/sözleşmeleri yapabilir.

(2) Bu anlaşmanın birinci bölümünde yer alan genel hükümler, Enerji Piyasası Düzenleme Kurul kararı ile değiştirilebilir.

MADDE 18. TADİLATLAR:

(1) Yönetmelik, Tebliğ ve Elektrik Piyasasında İletim ve Dağıtım Sistemlerine Bağlantı ve Sistem Kullanımı Hakkındaki Tebliğ hükümlerine göre yapılan tadilat, Ek-7'e işlenir.

MADDE 19. SONA ERME:

1) Bu anlaşma;

a) Üreticinin üretim izninin Yönetmelik ve Tebliğ kapsamında iptal edilmesi veya sona ermesi hallerinde,

b) Üreticinin iflasına karar verilmesi, tasfiye memuru atanması, hukuken tasfiyesini gerektiren bir durum ortaya çıkması veya acze düşmesi hallerinde,

c) Üretim tesisinin geçici kabul işlemlerinin, bu anlaşmanın imza tarihinden itibaren; YG seviyesinden bağlanacak hidroelektrik üretim tesislerinde üç yıl, YG seviyesinden bağlanacak hidroelektrik dışındaki üretim tesislerinde iki yıl, AG seviyesinden bağlanacak tüm üretim tesislerinde bir yıl içinde yapılmaması halinde bu anlaşma bu sürelerin sonunda,

kendiliğinden sona erer.

(2) Bu anlaşmanın sona ermesi, doğmuş ve/veya doğacak mali yükümlülükleri ortadan kaldırmaz.

MADDE 20. KISMİ HÜKÜMSÜZLÜKTE ANLAŞMANIN GEÇERLİLİĞİ:

(1) Bu anlaşmanın herhangi bir hükmünün, batıl, hükümsüz, geçersiz, uygulanamaz veya mevzuata aykırı olduğu tespit edilirse; bu durum anlaşmanın geri kalan hükümlerinin geçerliğini kısmen veya tamamen ortadan kaldırmaz. Yapılan tespit sonucunda anlaşmanın yürütülmesine engel bir halin ortaya çıktığının anlaşılması durumunda, anlaşma Türk Borçlar Kanunu çerçevesinde geçersiz kabul edilir.

MADDE 21. ANLAŞMAZLIKLARIN ÇÖZÜMÜ:

(1) Dağıtım Şirketi ile üreticinin bu anlaşmanın hükümleri üzerinde mutabakata varamamaları halinde, taraflar, anlaşmazlığın çözümü konusunda Kuruma yazılı olarak başvuruda bulunabilir. Anlaşmazlıklar Kurum tarafından çözüme kavuşturulur.

MADDE 22. BİLDİRİMLER:

(1) Bu anlaşma uyarınca yapılacak bildirimler, taahhütlü mektup veya telgraf kullanılarak karşı tarafın ikamet adresine yapılır. Faturaya kayıt düşülerek yapılacak bildirimler de geçerlidir.

(2) Dağıtım şirketinin adres değişikliği, resmi internet sayfasına yayımlanarak bildirilir.

MADDE 23. MEVZUATA UYUM:

(1) Bu anlaşmanın yürürlük tarihinden sonraki mevzuat değişiklikleri tarafları bağlar. Bu anlaşma hükümleri mevzuat hükümlerine uymama gerekçesi olarak ileri sürülemez.

MADDE 24. YÜRÜRLÜĞE GİRME:

(1) Bu anlaşma, cezai şartlar bakımından üreticinin dağıtım sistemini kullanmaya başladığı tarihte diğer hükümleri bakımından imzalandığı tarihte yürürlüğe girer.

Ekler:

1. Bağlantı Bilgileri,
2. Mülkiyet Sınırları Çizelgesi,
3. Bağlantı Tek Hat Şeması
4. Koruma Sistemi Ayarları,
5. Devreye Alma Testleri,
6. İletişim Sistemine İlişkin Bilgiler,
7. Üretici Talep Kontrolü Uygulamalarına İlişkin Hak ve Yükümlülükleri,
8. Tadilat,
9. Tesis Sözleşmesi
10. Diğer Yükümlülükler

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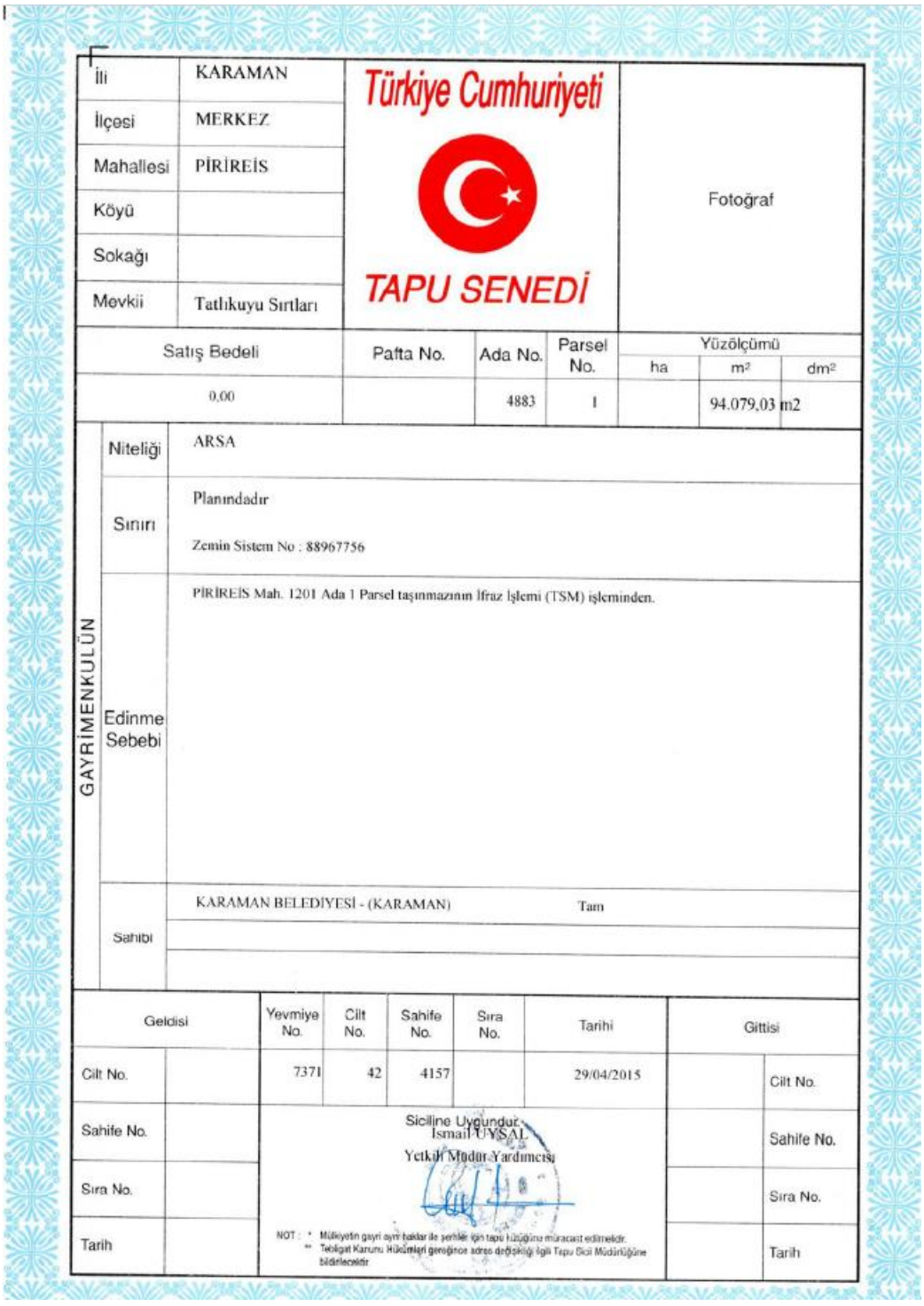
Annex C – Title Deed



İli	KARAMAN
İlçesi	MERKEZ
Mahallesi	PİRİREİS
Köyü	
Sokağı	
Mevkii	Tatlıkuyu Sırtları

Türkiye Cumhuriyeti

TAPU SENEDİ

Fotoğraf

Satış Bedeli	Pafta No.	Ada No.	Parsel No.	Yüzölçümü ha	Yüzölçümü m²	Yüzölçümü dm²
0,00		4883	1		94.079,03	m2

GAYRİMENKULÜN

Niteliği	ARSA
Sınırı	Planındadır Zemin Sistem No : 88967756
Edinme Sebebi	PİRİREİS Mah. 1201 Ada 1 Parsel taşınmazının İfraz İşlemi (TSM) işleminden.
Sahibi	KARAMAN BELEDİYESİ - (KARAMAN) Tam

Geldisi		Yevmiye No.	Cilt No.	Sahife No.	Sıra No.	Tarihi	Gittisi	
Cilt No.		7371	42	4157		29/04/2015		Cilt No.
Sahife No.		Siciline Uygundur. İsmail UYSAL Yetkili Müdür Yardımcısı						Sahife No.
Sıra No.								Sıra No.
Tarih		NOT : * Mülkiyetin gayri ayni haklar ile şerhler için tapu hizmetine müracaat edilmelidir. ** Tebligat Kanunu Hükümleri gereğince adres değişikliği ilgili Tapu Sicil Müdürlüğüne bildirilecektir						Tarih

Annex D Table of Summary of the National Legislation and International Standards

The regulations developed under the Environmental Law aim to specify and identify the procedures and principles of the management of environmental aspects given below.

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
Environmental Permit and Licenses			
Regulation on Environmental Impact Assessment	31907	29.07.2022	Scoping of the Project and evaluation of impacts for the pre-construction, construction and operation stages of the Project.
Regulation on Environmental Permits and Licensing	29115	10.09.2014	Requirements for environmental permits and licenses at all stages of the Project.
Regulation on Environmental Auditing	27061	21.11.2008	Requirements for environmental audits to be performed by either Project Owner or governmental authorities during construction and operation stages.
Regulation on the Implementation of the Law Concerning Private Security Services	25606	07.10.2004	During the construction phase for camp site security and during the operation phase for safety purposes.
Air Quality Control and Greenhouse Gas (GHG) Emissions			
Industrial Air Pollution Control Regulation	27277	03.07.2009	During the construction phase, dust emissions.
Exhaust Gas Emission Control Regulation	30004	11.03.2017	Operation of Project vehicles, machinery, and equipment at all phases of the Project.
Biodiversity Conservation and Protection of Nature			
Regulation on Protection of Wildlife and Wildlife Development Area	259637	08.11.2004	Measures to be taken for wildlife protection near to the Project area during the planning phase of the Project.
Chemicals and Other Dangerous Substances			
Regulation on Classification, Labelling, and Package of the Materials and Mixtures	28848	11.12.2013	Taking measures for chemicals and mixtures to be used during construction and operation phases.
Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals	30105	23.06.2017	Determination of chemicals to be used during the operation phase.
Regulation on the Control of Polychlorinated Biphenyls (PCBs) and Polychlorinated Terphenyls (PCTs)	26739	27.12.2007	Usage of transformers, capacitors, electrical equipment including voltage regulators, switches, oil used in motors, old electrical devices or appliances containing PCB capacitors, fluorescent light ballasts during the operational phase.
Noise			

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
Environmental Noise Control Regulation	32029	30.11.2022	Determination of noise emissions and measures to be taken at construction and operation phases.
Regulation on the Environmental Noise Emissions Caused by Equipment Used Outdoors	26392	30.12.2006	Regulating the noise levels caused by noise sources within the Project site at the construction and operation phases.
Soil and Land Use			
Regulation on the Control of Soil Pollution and Lands Contaminated by Point Sources	27605	08.06.2010	Determination of risks of soil contamination at construction and operation phases.
Regulation on Control of Excavated Soil, Construction and Demolition Wastes	25406	18.03.2004	Management of excavated soil and construction and demolition wastes at the source.
Regulation on Protection, Use, and Planning of Agricultural Lands	30265	09.12.2017	Management of change in the land use during the planning phase of the Project.
Waste			
Regulation on Waste Management	29314	02.04.2015	Management of waste from generation to disposal without harming the environment and human health during construction and operation phases.
Zero Waste Regulation	30829	12.07.2019	General principles regarding the establishment, development, monitoring, financing, recording and certification of the zero waste management system in line with sustainable development goals during construction and operation phases.
Regulation on Packaging Waste Control	30283	27.12.2017	Preventing the formation of packaging waste, reducing the amount of unavoidable packaging waste to be disposed of using reuse, recycling and recovery methods in construction and operation phases.
Regulation on Waste Oil Management	30985	21.12.2019	Waste oils included in the definition of waste oil and the management, recovery, disposal of these wastes, precautions to be taken and notifications to be made
Regulation on Medical Waste Control	29959	25.01.2017	Collection of medical waste in the places where it is produced, temporary storage, transportation to the medical waste processing facilities and disposal
Regulation on Control of Waste Electrical and Electronic Equipment	28300	22.05.2012	Management of electrical and electronic equipment wastes during construction and operation phases.

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
Regulation on Control of Waste Batteries and Accumulators	25569	31.08.2004	Establishment of a collection system and management for the recovery or final disposal of waste batteries and accumulators.
Regulation on Control of End-of-life Tires	26357	25.11.2006	Establishing a collection and management system for ensuring the necessary regulations and standards in the management of end-of-life tires during the construction and operation phases.
Water and Wastewater			
Regulation on the Protection of Ground Waters against Pollution and Deterioration	28257	07.04.2012	Protection of groundwater sources against pollution during construction and operation phases.
Regulation on the Control of Pollution Caused by Hazardous Substances in and around Water Environment	26005	26.11.2005	Management of hazardous substances during construction and operation phases.
Regulation on Wastewater Collection and Removal Systems	29940	06.01.2017	Procedures and principles regarding the planning, design and project design, construction and operation of wastewater collection and removal systems.
Structural Safety			
Regulation on Structures to be Built in Natural Disaster Areas	26582	14.07.2007	Management of construction works within the scope of the Project.
Regulation on Building Constructions in Earthquake Zones	26454	06.03.2007	Management of construction works within the scope of the Project.
Regulation on Building Earthquake of Turkiye	30364	18.03.2018	Measures to be taken for the design and construction works under the impact of earthquakes and the evaluation of the performance of existing buildings under the impact of earthquakes.
Regulation on the Protection of Buildings from Fire	26735	19.12.2007	Measures to be taken for fire protection during construction and operation phases.
Traffic			
Regulation on the Road Transportation of Hazardous Goods	28801	24.10.2013	Hazardous goods to be transported during construction and operation phase.
Regulation on Highway Traffic	23053	18.07.1997	Regulating speed limits of vehicles and machinery used during construction and operation phases.
Regulation on Traffic Signs	18789	19.06.1985	Regulating the traffic signs to be used during the construction and operation phases

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
Health and Safety and Labor			
Regulation on Emergency Situations in Workplaces	28681	18.06.2013	Preparation of emergency plans, prevention, protection, evacuation, firefighting, first aid and similar studies in workplaces.
Regulation on duties and responsibilities of OHS Specialists	28512	29.12.2012	Defines roles and responsibilities of OHS specialists
Regulation on duties and responsibilities of Occupational Physicians and other medical personnel	28713	20.07.2013	Defines roles and responsibilities of Occupational physicians and the medial personnel
Regulation on Health and Safety at Construction Works	28786	05.10.2013	Measures to be taken during construction phase.
Regulation on Health and Safety Conditions Regarding Use of Work Equipment	28628	25.04.2013	Measures to be taken during construction phase related to use of equipment.
Regulation on Health and Safety Precautions Regarding Working with Chemicals	28733	12.08.2013	Measures to be taken during construction and operation phase related to use of chemicals.
Regulation on Protection of Employees from the Hazards of Explosive Environments	28633	30.04.2013	It regulates the procedures and principles regarding the precautions to be taken in order to protect the employees from the dangers of explosive atmospheres that may occur in the workplaces in terms of health and safety.
Regulation on Health and Safety Regarding Temporary and Time-Limited Works	28744	23.08.2013	Protection of employees with a temporary or fixed-term employment contract at the same level as other employees in the workplace in terms of health and safety.
Regulation on Health and Safety Signs	28762	11.09.2013	Measures to be taken during construction and operation phases.
Regulation on Management of Dust	289812	05.11.2013	Measures to be taken to combat dust in terms of occupational health and safety to prevent the risks that may arise from dust in the workplaces and to ensure that the workers are protected from the effects of dust.
Regulation on Material Safety Data Sheets on Hazardous Materials and Mixtures	29204	13.12.2014	Preparation of safety data sheets to ensure effective control and surveillance against the negative effects of harmful substances and mixtures on human health and the environment during construction and operation phases.
Law on Occupational Health and Safety (6331)	28339	20.06.2012	Health and safety measures to be taken during construction and operation stages.
Regulation on Personal Protective Equipment	30761	01.05.2019	Measures to be taken during construction and operation phases to ensure the health and safety of employees.

Regulations / Communiques	OG Number	OG Date	Relevance/Implication for the Project
Regulation on Protection of Workers from Risks Created by Noise	28721	28.07.2013	Measures to be taken during construction and operation phases to ensure the health and safety of employees.
Regulation on Risk Assessment for Occupational Health and Safety	28512	29.12.2012	Determination of occupational health and safety risks occurring during construction and operation phases.
Regulation on Sub-contractors	27010	27.09.2008	Management of contactors/sub-contractors during construction and operation phases.
Regulation on Use of Personal Protective Equipment in Workplaces	28695	02.07.2013	Measures to be taken during construction and operation phases to ensure the health and safety of employees.
Regulation on Vocational Training of the Employees Working in Dangerous and Highly Dangerous Workplaces	28706	13.07.2013	Measures to be taken during construction and operation phases to ensure the health and safety of employees.
Regulation on the Procedures and Principles of Employee Health and Safety Training	28648	15.05.2013	Measures to be taken during construction and operation phases to ensure the health and safety of employees.
Regulation on High Current Electrical Facilities	24246	30.11.2000	Covers measures regarding the safe installation, construction, operation and maintenance of high current electrical facilities.
Regulation on Manual Handling	28717	24.07.2013/	Defines the safe procedures for safe handling of goods and equipment using manual manpower.
Cultural Heritage			
Law on Protection of Cultural and Natural Assets	18113	23.07.1983	During chance finds at the construction phase, determination of measures to be taken.
Regulation on Researches, Drillings and Excavations in relation to the Cultural and Natural Assets	18485	10.08.1984	Defining the procedures and obligations concerning the cultural and natural assets found out during construction.

The international agreements and conventions ratified by Türkiye are listed below:

International Agreements and Conventions	Year of the Agreement / Conventions
Paris Agreement	2021
UN Framework Convention on Climate Change (UNFCCC)	2004
Rio Declaration on Environment and Development and Statement on Forest Principles	1992

International Agreements and Conventions	Year of the Agreement / Conventions
Convention on Biological Diversity (Rio Convention)	1992
Paris Convention on the Protection of the World Cultural and Natural Heritage	1975
Barcelona Convention on the Protection of the Mediterranean Sea Against Pollution	1976
The Convention for the Protection of Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention)	1981
Bern Convention on Protection of Europe's Wildlife and Living Environment	1982
Vienna Convention for the Protection of the Ozone Layer	1988
Montreal Protocol on Substances Depleting the Ozone Layer	1990
Convention on Wetlands of International Importance, Especially as Waterfowl Habitat	1994
Convention on International Trade in Endangered Species of Wild Fauna and Flora	1996
UN Convention to Combat Desertification	1998
United Nations Europe Economic Commission Convention on Transboundary Effects of Industrial Accidents	2000
Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention)	2001
Stockholm Convention on Persistent Organic Pollutant	2010
Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)	1972
Mediterranean Sea Protocol Concerning Specially Protected Areas and Biodiversity including related protocols	1988
International Labor Organization (ILO) Convention on Forced Labor	1930
ILO Convention on Freedom of Association and Protection of the Right to Organize	1948
ILO Convention on Right to Organize and Collective Bargaining	1949
ILO Convention on Equal Remuneration	1951
ILO Convention on Abolition of Forced Labor	1957

International Agreements and Conventions	Year of the Agreement / Conventions
ILO Convention on Discrimination (Employment and Occupation)	1958
ILO Convention on Worst Forms of Child Labor	1999

Annex E – Site Photographs

Photo No: 01	
Date:	
Location: SPP Sub-project Area	
Details/Notes: **Photos are taken from Project Identification File**	
Photo No: 02	
Date:	
Location: SPP Sub-project Area	
Details/Notes: **Photos are taken from Project Identification File**	
Photo No: 03	
Date:	
Location: SPP Sub-project Area	

Details/Notes: **Photos are taken from Project Identification File**	

Annex F – E&S Incident Notification Form Template

1) Incident Details		
Date of Incident: [*Please indicate*]	**Time of Incident:** [*Please indicate*]	
Location of the Incident:	[*Please indicate*]	
Full Name of Sub-borrower:	[*Please indicate*]	
Date Reported to ILBANK: [*Please indicate*]	**Reported to ILBANK by**: [*Please indicate]*	**Notification Type**: [*Please indicate; e-mail/phone call/media notice/other]*
Date Reported to WB: [*Please indicate*]	**Reported to WB by**: [*Please indicate]*	**Notification Type**: [*Please indicate; e-mail/phone call/media notice/other]*
Full Name of the Contractor of the Subproject:	[*Please indicate]*	
Full Name of the Sub-contractor involved in the incident:	[*Please indicate]*	

2) Type of incident (please check all that apply)[17]	
☐ Fatality	☐ Acts of violence/protest
☐ Lost time injury	☐ Unexpected impacts on heritage resources
☐ Displacement without due process	☐ Unexpected impacts on biodiversity resources
☐ Child labor	☐ Environmental pollution incident
☐ Forced labor	☐ Dam failure
☐ Disease outbreaks	☐ Other

3) Description/Narrative of Incident

For example:

I. *What is the incident?* [*Please briefly describe*]

II. *What were the conditions or circumstances under which the incident occurred (if known)?* [*Please briefly describe*]

III. *Are the basic facts of the incident clear and uncontested, or are there conflicting versions? What are those versions?* [*Please briefly describe*]

IV. *Is the incident still ongoing or is it contained?* [*Please briefly describe*]

V. *Have any relevant authorities been informed?* [*Please briefly describe*]

[17] See Appendix 2 for definitions.

4) Actions taken to contain the incident

Short Description of Action	Responsible Party	Expected Date	Status

For incidents involving a Contractor:

Name of Contractor:
Have the works been suspended? Yes ☐ No ☐
Note: Please attach a copy of the instruction suspending the works

5) What support has been provided to affected people

[*Please briefly describe*]

APPENDICES

Appendix 1: Supporting documents

[Note: Please mark the relevant documents available at this stage and submit them attached to the report]:

☐ Copy of the social security registration records of the victims and involved persons
☐ Copy of the instruction suspending the works
☐ Statement of victims
☐ Statement of witnesses
☐ Copies of notifications done to the relevant authorities
☐ Copies of legal investigation reports of relevant authorities
☐ Copies of E&S training records of the affected and involved persons
☐ Copies of OHS training records of the affected and involved persons
☐ Photographs related to the incident
☐ Others

Appendix 2: Incident Types

The following are incident types to be reported using the environmental and social (E&S) incident response process:

Fatality: Death of a person(s) that occurs within one year of an accident/incident, including from occupational disease/illness (e.g., from exposure to chemicals/toxins).

Lost Time Injury: Injury or occupational disease/illness (e.g., from exposure to chemicals/toxins) that results in a worker requiring 3 or more days off work, or an injury or release of substance (e.g., chemicals/toxins) that results in a member of the community needing medical treatment.

Acts of Violence/Protest: Any intentional use of physical force, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, deprivation to workers or project beneficiaries, or negatively affects the safe operation of a project worksite.

Disease Outbreaks: The occurrence of a disease in excess of normal expectancy of number of cases. Disease may be communicable or may be the result of unknown etiology.

Displacement Without Due Process: The permanent or temporary displacement against the will of individuals, families, and/or communities from the homes and/or land which they occupy without the provision of, and access to, appropriate forms of legal and other protection and/or in a manner that does not comply with an approved resettlement action plan.

Child Labor: An incident of child labor occurs: (i) when a child under the age of 14 (or a higher age for employment specified by national law) is employed or engaged in connection with a project, and/or (ii) when a child over the minimum age specified in (i) and under the age of 18 is employed or engaged in connection with a project in a manner that is likely to be hazardous or interfere with the child's education or be harmful to the child's health or physical, mental, spiritual, moral or social development.

Forced Labor: An incident of forced labor occurs when any work or service not voluntarily performed is exacted from an individual under threat of force or penalty in connection with a project, including any kind of involuntary or compulsory labor, such as indentured labor, bonded labor, or similar labor-contracting arrangements. This also includes incidents when trafficked persons are employed in connection with a project.

Unexpected Impacts on heritage resources: An impact that occurs to a legally protected and/or internationally recognized area of cultural heritage or archaeological value, including world heritage sites or nationally protected areas not foreseen or predicted as part of project design or the environmental or social assessment.

Unexpected impacts on biodiversity resources: An impact that occurs to a legally protected and/or internationally recognized area of high biodiversity value, to a Critical Habitat, or to a Critically Endangered or Endangered species (as listed in IUCN Red List of threatened species or equivalent national approaches) that was not foreseen or predicted as part of the project design or the environmental and social assessment. This includes poaching or trafficking of Critically Endangered or Endangered species.

Environmental pollution incident: Exceedances of emission standards to land, water, or air (e.g., from chemicals/toxins) that have persisted for more than 24 hours or have resulted in harm to the environment.

Dam failure: A sudden, rapid, and uncontrolled release of impounded water or material through overtopping or breakthrough of dam structures.

Other: Any other incident or accident that may have a significant adverse effect on the environment, the affected communities, the public, or the workers, irrespective of whether harm had occurred on that occasion. Any repeated non-compliance or recurrent minor incidents which suggest systematic failures that the task team deems needing the attention of Bank management.

Annex G – E&S Incident Investigation Form Template

1) Investigation Findings

For example:

I. *where and when the incident took place,*
II. *who was involved, and how many people/households were affected,*
III. *what happened and what conditions and actions influenced the incident,*
IV. *what were the expected working procedures and were they followed,*
V. *did the organization or arrangement of the work influence the incident,*
VI. *were there adequate training/competent persons for the job, and was necessary and suitable equipment available,*
VII. *what were the underlying causes; where there any absent risk control measures or any system failures.*

2) Corrective Actions from the investigation to be implemented (to be fully described in Corrective Action Plan)

Action	Responsible Party	Expected Date

3a) Fatality/Lost Time Injury Information

Fatality ☐ **Lost time injury** ☐

Immediate cause of fatality/injury for worker or member of the public (please check all that apply) [18]**:**

☐ Caught in or between objects
☐ Struck by falling objects
☐ Stepping on, striking against, or struck by objects
☐ Drowning
☐ Chemical, biochemical, material exposure
☐ Falls, trips, slips
☐ Fire & explosion
☐ Electrocution
☐ Homicide
☐ Medical Issue
☐ Suicide
☐ Project Vehicle Work Travel
☐ Non-project Vehicle Work Travel
☐ Project Vehicle Commuting
☐ Non-project Vehicle Commuting
☐ Vehicle Traffic Accident (Members of Public Only)
☐ Other

Name	Age/ Date of Birth	Nationality	Gender	Date of Fatality/ Injury	Cause of Fatality/ Injury	Affected Party (Employee/ Public)
			☐ Female ☐ Male			☐ Sub-borrower employee ☐ Contractor employee ☐ Sub-contractor employee ☐ Public

3b) Financial Support/Compensation Types (to be fully described in Corrective Action Plan template – template is given in Appendix 3)

☐ No Compensation Required ☐ Contractor Insurance

[18] See Appendix 1 for definitions

☐ Workman's Compensation/National Insurance ☐ Other
☐ Contractor Direct ☐ Court Determined Judicial Process

Name	Compensation Type	Compensation Amount (TRY)	Responsible Party

4) Supplementary Narrative

Appendix 1: Definition of fatality/injury immediate causes

1. **Caught in or between objects:** caught in an object; caught between a stationary object and moving object; caught between moving objects (except flying or falling objects).
2. **Struck by falling objects:** slides and cave-ins (earth, rocks, stones, snow, etc.); collapse (buildings, walls, scaffolds, ladders, etc.); struck by falling objects during handling; struck by falling objects.
3. **Stepping on, striking against, or struck by objects:** stepping on objects; striking against stationary objects (except impacts due to a previous fall); Striking against moving objects; Struck by moving objects (including flying fragments and particles) excluding falling objects.
4. **Drowning:** respiratory impartment from submersion/emersion in liquid.
5. **Chemical, biochemical, material exposure:** exposure to or contact with harmful substances or radiations.
6. **Falls, trips, slips:** falls of persons from heights (e.g., trees, buildings, scaffolds, ladders, etc.) and into depths (e.g., wells, ditches, excavations, holes, etc.) or falls of persons on the same level.
7. **Fire & explosion:** exposure to or contact with fires or explosions.
8. **Electrocution:** exposure to or contact with electric current.
9. **Homicide:** a killing of one human being by another.
10. **Medical Issue:** a bodily disorder or chronic disease.
11. **Suicide:** the act or an instance of taking, or attempting to take, one's own life voluntarily and intentionally.
12. **Others:** any other cause that resulted in a fatality or injury to workers or members of the public.

Vehicle Traffic

13. **Project Vehicle Work Travel:** traffic accidents in which project workers, using project vehicles, are involved during working hours and which occur in the course of paid work.
14. **Non-project Vehicle Work Travel:** traffic accidents in which project workers, using non-project vehicles, are involved during working hours and which occur in the course of paid work.
15. **Project Vehicle Commuting:** traffic accidents in which project workers, using project vehicles, are involved while travelling to (i) the worker's principal or secondary residence; (ii) the place where the worker usually takes his or her meals; or (iii) the place where he or she usually receives his or her remuneration.
16. **Non-project Vehicle Commuting:** traffic accidents in which project workers, using non-project vehicles, are involved while travelling to (i) the worker's principal or secondary residence; (ii) the place where the worker usually takes his or her meals; or (iii) the place where he or she usually receives his or her remuneration.
17. **Vehicle Traffic Accident (Members of Public Only):** traffic accidents in which non-project workers/members of the public are involved in an accident while travelling for any purpose.

Appendix 2: Supporting documents

[Note: Please mark the relevant documents available and submit them attached to the report]:

☐ Copy of the social security registration records of the victims and involved persons

☐ Copy of the instruction suspending the works

☐ Statement of victims

☐ Statement of witnesses

☐ Copies of notifications done to the relevant authorities

☐ Copies of legal investigation reports of relevant authorities

☐ Copies of E&S training records of the affected and involved persons

☐ Copies of OHS training records of the affected and involved persons (such as basic OHS training, induction training, visitors training, job-specific training, refreshment training, etc.)

☐ Photographs related to the incident

☐ Health examination records of the affected and involved employees

☐ Copies of Personal Protective Equipment delivery forms (signed copies)

☐ Root Cause Analysis completed for the incident

☐ Information/documentation related to any judicial process

☐ Others

Appendix 3: Corrective Action Plan template

Action No:	Brief Description of E&S non-compliance	Corrective Action	Financial and Human Resources Required	Responsible Party	Due Date for Completion of Corrective Action	Indicators for Successful Completion of Corrective Action	Status of Corrective Action

Annex H – Chance Find Procedure

H.1 Introduction

This document describes the Chance Find Procedure for subproject, outlining the procedures that will be followed in case of chance finds occur during the construction activities associated with the subproject.

H.2 Scope

This Chance Find Procedure (CFP) will be implemented for Karaman Municipality/4.787,2 MWp / 4 MWe Solar (Photovoltaic) Power Plant Project Sub-project in order to manage any chance finds that may be encountered during the construction activities. The purpose of the CFP document is to:

- outline the applicable legislation and standards relevant to this procedure;
- define roles and responsibilities;
- define project commitments, operational procedures, training requirements and guidance relevant to this procedure; and
- define monitoring and reporting procedures.

Although there are no known archaeological sites or remains within the subproject area, it is considered that there may be a potential to encounter archaeological findings during the construction of the subproject. The potential to lead to the discovery or adverse impact of archaeological resources may occur during the activity of driving the panels into the ground. This CFP is prepared in order to provide information to the contractors and employees regarding the actions to be taken in case of an archaeological chance find discovery.

H.3 Legislation and Standards

Legislation and standards that apply to the project comprise the following:

- Word Bank Environmental and Social Standard (ESS) 8: Cultural Heritage
- applicable Turkish laws and national standards
- other commitments to and requirements of Turkish government authorities
- other industry guidelines with which the project has committed to comply

In Turkey, movable and immovable cultural and natural assets are protected and preserved by the Law on Preservation of Cultural and Natural Assets (Law No. 2863) published in the Official Gazette dated 23.07.1983 and numbered 18113. Law 2863 establishes legal protection for the following:

- all natural assets and immovable cultural assets constructed up until the end of the 19th century,
- any immovable cultural asset from after the end of the 19th century, identified by the Ministry of Culture and Tourism as an important asset worthy of preservation,
- all immoveable cultural assets located within archeological sites,
- buildings/areas that have witnessed significant historical events during the National War and the foundation of the Turkish Republic and dwellings that have been used by Mustafa Kemal ATATÜRK, regardless of time and registration.

The Ministry of Culture and Tourism is the responsible body to take decisions for protection of cultural heritage in Turkey at the national level. As part of the Ministry, the High Commission for the Protection of Cultural Assets is responsible for protecting and restoring immovable cultural assets. Implementation of the decisions and regulations issued by the Ministry are undertaken by local administrations. At local level, there are Cultural Assets Protection Regional Boards defined by the Ministry of Culture and Tourism, which are responsible for preservation, registration and classification of cultural heritage within their respective

jurisdictions. The relevant Regional Board for the project is the Karaman Cultural Heritage Protection Regional Board Directorate." According to Law 2863, all the natural and cultural assets qualified for legal preservation are properties of the State. Therefore, regional boards have the power and authority to provide legal protection to the preservation sites and to approve or reject all the activities, which have potential negative impacts on the preservation sites such as construction, demolition and excavation activities.

H.4 Roles and Responsibilities

Principal roles and responsibilities for the implementation of this procedure are outlined below.

Role	Responsibilities
Contractor -Project Manager	• Overall responsibility for the development, review, approval and coordination of the numerous activities required to initiate, conduct and complete construction. • Ensure that this procedure is prepared, and updated as required, based on the activities undertaken as part of the project. • Ensure that adequate resources are made available to implement the procedures and guidelines outlined in this procedure.
Contractor - Environmental and Social (E&S) Expert	• Initiation, development, implementation and coordination of the CFP during construction. • Ensure that adequate training is given to all site personnel and sub- contractors, covering the procedures and guidelines outlined in this procedure. Establish appropriate control procedures and conduct audits as necessary. • Consultation with and reporting to relevant government bodies in case of potential archeological chance finds. • Record all confirmed chance finds by filling up the "Chance Find Reporting Form" and maintain copies in a log-book. Ensure that the chance finds log-book is up to date.
Contractor - Site Manager	• Day-to-day implementation of the provisions of the CFP in the field during construction. • Notify the E&S Expert regarding potential chance finds during construction.
Employees	• Understand and comply with archeological chance finds procedures and guidelines outlined in this procedure. • Reporting of the potential chance finds to the Site Manager.

H.5 Impact Avoidance and Mitigation

In the event of an archaeological discovery, the following actions will be implemented:

- All staff involved in land clearance and excavation activities will take the responsibility for managing archaeological protection and will be trained in these aspects by the E&S Expert.
- In case any potential chance find is encountered, all construction activities will cease immediately in the vicinity of the chance find.
- The Site Manager will be contacted immediately. The discovered site location, the characteristics of the potential archaeological material and photos will be recorded by the Site Manager, who in turn will inform the E&S Expert.
- Karaman Museum Directorate will be notified at the latest within three days after the chance find is encountered. Contact details of the Karaman Museum Directorate are given below:
  Address: İmaret Neighborhood Turgut Özal Str. No:3, 70200 Merkez/KARAMAN
  Telephone: 0 338 2131536
  E-mail: karamanmuzesi@ktb.gov.tr
- The site and its vicinity will be secured 24 hours a day against damage or loss, until inspection by the authority.

- The E&S Expert will fill up a "Chance Find Report Form" for each confirmed chance find and inform the Project Manager about the date that the construction work can resume, which is determined by the authorities concerning the conservation of the heritage.
- Further steps to be followed and proper plan to be implemented for the management of the finds (Changes in the layout, conservation, preservation, restoration and salvage) will be decided and reported in writing by the authorities in charge.
- Photographs of the potential artifacts that are likely to be encountered in the construction site are presented in the following pages to be used during the training of the relevant staff.

H.6 Verification and Monitoring

E&S Expert/s will record all cases of archaeological chance finds. He/she will fill up a "Chance Find Reporting Form" for each chance find confirmed by the authority and maintain copies in a logbook. A sample of a reporting form which can be used to record chance finds is included below. The chance find logbook will be summarized on an annual basis and records included in semi-annual monitoring reports to verify that correct management procedures have been followed. Action items will be taken in cases of non-adherence to this CFP.

H.7 Reporting

Contractor will comply with reporting requirements including chance finds defined in site-specific ESMP (contractor will develop monthly and quarterly monitoring reports and submit to 4.787,2 MWp / 4 MWe Solar (Photovoltaic) Power Plant Project of Karaman Municipality through supervision consultant; 4.787,2 MWp / 4 MWe Solar (Photovoltaic) Power Plant Project of Karaman Municipality will examine submit the reports to ILBANK quarterly (and monthly if requested by ILBANK); ILBANK will inform the World Bank by providing regular semi-annual monitoring reports.

4.787,2 MWp / 4 MWe Solar (Photovoltaic) Power Plant Project of Karaman Municipality Subproject Chance Find Reporting Form	
REGISTRATION	
Name of recorder:	
Date and time of discovery:	
Site Name:	**Coordinates**

	X	Y
Description of find:		
Photograph:		
Estimated weight and dimensions:		
CONTACT PERSON		
Name/Title/Duty:		
Date and Time:		
Contact information:		
Details of conversation:		
DECISIONS		
Any protection measures to be implemented:		
Movable or immovable: If moved, please specify the new location.		
Further actions required:		
Recommence date and time:		
Notes:		

SUBMISSION	
Name:	**Date:**

Annex İ – Change Notification Form

Change Notification Form	
Subproject Name	
Subproject Location	
Subproject Phase	☐ Pre-construction ☐ Construction ☐ Operation
Name of the Institution Notifying the Change	
Date	
Category of the Change *(please select all that apply)*	☐ Legislative Change ☐ Design Change ☐ Schedule Change due to E&S factors ☐ Project Schedule Changes due to technical, financial, legal or administrative factors ☐ Changes due to E&S issues encountered at Subproject implementation ☐ Contractor or Construction Supervision Consultant Change ☐ Other *(please specify below)*
Detailed Description of the Change(s)	
Documents Submitted with Change Notification Form	
Name of the Staff Notifying the Change	
Position of the Staff Notifying the Change	
Signature	

Change Notification Form