

**TÜRKİYE PUBLIC AND MUNICIPAL RENEWABLE ENERGY PROJECT  
(PUMREP)**

**ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)**

**3129,3 kWp / 2600,0 kWe Solar (Photovoltaic) Power Plant Project  
of Aksaray Municipality**

**March, 2024**

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**This document has been prepared by Ardea Energy Engineering & Consulting Company.**

This Environmental and Social Management Plan has been prepared by Ardea Energy Engineering and Consulting on behalf of Aksaray 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.

## Table of Content

List of Tables.....	5
List of Figures .....	6
Abbreviations .....	7
Glossary of Terms .....	9
EXECUTIVE SUMMARY.....	10
1. INTRODUCTION .....	13
1.1. Background	13
1.2. Objective of the ESMP	15
1.3. Overview of E&S Requirements Applicable to the Subproject	15
1.4. Review and Update	16
1.5. Implementation Arrangements	16
2. SUBPROJECT DESCRIPTION.....	17
2.1. Subproject Information	17
2.1.1. Subproject Location .....	19
2.1.2. Site Access Route.....	21
2.1.3. Energy Transmission Line (ETL) .....	22
2.1.4. The Temporary Sub-project Facilities .....	23
2.2. Subproject Impact Area	24
2.3. Environmental and Social Baseline	26
2.3.1. Physical Environment .....	27
2.3.2. Biodiversity .....	34
2.3.3. Socio-economic Environment.....	37
3. SUBPROJECT ACTIVITIES.....	43
3.1. Construction Phase	43
3.1.1. Construction Activities .....	43
3.1.2. Construction Facilities .....	45
3.2. Operation Phase	46
3.2.1. Operation Activities .....	46
3.2.2. Operation Facilities .....	46
3.3. Labor Requirements	47
3.4. Land Acquisition Status	47
3.5. Permitting Status	48
4. ESMP MATRIX: RISK AND IMPACTS, MITIGATION AND MONITORING.....	49

4.1. E&S Risk and Impacts of the Subproject	50
4.2. Construction Phase	50
4.2.1. Environmental Impacts and Risks.....	50
4.2.2. Social Impacts and Risks .....	53
4.3. Operation Phase	56
4.3.1. Environmental Impacts and Risks.....	56
4.3.2. Social Impacts and Risks .....	57
4.4. Construction ESMP Matrix	59
4.5. Operation ESMP Matrix	73
4.6. Monitoring and Reporting	76
4.7. List of Associated Plans and Procedures	96
4.8. Management of Change	96
5. CAPACITY DEVELOPMENT AND TRAINING.....	98
5.1. Organizational Capacity	98
5.2. Roles and Responsibilities	99
5.3. Capacity Building and Training	101
6. IMPLEMENTATION SCHEDULE AND COST ESTIMATES .....	103
6.1. Implementation Schedule	103
6.2. Cost Estimates	103
<b>List of Annexes</b> .....	104
Annex A – List of the Individuals/Organizations that Prepared or Contributed to the ESMP ....	105
Annex B – Existing Permitting Documentation.....	106
B.1 EIA Decision of the Sub-project	106
B.2 Aksaray Municipality Council Decision on the Construction of the Sub-project	107
B.3 Sub-project Land Classification Certificate	109
B.4 Agreement Between Aksaray Municipality and Meram Electricity Distribution Inc. for Unlicensed Producers' Connection to the Distribution System	110
B.5 Zoning Approval of Sub-project Area	118
B.6 Title deeds of parcels through which the energy transmission line passes	121
B.7 Consent Letter and Photographs	123
Annex C -Title Deeds of the Municipality for the Sub-project Area.....	126
Annex D – Table of Summary of the National Legislation and International Standards .....	128
Annex E – Site Photographs .....	135
Annex F – E&S Incident Notification Form Template.....	141
Annex G – E&S Incident Investigation Form Template.....	144
Annex H – Chance Find Procedure.....	147
Annex I – Change Notification Form.....	153

# List of Tables

Table 1. Relevance of the WB ESSs to the Subproject.....	15
Table 2. Key Technical Information on Subproject.....	18
Table 3. Subproject Location .....	19
Table 4. Coordinates of the Sub-project Area.....	20
Table 5. Technical Information on the ETL.....	23
Table 6. Summary of Baseline Field Studies .....	27
Table 7. Flora Species Likely to be Found in the Sub-project Area and Its Surroundings.....	35
Table 8. Population Values in Social Impact Area (2024).....	38
Table 9. Education and Health Services in the Sub-project Impact Area.....	40
Table 10. Vulnerable Groups in the Social Impact Area .....	42
Table 11. Construction Facilities .....	45
Table 12. Operation Facilities .....	46
Table 13. Labor Requirements of the Subproject .....	47
Table 14. Land Acquisition Status for the Subproject and Associated Facilities .....	47
Table 15. Status of Permits for the Construction Phase.....	48
Table 16. Key Performance Indicators for Both Construction and Operation Phases of the Subproject.....	76
Table 17. Construction Environmental and Social Monitoring Table .....	80
Table 18. Operation Environmental and Social Monitoring Table.....	88
Table 19. Plans and Procedures associated.....	96
Table 20. Roles and E&S related Responsibilities of Key Parties associated with ESMP Implementation .....	99
Table 21. Training Components for Training of Contractor Staff.....	101
Table 22. Duration of Activities.....	103
Table 23. Cost Estimation .....	103

## List of Figures

Figure 1. Map of Sub-project Location.....	20
Figure 2. Structures Along the Main Site Access Route.....	22
Figure 3. Map of ETL Route.....	23
Figure 4. Sub-project Impact Area.....	26
Figure 5. Neighborhoods within the Project Impact Area .....	26
Figure 6. Geographical location of Aksaray Province .....	28
Figure 7. Aksaray Earthquake Intensity Map .....	29
Figure 8. Solar Energy Potential Map of Aksaray Province.....	31
Figure 9. Aksaray Flood and Hydrology Analysis.....	33
Figure 10. Cultural Inventories Around the Sub-project Area.....	41
Figure 11. Organization Structure – Sub-project Implementation Unit (PIU) .....	98

## Abbreviations

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

<b>RD</b>	Regional Directorate
<b>RE</b>	Renewable Energy
<b>SDS</b>	Safety Data Sheets
<b>SEP</b>	Stakeholder Engagement Plan
<b>Subproject</b>	3129,3 kWp /2600,0 kWe Solar (Photovoltaic) Power Plant Project of Aksaray Municipality
<b>WB</b>	World Bank



## Glossary of Terms

Associated facilities	<p>Facilities or activities that are not funded as part of the Subproject and are:</p> <p>(a) directly and significantly related to the project;</p> <p>(b) carried out, or planned to be carried out, contemporaneously with the project; and</p> <p>(c) necessary for the project to be viable and would not have been constructed, expanded or conducted if the project did not exist.</p> <p>For facilities or activities to be Associated Facilities, they must meet all three criteria.</p>
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	<p>Designated terrestrial, aquatic or marine ecosystems managed under the related legislation to protect and sustain the biodiversity features, natural and associated cultural resources.</p> <p>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.</p>
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 primary objectives of the PUMREP include scaling up renewable energy use in public sector buildings and municipalities, reducing energy bills, and demonstrating leadership in the public sector's commitment to sustainable energy solutions and climate mitigation. The project to be financed under PUMREP includes the installation of a renewable energy facility with an installed capacity of 3129,3 kWP/2600,0 kWE and expected to generate 5,568 MWh of electricity annually by Aksaray Municipality. The plant will meet the energy of more than 4.640 households with 5,568M Wh of electrical energy production, save the municipality more than 11.5 million EUR in energy costs within 30 years and prevent the release of more than 1.182 tons of CO<sub>2</sub> per year into the atmosphere.

The project site is located in the district of Kurtuluş, which is a part of Aksaray province in Türkiye. The solar power plant project is a part of Türkiye's ambitious plan to increase the share of renewable energy sources in the country's energy mix. The project site is located on a 4-hectare land allocated by Aksaray Municipality. The solar panels used in the project are of high quality and have a lifespan of 30 years. The 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.

The sub-project, which is included in the Annex-2 List of the Environmental Impact Assessment Regulation which was published in the Official Gazette dated 25.11.2014 and numbered 29186, was examined and evaluated, and the measures foreseen to be taken against environmental impacts in the Project Identification Document were deemed sufficient. In addition, since it was determined that there was no need to prepare an EIA Report, the Aksaray Governorship decided that “Environmental Impact Assessment is Not Required” for the said project in accordance with Article 17 of the EIA Regulation on October 06, 2022 as seen in the Annex B.1.

The Sub-Project will be tendered as a “Design, Supply, and Installation” project. In this type of tender, the selected contractor is responsible for developing the detailed design as part of their contractual obligations. This process includes integrating ESMP measures into the design. Hence, specific layout and design details will be developed and finalized during the implementation phase

of the project. This approach ensures that ESMP measures are integrated early in the design phase, alongside the development of the specific layout and design details. This early integration of ESMP measures is advantageous as it allows for a more cohesive and thorough incorporation of environmental and social considerations from the outset of the sub-project. ESMP for the Sub-project outlines the measures to mitigate any potential environmental and social impacts throughout the sub-project lifecycle. This plan is essential for ensuring that the projects adhere to national and international environmental regulations and social safeguards.

The Sub-Project is not only pivotal in supporting Türkiye's renewable energy targets but also in setting a precedent for sustainable energy practices within the public sector. The comprehensive ESMP ensures that all environmental and social considerations are meticulously managed, paving the way for a cleaner and more sustainable future.

In addition to the environmental and social benefits, the Sub- Project is anticipated to have significant economic and operational advantages. By harnessing solar energy, the projects will enable substantial cost savings in energy expenses for public facilities, including administrative buildings, water supply and treatment facilities, and public lighting. This reduction in operational costs will allow the municipality to allocate resources more efficiently towards other essential services and infrastructure development, thereby improving the overall quality of life for residents. Furthermore, the Sub-Project will generate local employment opportunities during both the construction and operational phases, fostering economic growth and supporting community development.

The ESMP describes the measures and controls developed for the management of the potential project impacts, determines the implementation schedule of these mitigation measures, defines the roles and responsibilities for implementation of ESMP as well as reporting and monitoring requirements in line with WB requirements.

This ESMP is based on an assessment of potential impacts and risks that may arise during pre-construction, construction, operation, and decommissioning stages of the project and proposes appropriate mitigation measures to effectively address these impacts and risks. The implementation of the ESMP will be further strengthened through the use of the Stakeholder Engagement Plan (SEP). The SEP will facilitate ongoing communication and collaboration with affected communities, ensuring their concerns and inputs are considered throughout the project lifecycle. This proactive engagement will help address any environmental and social impacts promptly, enhance transparency, and build trust with stakeholders. By integrating the SEP with the ESMP, the project will ensure that all environmental and social management measures are effectively

implemented and continuously monitored, thereby promoting sustainable outcomes and mitigating potential issues.

# 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 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 Renewable Energy (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).

Aksaray Municipality (hereinafter referred to as “the **Sub-borrower**”) has applied to ILBANK for sub-financing 3129,3 kWp /2600,0 kWe Solar (Photovoltaic) Power Plant Project (herein after referred to as “the **Subproject**”) under **Component 2**. The Subproject is located in insert Aksaray, Central District, Kurtuluş Neighborhood.

ILBANK has established an **Environmental and Social Management System (ESMS)** effective on **24<sup>th</sup> 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**<sup>1</sup> 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 Subproject 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 and Consulting 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.

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<sup>1</sup> <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
- WB Group EHSGs for Electric Power Transmission and Distribution (2007)

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 Subproject 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 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

Unlicensed solar power plant project with an installed capacity of 3129.3 kWp /2600.0 KWE belonging to Aksaray Municipality located in the Kurtuluş district of Aksaray province will meet the energy of more than 4,640 households with 5.568 MWh of electrical energy production, save the municipality more than 11.5 million EUR in energy costs within 30 years and prevent the release of more than 1,182 tons of CO<sub>2</sub> per year into the atmosphere. Key technical information on the Sub- project is summarized in **Table 2**.

The economic life of the plant expires after 30 years, it will be decommissioned, and the cost of **decommissioning** is calculated for **EUR 32,000.00/MWp**. So, the overall power plant decommissioning cost will be, **EUR 103,014.00**.

The planned Sub-project will be equipped with Topcon N-type modules with 540 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.

A sub-station that will be located on 161/ 9, will play a crucial role in the overall functionality of the plant. It will be housed in a single-story building, designed to accommodate the necessary electrical equipment and control systems and allowing room for maintenance and operational activities. The building will have multiple compartments, each serving a specific function within the substation.

The substation will comprise of the following equipment:

**Transformer** which will serve to step up the voltage of the electricity generated by the solar panels. This is necessary for efficient long-distance transmission of electricity through power lines.

**Energy Transmission Line (ETL)** that connect the electricity produced by a solar power plant to the grid. A solar power plant can transport the electricity it produces to a point, but transmission

lines are required to transmit this electricity to the national grid. Detailed information about the sub-project's energy transmission lines will be given in section 2.1.3.

**Switchgear** which will consist of switches, fuses, circuit breakers, and other electrical devices that control, protect, and isolate electrical equipment within the substation. This will ensure the safety and reliability of the power distribution process.

**Monitoring and Control Systems** with monitoring and control systems that will allow operators to remotely monitor the performance of the solar power plant, manage energy production, and respond to any operational issues in real-time.

**Protection Equipment** that will be used to safeguard the equipment and personnel from electrical faults and overloads, substations are equipped with protection equipment such as relays, surge arresters, and grounding systems.

Communication Infrastructure such as SCADA (Supervisory Control and Data Acquisition) systems, which enable operators to remotely monitor and control various aspects of the power plant's operation.

A battery storage unit will be placed adjacent to the substation.

Table 2. Key Technical Information on Subproject

Information	Remarks/ Notes
<b>Technology</b>	<b>Photovoltaic</b>
<b>Installed Power</b>	3129,3 kWp
<b>Connection Power</b>	2600,0 kWe
<b>Annual Electricity Generation</b>	5.568,00 MWh
<b>Solar Panel Type</b>	Monocrystalline Monoperc
<b>Annual Carbon Emission Reduction</b>	1.182 tons
<b>Lifetime Carbon Emission Reduction</b>	35.460 tons
<b>Households Powered</b>	4.640
<b>Economic Life of the Power Plant (Operation Duration)</b>	30 years

Further information on the construction and operation phase activities and facilities is provided in the following sections in this chapter.

### 2.1.1. Subproject Location

The solar power plant will be located on a vacant land, which is a barren, mountainous area that is not suitable for grazing or agricultural use in fact, it has been designated as an afforestation area under the "Land Use Plan". The land determined for the sub-project also belongs to the municipality and provides a safe and stable basis for the development and operation of the solar power plant. Sub-project areas numbered 9, 11 and 43 parcels of block 161 , which are owned by Aksaray Municipality, were deemed suitable for building a Solar Power Plant by the Aksaray Municipality Council Decision, and the council decision was concluded positively as seen in the Annex B.2. Moreover, according to the document received from the Aksaray Provincial Directorate of Agriculture and Forestry, it was stated that the relevant real estate has the status of "land" and that no additional process is required. The relevant document is given in the Annex B.3.

Detailed information on the Subproject location is presented in Table 3.

Table 3. Subproject Location

Information	Remarks/ Notes
Province	Aksaray
District	Central District
Neighborhood/ Village	Kurtuluş Neighborhood
Block, Parcel	161/43,11,9
Land Area (ha)	40.957,00 m2
Land Use Type according to Title Deed	National Real Estate Agency – Allocation
Current Land Use	There are no activities such as grazing, animal husbandry and agriculture in the sub-project area. Mr.Bilgiç, a lifelong resident of Aksaray also Planning and Project Manager at the Aksaray Municipality, stated in response to the questions asked that the sub-project area is not used as pasture, grazing is not done in the region, and the land is defined as a mountainous, barren land.
Other Nearby Facilities and Activities	There is no precedent for large-scale farms, meat processing facilities or other activities in this terrain.

A map of the Subproject location is presented in **Figure 1**.

Figure 1. Map of Sub-project Location



Coordinates of the sub-project area are given in the Table 4.

Table 4. Coordinates of the Sub-project Area

Unit / Parcel	Coordinates (WGS84 in decimals)	
	Y	X
<b>161/43</b>	K1(38.382898391° N)	K1(34.065387249° E)
	K2(38.382780724° N)	K2(34.065344535° E)
	K3(38.382142734° N)	K3(34.065170083° E)
	K4(38.382017102° N)	K4(34.064446496° E)
	K5(38.382063164° N)	K5(34.063869454° E)
	K6(38.382302823° N)	K6(34.063935362° E)
	K7(38.382333828° N)	K7(34.063160143° E)
	K8(38.382550727° N)	K8(34.063112369° E)
	K9(38.382802539° N)	K9(34.063547343° E)
	K10(38.382914563° N)	K10(34.063606344° E)
<b>161/11</b>	K1(38.367806717° N)	K1(34.065155775° E)
	K2(38.367742469° N)	K2(34.065452563° E)
	K3(38.367578891° N)	K3(34.066048714° E)
	K4(38.367441291° N)	K4(34.066532951° E)
	K5(38.367271946° N)	K5(34.066425156° E)
	K6(38.367331575° N)	K6(34.066141124° E)
	K7(38.367093066° N)	K7(34.066077530° E)
	K8(38.367215332° N)	K8(34.065574869° E)
	K9(38.367155056° N)	K9(34.065394845° E)
	K10(38.367260001° N)	K10(34.065052526° E)
	K11(38.367461418° N)	K11(34.065082148° E)
<b>161/9</b>	K1(38.379401091° N)	K1(34.065244251° E)
	K2(38.379372044° N)	K2(34.065485390° E)
	K3(38.379700683° N)	K3(34.065607101° E)
	K4(38.379686709° N)	K4(34.065805987° E)
	K5(38.379632789° N)	K5(34.066037145° E)
	K6(38.379543098° N)	K6(34.066326967° E)
	K7(38.379492059° N)	K7(34.066607853° E)
	K8(38.379142549° N)	K8(34.066868442° E)

	K9(38.378944991° N)	K9(34.065988585° E)
	K10(38.378917168° N)	K10(34.065361371° E)
	K11(38.378895200° N)	K11(34.065259958° E)
	K12(38.378852344° N)	K12(34.065126527° E)
	K13(38.378219320° N)	K13(34.065149416° E)

K# represents the corner points of the sub-project area.

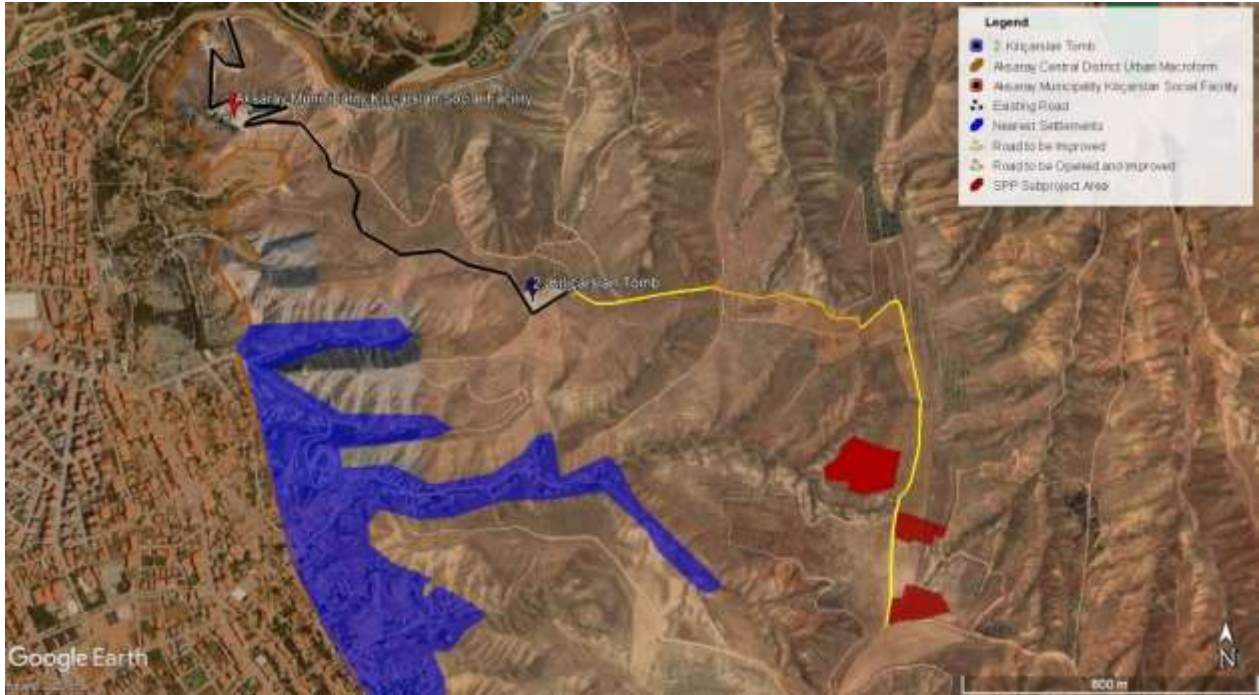
### 2.1.2. Site Access Route

According to the information received from the municipal teams, the main site access route will follow the road shown in Figure 2. The route has been planned to avoid passing through the city, ensuring minimal disruption to urban areas. While there are no residential settlements along the road, the Aksaray Municipality Kılıçarslan Social Facility and the 2nd Kılıçarslan Tomb are located along this route. The existing road extends up to the 2nd Kılıçarslan Tomb, with a width of 7 meters. Beyond this point, a new road will be opened to connect to the project site. As part of the planned improvement works, this newly opened section will be constructed and covered with a veneer coating to enhance its durability. The road to be opened and improved follows an existing cadastral road and does not pass through any private parcels, ensuring that no private land will be affected by the construction activities.

In addition, according to the information received from the municipality teams, the 2. Kılıçarslan Tomb is not open to visitors. Therefore, no traffic congestion is expected in and around the 2. Kılıçarslan Tomb. Similarly, it was stated that Aksaray Municipality Kılıçarslan Social Facility is a restaurant that is not preferred and therefore there is no traffic congestion around the social facility.

Additionally, the planned road improvement work consists of surface corrections and leveling rather than deep excavation or heavy construction. Therefore, no damage to the 2nd Kılıçarslan Tomb is anticipated. Since the tomb is not open to visitors, there will be no increased vehicle load or vibrations that could impact its structure. The project will be executed with care to ensure the preservation of the tomb and its surroundings.

Figure 2. Structures Along the Main Site Access Route



### 2.1.3. Energy Transmission Line (ETL)

The construction of the energy transmission line (ETL) to be carried within the scope of the sub-project is planned to strengthen local grid connections and make energy transmission safe. This line is designed to include both underground cables and overhead lines. There is no transformer station for connection to the national grid; instead, a root building will be used. The length of the transmission line is 2 km. The voltage level is determined as 36 kV and 10 poles (pylons) will be used to support the line. The area covered by each pole is 31 m<sup>2</sup>. There is no need for expropriation or easement rights within the scope of the sub-project, because there is no such requirement on the parcels included in the sub-project. The ETL passes through parcel 22, 23 and 109 of block 217, which belongs to the municipality which title deeds presented in the Annex B.6. Parcel 109 of block 217 are considered as pasture areas and due to the size of the parcel, it has borders close to residential areas, and there may be portions of the land used as pasture in these regions. However, it is considered that the installation of electricity poles within the sub-project scope will not pose any issues for the use of the parcel as pastureland. The plots where the energy transmission line passes and the locations where the poles will be used are shown in the Figure 3.

In this sub-project, it was discussed that the distribution system assets would be provided by the Aksaray Municipality, which is the producer, and that Meram Elektrik A.Ş. would operate and distribute them. Detailed information about the agreement is available in Annex B.4.

Technical information on the ETL is summarized in Table 5. Status of land acquisition for the ETL is described below in Section 3.4.

Table 5. Technical Information on the ETL

Information	Remarks/ Notes
<b>Status of ETL</b>	ETL will be newly construction
<b>Transformer station (for national grid connection)</b>	There is no Transformer Station
<b>Length of the route (km)</b>	2.4 km
<b>Voltage level (kV)</b>	36 kV
<b>Number of ETL towers (pylons)</b>	10
<b>Total footprint area per each ETL tower (m2)</b>	31 m <sup>2</sup>
<b>Number of parcels subject to expropriation</b>	The number of lands that need to be expropriated is none.
<b>Number of parcels subject to easement rights</b>	The number of parcels subject to easement right is none.

Figure 3. Map of ETL Route



#### 2.1.4. The Temporary Sub-project Facilities

The Temporary Sub-project Facilities are expected to be installed during construction. The site layout will be prepared as a “Design, Procurement and Installation” project during the tender phase. In other words, temporary facilities for mobilization such as office, storage area are required to be constructed on the construction site by the contractors of the sub-project after the contractor makes the final designs.

## 2.2. Subproject Impact Area

The Sub-project Impact Area refers to the geographic region where the environmental and social effects of the sub-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 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 sub-project documents to understand the work completed thus far and to identify key issues that need further evaluation in this report.

The social, economic, and infrastructure characteristics of surrounding communities were determined through interviews with the mukhtar of Kurtuluş and Laleoğlu Neighborhoods. The social baseline of the sub-project provides a comprehensive overview of local demographics, health and education services, land use/land acquisition, cultural heritage, the livelihoods of local people, the current infrastructure, and vulnerable groups within the sub-project impact area.

The environmental and social assessment will be conducted by considering all direct, indirect, and cumulative environmental and social risks and impacts of the sub-project in an integrated manner. This assessment will be based on relevant sections outlined in Table 1, in alignment with ESS1-ESS10. As a result, the sub-project's Area of Influence (AoI) has been determined. Based on the social baseline and potential sub-project impacts, the boundaries of the social AoI have also been defined. This defined impact area is illustrated in Figure 4.

The AoI is highly dependent on the type and magnitude of the sub-project's impacts. For instance, the area of influence for an emission source may be identified using a dispersion model, while the area affected by wastewater discharge depends on the characteristics of the effluent and its discharge point. Therefore, in the ESMP, the AoI is defined based on the type and scale of impacts and the impact assessment conducted. Potentially Affected Parties, especially those living in



settlements close to the sub-project area who may experience primary impacts such as odour, noise, and dust, have been identified based on detailed impact assessment results.

In defining the impact area, factors such as the presence of a main road passing within a 2 km radius and the passage of an ETL (Energy Transmission Line) through the area were considered. These factors contribute to potential dust generation, noise, and vibration impacts in the region. Construction activities and vehicle movements along the main road may lead to increased levels of airborne dust, while heavy machinery and electrical infrastructure works associated with the ETL may generate localized noise and vibration effects. Consequently, the impact area has been determined accordingly to account for these environmental and social considerations.

The Sub-project Impact Area has been determined with a 2 km radius, as shown in Figure 4 and Figure 5. This distance has been selected based on standard environmental assessment methodologies, which take into account potential impacts such as dust, noise, vibration, and visual disturbance during the construction and operation phases of solar power plants. Studies indicate that construction activities, especially land preparation, excavation, and transportation—can generate airborne dust and noise pollution that may spread up to 2 km under certain meteorological conditions. Dust emissions (PM10, PM2.5) from construction work can travel 1-5 km, depending on terrain structure, wind speed, and humidity levels. However, in most cases, a significant reduction in dust levels occurs within 2 km.<sup>2</sup> Similarly, noise levels from construction machinery, transport vehicles, and excavation equipment tend to decrease significantly within 1-2 km. Due to this reduction, a 2 km buffer zone is considered appropriate for noise and vibration impacts. Beyond this distance, noise levels from machinery and vehicle movement diminish substantially.<sup>3</sup> As illustrated in the figures, the designated impact area includes regions where construction and operational activities are expected to generate emissions and disturbances. Additionally, as depicted in Figure 5, the impact area overlaps with Kurtuluş and Laleli neighborhoods, indicating that these settlements may be subject to indirect effects from the project. Accordingly, the Environmental and Social Management Plan (ESMP) will incorporate mitigation measures tailored to minimize potential adverse impacts within this defined area.

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<sup>2</sup> USEPA (United States Environmental Protection Agency), “AP-42: Compilation of Air Pollutant Emission Factors

<sup>3</sup> World Bank Group – Environmental, Health, and Safety (EHS) Guidelines for Renewable Energy (2015)

Figure 4.Sub-project Impact Area

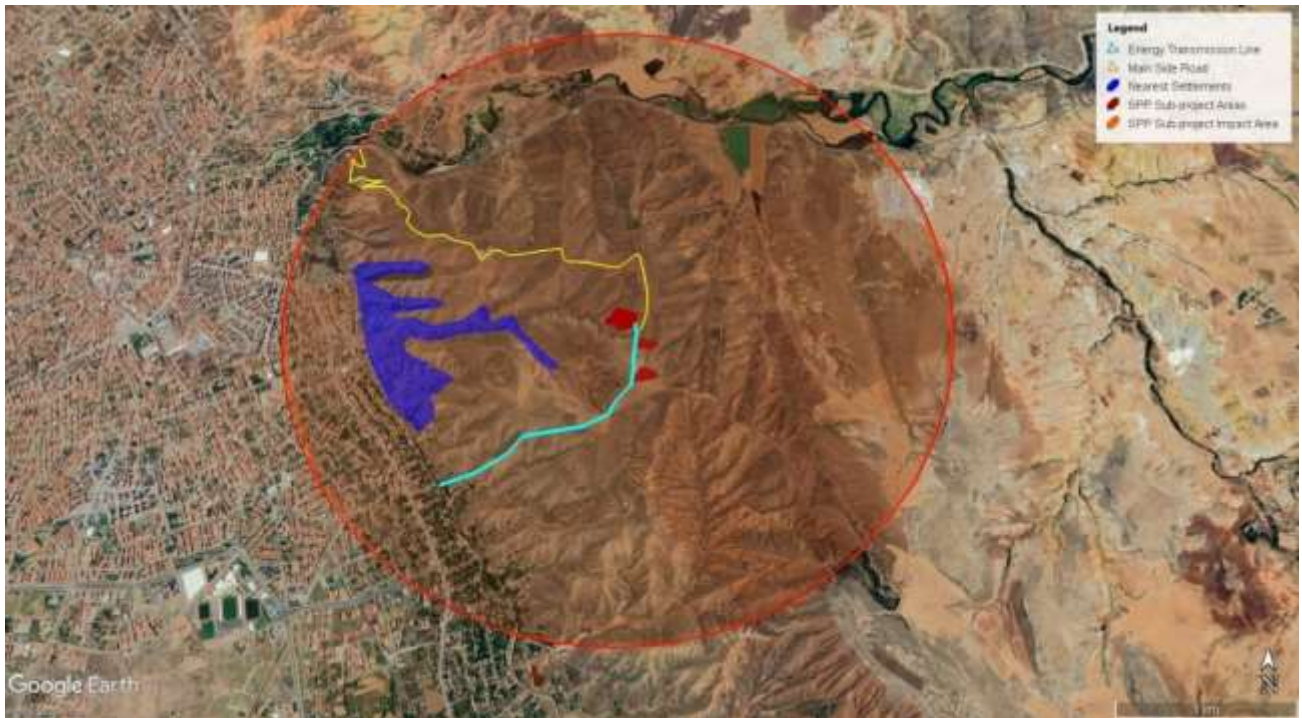
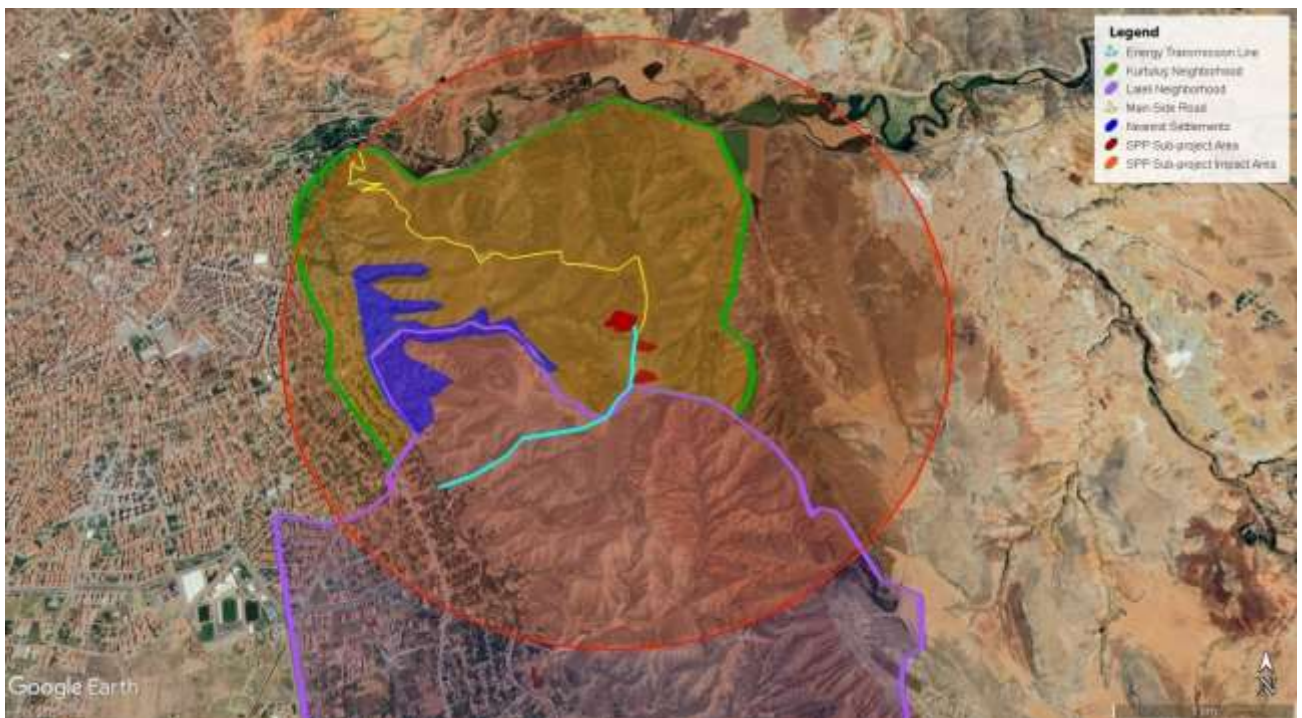


Figure 5.Neighborhoods within the Project Impact Area



### 2.3. Environmental and Social Baseline

In this study, various data collection methods were employed to characterize the environmental and social baseline conditions. Conversations with both mukhtars of Kurtuluş and Laleli Neighborhood and municipal teams 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.

Additionally, information obtained from internet research contributed to the existing data. Various official websites, academic publications, and local reports were reviewed to gain a comprehensive understanding of the environmental and social conditions within the sub-project's impact area. These sources included Aksaray Chamber of Agriculture reports, Aksaray Governorship Risk Mitigation Plan and statistics provided by local governments.

By combining these two methods, a rich and diverse dataset was created to understand the environmental and social conditions of the sub-project area. The information obtained forms the basis for the assessments conducted within the Environmental and Social Management Plan (ESMP).

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
<b>Social and Environmental Baseline</b>	04.10.2024	Mehmet Emekli (mukhtar of Kurtuluş Neighborhood) Şükrü Genç (mukhtar of Laleli Neighborhood)
	04.10.2024	Salim Bilgiç (Planning and Project Manager of Aksaray Municipality)

### 2.3.1. Physical Environment

#### 2.3.1.1. Topography

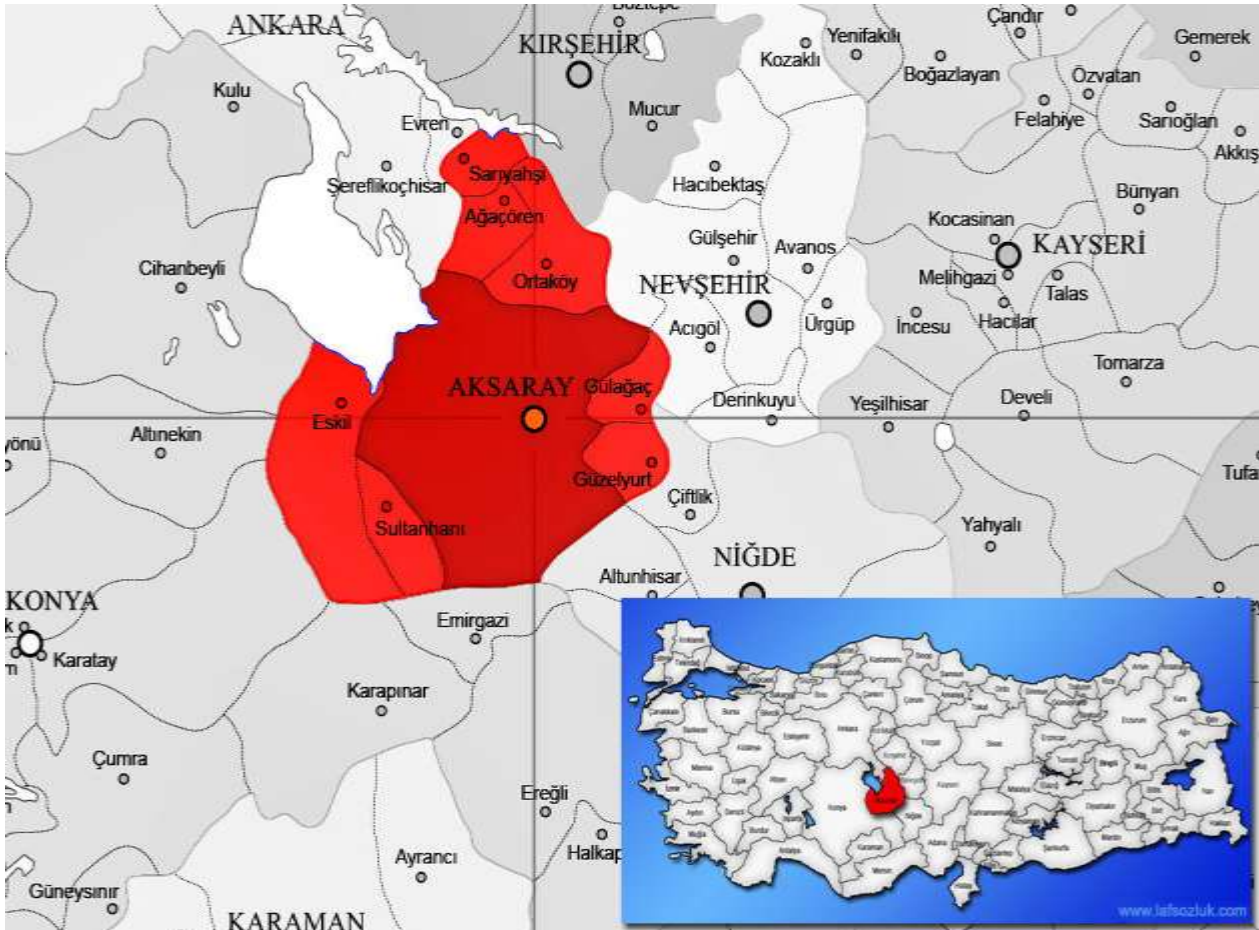
According to information received from the Aksaray Governorship Aksaray Provincial Risk Reduction Plan Report <sup>4</sup>, Aksaray province is located in the Konya section of the Central Anatolia Region and partly in the Central Kızılırmak section, southeast of Salt Lake. It is surrounded by Nevşehir to the east, Niğde to the southeast, Konya to the west, Ankara to the north and Kırşehir to the northeast seen in the Figure 6. It has a large area of 7997 km<sup>2</sup>. The landforms of the province consist of old volcanic mountains such as Hasan Mountain (3268 m), Küçük Hasan Mountain (3040 m), Melendiz Mountains and Ekecik Mountain (2137 m) and plateaus and plains formed by the lava erupting from these mountains. The Hasan Mountain volcanic twins located on the Niğde-Aksaray provincial border are the second highest volcanic mountain unit in the Central Anatolia Region after Erciyes Mountain (3917 m) with their quite typical volcanic cone structures.

Obruk Plateau is located in the west of the city center and Kızılırmak Plateau is in the north. The average height of the Obruk Plateau varies between 1000-1500 meters. The Aksaray Plain is located in the southeast of the Aksaray lands and is a continuation of the Konya Plain. A large part

<sup>4</sup> <https://aksaray.afad.gov.tr/il-planlari>

of the Konya Plain is within the borders of Aksaray. The average elevation of Aksaray above sea level is 980 meters. The western parts (Sultanhanı, Eskil and part of the city center) are plains and close to flat, while the eastern, southern and northern parts (Ağaçören, Gülağaç, Güzelyurt, Sarıyahşi and Ortaköy) have more slope and elevation due to the effect of the geological structure. In addition to this information, underground water reacts with carbon dioxide to form carbonic acid. This acid dissolves rocks that can be dissolved in water and forms underground cave and cavity systems. Over time, sinkholes are formed by the collapse of the ceiling of these caves. Since Aksaray is located in the Konya Closed Basin and has similar characteristics to areas where sinkholes are concentrated, such as the Karapınar area, Sultanhanı and Eskil districts carry a sinkhole risk. There is no potential sinkhole risk in Aksaray central district and its surroundings, and the sub-project area is 46 km away from Sultanhanı and 58 km away from Eskil district to districts that carry a sinkhole risk.

Figure 6. Geographical location of Aksaray Province



### 2.3.1.2. Geology

Aksaray has a geological structure characterized by volcanic mountains and plateaus formed by lava. The volcanic mountains in the region, such as Hasan Mountain, Melendiz Mountains and Ekecik Mountain, were formed as a result of past volcanic activities. The lava flows spreading

from these mountains formed the extensive plateaus of Aksaray and made a significant contribution to the geological structure of the region. Geological materials such as volcanic rocks, tuff and basalt, have an important place in the ground structure. This volcanic past has also determined the topographic features of the region and has been effective in the emergence of a land structure suitable for agricultural activities.

### 2.3.1.3. Tectonics and Seismicity

The most important active faults affecting Aksaray can be listed as the Tuzgözü Fault Zone, Kırşehir Region Faults, Keskin Fault, Gümüşkent Fault, Ecemiş Fault and the faults passing around Hirfanlı Dam and Eskil. On the other hand, Earthquakes in Aksaray are usually of limited magnitude and usually cause limited effects on local people and structures. However, the risk of earthquakes always exists, and local authorities play an important role in taking the necessary measures to ensure that buildings are earthquake resistant.

According to the information received within the scope of the Aksaray Governorship Provincial Risk Reduction Plan Report <sup>5</sup>, an earthquake with a minimum magnitude of 1 and a maximum magnitude of 4.4 has occurred in Aksaray since 1900. The sub-project site has not seen an earthquake around 5 km shooting. According to the information obtained from the AFAD Türkiye Earthquake Map , the sub-project area is in the 0-0.1 PGA value range.<sup>6</sup>

Figure 7. Aksaray Earthquake Intensity Map



<sup>5</sup> <https://aksaray.afad.gov.tr/il-planlari>

<sup>6</sup> <https://www.afad.gov.tr/turkiye-deprem-tehlike-haritasi>

#### 2.3.1.4. Soil and Land Composition

Aksaray province has the typical soil structure of the Central Anatolia Region, and the climate and geological structure in the region affect the soil composition. In general, the soil in Aksaray have suitable characteristics for agricultural activities. The main types of soil in Aksaray are red-nosed (red soil) and brown soil. These soils generally have high mineral content and are productive in terms of agricultural production. In addition, alluvial soils are also seen in some areas due to the effect of irrigation systems. This soil plays an important role in agricultural production due to the rich nutrients brought by rivers and streams.

According to the data of the Aksaray Chamber of Agriculture<sup>7</sup>, the socio-economic structure in the province is based on agriculture and animal husbandry; 70% of the active population earns their living from these sectors. 54.4% of the lands in the province are suitable for agriculture, while the remaining 45.6% consist of meadows, pastures, degraded forests and forest areas unsuitable for agriculture. The total size of Aksaray agricultural lands is 420,430 hectares, and cereals, legumes, industrial plants, tuber plants, fruits and vegetables are grown in these areas. 86% of the arable lands are dry and 14% are irrigated.

In the interviews with the mukhtars of Kurtuluş and Laleli Neighborhoods, it was informed that there are a small number of people engaged in animal husbandry and agriculture in Kurtuluş and Laleli neighborhoods in the social impact area, but the sub-project area is not used as pasture and grazing land. Likewise, according to the information received from the municipality teams, it was learned that the area is not used as pasture and grassland by people coming from other districts. They described the sub-project area as mountainous, barren and arid. Likewise, it was informed that there is no agriculture in the treasury land.

#### 2.3.1.5. Meteorology and Climatic Characteristics

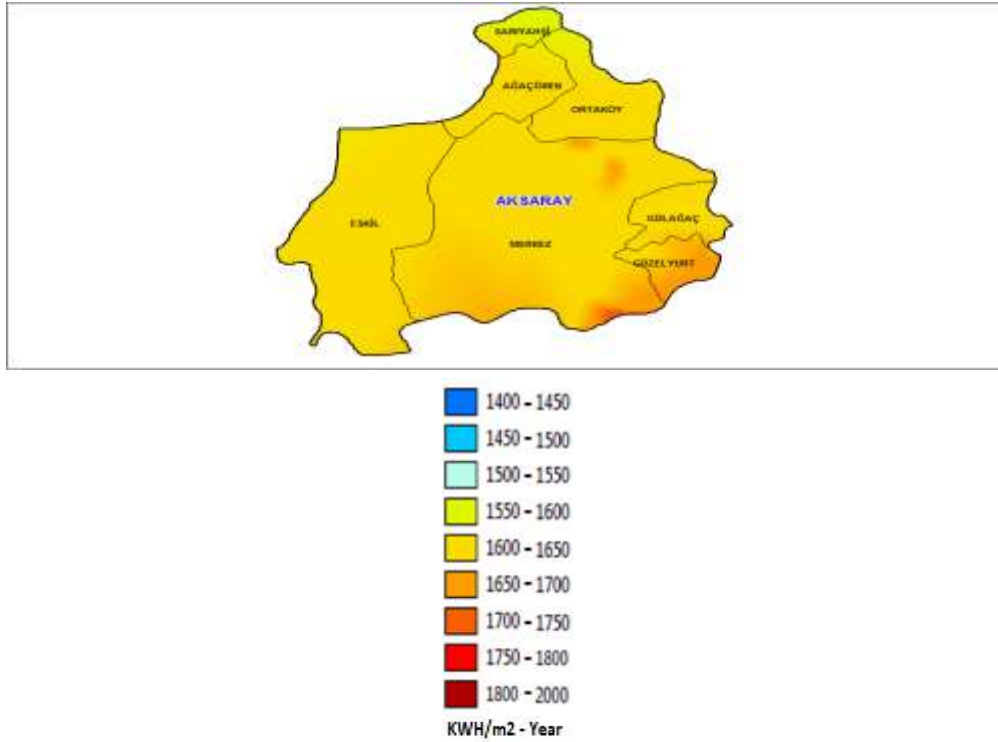
According to the information received from the Aksaray Governorship Risk Reduction Report, the climate of Aksaray, which is shaped by the weather events caused by air masses and pressure centers that are cold in winter and hot in summer, is hot and dry in summer and cold and rainy in winter. While systems coming from the north and west often cause precipitation in autumn, winter and spring, Aksaray experiences hot and dry days during the summer season due to the effect of the Basra low pressure center that is generally hot.

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<sup>7</sup> <http://aksaray.ziraatodasi.org.tr/tarim-profilii>

In addition, Solar energy potential map of Aksaray province is given in Figure 8. A minimum annual energy production estimate of 1700 kWh/m<sup>2</sup> - year is seen in the Merkez District located in the southern parts of Aksaray province. In addition, parts of Kurtuluş District, which is also located in the center part of the city, constitute the solar-rich parts of the city with an annual energy production estimate of 1500-1800 kWh/m<sup>2</sup> - year.

Figure 8. Solar Energy Potential Map of Aksaray Province



#### 2.3.1.6. Air Quality

Aksaray's air quality generally varies depending on climate conditions and human activities, with occasional increases in pollution during the winter months due to fossil fuel use and industrial activities. Factors such as solid fuel use, dust from agriculture, and traffic can affect air quality. However, the absence of large industrial areas and lower traffic congestion help maintain air quality better than in larger cities. During subproject construction, if the current values are exceeded according to the Industrial Air Pollution Control Regulation<sup>8</sup>, ESS-3 and ESS-4 protocols should be evaluated comprehensively, and appropriate measures should be taken to reduce the possible negative impact.

<sup>8</sup> <https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=13184&MevzuatTur=7&MevzuatTertip=5>

#### 2.3.1.7. Noise

The sub-project area is located in a mountainous region, with nearby settlements visible in Figure 1. During the construction phase, noise will be generated by the operation of the drilling rig and other vehicles, such as water tanks, loaders, trucks, and generators. This noise may have potential negative impacts on workers, local residents, and wildlife in the vicinity of the sub-project site. Proper mitigation measures, mentioned in Chapter 4, should be implemented to minimize these effects on the surrounding environment and community.

#### 2.3.1.8. Water Resources

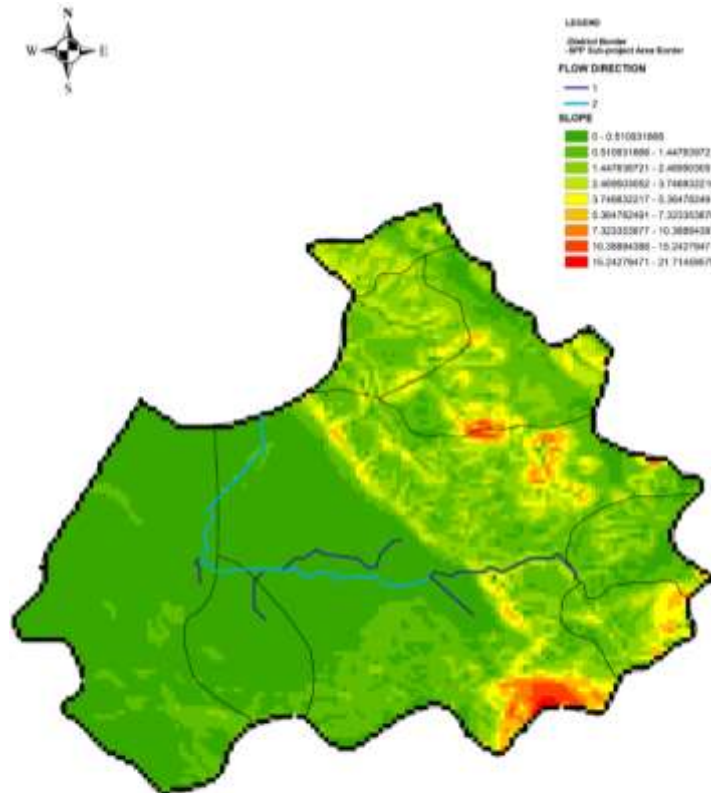
Aksaray's primary water source is the Mamasin Dam, which provides both drinking and agricultural water. According to information received from the mukhtar of the Kurtuluş neighborhood, there are no water wells or irrigation activities near the sub-project site. Moreover, there are no dry and fluid streams with seasonal flow within the area determined as the sub-project area.

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

Floodplains are large areas in which water spreads out of the normal beds of rivers, streams and streams due to heavy rainfall or excessive water flow. Floodplains are designated areas to protect residential areas and agricultural areas by preventing water from getting out of control. These areas prevent flooding by allowing floodwaters to spread and help drain water in a controlled manner. The highest average rainfall in Aksaray is 45.9 mm in December. In the analysis, the drainage was taken as 500 m and the direction of the streams in case of precipitation and which channel to connect to them was shown in the Figure 9. Considering the annual rainfall of Aksaray and the slope of the area, this risk is quite low. Warning systems must be established as a measure to prevent any flood risk or flood hazard from occurring and damaging the facility.



Figure 9. Aksaray Flood and Hydrology Analysis



Large-scale landslides, landslides or large fires are rarely seen in the central district of Aksaray. Since Aksaray generally has a flat and slightly sloping land structure, the risk of landslides and landslides is low. There is no landslide risk in the sub-project area and its surroundings. In terms of large fires, forest fires are not experienced much since Aksaray is not rich in forest areas. However, small-scale fires such as stubble fires may occur in agricultural lands in rural areas. In the city center, no large fire incidents have been recorded in residential areas. Various measures can be taken in the Solar Power Plant sub-project area against possible stubble fires. Fire protection strips should be created around the area and vegetation should be regularly cleared. Fire extinguishing equipment should be placed at strategic points and personnel should be trained in fire extinguishing. Early warning can be provided with security cameras and fire detection systems. In addition, awareness-raising activities should be carried out on stubble burning in cooperation with farmers in the area. These steps will minimize the risk of fire.

### 2.3.2. Biodiversity

For the sub-project area, information on the habitats of species that are important and/or endangered or may be endangered and species that are endemic to our country is given in the Flora and Fauna section. As a result of the literature studies conducted regarding the Aksaray province where the sub-project area is located; no biosphere reserves, biotopes, biogenetic reserve areas were encountered.

#### 2.3.2.1. Flora

The plant vegetation of Aksaray province is generally composed of herbaceous forms. Aksaray, located in the central climate zone, has a cold and continental climate. Summers are hot and dry, and winters are cold and rainy. Precipitation usually occurs in spring and winter, and the average precipitation amount in the last 40 years has been recorded as 340 mm. The low humidity rate in summer months, high temperature, and wind intensity lead to an increase in the evaporation rate. Snow melting in spring months can cause floods and landslides.

When the climate and topographic conditions in Aksaray are considered, it can be said that species from the European-Siberian and Mediterranean elements, as well as species from the Iranian-Turanian element, are dominant. In addition, the area falls into the B4 square in terms of the grid system of P.H. Davis (Flora of Turkey and The East Aegean Islands).

The plant species in the sub-project area were created by field observations and literature reviews, with the TÜBİVES Turkey Plant Data Service being utilized for flora studies. The identification of the Turkish names of the flora species was supported by the work "Türkiye Bitkileri Sözlüğü" by Prof. Dr. Turhan Baytop. The assessment of endemism and threat categories related to flora was conducted based on the "Red Data Book of Turkish Plants" prepared by Prof. T. Ekim and colleagues (2000, Türkiye Tabiatı Koruma Derneği and Van 100. Yıl University). Additionally, the relevant species were evaluated according to the annex lists of the Bern Convention on the Conservation of European Wildlife and Natural Habitats. For identifying the Turkish names of the plants, the work "Türkiye Bitkileri Listesi" (Güner, 2012) was also referenced.

No endemic or endangered species were encountered during the field studies; however, the species listed in the table below have been identified as likely to be present in the sub-project.

Table 7. Flora Species Likely to be Found in the Sub-project Area and Its Surroundings

Family/Species Name	Common Name	Habitat	Distribution in Turkey
APIACEAE (Apiaceae Family)			
<i>Anthriscus nemorosa</i> (BIEB.) SPRENGEL	Peçek	Coniferous and deciduous forests, rocky slopes, wet meadows	Turkey
<i>Astrodaucus orientalis</i> (L.) DRUDE	-	Fields, slopes, steppes, road sides	Continental Anatolia
<i>Biforia radians</i> BIEB.	-	Vacant areas, field edges, chalky places	Northern Turkey, Central and Continental Anatolia
<i>Bupleurum odontites</i> L.	-	Dry open habitats, riverbanks	Eastern Anatolia
<i>Caucalis platycarpus</i> L.	-	Fields, slopes, road sides, barren areas	Thrace and Continental Anatolia
<i>Conium maculatum</i> L.	Baldıran	Thickets and riverbanks	Turkey
<i>Echinophora tournefortii</i> JAUB. ET SPACH	Çöyürotu	Salt steppes, dry cultivated or fallow fields	Western and Eastern Anatolia
<i>Eryngium campestre</i> L. var. <i>virens</i> LINK	Boğa dikeni	Forest clearing, rocky hill sides	Turkey
<i>Falcaria vulgaris</i> BERNH.	Kazayağı	Rocky slopes, pastures, coasts, fallow fields	Anatolia
<i>Heracleum platytaenium</i> BOISS.	Tavşancıl otu	Mixed forests, rocky slopes, stream banks	K., W. and C. Anatolia
<i>Laser trilobum</i> (L.) BORKH.	Kefe kimyonu	Coniferous groves and maquis rocks next to the sea	Turkey
ASCLEPIADACEAE (Asclepiadaceae Family)			
<i>Cynanchum acutum</i> L. subsp. <i>acutum</i> L.	Sütlü sarmaşık	Sandy salt flats, river banks, fallow fields, vineyards, roadsides	Turkey
<i>Cynanchum acutum</i> L. subsp. <i>sibiricum</i> (WILLD.) RECH. FIL	-	Sandy salt flats, river banks, fallow fields, vineyards, roadsides	East Anatolia
ASTERACEAE (Asteraceae Family)			
<i>Achillea biebersteinii</i> AFAN.	Civan perçemi	Coniferous forest, steppe, dry grassland, rocky slope, fallow field	Anatolia (Western Türkiye None)
<i>Anthemis austriaca</i> JACQ.	-	Steppe, fallow field, roadside	Türkiye (excluding Northern Anatolia)
<i>Carduus pycnocephalus</i> L. subsp. <i>albidus</i> (BIEB.) KAZMI	-	Rocky area, field, wasteland, <i>Pinus brutia</i> forest	Türkiye (excluding NE Anatolia)
BORAGINACEAE (Boraginaceae Family)			

Buglossoides arvensis (L.) JOHNSTON	Tarla sedefotu	Limestone slopes, field edges	Turkey
Heliotropium europaeum L.	Siğil Otu	Orchards, fields	N. Türkiye, S. and Continental Anatolia

### 2.3.2.2. Fauna

In this section, the findings regarding the vertebrate fauna in the terrestrial ecosystems in the sub-project area were evaluated as a result of literature reviews, local people's opinions and field surveys. The identified fauna species were examined in four main groups as Amphibians, Reptiles, Birds and Mammals. Detailed information about identified fauna species and their conservation status in the Sub-project area are given.

#### **Amphibians (Amphibia)**

Amphibians are generally species dependent on water and have been identified in areas close to water sources within the sub-project area. Protecting amphibian species is important because habitat destruction can directly affect their living spaces. Based on literature and field observations, the following species may be found in this area:

- **Marsh Frog** (*Pelophylax ridibundus*)
- **Anatolian Salamander** (*Salamandra infraimmaculata*)

#### *Conservation Status:*

These species are generally listed under the Bern Convention. The Anatolian Salamander, in particular, is sensitive to habitat loss, so precautions should be taken to protect areas near water sources during the sub-project.

#### **Reptiles (Reptilia)**

Reptiles, which prefer to live in arid and semi-arid areas, have been identified in the habitats within the sub-project area. Protecting reptile habitats is among the primary measures in the sub-project. Potential species in this area include:

- **Lizard Species** (*Lacerta spp.*)
- **Tortoise Species** (*Testudo graeca* - Greek Tortoise)

#### *Conservation Status:*

The Greek Tortoise is listed as "Vulnerable" in the IUCN (International Union for Conservation of Nature) Red List and is protected under the Bern Convention. To prevent habitat disruption, construction and activity areas will be kept away from biodiversity-sensitive regions.

## **Birds (Aves)**

Birds are particularly important in terms of migration routes and breeding areas. Construction activities in the sub-project area may affect the migration routes of bird species. Possible bird species in the region include:

- **Common Buzzard** (*Buteo buteo*)
- **Lesser Kestrel** (*Falco naumanni*)
- **Yelkouan Shearwater** (*Puffinus yelkouan*)

### *Conservation Status:*

The Lesser Kestrel is a species protected under the Bern Convention and national legislation. Sub-project activities will be planned according to the migration and breeding periods of these species to minimize negative impacts on birds.

## **Mammals (Mammalia)**

Large and small mammal species living in the region may be affected by habitat conservation efforts. Based on literature reviews and field observations, the following species have been identified in the sub-project area:

- **Red Fox** (*Vulpes vulpes*)
- **European Hare** (*Lepus europaeus*)
- **Field Mouse** (*Microtus spp.*)

### *Conservation Status:*

Mammal species like the Red Fox , European Hare and Field Mouse may be affected by habitat loss during the construction phase of the sub-project. Therefore, protective measures will be taken for their living areas, and sub-project activities will be managed to have the least possible impact on these species.

### **2.3.3. Socio-economic Environment**

The socio-economic environment of the sub-project area includes various aspects of human life such as population dynamics, land ownership, employment, education, health services, and infrastructure. Analyzing these factors is essential to assess the potential impacts of the sub-project on local communities. In this section, we will examine key socio-economic indicators, including demography and population, land use and ownership, livelihood means, and the provision of basic services such as education, healthcare, and infrastructure. Additionally, attention will be given to transportation, cultural heritage (both tangible and intangible), and the needs of vulnerable and

disadvantaged groups. This comprehensive understanding will allow for a more informed evaluation of the sub-project's socio-economic impact on the region.

### 2.3.3.1. Demography and Population

According to 2024 data from TÜİK<sup>9</sup>, the population of Aksaray is 438,504 people, and the population of Aksaray Central District is 321,160 people. The surface area of the province is 7,659 km<sup>2</sup>. There are 57 people per km<sup>2</sup> in the province. The annual population growth rate in the province was 1.24%. The districts with the highest and lowest population growth rates were Sarıyahşi (12.99%) and Ortaköy (-0.65%), respectively.

As a result of the interviews conducted with the mukhtar of Kurtuluş and Laleli Neighborhoods that are in the Social Impact Area, population information of the Kurtuluş and Laleli Neighborhoods is given in the Table 8. As a result of the interviews conducted with the mukhtars, it was stated that the Kurtuluş and Laleli Neighborhoods started to receive migration from outside and that the reason for this was the renewed long building complexes and market opportunities.

Table 8. Population Values in Social Impact Area (2024)

Population	Kurtuluş Neighborhood	Laleli Neighborhood
Female Population	2.339	1.941
Male Population	2.431	1.959
Total	4.770	3.900

### 2.3.3.2. Land Ownership Status and Land Use by Affected People

The land allocated for the sub-project is under the ownership of the municipality. Currently, there are no ongoing activities or developments on the land. This area has remained largely unused, and no residential, agricultural, or commercial purposes have been observed. Furthermore, the land is not associated with any informal settlements or private ownership disputes.

The week of 10 February 2025 ,A local resident had brought their dogs (identified as Aksaray Malaklısı, a large Turkish shepherd breed) to Parcel No. 161, Block 9, within the subproject area. Upon identifying this, the municipal authorities informed the individual that the area was designated for the solar power project and unsuitable for this purpose. The discussion was conducted constructively, considering both the project requirements and animal welfare. The resident agreed to relocate the dogs after receiving detailed information and signed an official consent letter. The municipality provided logistical support to ensure a smooth and responsible

<sup>9</sup> <https://cip.tuik.gov.tr/>

relocation, balancing the project's needs with the well-being of the animals. The consent letter received from him and the relevant pictures are given in the Annex B.7 .

All relevant land title deeds and documentation confirming the municipality's ownership are included in Annex C -Title Deeds of the Municipality for the Sub-project Area of this report for reference and verification. These documents detail the exact boundaries and legal status of the land in accordance with local property laws.

#### 2.3.3.3. Employment and Means of Livelihood

The Kurtuluş and Laleli neighborhoods of the Aksaray Central district are one of the important residential areas of the city. According to information received from the Kurtuluş and Laleli Neighborhood mukhtars, the livelihoods of those living in these neighborhoods are generally shaped around trade, small-scale industry and the service sector. Due to its central location, Kurtuluş Neighborhood hosts various shops, markets and small businesses. The retail sector and local tradesmen in particular form the basis of employment opportunities in the neighborhood. Similarly, Laleli Neighborhood is a neighborhood with a high concentration of small businesses, and its residents are generally engaged in trade. In addition, in recent years, along with the general economic development of Aksaray, there has been a revival in the construction sector in these neighborhoods, which has been one of the factors that has increased employment. Although the agricultural sector is not a direct source of income for the city center, it can be an additional source of income for families connected to rural areas.

#### 2.3.3.4. Education and Health Services

According to the information received from the Kurtuluş Neighborhood mukhtar, there is one primary school and one private kindergarten in the Kurtuluş Neighborhood. There is also a Quran course in the neighborhood. Students who receive primary and secondary school education receive education in a school shared with the Bahçeli Neighborhood. This school serves both primary and secondary school students in a single building. According to the information received from the Laleli Neighborhood mukhtar, there is one school in Laleli. This school provides education at both primary and secondary school levels and also includes a kindergarten.

There is one health center in Kurtuluş Neighborhood. This health center also provides basic health services to the residents of the Kurtuluş Neighborhood and plays an important role especially in family medicine services. There is one health center in the Laleli Neighborhood. This health center provides basic health services and meets the basic health needs of the population in the Laleli Neighborhood. Moreover, Aksaray University Training and Research Hospital is 10 minutes away from Kurtuluş Neighborhood. The summarized information given Table 9.

Table 9. Education and Health Services in the Sub-project Impact Area

Neighbourhoods	Health Facility (PHC)	Number of Schools	Number of Students
<b>Kurtuluş</b>	1	1	250
<b>Laleli</b>	1	3	300

#### 2.3.3.5. Infrastructure Services

The information obtained from the mukhtars and municipal teams is as follows. The main water source of Aksaray is the Mamasın Dam, which is used for both drinking water and agricultural irrigation. There are no water wells or irrigation activities near the sub-project area. The waste management system in the region provides regular garbage collection and solid waste disposal without any problems. In addition, there is no septic tank use, and wastewater management is provided by a built-in sewage system in the region. Residents of the region use natural gas and coal for heating; except for areas far from the district center, natural gas infrastructure is available. Transportation infrastructure is also sufficient, providing easy access to the sub-project area. The construction of the solar power plant will not cause disruption of local roads or access to agricultural lands.

#### 2.3.3.6. Transportation and Traffic

The information obtained from the mukhtars and municipal teams is as follows. Aksaray Central District has a developed structure in terms of transportation infrastructure. Public transportation vehicles, minibuses and buses are provided within the city, and these services provide regular services from the city center to the surrounding neighborhoods, especially Kurtuluş and Laleli neighborhoods. Kurtuluş Neighborhood has easy transportation opportunities thanks to its proximity to the city center, while Laleli Neighborhood is also connected to a good transportation network due to its proximity to the city center. Traffic density is generally low in both neighborhoods, which prevents serious problems in vehicle traffic. In addition, the roads leading to both neighborhoods are in good condition, providing easy access for sub-projects in the region. It will be easy for workers to reach the center during the construction and operation phases, and for the personnel who go from the center to the construction site for the protection and control of the panels.



### 2.3.3.7. Cultural Heritage (Tangible and Intangible)

Kurtuluş and Laleli Neighborhoods are regions that reflect the cultural texture of the Aksaray Central district, and the neighborhoods' social and religious traditions, family-oriented activities and neighbourly relations also enrich the intangible cultural heritage in this region.

When we look at tangible cultural values, structures such as the 2. Kılıçarslan Tomb and the Somuncu Baba Tomb in Kurtuluş Neighborhood are important examples of cultural heritage. These tombs have a special importance for the local people in terms of both their historical value and spiritual meaning. In addition, cemeteries and other social structures in these Neighborhoods are also among the elements that nourish the local culture. However, there is no other structure with cultural inventory value other than these structures in Kurtuluş and Laleli Neighborhoods. The construction of the solar power plant sub-project was planned in a way that would not affect such cultural heritage elements. Information received from municipal teams indicated that the 2. Kılıçarslan Tomb, which is close to the sub-project area, is not open to visitors and that a possible traffic density is not expected.

The location of the cultural structures mentioned in relation to the sub-project area is shown in the Figure 10 below.

Figure 10. Cultural Inventories Around the Sub-project Area



### 2.3.3.8. Vulnerable and Disadvantage Groups

The reason for including vulnerable groups in the sub-project is to identify in advance the negative impacts of large-scale activities such as construction on these groups and to ensure that the

necessary measures are taken to minimize these impacts. These groups are often at greater risk of being affected by social changes and may have difficulty in advocating for themselves, participating in sub-projects or accessing services. Therefore, it is important to take into account the special needs of these groups when assessing the social impacts of sub-projects in order to ensure social justice and to ensure that the sub-project is sustainable for everyone. The reason for selecting these groups is that they are vulnerable groups likely to be encountered within the social impact area of the sub-project.

Vulnerable groups in the social impact area comprise of:

1. **Disabled individuals:** Construction activities can disrupt accessibility routes and restrict mobility. They may have special needs for access to participation activities.
2. **People over 65 years of age:** Construction activities can disrupt older people's daily routines and access to basic services, potentially causing discomfort or stress. They may have special needs for access to participation activities.
3. **Immigrants and Refugees:** Refugees may have difficult living conditions and limited resources, making them more susceptible to the impacts of the sub-project. Their legal status and lack of access to certain services can also heighten their vulnerability.
4. **People with chronic illnesses or in need of special care:** Construction-related activities (traffic, damage to infrastructure, etc.) can affect access to basic services and routines, exacerbate health problems or cause discomfort.
5. **Female head of households:** Female heads of households with special needs may have limited participation in consultations.

The table below was filled in with the information received from the Mukhtars and the Municipality.

Table 10. Vulnerable Groups in the Social Impact Area

Number	Kurtuluş Neighborhood	Laleli Neighborhood
<b>Refugees</b>	150 (5 Syrian households, 5 Uzbek households and about 10 Afghan households)	30 (No detailed information about the nationality)
<b>Disabled individuals</b>	20	40
<b>People over 65 years of age</b>	150	220
<b>People with chronic illnesses or in need of special care</b>	10	15

<b>Female head of households</b>	5 (Mukhtar's information is not clear on this matter)	20
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## 3. SUBPROJECT ACTIVITIES

### 3.1. Construction Phase

#### 3.1.1. Construction Activities

Construction activities will be completed in 8 months. 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:

Since the sub-project site is a municipal property, no excavation or land leveling activities will be required as the municipality has already prepared the site. Therefore, no topsoil stripping, excavation, or filling is planned.

- 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 case of rocky terrains.

- Construction machinery and equipment:

The machinery and equipment 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 minimal 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 sub-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 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, material storage facilities) will be dismantled and removed from the site. If subcontractor camps or temporary material storage areas are used outside the sub-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 of construction facilities are provided in Table 11.

Table 11. Construction Facilities

Type	On-site or Off-site	Temporary or Permanent	List of Facilities
<b>Construction Camp Site</b>	On-site	Temporary	<ul style="list-style-type: none"> <li>- Prefabricated worker accommodations (e.g., dormitory, kitchen, dining area)</li> <li>- Restrooms and sanitation facilities</li> <li>- Storage area for tools and equipment</li> </ul>
<b>Storage Facility</b>	On-site	Temporary	<ul style="list-style-type: none"> <li>- Storage containers for construction materials (e.g., steel, cables, electrical components)</li> <li>- Fuel storage tanks (with safety measures for hazardous materials)</li> </ul>
<b>Machinery Parking Area</b>	On-site	Temporary	-Designated area for parking heavy machinery (e.g., JCB, trucks, ramming machine)
<b>Sub-contractor Camp Site</b>	Off-site	Temporary	- Sub-contractor worker accommodations located outside the sub-project area (if applicable, e.g., nearby rented facilities)
<b>Laydown Area</b>	Off-site	Temporary	-Off-site laydown areas for storing large equipment or materials temporarily before use (if necessary)
<b>Permanent Storage Area</b>	On-site	Permanent	- Permanent storage for spare parts and maintenance tools after sub-project completion (if applicable)

A layout of the construction camp site is to be provided by DSI (Design Supply Install ) Contractor as mobilization plan.

## 3.2. Operation Phase

### 3.2.1. Operation Activities

Operation activities primarily include the regular operation and maintenance of the solar power plant. This includes periodic panel cleaning, vegetation control, site security, and equipment maintenance. Solar panel cleaning is essential for maintaining optimal energy production and will typically be done using water, sourced from tankers due to the absence of a permanent water supply on-site. No chemicals or cleaning solutions are expected to be used, as only water and cleaning equipment will be required. Cleaning activities will be scheduled periodically, depending on environmental factors such as dust accumulation. For vegetation control, mechanical methods such as mowing or trimming will be employed to prevent overgrowth that could obstruct solar panel efficiency. Herbicides are not anticipated to be used. 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. Security personnel may be present on-site, or remote surveillance could be utilized depending on sub-project needs. A control building housing the monitoring systems (SCADA) will ensure continuous oversight of energy production and system performance.

### 3.2.2. Operation Facilities

Operation facilities are described in Table 12.

Table 12. Operation Facilities

Component	Characteristics
<b>Solar panels</b>	Photovoltaic panels (5795 x 540 Watt Panels)
<b>Mounting structures</b>	93.870 Tonnes of Steel Structure
<b>Inverters, transformers, etc.</b>	26 pcs of 100 kVA Inverter and 3 pcs of 1250 kVA transformer
<b>Control room, building, system, etc.</b>	SCADA System
<b>Energy monitoring system</b>	The SCADA system will also function as the energy monitoring system, providing real-time data on energy output and system status.
<b>Grounding system</b>	A grounding system will be implemented to protect the plant's electrical equipment from electrical faults.
<b>Lightning protection system</b>	Lightning Rods
<b>Fire preparedness and firefighting facilities</b>	Fire Extinguisher
<b>Security facilities</b>	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 Subproject are provided in Table 13.

Table 13.Labor Requirements of the Subproject

Phase	Number of Workers (including contractors and subcontractors)	Planned Accommodation Arrangement
<b>Construction Workers (at peak)</b>	47 (For 1 MW sub-project area 12 worker, For 2 MW sub-project area 15 worker, and for 3 MW sub-project area 20 worker)	On-site temporary accommodation (prefabricated camp or temporary facilities for workers)
<b>Operation Workers (at peak)</b>	3	Off-site accommodation (no permanent on-site housing, workers commute as needed)

### 3.4. Land Acquisition Status

The parcels to be used within the scope of Aksaray Municipality Solar Power Plant Sub-Project are located in Kurtuluş Neighborhood and consist of lands numbered 161 Block 43, 11 and 9. These lands are owned by Aksaray Municipality and allocated to the sub-project by the National Real Estate Directorate. The sub-project site was selected in a mountainous area where no agricultural activities are carried out and in a way that would not harm the agricultural production or other activities in the surrounding area. Documents regarding the ownership and allocation of the land are also included in the annexes of the sub-project and the process was carried out in accordance with legal regulations. Moreover, There is no need for expropriation for the access road. The existing development road will be corrected and used.

The parcels 161/58, 345, through which the Energy Transmission Line passes, belong to Aksaray Municipality and there is no need for expropriation. It merges with the main network at the point where the Energy Transmission Line ends. Land acquisition status of the parcels to be used by the Subproject is summarized in Table 14.

Table 14.Land Acquisition Status for the Subproject and Associated Facilities

Subproject Component	Lot/ Parcel No.	Current Land Ownership	Type of Parcel (according to Title Deed)	Land Acquisition Method	Title Deed Area of the Parcel (m <sup>2</sup> )	Area to be Used by the Subproject (m <sup>2</sup> )	Status of Land Acquisition
<b>SPP Area</b>	<b>161/9</b>	Legal Entity (Aksaray Municipality )	Raw Soil	Municipal land	11.290	11.290	Land owned by the municipality



	<b>161/11</b>	Legal Entity ( Aksaray Municipality )	Raw Soil	Municipal land	8.267	8.267	Land owned by the municipality
	<b>161/43</b>	Legal Entity ( Aksaray Municipality )	Raw Soil	Municipal land	21.400	21.400	Land owned by the municipality
<b>ETL</b>	<b>217/22</b>	Legal Entity ( Aksaray Municipality )	Raw Soil	Municipal land	8.644	It will be identified at the final design	Land owned by the municipality
	<b>217/13</b>	Legal Entity ( Aksaray Municipality )	Raw Soil	Municipal land	2.643.480,60	It will be identified at the final design	Land owned by the municipality
	<b>217/109</b>	Legal Entity ( Aksaray Municipality )	Pasture Land	Municipal Land	6.254.956,00	It will be identified at the final design	Land owned by the municipality

### 3.5. Permitting Status

Status of permits, licenses, approvals required to be in place before start construction is presented in Table 15.

Table 15. Status of Permits for the Construction Phase

Permit, License, Approval	Status (In place, Not in place)	Remarks/ Notes
<b>EIA Decision for the Power Plant</b>	EIA is not Required Decision	The EIA Exemption Decision states that the sub-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 Introduction 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 on October 06, 2022, and the sub-project was exempted from further environmental review under Article 17 of the regulation. The relevant decision is given in the Annex B.1.
<b>Zoning plan approval</b>	All zoning approvals for the sub-project area have been obtained.	The zoning permits obtained are stated in the Annex B.5.
<b>Aksaray B. SEP Land Classification Agriculture Forestry</b>	The relevant article was taken from the Aksaray Governorship Provincial Directorate of Agriculture and Forestry.	Relevant article is given in the Annex B.3
<b>Connection Agreement with Electricity Distribution Company (Medaş)</b>	The relevant agreement has been made.	Details of the agreement are given in the Annex B.4

## **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 implementation of this ESMP is defined in Section 5.2.

Implementation arrangements for ESMP implementation are described in Section 1.5.

Contractor's E&S management plans and procedures that will support implementation of the E&S assessment documents are listed in Section 4.7.

## **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 Subproject either during the construction phase or the operational phase.

The highlighted impacts listed in 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 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 Subproject, 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 Subproject 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 Subproject on soil environment are summarized below:

- Soil compaction as a result of topsoil stripping, levelling, 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 wastes to be generated within the scope of the Subproject, and
- Erosion potential due to earthworks.

#### 4.2.1.2. Impacts on Natural Habitats

There might be minimal vegetation loss during the construction phase for each Subproject, as the area is not pastureland, and there is no cultivation. Vegetation will not be harmed except where access roads or actual construction areas need to be cleared. The cleared areas will ensure the construction work can be performed smoothly. Although impacts on vegetation are expected to be minimal, the construction works will still involve clearing of bushes, removal of topsoil, excavation, and mass haulage in some areas. These activities may expose the land to elements of erosion, such as wind and water, thus triggering the process of land degradation. The impacts that may occur due to spillage or leakage of chemicals and hazardous materials, along with poor waste/wastewater handling and disposal, could range from low significance to high significance, depending on the magnitude (e.g., amount of spillage, toxicity level of the spilled chemical). The impact of Subproject activities on ecological components is related to the size of the impact and the vulnerability of the recipient.

#### 4.2.1.3. Dust and exhaust gases emission

During construction, there will be material handling and movement of construction equipment at the Subproject sites. This will result in fugitive dust emissions, as well as exhaust emissions from heavy construction machinery. The primary emissions from the exhaust gases of vehicles will include NO<sub>2</sub>, CO, HC, SO<sub>2</sub>, and PM. Nearby houses could be impacted by these emissions, along with bio-aerosols and odors that might deteriorate air quality during waste collection and transportation.

#### 4.2.1.4. Noise Pollution

During the construction phase noise pollution may occur, necessary precautions will be taken and procedures will be followed.

#### 4.2.1.5. 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 Subproject site could be a risk of contaminating the clear river water with cement and muddy water 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 Subproject are close to natural water bodies.

#### 4.2.1.6. Waste

During the construction phase of the Subproject, 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 waste, 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 waste 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.

#### 4.2.1.7. Biodiversity

The project area is not pastureland, and there is no significant vegetation or cultivation. 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. However, some small mammal species, such as the Field Mouse (*Microtus* spp.), may experience habitat displacement due to ground disturbance and soil removal. These species will need time to relocate and adapt to new habitats.

The impact on ecological components is anticipated to be minimal and limited primarily to dust, noise, and air pollution, which will mostly affect nearby residential areas rather than any significant biodiversity. Periodic bird carcass monitoring will be conducted, and if a noticeable increase is observed, appropriate mitigation measures will be implemented.

#### 4.2.1.8. Water Resources

The Subproject 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.

## 4.2.2. Social Impacts and Risks

### 4.2.2.1. 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 handling,
- Electricity,
- Traffic related risks due to increased traffic,

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.

### 4.2.2.2. 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. 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,
- 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,

#### 4.2.2.3. Labor and Working Conditions

During the construction phase, labor and working conditions can be challenging, and several risks may arise, including:

- **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.
- **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.
- **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.
- **Migrant Workers:** In many large-scale projects, temporary or migrant workers are employed. It's important to ensure these workers are treated fairly, with access to housing, sanitation, and legal protections.

#### 4.2.2.4. 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 machinery in Subproject site may cause traffic reducing movement and flow of vehicles. This is likely to cause increased frequency and severity of accidents.

#### 4.2.2.5. 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. Any potential impacts will be managed in line with national legislation and relevant standards, though the need for extensive mitigation is less due to the lower scale of disruption from this type of project.

#### 4.2.2.6. Vulnerable groups

Certain vulnerable groups such as disabled people, children or elderly people, certain minorities and groups with livelihood dependencies in the Subproject region might be affected during the construction phase.

Subproject specific ESMP along with the SEP will consider any impacts in association with the daily living patterns of potential vulnerable groups (i.e school aged children commuting for school) that may be generated due to civil work.

#### 4.2.2.7. Cultural Heritage

The Sub-project is located near the 2nd Kılıçarslan Tomb and Somunlu Baba Tomb; however, the Sub-project is not expected to have any impact on these cultural heritage sites. The construction activities are planned to take place at a sufficient distance from these landmarks, ensuring that their structural integrity and historical value remain unaffected. Additionally, all necessary precautions will be taken during construction to avoid any indirect impacts, and the Sub-project will comply with cultural heritage protection regulations. Thus, despite their presence along the road route, the Sub-project's effect on these important sites is anticipated to be negligible.

#### 4.2.2.8. Technical and Social Infrastructure Services

The SPP Sub-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 Sub-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 Sub-project may contribute positively by improving the reliability of the regional power supply, potentially creating opportunities for new infrastructure development and enhancing local services.



## 4.3. Operation Phase

### 4.3.1. Environmental Impacts and Risks

#### 4.3.1.1. 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.

#### 4.3.1.2. Air Quality, Odor

The sub- project is expected to have a positive impact on air quality during the operation phase, as it will generate renewable energy without emitting pollutants. No significant odors are expected, and there will be no combustion-related emissions, making this phase largely neutral in terms of air quality impacts.

#### 4.3.1.3. 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.

#### 4.3.1.4. 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 sub-project does not contribute to soil or water contamination.

#### 4.3.1.5. 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 sub-project will play a role in reducing the region's carbon footprint.

#### 4.3.1.6. 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 sub-project will not have any significant impact on local water resources.

#### 4.3.1.7. Biodiversity

The operation of the Sub-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 sub-project area will remain stable, and no additional habitat loss is expected.

### 4.3.2. Social Impacts and Risks

#### 4.3.2.1. 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.

#### 4.3.2.2. 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.

#### 4.3.2.3. 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.

#### 4.3.2.4. Vulnerable groups

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

During the operation phase, specific measures will be put in place to address potential risks to vulnerable groups, such as people with disabilities, the elderly, and those in need of care. In the unlikely event of emergencies, such as a fire caused by a solar panel malfunction, contingency plans will ensure the safety and well-being of these individuals. Evacuation protocols and emergency response systems will be designed to accommodate their specific needs, ensuring their protection during any incidents.

#### 4.3.2.5. Cultural Heritage

No additional impacts on cultural heritage sites, such as the 2nd Kılıçarslan Tomb and Somunlu Baba Tomb, are expected during the operation phase. The sub-project site is located far enough to avoid any disturbance, and ongoing operations will not interfere with these culturally significant landmarks.

#### 4.3.2.6. 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 sub-project could improve local power supply reliability, enhancing the potential for new infrastructure development in the region.

#### 4.4. Construction ESMP Matrix

No	Impact Description	Receptor	Proposed Mitigation Measure	Relevant Plans/Procedures
	<b>ESS2 - Labor and Working Conditions</b>			
	<b>General OHS risks</b>			
1	<p><b>OHS - Physical Hazards: Electrical Hazards</b></p> <p>Electric Shock</p> <p>Spark and Fire Risk</p> <p>Communication and Security Systems Failure</p> <p>Equipment Failure</p>	<ul style="list-style-type: none"> <li>• Construction workforce</li> <li>• Employees</li> <li>• Community</li> </ul>	<p><u>General Measures</u></p> <ul style="list-style-type: none"> <li>• Ensure that all energized electrical devices and lines are marked with warning signs.</li> <li>• 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.</li> <li>• Ensure that all electrical cords, cables, and hand power tools are checked for frayed or exposed cords. Also, ensure that the manufacturer's recommendations for the maximum permitted operating voltage of portable hand tools are followed.</li> <li>• Ensure that all electrical equipment used in environments that are or may be wet is double insulated/grounded; use equipment with ground fault interrupter (GFI) protected circuits.</li> <li>• Ensure that high-voltage equipment ('electrical hazard') and service rooms where access is controlled or prohibited are properly labeled.</li> <li>• Ensure that "No Approach" zones are established around or under high voltage lines.</li> </ul> <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> <li>• Ensure that rapid response teams and emergency plans should be established for electrical accidents.</li> <li>• Ensure that regular electrical safety inspections should be conducted in the project area.</li> <li>• Ensure that continuous inspections should be conducted to ensure that employees use appropriate personal protective equipment (PPE).</li> </ul>	<ul style="list-style-type: none"> <li>• OHS Management Plan</li> <li>• OHS Trainings</li> <li>• Risk Assessment Document</li> <li>• LMP</li> <li>• Emergency Response Plan</li> </ul>

			Ensure that emergency communication plans should be developed in the event of electrical accidents.	
2				
	<p><b>OHS - Physical Hazards: Rotating and Moving Equipment</b></p> <p>Fall Risk and Injury Risk</p> <p>Equipment Failure</p>	<ul style="list-style-type: none"> <li>Construction workforce</li> </ul>	<p><u>General Measures</u></p> <ul style="list-style-type: none"> <li>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. <ul style="list-style-type: none"> <li>Ensure that if a machine or equipment has an exposed moving part or an exposed pinch point that could endanger the safety of any worker, the machine or equipment is equipped with and protected by a guard or other device that prevents access to the moving part or pinch point. Guards should be designed and installed in conformance with appropriate machine safety standards.</li> <li>Ensure that where possible, equipment is designed and installed to enable routine service, such as lubrication, to be carried out without removing guarding devices or mechanisms</li> </ul> </li> </ul> <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> <li>Ensure that the necessary information is provided to the employees in order to implement the project-specific optimized Emergency Response Plan in the event of a possible problem.</li> <li>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.</li> <li>Ensure that employees and coworkers receive regular training and drills on the safe use of rotating and moving equipment and emergency response procedures.</li> </ul>	<ul style="list-style-type: none"> <li>Safety procedures</li> <li>OHS Management Plan</li> <li>OHS Trainings</li> <li>Emergency Response Plan</li> </ul>
3				
	<p><b>OHS - Physical Hazards: Welding and Hot Works</b></p> <p>Fire Risk</p>	<ul style="list-style-type: none"> <li>Construction workforce</li> </ul>	<p><u>General Measures</u></p> <ul style="list-style-type: none"> <li>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 it should be informed about the usage of the equipment according to OHS.</li> </ul>	<ul style="list-style-type: none"> <li>Safety procedures</li> <li>OHS Management Plan</li> <li>Emergency Response Plan</li> </ul>

	Physical Injuries Smoke and Gas Exposure Fall or Injury Risk		<ul style="list-style-type: none"> <li>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".</li> </ul> <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> <li>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.</li> <li>Ensure that areas where welding or hot work is performed should be cleared of flammable materials (e.g. fuel, solvent, spark-ignitable materials) and should be checked regularly.</li> <li>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.</li> </ul>	
4				
	<p><b>OHS - Physical Hazards: Industrial Vehicle Driving and Site Traffic</b></p> <p>Traffic Accident</p> <p>Damage to sub-project equipment</p>	<ul style="list-style-type: none"> <li>Construction workforce</li> </ul>	<p><u>General Measures</u></p> <ul style="list-style-type: none"> <li>Make sure drivers undergo medical supervision and it should be ensured that there are no extra working hours that will cause eye strain.</li> <li>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 and drivers participating in the sub project will be informed about road safety, speed limits and traffic rules and requirements to be followed during the project.</li> </ul> <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> <li>Ensure that pedestrian paths and safe crossing points should be determined within the construction site, and the use of these paths should be encouraged.</li> <li>Ensure that traffic control personnel should be assigned to the construction site to control traffic flow during busy times.</li> </ul>	<ul style="list-style-type: none"> <li>Safety procedures</li> <li>OHS Management Plan</li> <li>LMP</li> <li>Emergency Response Plan</li> </ul>
5				

	<p><b>OHS - Physical Hazards: Ergonomics, Repetitive Motion, Manual Handling Lifting</b></p> <p>Lifting Operations OHS Risks</p>	<ul style="list-style-type: none"> <li>Construction workforce</li> </ul>	<p><u>General Measures</u></p> <ul style="list-style-type: none"> <li>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</li> <li>Ensure that tools are selected and designed that reduce force requirements and holding times and improve postures</li> <li>Ensure that rest and stretch breaks are incorporated into work processes and job rotation is in place</li> <li>Ensure quality control and maintenance programs are in place that reduce unnecessary forces and effort</li> </ul> <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> <li>Ensure that ergonomic assessment should be made for the work done in the construction site and workstations should be arranged accordingly.</li> </ul>	<ul style="list-style-type: none"> <li>Safety procedures</li> <li>OHS Management Plan</li> <li>LMP</li> <li>Emergency Response Plan</li> </ul>
6				
	<p><b>OHS - Chemical Hazards</b></p> <p>Chemical Exposure</p> <p>Fire and Explosion Risks</p> <p>Environmental Pollution</p>	<ul style="list-style-type: none"> <li>Construction workforce</li> </ul>	<p><u>General Measures</u></p> <ul style="list-style-type: none"> <li>Ensure that engineering and administrative control measures are in place to prevent or minimize the release of hazardous substances into the working environment, keeping the exposure level below internationally established or recognized limits</li> <li>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</li> <li>Ensure that employees are trained in the use of available information (such as MSDS/SDSs), safe working practices and proper use of PPE</li> </ul> <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> <li>Ensure that special procedures should be established for the safe storage and handling of chemicals, and these procedures should be taught to all employees.</li> </ul>	<ul style="list-style-type: none"> <li>Emergency Response Plan</li> <li>OHS Management Plan</li> </ul>

			<ul style="list-style-type: none"> <li>• 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.</li> </ul>	
7				
	<b>Working Conditions</b>			
	<p><b>General Working Conditions</b></p> <p>Unfair wages, inappropriate working hours, not usage of leave entitlements, and no protection against unfair treatment, Inadequate Accommodation Conditions.</p>	<ul style="list-style-type: none"> <li>• Construction workforce</li> </ul>	<p><b>General Measures</b></p> <ul style="list-style-type: none"> <li>• Ensure that all legal rights of workers are guaranteed and that obligations between employers and workers are clearly defined by fair contracts.</li> <li>• Ensure that workers toolbox trainings will be implemented on weekly basis to consist of the OHS Plan and Labor Conditions.</li> <li>• Ensure that Child labor, forced labor and unregistered labor will be prohibited as of the LMP.</li> <li>• Ensure that workers' rights to form and join unions are supported and that workers will not be discriminated against in this process.</li> <li>• Ensure that design and construction of accommodation facilities for construction workers in accordance with national and international standards (World Bank's IFC Performance Standards).</li> </ul> <p><b>Site-specific Measures</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Ensure that in cases where workers need accommodation, safe, hygienic and adequate living standards will be provided.</li> <li>• 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,</li> </ul>	<ul style="list-style-type: none"> <li>• SEP</li> <li>• Sub-contractor agreement templates</li> <li>• Employment records</li> <li>• Labor Management Plan (LMP)</li> </ul>



			showers, hand-washing stations, and wastewater disposal systems, to maintain hygiene and sanitation standards.	
8				
	<b>Gender-based violence (GBV); sexual exploitation and abuse/sexual harassment (SEA/SH) on employees; gender inequality</b>	<ul style="list-style-type: none"> <li>Construction workforce</li> </ul>	<p><b>General Measures</b></p> <ul style="list-style-type: none"> <li>Ensure that sensitization of the Managements of Construction Contractor and both Consultants on GBV and SEA/SH issues will be provided.</li> <li>Ensure that all workers will sign and be informed about the Code of Conduct.</li> </ul> <p><b>Site-specific Measures</b></p> <ul style="list-style-type: none"> <li>Ensure that a Worker’s GM will be implemented to capture GBV and SEA/SH related complaints.</li> <li>Ensure that training regarding GBV and SEA/SH will be provided to all workers.</li> <li>Ensure that awareness Meetings will be conducted with the workers.</li> </ul>	<ul style="list-style-type: none"> <li>SEP</li> </ul>
9				
<b>ESS3 - Resource Efficiency and Pollution Prevention and Management</b>				
	<b>Air Emissions and Ambient Air Quality</b>			
	Temporary nuisance on surrounding industrial facilities due to <b>dust emissions</b> during earthworks and <b>gaseous emissions</b> from vehicles and machinery	<ul style="list-style-type: none"> <li>Construction workforce</li> <li>Communities</li> <li>Flora and fauna</li> </ul>	<p><b>General Measures</b></p> <ul style="list-style-type: none"> <li>Ensure use of dust control methods, such as covers, water suppression, or increased moisture content for open storage piles, or controls,</li> <li>Ensure use of water suppression for control of loose materials on paved or unpaved road surfaces.</li> </ul> <p><b>Site-specific Measures</b></p> <ul style="list-style-type: none"> <li>Ensure that air quality standards and permits to be applied in the sub-project area should be determined and adhered to in accordance with local and national regulations.</li> <li>Exhaust systems and emission levels of the equipment and vehicles will be checked regularly,</li> </ul>	<ul style="list-style-type: none"> <li>Construction Plan and Schedule</li> <li>SEP</li> </ul>

10					
	<b>Energy Conservation</b>				
		<ul style="list-style-type: none"> <li>• Communities</li> </ul>	<p><b><u>General Measures</u></b></p> <ul style="list-style-type: none"> <li>• Ensure that Materials and equipment that comply with international energy efficiency standards should be used to minimize energy consumption.</li> </ul> <p><b><u>Site-specific Measures</u></b></p> <ul style="list-style-type: none"> <li>• Ensure that the positioning of solar panels should be optimized to receive maximum sunlight.</li> <li>• Ensure that water systems should be equipped with efficient and low-energy systems to save energy.</li> <li>• Ensure that programs should be created for the recycling and reuse of waste generated in the sub-project area, contributing to energy saving.</li> <li>• Ensure that energy efficiency should be ensured that the equipment and machinery used in the sub-project are selected.</li> </ul>		<ul style="list-style-type: none"> <li>• Construction Plan and Schedule</li> </ul>
11					
	<b>Wastewater and Ambient Water Quality</b>				
	Generation and discharge of wastewater due to construction activities	Surface water resources	<p><b><u>General Measures</u></b></p> <ul style="list-style-type: none"> <li>• Ensure water is used efficiently to reduce the amount of wastewater generation</li> <li>• 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.</li> <li>• Ensure that if septic systems are to be used for wastewater disposal and treatment, ensure that the following requirements are met: <ul style="list-style-type: none"> <li>○ Properly designed and installed in accordance with local regulations and guidance to prevent any hazard to public health or contamination of land, surface or groundwater.</li> <li>○ Well maintained to allow effective operation.</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>• Waste Management Plan</li> </ul>

			<ul style="list-style-type: none"> <li>○ Installed in areas with sufficient soil percolation for the design wastewater loading rate.</li> </ul> <p><b>Site-specific Measures</b></p> <ul style="list-style-type: none"> <li>• 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.</li> </ul>	
12				
	<b>Hazardous Materials Management</b>			
	Generation of hazardous waste during construction activities	<ul style="list-style-type: none"> <li>• Construction workforce</li> <li>• Communities</li> <li>• Flora and fauna</li> </ul>	<p><b>General Measures</b></p> <ul style="list-style-type: none"> <li>• Ensure that the types and the quantities of hazardous substances present in the sub-project should be identified. This information should be recorded and should include a summary table with the following information: <ul style="list-style-type: none"> <li>○ Name and description (e.g. composition of a mixture) of the hazardous materials</li> <li>○ Classification (e.g. code, class or division) of the hazardous materials</li> <li>○ Internationally accepted regulatory reporting threshold quantity or national equivalent of the hazardous materials</li> <li>○ Quantity of hazardous materials used per month</li> <li>○ Characteristic(s) that make(s) the materials hazardous (e.g. flammability, toxicity)</li> </ul> </li> <li>• Ensure that operators are trained on release prevention, including drills specific to hazardous materials as part of emergency preparedness response training</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Waste Management Plan</li> <li>• Emergency Response Plan</li> </ul>

			<ul style="list-style-type: none"> <li>• 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</li> </ul> <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> <li>• Ensure that specific areas should be allocated for the safe storage of hazardous chemicals and these areas should be marked with relevant signs.</li> <li>• Ensure that site-specific emergency response plans should be prepared and drills should be organized. These plans should include the necessary steps for rapid and effective response in case of chemical leaks.</li> </ul>	
13				
	<b>Waste Management</b>			
	Generation of waste during construction activities	<ul style="list-style-type: none"> <li>• Construction workforce</li> <li>• Communities</li> <li>• Flora and fauna</li> </ul>	<p><u>General Measures</u></p> <ul style="list-style-type: none"> <li>• Establish waste management priorities at the outset of activities based on an understanding of potential Environmental, Health, and Safety (EHS) risks and impacts and considering waste generation and its consequences.</li> <li>• Ensure that waste segregation and storage in temporary waste storage areas is managed according to the standards set out in the GIP and relevant legislation</li> <li>• Ensure that waste is classified and labeled according to waste codes.</li> </ul> <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> <li>• Ensure that specific areas should be created for temporary storage of waste and these areas should be marked with appropriate signs.</li> <li>• Ensure that recycling processes and facilities should be developed in cooperation with local recycling facilities and these processes should be integrated into sub-project activities.</li> <li>• Ensure that plans should be created and drills should be organized for emergency situations related to waste management. These plans should include rapid and effective response methods for situations such as leakage or waste spread.</li> </ul>	<ul style="list-style-type: none"> <li>• Waste Management Plan</li> </ul>
14				
	<b>Noise</b>			

	Noise generation due to construction	<ul style="list-style-type: none"> <li>Local community</li> <li>Sub-project Site Surroundings</li> </ul>	<p><u>General Measures</u></p> <ul style="list-style-type: none"> <li>Ensure implementation of Subproject-specific SEP in order to address any noise-related grievance and plan/take corrective actions, where necessary.</li> <li>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</li> </ul> <p><u>Site-specific Measures</u></p> <ul style="list-style-type: none"> <li>Ensure that construction schedules should be planned to reduce noise production during the early hours of the day or away from residential areas.</li> <li>Ensure that rest periods and rotation schedules should be implemented to minimize worker exposure to noise.</li> </ul>	<ul style="list-style-type: none"> <li>Stakeholder Engagement Plan</li> </ul>
15				
<b>ESS4 - Community Health and Safety</b>				
	<b>Risks related with Gender Based Violence (GBV) Sexual Exploitation Abuse/Sexual Harassment (SEA/SH)</b>			

		<ul style="list-style-type: none"> <li>• Communities</li> </ul>	<u>General Measures</u> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Ensure that workers will be required to sign and adhere to the code of conduct.</li> <li>• Ensure that regular awareness raising sessions will be conducted on site in GBV prevention and other social issues.</li> <li>• Ensure that grievance mechanism will be implemented to receive any complaints in this aspect.</li> </ul>	<ul style="list-style-type: none"> <li>• SEP</li> </ul>
16				
	<b>Traffic Safety</b>			
	<p>Road safety</p> <ul style="list-style-type: none"> <li>- Traffic density caused by heavy tonnage vehicles</li> <li>-Transportation of hazardous materials from the construction site to the relevant locations</li> </ul>	<ul style="list-style-type: none"> <li>• Local Communities</li> <li>• Road Users</li> <li>• Road Infrastructure</li> </ul>	<u>General Measures</u> <ul style="list-style-type: none"> <li>• Ensure that people who use construction equipment must have a professional qualification certificate. Improving driving skills and requiring licensing of drivers</li> <li>• Ensuring adequate transport vehicle specifications.</li> <li>• Adopting limits for trip duration and arranging driver rosters to avoid overtiredness which extra working hours that will cause eye strain should be avoided.</li> <li>• Avoiding dangerous routes and times of day to reduce the risk of accidents</li> <li>• Roads passing through settlements will be avoided whenever alternative routes are available. If Sub-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</li> <li>• Scheduling of traffic will be undertaken to avoid the peak hours on the local road network wherever practicable.</li> <li>• Develop sub-Project specific “Hazard Assessment and Management Actions” in order to identify the potential hazard involved in the</li> </ul>	<ul style="list-style-type: none"> <li>• Stakeholder Engagement Plan</li> <li>• LMP</li> </ul>

			<p>transportation of hazardous materials and actions/ preventive measures and emergency response procedures by reviewing:</p> <ul style="list-style-type: none"> <li>○ the hazard characteristics of the substances identified,</li> <li>○ The history of accidents, both by the company and its contractors, involving hazardous materials transportation</li> <li>○ The existing criteria for the safe transportation of hazardous materials, including environmental management systems used by the company and its contractors</li> </ul>	
17				
	<b>Labor Influx</b>			
	Impacts on local economy, livelihood sources and employment	<ul style="list-style-type: none"> <li>• Communities</li> </ul>	<p><u>General Measures</u></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Ensure that SEP will be implemented for regularly engaging with communities and running the grievance mechanism.</li> </ul>	<ul style="list-style-type: none"> <li>• SEP</li> </ul>
	Impacts on <b>vulnerable</b> and <b>disadvantaged</b> individuals and groups	<ul style="list-style-type: none"> <li>• Communities</li> </ul>	<p><u>General Measures</u></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Ensure that for the vulnerable and disadvantaged groups establish an accessible grievance redress mechanism where individuals can voice concerns or report issues anonymously and without fear of retaliation and provide multiple channels for reporting grievances, such as phone, email, or community representatives.</li> </ul>	<ul style="list-style-type: none"> <li>• SEP</li> </ul>
18				
	<b>ESS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources</b>			
	<b>Disturbance on biodiversity</b>	<ul style="list-style-type: none"> <li>• Flora and fauna</li> </ul>	<p><u>General Measures</u></p> <ul style="list-style-type: none"> <li>• Ensure that pre-construction surveys will be conducted to identify the presence and distribution of these species on the Sub-project site before construction begins. Habitats for these species will be designated, especially their nesting or burrowing sites. Disturbance or destruction of these habitats will be avoided during construction activities. Regular</li> </ul>	<ul style="list-style-type: none"> <li>• Construction Plan and Schedule</li> </ul>

			<p>carcass monitoring will be carried out during the construction phase to monitor potential bird collisions with solar panels or other infrastructure.</p> <ul style="list-style-type: none"> <li>• Ensure that vegetation removal will be minimized by conducting a thorough survey to avoid unnecessary clearing.</li> <li>• Ensure that natural vegetation will be restored upon completion of construction activities, enabling species to re-inhabit surrounding areas.</li> <li>• Sub-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.</li> <li>• Habitat degradation will be reduced by keeping vehicles on access roads and minimizing pedestrian traffic in intact areas.</li> <li>• Ensure that to minimize the impact on small mammal species such as the Field Mouse (<i>Microtus spp.</i>), sufficient time will be allocated during the construction phase to allow them to relocate to suitable habitats. Pre-construction surveys will help identify their burrowing sites, and gradual site preparation will be preferred to facilitate their movement.</li> </ul>	
19				
<b>ESS8 - Cultural Heritage</b>				
	<b>Impacts on cultural heritage</b>	<ul style="list-style-type: none"> <li>• Cultural heritage</li> </ul>	<p><u>General Measures</u></p> <ul style="list-style-type: none"> <li>• Ensure that chance Finds Procedure will be applied in order to ensure timely identification and appropriate management of chance findings during Sub-project implementation.</li> <li>• Ensure that Chance Finds Procedure will be made a part of toolbox trainings during construction.</li> <li>• Ensure that construction work will be stopped immediately in case of any chance finds.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Chance Finds Procedure</li> </ul>
20				
<b>ESS10 - Stakeholder Engagement and Information Disclosure</b>				
	<b>Insufficient stakeholder engagement activities and public consultation during construction</b>	<ul style="list-style-type: none"> <li>• Communities</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Ensure that preparing of documents in understandable and local language.</li> <li>• Ensure that organizing periodic information meetings.</li> </ul>	<ul style="list-style-type: none"> <li>• SEP</li> </ul>



	<ul style="list-style-type: none"><li>- Incomplete information about the social and environmental impacts of the project during construction.</li><li>- Difficulty accessing information due to language barriers</li><li>- Risk of conflicts arising</li></ul>		<ul style="list-style-type: none"><li>• Ensure that there is preparation of clear and transparent information materials.</li><li>• Establishing effective grievance mechanisms.</li></ul>	
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#### 4.5. Operation ESMP Matrix

Impact Description	Receptor	Proposed Mitigation Measure	Implementation Plans
<b>ESS2 - Labor and Working Conditions</b>			
<b>OHS - Physical Hazards: Electrical Hazards</b> - Improper Working Conditions - Work Injuries and Electricity Shock	Employees	<ul style="list-style-type: none"> <li>• Ensure that Implementing safety procedures to prevent electrical injuries.</li> <li>• Ensure that Building security fences around electrical areas.</li> <li>• Ensure that train electricians and provide insulated PPE.</li> <li>• Ensure that avoiding work during rainy periods or when there is any water accumulation in the area</li> <li>• Ensure that install danger signage at electrical hazard areas.</li> </ul>	<ul style="list-style-type: none"> <li>• Safety procedures</li> <li>• OHS Management Plan</li> <li>• Emergency Response Plan</li> </ul>
<b>OHS - Physical Hazards: Rotating and Moving Equipment</b> Lifting Operations OHS Risks	Employees	<ul style="list-style-type: none"> <li>• Ensure that safety procedures will be used for lifting operations.</li> <li>• Ensure that workers will be provided with all necessary PPE and safety materials.</li> </ul>	<ul style="list-style-type: none"> <li>• Safety procedures</li> <li>• OHS Management Plan</li> <li>• LMP Emergency Response Plan</li> </ul>
<b>General Improper Working Conditions</b>	Employees	<ul style="list-style-type: none"> <li>• Ensure that implement weekly toolbox trainings on OHS.</li> <li>• Ensure that enforce Labor Management Plan (LMP).</li> <li>• Ensure that prohibit child labor, forced labor, and unregistered labor.</li> <li>• Ensure that inform employees about their labor rights and grievance mechanisms.</li> </ul>	<ul style="list-style-type: none"> <li>• LMP</li> <li>• SEP</li> </ul>
<b>Gender-based violence (GBV); sexual exploitation and abuse/sexual harassment (SEA/SH) on employees; gender inequality</b>	Employees	<ul style="list-style-type: none"> <li>• Ensure that sensitization of the Managements Staff on GBV and SEA/SH issues will be provided.</li> <li>• Ensure that awareness Meetings will be conducted with the affected communities.</li> <li>• Ensure that training regarding GBV and SEA/SH will be provided to all workers.</li> <li>• Ensure that all workers will sign and be informed about the Code of Conduct.</li> <li>• Ensure that GM will be operated to capture GBV and SEA/SH related complaints.</li> </ul>	<ul style="list-style-type: none"> <li>• Code of Conduct</li> <li>• SEP</li> </ul>
<b>ESS3 - Resource Efficiency and Pollution Prevention and Management</b>			
<b>Air Emissions and Ambient Air Quality</b>			
Air Pollution (related to gases released into the air in the event of a possible fire or similar) Dust Generation	Communities Flora and fauna	<ul style="list-style-type: none"> <li>• Ensure that prepare fire risk assessments to identify materials that could produce harmful gases.</li> <li>• Provide fire-resistant materials where possible to reduce harmful gas emissions during fire.</li> <li>• Provide respiratory protective equipment for workers in fire hazard areas (gas masks, PPE).</li> </ul>	<ul style="list-style-type: none"> <li>• Emergency Response Plan</li> <li>• SEP</li> </ul>

Impact Description	Receptor	Proposed Mitigation Measure	Implementation Plans
Odor Emissions			
<b>Wastewater and Ambient Water Quality</b>			
Wastewater generation	Communities Flora and fauna	<ul style="list-style-type: none"> <li>• Ensure that in case of septic tank use wastewater in the septic tank will be regularly vacuumed and removed to prevent overflow, reduce the risk of contamination, and ensure the proper functioning of the system. The septic tank will be maintained regularly</li> </ul>	<ul style="list-style-type: none"> <li>• Waste Management Plan</li> </ul>
Water use	Communities Flora and fauna	<ul style="list-style-type: none"> <li>• Water will be used efficiently while cleaning the panels in order to avoid wasting water.</li> </ul>	
<b>Hazardous Materials Management</b>			
Hazardous Substances	Communities Operation Workforce Flora and fauna	<ul style="list-style-type: none"> <li>• Ensure that document and safely store hazardous materials.</li> <li>• Ensure that use secondary containment measures.</li> <li>• Ensure that dispose of hazardous waste through licensed facilities.</li> </ul>	<ul style="list-style-type: none"> <li>• Emergency Response Plan</li> <li>• Waste Management Plan</li> </ul>
<b>Waste Management</b>			
Waste generation (General)	Communities Flora and fauna	<ul style="list-style-type: none"> <li>• Waste batteries and accumulators will be collected, stored, and managed separately in compliance with relevant regulations.</li> <li>• Contracts will be established with recycling facilities or manufacturers to ensure proper disposal or recycling of obsolete equipment.</li> </ul>	<ul style="list-style-type: none"> <li>• Waste Management Plan</li> </ul>
<b>ESS4 - Community Health and Safety</b>			

Impact Description	Receptor	Proposed Mitigation Measure	Implementation Plans
<ul style="list-style-type: none"> <li>• Glare from solar panels which can be a safety hazard for drivers, pedestrians, and nearby residents, particularly if it impairs visibility or causes discomfort</li> </ul>	<ul style="list-style-type: none"> <li>• Communities</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure that Proper panel orientation will be ensured and in case of needed anti-glare coatings will be used for road safety in the vicinity of the solar plant.</li> </ul>	<ul style="list-style-type: none"> <li>• SEP</li> </ul>
<ul style="list-style-type: none"> <li>• Impacts on local economy, livelihood sources and employment</li> </ul>	<ul style="list-style-type: none"> <li>• Communities</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure that SEP will be implemented for regularly engaging with communities and running the grievance mechanism.</li> </ul>	<ul style="list-style-type: none"> <li>• SEP</li> </ul>
<ul style="list-style-type: none"> <li>• Impacts on vulnerable and disadvantaged individuals and groups</li> </ul>	<ul style="list-style-type: none"> <li>• Communities</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Ensure that 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.</li> </ul>	<ul style="list-style-type: none"> <li>• SEP</li> </ul>
<ul style="list-style-type: none"> <li>• Risks related with Gender Based Violence (GBV) Sexual Exploitation Abuse / Sexual Harassment (SEA/SH)</li> </ul>	<ul style="list-style-type: none"> <li>• Communities</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure that ethical rules and code of conduct will be provided to all employees to prevent gender-based violence, harassment, abuse, etc. in the workplace.</li> <li>• Ensure that employees will be required to sign and adhere to the code of conduct.</li> <li>• Grievance mechanism will be implemented to receive any complaints in this aspect.</li> </ul>	<ul style="list-style-type: none"> <li>• SEP</li> <li>• Code of Conduct</li> </ul>
<b>ESS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources</b>			
<ul style="list-style-type: none"> <li>• Disturbance on biodiversity</li> </ul>	<ul style="list-style-type: none"> <li>• Flora and fauna</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure that exclusion fencing around the site will be maintained. Wildlife-friendly fencing will be ensured, that allow small animals like hedgehogs to pass through safely.</li> <li>• Regular carcass monitoring will be carried out during operation phase to monitor potential bird collisions with solar panels or other infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>• SEP</li> </ul>
<b>ESS10 - Stakeholder Engagement and Information Disclosure</b>			
<ul style="list-style-type: none"> <li>• Insufficient stakeholder engagement activities and public consultation during operation.</li> </ul>	<ul style="list-style-type: none"> <li>• Communities</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure that if necessary interaction / communication will be established with communities, and adequate timing will be planned for engagement activities.</li> </ul>	<ul style="list-style-type: none"> <li>• SEP</li> </ul>

## 4.6. 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 16.

Table 16. Key Performance Indicators for Both Construction and Operation Phases of the Subproject

Monitoring Focus	KPI
<b>Documentation</b>	
Following ESMP Project specific plans will be developed and be in place.	Full compliance with Subproject’s ESMP
<b>Air Quality</b>	
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

Monitoring Focus	KPI
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
<b>Noise</b>	
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
<b>Water / Wastewater</b>	
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
Groundwater levels of the community/private wells	No significant adverse impact
Wastewater and Water loss records in network	Sustainable low wastewater and water loss records
<b>Waste</b>	
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
<b>Soil Quality</b>	
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
<b>Traffic</b>	
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
<b>Health, Safety and Environment</b>	
% of scheduled HSE Inspection	>90
% of attendance at HSE meetings	>90
% of closing of NCRs	100
Reporting safe observations	100%
Reporting unsafe observations	100%
Reporting near misses	100%
Reporting number of incidents	100%

Monitoring Focus	KPI
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
<b>Labor and Working Conditions</b>	
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
<b>Community Health and Safety</b>	
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
Access to the Construction Site - Security Fence/ Protection Tape	Zero Number of unauthorized accesses to the Subproject area
<b>Trainings</b>	
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
<b>Disclosure</b>	
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
<b>Vulnerable groups:</b>	
Incidents, Grievances, Toolbox talks and trainings, Information/ disclosure	All grievances closed-out within the target timeframe Sufficient information provided to the VGs
<b>Grievance mechanism</b>	
Grievance Records, GM disclosure	All grievances closed-out within the target timeframe GM disclosure to the PAPs, stakeholders GM disclosure at Subproject web site
<b>Cultural Heritage</b>	

Monitoring Focus	KPI
Existence of a Chance Find	Zero Grievance Records



Table 17. 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	<ul style="list-style-type: none"> <li>• Employment records</li> <li>• Induction Training Plan</li> <li>• Accommodation conditions</li> </ul>	Sub-project office at the site Camp site Accommodation area and rooms	<ul style="list-style-type: none"> <li>• Document review</li> <li>• Visual observations</li> <li>• Interviews with workers</li> </ul>	Monthly	Reference: Good Practices WB ESS 2 National Labor Legislation Guidance by IFC and EBRD Workers' Accommodation: Processes and Standards	Aksaray 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
	<ul style="list-style-type: none"> <li>• Workers GM</li> </ul>	Sub-project office Camp site Accommodation	<ul style="list-style-type: none"> <li>• Grievance records</li> <li>• Interviews with workers</li> </ul>	Daily	Reference: WB ESS2	Aksaray 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 <ul style="list-style-type: none"> <li>• General OHS Risks</li> <li>• Lifting risks</li> <li>• Electricity Shock Risks</li> <li>• Fire risks</li> <li>• Manual handling risks</li> </ul>	<ul style="list-style-type: none"> <li>• PPE usage</li> <li>• OHS Trainings</li> </ul>	Sub-project office at the site Camp site	<ul style="list-style-type: none"> <li>• Document review for safety procedures</li> <li>• Visual observations to check measures are in place</li> <li>• Accident records</li> <li>• Grievance records</li> </ul>	Daily	<u>Reference:</u> National OHS Legislation WB ESS2	Aksaray 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

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)
Waste management <ul style="list-style-type: none"> <li>• Waste Storage Area</li> <li>• Waste management practices</li> </ul>	<ul style="list-style-type: none"> <li>• Adequate storage conditions</li> <li>• Leakages</li> </ul>	Waste storage area	Visual observations Waste records	Daily visual observations Monthly records control	<u>Threshold:</u> Storage areas must comply with ISO 14001 standards. Separate hazardous and non-hazardous waste bins clearly marked and 100% availability. <u>Reference:</u> WB ESS 3 Compliance with the Turkish Environmental Law (2872) and Waste Management Regulation (2015).	Aksaray Municipality Supervision Consultant Contractor	No overfill of bins Amount of waste stored Amount of waste collected	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)
Soil protection from spills and leakages of oil and chemicals	<ul style="list-style-type: none"> <li>• Oil stains on soil</li> <li>• Chemical spills on soil</li> <li>• Conditions of storage area for hazardous/toxic and wastes substances and wastes</li> <li>• Stormwater management system</li> </ul>	<p>Material storage locations and waste storage area within Sub-project site</p> <p>Car park area</p>	Visual observations	Daily	<p><u>Reference:</u></p> <p>WB ESS 3</p> <p>National Legislation</p>	<p>Aksaray Municipality</p> <p>Supervision Consultant</p> <p>Contractor</p>	Number of accidents and incidents of spills and leakages reported	Included in the subproject budget
Dust from construction activities and vehicle traffic	<ul style="list-style-type: none"> <li>• Grievances of disturbance from dust and emissions</li> <li>• Problems with vehicle exhaust systems and emission levels</li> </ul>	<p>Sub-project Site</p> <p>Car park area</p>	<ul style="list-style-type: none"> <li>• Grievance records</li> <li>• Visual observations for mitigation measures</li> <li>• In the event of excessive smoke from the exhaust, an immediate inspection should be carried out as the vehicle's emission levels may</li> </ul>	<p>Daily visual observations</p> <p>Routine vehicle inspection in three months</p>	<p><u>Threshold:</u></p> <p>Dust levels below PM10 = 50 µg/m<sup>3</sup> over 24 hours (as per WHO Air Quality Guidelines).</p> <p><u>Reference:</u></p> <p>WB ESS 3</p> <p>National Legislation</p>	<p>Aksaray Municipality</p> <p>Supervision Consultant</p> <p>Contractor</p>	<p>Number of grievances received</p> <p>Number of grievances resolved</p>	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)
			exceed legal limits.					
Wastewater pollution	<ul style="list-style-type: none"> <li>Wastewater</li> </ul>	Septic tanks	<ul style="list-style-type: none"> <li>By recording wastewater receipts (sewage vacuum truck transportation receipt).</li> </ul>	Monthly	<u>Reference:</u> Urban Wastewater Treatment Regulation	Aksaray Municipality Supervision Consultant Contractor		Included in the subproject budget
Noise from site machinery	<ul style="list-style-type: none"> <li>Grievances of disturbance from noise generation from site machinery</li> </ul>	Sub-project Site	<ul style="list-style-type: none"> <li>Grievance records</li> <li>Visual observations for mitigation measures</li> </ul>	Daily	<u>Threshold:</u> Noise levels not exceeding 85 dB(A) at worker locations (as per OSHA). At community boundaries: 55 dB(A) during the day and 45 dB(A) at night (WHO guidelines).	Aksaray Municipality Supervision Consultant Contractor		Included in the subproject budget
Hazardous materials	<ul style="list-style-type: none"> <li>Labelling</li> <li>Storage conditions</li> </ul>	<ul style="list-style-type: none"> <li>Hazardous material storage area</li> <li>Hazardous waste storage area</li> </ul>	<ul style="list-style-type: none"> <li>Visual observations for mitigation measures</li> </ul>	Daily	<u>Reference:</u> WB ESS 3 National Legislation	Aksaray Municipality Supervision Consultant Contractor		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	<ul style="list-style-type: none"> <li>• Approvals from government authorities</li> <li>• Traffic management plan</li> <li>• Damage on roads</li> <li>• Emergency Response Plan</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Sub-project office at the site</li> <li>• Along the transportation routes</li> <li>• Grievance records</li> </ul>	<ul style="list-style-type: none"> <li>• Grievance records review</li> <li>• Visual observations</li> <li>• Interviews with mukhtar of Area of influence</li> </ul>	Daily	<p><u>Threshold:</u> Traffic accidents involving project vehicles not exceeding 1 incident per year.</p> <p><u>Reference:</u> Compliance with IFC Traffic Safety Guidelines WB ESS 4</p>	Aksaray Municipality Supervision Consultant Contractor	<ul style="list-style-type: none"> <li>Number of incidents/accidents</li> <li>Number of grievances received</li> <li>Number of grievances resolved</li> <li>Zero damage on roads</li> </ul>	Included in the subproject budget
Risks related with Gender Based Violence (GBV) Sexual Exploitation Abuse / Sexual Harassment (SEA/SH)	<ul style="list-style-type: none"> <li>• Accommodation conditions</li> <li>• Ethical rules and public communication training</li> <li>• Workers code of conduct.</li> <li>• Grievance mechanism</li> </ul>	<ul style="list-style-type: none"> <li>• Area of Influence Neighborhoods</li> <li>• Camp site</li> </ul>	<ul style="list-style-type: none"> <li>• Grievance records review</li> <li>• Code of Conduct</li> <li>• Training Plan to include GBV and SEA/SH</li> <li>• Visual observations</li> <li>• Interviews with</li> </ul>	Daily	<p><u>Threshold:</u> 0 reported and unresolved GBV/SEA/SH incidents.</p> <p><u>Reference:</u> WB ESS 4</p>	Aksaray Municipality Supervision Consultant Contractor	<ul style="list-style-type: none"> <li>Number of incidences reported</li> <li>Number of incidences resolved</li> <li>Number of grievances</li> </ul>	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)
			Mukhtars of Area of influence					
Vulnerable and disadvantaged individuals and groups	<ul style="list-style-type: none"> <li>Recruitment policy</li> <li>CSR</li> </ul>	<ul style="list-style-type: none"> <li>Camp site</li> <li>Nearby settlements</li> </ul>	<ul style="list-style-type: none"> <li>Employment records</li> <li>Visual observations</li> <li>Interviews with Mukhtars of Area of influence</li> </ul>	Monthly	<u>Threshold:</u> 100% inclusion in community consultations and project benefits as per WB ESS1 and ESS7.  <u>Reference:</u> WB ESS 4	Aksaray Municipality  Supervision Consultant  Contractor	Number of grievances received  Number of grievances resolved	Included in the subproject budget
Biodiversity disturbance	<ul style="list-style-type: none"> <li>Animal carcasses in the nearby surroundings</li> <li>Vegetation cover</li> <li>Follow-up surveys during to detect any burrows, nests and other signs of mammal activity</li> </ul>	<ul style="list-style-type: none"> <li>Sub-project Site and environs</li> </ul>	<ul style="list-style-type: none"> <li>Visual observations by conducting systematic visual inspections of the site to identify signs of burrows and nests such as burrow entrances, tracks, droppings,</li> </ul>	Bi-monthly	<u>Threshold:</u> No clearance of critical habitats or protected species as per IUCN Red List.  <u>Reference:</u> WB ESS 6	Aksaray Municipality  Supervision Consultant  Contractor	Number and variety of mammal species observed around the sub-project site   Number of burrows/nests detected and identified	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)
			and other signs of mammalian activity.				Number of reported incidents where construction activities disturbed mammal habitats	
Cultural Heritage	<ul style="list-style-type: none"> <li>• Chance Finds procedure</li> </ul>	<ul style="list-style-type: none"> <li>• Sub-project site office</li> </ul>	<ul style="list-style-type: none"> <li>• Document review</li> </ul>	Once-off	<u>Threshold:</u> 0% disturbance to known cultural heritage sites. <u>Reference:</u> WB ESS 8 National Legislation	Aksaray Municipality Supervision Consultant Contractor	Number of chance finds and records	Included in the subproject budget



Table 18. 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	<ul style="list-style-type: none"> <li>• Employment records</li> <li>• Induction Training Plan</li> <li>• Employee GM</li> </ul>	Sub-project office at the site	<ul style="list-style-type: none"> <li>• Document review</li> <li>• Visual observations</li> <li>• Grievance records</li> <li>• Interviews with employees</li> </ul>	Monthly	<p><u>Threshold:</u> 100% compliance with national labor laws and international OHS standards.</p> <p><u>Reference:</u> National Labor Legislation Guidance by IFC and EBRD Workers' Accommodation: Processes and Standards WB ESS 2</p>	Aksaray Municipality	<p>Number of grievances received</p> <p>Number of grievances resolved</p> <p>No non-compliance reported</p>	Included in the subproject budget
Working Conditions	<ul style="list-style-type: none"> <li>• General OHS Risks</li> <li>• Lifting risks</li> </ul>	Sub-project office at the site	<ul style="list-style-type: none"> <li>• Document review for safety procedures</li> <li>• Visual observations to check measures are in place</li> <li>• Accident records</li> </ul>	Daily	<p><u>Threshold:</u> Minimum 90% satisfaction in worker feedback surveys.</p>	Aksaray Municipality	<p>% of scheduled HSE Inspection</p> <p>% of attendance at HSE meetings</p>	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)
<ul style="list-style-type: none"> <li>• Electricity Shock Risks</li> <li>• Fire risks</li> <li>• Manual handling risks.</li> </ul>			Grievance records		Zero unresolved safety incidents  <u>Reference:</u> National OHS Legislation  WB ESS 2		% 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 Results of scheduled audits HSE training carried out to training matrix	

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)
Waste management Waste Storage Area Waste management practices	<ul style="list-style-type: none"> <li>• Adequate storage conditions</li> <li>• Leakages</li> </ul>	Waste storage area	<ul style="list-style-type: none"> <li>• Visual observations</li> <li>• Waste records</li> </ul>	Daily visual observations Monthly records control	<u>Reference:</u> National Waste Legislation WB ESS 3	Aksaray 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	<ul style="list-style-type: none"> <li>• Oil stains on soil</li> <li>• Chemical spills on soil</li> <li>• Conditions of storage area for hazardous/toxic and wastes substances and wastes</li> <li>• Stormwater management system</li> </ul>	Material storage locations and waste storage area within Sub-project site Car park area	<ul style="list-style-type: none"> <li>• Visual observations</li> </ul>	Daily	<u>Reference:</u> WB ESS3 Regulation on the Control of Soil Pollution and Lands Contaminated by Point Sources	Aksaray Municipality	Number of accidents and incidents of spills and leakages reported	Included in the subproject budget
Dust from construction activities and vehicle traffic	<ul style="list-style-type: none"> <li>• Grievances of disturbance from dust and emissions</li> </ul>	Sub-project Site	<ul style="list-style-type: none"> <li>• Grievance records</li> <li>• Visual observations for mitigation measures</li> </ul>	Daily	<u>Threshold:</u> PM10: $\leq 50$ $\mu\text{g}/\text{m}^3$ (24-hour average). PM2.5: $\leq 25$ $\mu\text{g}/\text{m}^3$ (24-hour average).	Aksaray 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)
					Water spraying frequency based on weather and dust levels. <u>Reference:</u> WB ESS3 Exhaust Gas Emission Control Regulation			
Wastewater pollution	• Wastewater	Septic tanks	• By recording wastewater receipts (sewage vacuum truck transportation receipt).	Daily	<u>Threshold:</u> Discharge quality parameters meet the national regulation (e.g., BOD ≤ 30 mg/L, COD ≤ 50 mg/L). No untreated wastewater discharged into natural water bodies.	Aksaray Municipality	No leakages No overfilling Regular maintenance No odor	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)
					<u>Reference:</u> Urban Wastewater Treatment Regulation IFC General EHS Guideline WB ESS3			
Noise from site machinery	<ul style="list-style-type: none"> <li>Grievances of disturbance from noise generation from site machinery</li> </ul>	Sub-project Site	<ul style="list-style-type: none"> <li>Grievance records</li> </ul>	Daily	<u>Threshold:</u> Noise levels at sensitive receptors: ≤55 dB(A) during the day. ≤45 dB(A) during the night. Worker exposure: ≤85 dB(A) with appropriate PPE. <u>Reference:</u> WB ESS3	Aksaray 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)
					Regulation on the Environmental Noise Emissions Caused by Equipment Used Outdoors			
Hazardous materials	<ul style="list-style-type: none"> <li>• Labelling</li> <li>• Storage conditions</li> </ul>	<ul style="list-style-type: none"> <li>• Hazardous material storage area</li> <li>• Hazardous waste storage area</li> </ul>	<ul style="list-style-type: none"> <li>• Visual observations for mitigation measures</li> </ul>	Daily	<u>Reference:</u> WB ESS3	Aksaray Municipality	Number of spills and leakages reported	Included in the subproject budget
Community roads Traffic risks	<ul style="list-style-type: none"> <li>• Approvals from government authorities</li> <li>• Traffic management plan</li> <li>• Emergency Response Plan</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Sub-project office at the site</li> <li>• Along the transportation routes</li> <li>• Public's Grievance records</li> </ul>	<ul style="list-style-type: none"> <li>• Grievance records review</li> <li>• Visual observations</li> <li>• Interviews with mukhtars of Area of influence</li> </ul>	Daily at the sub-project construction areas	<u>Threshold:</u> -Traffic incidents involving project vehicles: $\leq 1/\text{year}$ . <u>Reference:</u> WB ESS4 National legislation	Aksaray Municipality	Number of grievances received  Number of grievances resolved	Included in the subproject budget
Risks related with Gender Based Violence	<ul style="list-style-type: none"> <li>• Ethical rules and public communication training</li> </ul>	<ul style="list-style-type: none"> <li>• Neighborhoods in the social</li> </ul>	<ul style="list-style-type: none"> <li>• Grievance records review</li> <li>• Code of Conduct</li> </ul>	Daily	<u>Threshold:</u> Functional grievance redress	Aksaray 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)
(GBV) Sexual Exploitation Abuse / Sexual Harassment (SEA/SH)	<ul style="list-style-type: none"> <li>Workers code of conduct.</li> <li>Awareness on GBV</li> <li>Grievance mechanism</li> </ul>	<ul style="list-style-type: none"> <li>impact zone and environs</li> <li>Camp site</li> </ul>	<ul style="list-style-type: none"> <li>Training Plan to include GBV and SEA/SH</li> <li>Visual observations</li> <li>Interviews with Mukhtars of Area of influence</li> </ul>		mechanism for GBV cases with resolution within 30 days <u>Reference:</u> WB ESS4		Number of grievances resolved	
Vulnerable and disadvantaged individuals and groups	<ul style="list-style-type: none"> <li>Recruitment policy</li> <li>CSR</li> </ul>	<ul style="list-style-type: none"> <li>Nearby settlements</li> </ul>	<ul style="list-style-type: none"> <li>Employment records</li> <li>Visual observations</li> <li>Interviews with Mukhtars of Area of influence</li> </ul>	Monthly	<u>Reference:</u> WB ESS4	Aksaray Municipality	Number of grievances received Number of grievances resolved	Included in the subproject budget
Biodiversity disturbance	<ul style="list-style-type: none"> <li>Animal carcasses in the nearby surroundings</li> <li>Vegetation cover</li> <li>follow-up surveys during to detect any burrows, nests and other signs of mammal activity</li> </ul>	<ul style="list-style-type: none"> <li>Sub-project Site and environs</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>	Semi-annually	<u>Reference:</u> WB ESS6 Regulation on Protection of Wildlife and Wildlife Development Area	Aksaray Municipality	Number and variety of mammal species observed around the sub-project site, including the count of bird carcasses found. Number of burrows/nests detected and identified	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)
							Number of reported incidents where operation activities disturbed mammal habitats	



#### 4.7. List of Associated Plans and Procedures

The E&S management plans and procedures to be prepared by Contractor/s are listed in Table 19.

Table 19. 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	Both Construction and Operation phase
Energy Efficiency	Both Construction and Operation Phase
Stakeholder Engagement Plan	Both Construction and Operation phase
Emergency Response Plan	Both Construction and Operation phase
Safety Procedures	Construction Only
Labor Management Plan (LMP)	Both Construction and Operation phase
Construction Plan and Schedule	Construction Only
Occupational Health and Safety Management Plan	Both Construction and Operation phase
Chance Find Procedure	Construction only
Induction regarding Code of Conduct, GBV & SEA/SH, Grievance Mechanism, EHS and WB Requirements, and	Both Construction and Operation phase
Safe Driving	Construction Only

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

#### 4.8. 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 I). 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.)

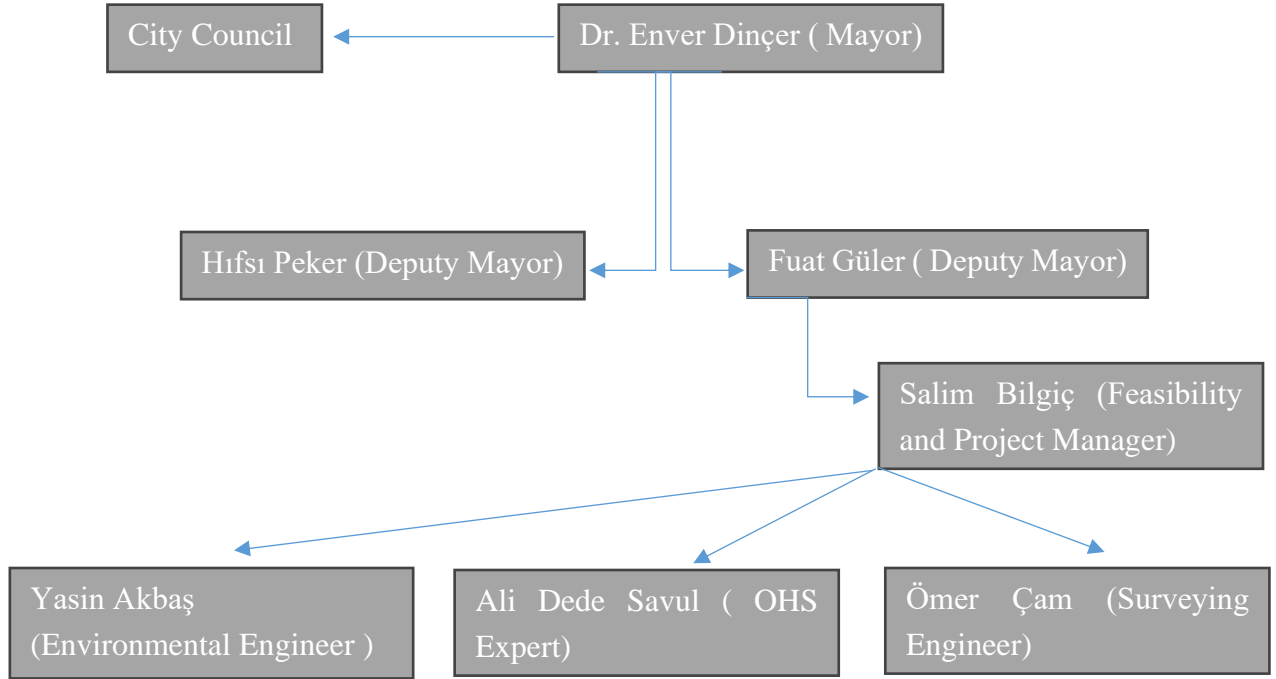
Contractor or construction supervision consultants changes at any phase of the Subproject requiring (i) E&S commitments and E&S roles and responsibilities to be clarified with the new contractor or supervision consulting firm, and (ii) contractor E&S training to be reorganized and redelivered to new 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 11. The PIU will have qualified staff and resources to the satisfaction of ILBANK.

Figure 11. Organization Structure – Sub-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 20.

Table 20.Roles and E&S related Responsibilities of Key Parties associated with ESMP Implementation

<b>Party</b>	<b>Role</b>	<b>Key Responsibilities</b>
<b>Sub-borrower</b>		
Aksaray Municipality	Sub-borrower Management	<ul style="list-style-type: none"> <li>• Hold ultimate responsibility for the E&amp;S performance of the Subproject to the satisfaction of the ILBANK, including the performance of Subproject contractors throughout the sub-financing agreement life cycle.</li> <li>• 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&amp;S instruments and monitoring progress; allocate resources for the recruitment of in-house environmental, social and OHS staff under the PIU</li> <li>• Ensure that ESMP, SEP and other E&amp;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.</li> <li>• Cooperate with the ILBANK representatives to discuss and agree on the ESAP and other E&amp;S covenants for incorporation into sub-financing agreements to be executed between the ILBANK and the sub-borrower (with support from RD E&amp;S team as necessary)</li> <li>• 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</li> <li>• 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.</li> <li>• Allocate resource to ensure monitoring of Subproject E&amp;S performance and reporting to ILBANK at IFI standards in line with the sub-financing agreement conditions</li> <li>• Facilitate monitoring visits and audits by ILBANK and their consultants</li> </ul>

Party	Role	Key Responsibilities
		<ul style="list-style-type: none"> <li>• Notify the ILBANK RD – E&amp;S Teams of any significant E&amp;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)</li> <li>• Prepare and submit a detailed E&amp;S Incident Investigation Form, supplemented by an RCA to be conducted pursuant to GIIPs, to ILBANK within <b>30 days</b> of the accident/incident date for significant accidents or incidents (in line with the template presented in the E&amp;S Supervision, Monitoring and Reporting Procedure). The investigation will be supplemented by a Root Cause Analysis (RCA) (Annex G).</li> </ul>
	E&S Team - Environmental staff - Social staff - OHS staff	<ul style="list-style-type: none"> <li>• Participate in the training to be organized by ILBANK as part of ILBANK ESMS Training Procedure implementation</li> <li>• Ensure that satisfactory ESMP, SEP and as required other E&amp;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&amp;S capabilities, coordinate commissioning independent third-party specialists (such as external E&amp;S consultancy companies, individual consultants) to carry out the E&amp;S assessment and prepare the E&amp;S documentation required for ILBANK’s appraisal and credit decision-making processes</li> <li>• Provide ILBANK with relevant adequate information to undertake the E&amp;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&amp;S Screening and Risk Classification and ESDD procedures)</li> <li>• Support the sub-borrower management as required in the review and evaluation of ESAP and other E&amp;S covenants for incorporation into sub-financing agreements to be executed between the ILBANK and the sub-borrower</li> <li>• Ensure compliance of Subproject operations (including contractor activities on site) with national legislation and E&amp;S requirements of the lending IFIs as included in the sub-financing agreements, ESAP and Subproject-specific E&amp;S documentation (such as ESMP, SEP and other E&amp;S management plans and procedures required by ILBANK)</li> <li>• Undertake monitoring of Subproject E&amp;S performance and reporting to ILBANK at IFI standards in line with the sub-financing agreement conditions</li> <li>• Ensure implementation of corrective actions in case of E&amp;S non-compliances in coordination and agreement with ILBANK DG and RD E&amp;S teams over reasonable timeframes</li> <li>• Coordinate the construction supervision consultants, contractors and/or external E&amp;S consultants for collection of the monitoring data and compilation of or providing input to periodic monitoring reports as necessary and appropriate</li> <li>• Allow ILBANK representatives (including individual consultants) to access Subproject facilities and records.</li> </ul>
Construction Supervision Consultants (“Müsavir”)	Management and E&S staff	Carry out the following tasks on behalf of the sub-borrowers: <ul style="list-style-type: none"> <li>• Participate in the training sessions to be organized by sub-borrowers in line with the requirements of ILBANK ESMS Training Procedure</li> <li>• Supervise the construction works of contractors on-site, including implementation of Subproject-specific E&amp;S requirements (requirements stemming from ESMP, SEP and other E&amp;S management plans and procedures required by ILBANK as applicable) by contractors on a daily basis</li> <li>• Ensure sufficient E&amp;S capacity for implementation of E&amp;S requirements as set out in the sub-financing agreements between the sub-borrower and ILBANK</li> <li>• Support the sub-borrowers for the supervision and review of E&amp;S management documentation prepared by construction contractors and submit them to sub-borrowers upon finalization</li> <li>• Review monthly self-monitoring reports prepared by the construction contractors for early identification of E&amp;S issues and/or non-compliances and submit them to municipalities/municipal utilities upon finalization</li> <li>• Identify E&amp;S non-compliances on site and enforce construction contractors to undertake corrective actions within defined and agreed timeframes</li> </ul>

Party	Role	Key Responsibilities
		<ul style="list-style-type: none"> <li>Support the sub-borrowers (as requested) in the preparation of periodic E&amp;S monitoring reports to be submitted to ILBANK in line with the ILBANK E&amp;S Supervision, Monitoring and Reporting Procedure</li> <li>Notify the sub-borrower of any significant E&amp;S incident or accident that have taken place in Subproject related operations within 24 hours</li> </ul>
Construction Contractor	Management and E&S staff	<ul style="list-style-type: none"> <li>Ensure sufficient E&amp;S capacity for implementation of E&amp;S requirements as set out in the construction contracts</li> <li>Participate in the training sessions to be organized by sub-borrowers in line with the requirements of ILBANK ESMS Training Procedure</li> <li>Prepare Subproject-specific E&amp;S management plans and procedures prior to start of construction works as required by the construction contracts</li> <li>Comply with the requirements of national legislation and implement the E&amp;S requirements as set out in the sub-financing agreements (executed between ILBANK and the sub-borrowers) and construction contracts</li> <li>Submit periodic (in frequencies to be set by ESAP) E&amp;S self-monitoring reports to the municipalities/municipal utilities through construction supervision consultants (“müşavir”) – in line with the format provided by ILBANK.</li> <li>Fill in monthly occupational health and safety (OHS) forms – reviewed by construction supervision consultants.</li> <li>Implement corrective actions in case of E&amp;S non-compliances under the supervision of sub-borrower’s construction supervision consultant</li> <li>Promptly notify the sub-borrower of any significant E&amp;S incident or accident that have taken place in Subproject related operations (timeframe to be defined by ILBANK no later than 24 hours)</li> </ul>

### 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 21 . 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 21. Training Components for Training of Contractor Staff

Module	Training Name	Training Duration	Key Training Content
Module 1	ILBANK E&S Requirements	1 hour	<ul style="list-style-type: none"> <li>Overview of ILBANK E&amp;S requirements: <ul style="list-style-type: none"> <li>ILBANK E&amp;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.)</li> <li>External Communications (including stakeholder engagement, grievance management, etc.)</li> <li>Monitoring, Review and Reporting</li> <li>Labor Management, Contractor Management</li> </ul> </li> <li>ILBANK Code of Conduct</li> </ul>
Module 2	Subproject-level E&S Requirements for contractors as per sub-financing agreement conditions	3 hours	<ul style="list-style-type: none"> <li>Subproject specific requirements: <ul style="list-style-type: none"> <li>E&amp;S covenants included in sub-loan agreements</li> <li>Subproject ESAP requirements</li> <li>Subproject-level E&amp;S assessment and management documentation (such as ESMP, SEP and other E&amp;S management plans and procedures as applicable);</li> <li>Emergency Preparedness and Response Plan including a training program for emergency responders including drills at regular intervals;</li> <li>Specific training (such as driver training in case of involvement of</li> </ul> </li> </ul>

Module	Training Name	Training Duration	Key Training Content
			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 22.

Table 22. Duration of Activities

Phase	Remarks/ Notes
<b>Construction Duration</b> (from site mobilization until provisional acceptance)	8 months
<b>Defect Liability Period</b>	12 months/ 1 years
<b>Operation Duration</b>	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 23. Cost Estimation

Component	Estimated Cost (C)
<b>OHS Observation Training</b>	30,000
<b>Stakeholder Engagement Activities</b>	20,000
<b>Materials and Resources</b>	10,000
<b>Monitoring and Reporting</b>	5,000
<b>Contingency Fund</b>	5,000
<b>Total</b>	<b>70,000</b>



## List of Annexes

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

Annex B – Existing Permitting Documentation

Annex B.1 - EIA Decision of the Sub-project

Annex B.2 Aksaray Municipality Council Decision on the Construction of the Sub-project

Annex B.3 - Sub-project Land Classification Certificate

Annex B.4 Agreement Between Aksaray Municipality and Meram Electricity Distribution Inc. for Unlicensed Producers' Connection to the Distribution System

Annex B.5- Zoning Approval of Sub-project Area

Annex C – Title Deeds

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

Annex E-Site Photographs

Annex F- E&S Incident Notification Form Template

Annex G- E&S Incident Investigation Form Template

Annex H- Chance Find Procedure

Annex I - Change Notification Form

## 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, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ BAKANLIĞI**  
Çevresel Etki Değerlendirmesi, İzin ve Denetim Genel Müdürlüğü

  
**T.C.**  
**AKSARAY VALİLİĞİ**  
**ÇEVRE, ŞEHİRCİLİK VE İKLİM DEĞİŞİKLİĞİ İL MÜDÜRLÜĞÜ**

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**Karar Tarihi : 06-10-2022**  
**Karar No : 13955465 220-02 B-2022242**

**ÇEVRESEL ETKİ DEĞERLENDİRME BELGESİ**

25.11.2014 tarih ve 29186 sayılı Resmî Gazete’de yayımlanarak yürürlüğe giren Çevresel Etki Değerlendirmesi Yönetmeliği’nin Ek-II listesinde yer alan **4,9 MWe/6,44 MWm KURULU GÜÇE SAHİP GÜNEŞ ENERJİ SANTRALI** 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.

  
Hamza AYDOĞDU  
Vali

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Proje Sahibi : AKSARAY BELEDİYE BAŞKANLIĞI  
Proje Yeri : Aksaray İli, Merkez İlçesi, KURTULUŞ MAHALLESİ, 161 ADA, 9,10,11,42 VE 43 NOFLU PARSELLER ÇED ALANI 5.75 ha  
Kapasite : 4,9 MWe/6,44 MWm Kurulu Güçe Sahip Güneş Enerji Santrali

## B.2 Aksaray Municipality Council Decision on the Construction of the Sub-project

T.C.  
AKSARAY  
BELEDİYE BAŞKANLIĞI

MECLİS KARARI



<b>KARAR TARİHİ</b> 03.09.2021	<b>KARAR NO</b> 2021/09-147	<b>KARARIN KONUSU</b>	Kurtuluş Mahallesi 161 Ada 9, 10, 11, 42 ve 43 Nolu Parsellere İlişkin İlave İmar Planı Hk.  ( İmar ve Şehircilik Md. Teklifi ) ( İmar Komisyonu Raporu )
Belediye meclisini teşkil eden zevat	Belediye Meclisi; Meclis Başkanı Dr. Evren DİNÇER Başkanlığında; Üyelerden; Cem ELİBOL, Yakup ÜLGER, Osman KOÇAK, Hıfı PEKER, Muhammet Ali ASLAN, Gamze ÇELİK, Mehmet Emin KILIÇ, Tamer YALVAÇ, Malik EKİNCİ, Yakup Kadri PEREK, Şükrü TANŞI, Mustafa TOPAÇLI, Oğuz EREN, Rıza SERİNBAŞ, Koray YILDIRIM, Nurettin YAR, Mehmet YARDIMLI, Ercan KILIÇ, Tamer KARGIN, İzzet KOCAMAN, Muhammet ÇELİK, Ramazan YILMAZ, Muhterem GÜR, Nurdilek ATALAY, Fehmi KUYUCU, Tolga KARA, Bilal ÖZDEMİR'in İştiraki ile toplandı. (Burhanettin KARATAŞ, İsmet KAYABAŞI, Vefa ÜLGER, Muhterem GÜR ve Mahmut BAYSAL izinli.)		

İmar ve Şehircilik Müdürlüğü'nün teklifi ile belediye meclisinde, İmar Komisyonuna havalesi kararlaştırılan ve Komisyonca hazırlanan 19.08.2021 tarih ve Bila sayılı İmar Komisyonu raporu.

### İMAR KOMİSYONU RAPORU

**RAPOR NO:** 123

**PİN NO:** UİP:68038396, NİP:68234569

**KONU:** Kurtuluş Mahallesi 161 ada 9, 10, 11, 42 ve 43 nolu parsellere ilişkin ilave İmar Planı hk.

**İLGİ:** İmar ve Şehircilik Müdürlüğü'nün teklifi;

**TALEP:** Aksaray İli, Kurtuluş Mahallesi 161 ada 9, 10, 11, 42 ve 43 nolu parsellerde Güneş Enerjisine Dayalı Elektrik Üretim ve İletim Tesisi yapılması talep edilmektedir.

**MÜLKİYET:** Aksaray İli Kurtuluş Mahallesi 161 ada 9, 10, 11, 42 ve 43 nolu parseller Aksaray Belediyesi adına kayıtlıdır.

**PLANLARDAKİ DURUMU:** 05/04/2012 tarih ve 2012/4 sayılı meclis kararı ile onaylı Nazım ve Uygulama İmar Planında Plansız Alanında kalmaktadır.

**DEĞERLENDİRME:** 1/1000 ölçekli uygulama imar planı değişikliği teklifi ekinde olup, incelenerek karar alınmak üzere 5393 Sayılı Belediye Kanununun 18/c ve 3194 Sayılı İmar Kanununun 8/b maddesine göre konunun Belediye Meclisinde havalesini arz ederim. Şeklinde hazırlanan İmar ve Şehircilik Müdürlüğü'nün teklifi Komisyonumuzca incelenmiştir.

**KOMİSYON KARARI:** Aksaray İli, Kurtuluş Mahallesi 161 ada 9, 10, 11, 42 ve 43 nolu parsellerde Güneş Enerjisine Dayalı Elektrik Üretim ve İletim Tesisi amaçlı ilave imar planı yapılması; Komisyonumuzca oybirliği ile uygun görülmüştür.

6



**KARAR:** Hazırlanan İmar Komisyonu Raporu, Aksaray Belediye Meclisinde okunarak yapılan işaretle oylama neticesinde Aksaray İli, Kurtuluş Mahallesi 161 ada 9, 10, 11, 42 ve 43 nolu parsellerde Güneş Enerjisine Dayalı Elektrik Üretim ve İletim Tesisi amaçlı ilave imar planı yapılması; Komisyonumuzca oybirliği ile uygun görüldüğünden raporun komisyondan geldiği şekliyle aynen ve oybirliği ile kabulü kararlaştırılmıştır.




  
Şükrü TANŞI  
Meclis Kâtibi


Mustafa TOPAÇLI  
Meclis Kâtibi



## B.3 Sub-project Land Classification Certificate



**T.C.**  
**AKSARAY VALİLİĞİ**  
**İl Tarım ve Orman Müdürlüğü**

  
İL İÇİŞİLERİ VE İZMİR  
VALİLİĞİ VE İZMİR İL  
VETİNERİNERİ VE İL  
2022

Sayı : E-69350487-230.04.02-5576488  
Konu : Güneş Enerji Santrali Arazi Sınıf Belirleme Talebi

**AKSARAY BELEDİYE BAŞKANLIĞINA**  
**(Etüt Proje Müdürlüğü)**

İlgi : 11.05.2022 tarihli ve 52495008-750-33349 sayılı yazınız.

İlgi tarih ve sayılı yazınızda belirtilen Aksaray İli Merkez İlçesi Kurtuluş Mahallesi içinde bulunan 161 ada 9,10,11,42 ve 43 parsel numaralı taşınmazlara Güneş Enerji Santrali (GES) kurulabilecek arazilerden olup olmadığının bildirilmesi istenmiştir.


Kurumumuz teknik ekibince yapılan TAKBİS sorgulamalarında söz konusu taşınmazların vasfının "arsa" olduğu görülmüş olup, Kurumumuzca yapılacak herhangi bir işlem bulunmamaktadır. Bilgilerinizi arz ederim.

**Bülent SAKLAV**  
Vali a.  
İl Müdürü

Bu belge, güvenli elektronik imza ile imzalanmıştır.  
Doğrulama Kodu: B201F8DC-1315-4135-B225-91F7F19B3B64 Doğrulama Adresi: <https://www.turkiye.gov.tr/tarim-ebys>

Kurtuluş Mah. 3846 Sk. No:1 68100 Aksaray  
Tel: ( 0382) 213 15 85 Faks: ( 0382) 213 29 07  
E-Posta: aksaray@tarim.gov.tr Kep: tarimveormanbakanligi@hs01.kep.tr  
KEP Adresi : tarimveormanbakanligi@hs01.kep.tr

Bilgi için:Aysel CANBULUT  
TEZGEL  
Mühendis



B.4 Agreement Between Aksaray Municipality and Meram Electricity Distribution Inc. for Unlicensed Producers' Connection to the Distribution System

LİSANSIZ ÜRETİCİLER İÇİN DAĞITIM SİSTEMİNE BAĞLANTI ANLAŞMASI  
LİSANSIZ ELEKTRİK ÜRETİCİLERİ İÇİN DAĞITIM SİSTEMİNE BAĞLANTI ANLAŞMASI

Üretici No:


Tarih: 24.03.2023

Sayısı: 8 68 02 02 4987

Bu Anlaşma; isim veya unvanı ile kanuni ikametgah adresi aşağıda belirtilen Üreticiye ait Elektrik Piyasasında Lisansız 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: <b>Meram Elektrik Dağıtım A.Ş.</b>	Üretici: <b>Aksaray Belediye Başkanlığı</b>  <b>(Aksaray 0340030591)</b>
Kanuni Adresleri	<b>Sancak Mah. Yeni İstanbul Cad. No:92 42003 Selçuklu/KONYA</b> Tel : 0850 251 3000 Fax: 0332 255 0082	<b>Zincirli Mahallesi 44. Cadde No:55 Merkez / AKSARAY</b> Tel: (382)222-0323 Fax: (382)213-1573
KEP:	<b>meram.dagitim@hs02.kep.tr</b>	<b>aksaraybelediyesi@hs01.kep.tr</b>
Temsile Yetkili Kişiler	<b>Seyit Mehmet BAYK</b> Yenilenebilir Enerji Müdürü	<b>Fuat GÜLER</b> Belediye Başkanı Yard.
İmzalar		

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

  
**MERAM ELEKTRİK DAĞITIM A.Ş.**  
Sancak Mh. Yeni İstanbul Cd. No:92  
Selçuklu/KONYA  
Teluk Vergi Dairesi 839 003 0074  
Ticaret Sicil No:45211

  
KASE/İMZA  
  
**Fuat GÜLER**  
Belediye Başkanı Yard.

## LİSANSIZ ÜRETİCİLER İÇİN DAĞITIM SİSTEMİNE BAĞLANTI ANLAŞMASI

### BİRİNCİ BÖLÜM

#### MADDE 1 - TARAFLAR

(1) Bu anlaşma dağıtım şirketi ile Elektrik Piyasasında Lisansız 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 Lisansız 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 Lisansız Elektrik Üretimine İlişkin Yönetmelik (Yönetmelik) ve Elektrik Piyasasında Lisansız 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 yaptırım 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 teşhisi 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.

2  
MERAM ELEKTRİK DAĞITIM A.Ş.

Sancak Mh. Yeni İstanbul Cd. No:92  
Selçuklu/KONYA  
Selçuk Vergi Dairesi, 33 081  
Ticaret Sicil No 4211

KAŞE/İMZA

Fuat GÜLER

Belediye Başkanı







## LİSANSIZ ÜRETİCİLER İÇİN DAĞITIM SİSTEMİNE BAĞLANTI ANLAŞMASI

### 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 mühürünün 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.

4  
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Ticaret Sicil No 4/211

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## LİSANSIZ ÜRETİCİLER İÇİN DAĞITIM SİSTEMİNE BAĞLANTI ANLAŞMASI

### 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 yeterli 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 işletilebilmek 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 sisteminin veya enerji alınan veya verilen başka bir sistemi etkileyen veya etkileme

5  
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## LİSANSIZ ÜRETİCİLER İÇİN DAĞITIM SİSTEMİNE BAĞLANTI ANLAŞMASI

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, sistemle 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 ALIMINI:

(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 işbirlikleri 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. CEZAI 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.

6  
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LİSANSIZ ÜRETİCİLER İÇİN DAĞITIM SİSTEMİNE BAĞLANTI ANLAŞMASI

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.

7  
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 Belediye Başkan Yard.

## LİSANSIZ ÜRETİCİLER İÇİN DAĞITIM SİSTEMİNE BAĞLANTI ANLAŞMASI

(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.

8  
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### 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 geçerliliğini 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

KAŞELİ İMZA

Puat GÜKER  
Belediye Başkan Yard.

## B.5 Zoning Approval of Sub-project Area

Evrak No : 2022/1-75		<b>T.C. AKSARAY BELEDİYESİ ŞEHİRCİLİK VE İMAR MÜDÜRLÜĞÜ</b>			Kad. Pafta No: 30
					İmar Pafta No: -
<b>KADASTRO</b>		<b>TOPLAM Alan (m<sup>2</sup>)</b>	<b>Taks (m<sup>2</sup>)</b>	<b>Kaks (m<sup>2</sup>)</b>	<b>DÜŞÜNCELER</b>
ADA No	PARSEL No				ADRES: KURTULUŞ MAH.
161	9	11290.00 m <sup>2</sup>		564.50 m <sup>2</sup>	
<b>İMAR DURUMU</b>					
Bu mülyetin İmar planı 05.04.2012 tarih ve 20124 sayılı meclis kararı ile belirlenmiştir.					Bina dış cephe boyası beyaz ve tonları olacaktır.
Yola Mesafesi : KROKİSİNDE			İnşaat tarzı : -		
Bina Cephesi: KROKİSİNDE (En çok)			Kat adedi (Bodrum hariç) : -		
Bina Derinliği:			Bina Yüksekliği(MAX) Y ençok=6.50		
Arka Bahçe Mesafesi (MIN)			* JEOLJİK DURUM.O.A.5.1.		
NOT-1-Planın Alanın İmar Yönetmeliğinin 1.maddesinin 6.ücreti gereği çekim mesafesi ile KAKD ve/veya TAKS kesilmeden parselde, TAKS 1/2001 ölçeğinde çapılıyolcu mesafelerine göre uygulanır.					
25.05.2022 DÜZENLEYEN Veyis KARAK Harita/Kadastro Teknikeri		25.05.2022 KONTROL EDEN Fatma ULUOĞAN Şehir Plancısı		25.05.2022 ONAYLAYAN Mehmet KARLI İmar Ve Şehircilik Müdürü	
NOTLAR					
1- UYGULAMA; MERİ MEVZUAT, YÖNETMELİK, PLAN NOTLARI, GENELGELER VE T.S.E NİN YAYINLADIĞI ESASLARA GÖRE YAPILACAKTIR.					
2- İŞ BU İMAR ÇAPI İMAR PLANINDA VE MEVZUATTA BİR DEĞİŞİKLİK OLMADIĞI MÜDDETÇE GEÇERLİDİR.					
İNŞAAT SAHİBİ AKSARAY BELEDİYESİ		RESMİ.....		NOLU MAKBUZLA İŞLEM GÖRDÜ	

Evrak No : 2022/1/77		T.C. AKSARAY BELEDİYESİ ŞEHİRCİLİK VE İMAR MÜDÜRLÜĞÜ			Kad. Pafta No. 30
					İmar Pafta No. -
<b>KADASTRO</b>		<b>TOPLAM Alan (m<sup>2</sup>)</b>	<b>Taks (m<sup>2</sup>)</b>	<b>Kaks (m<sup>2</sup>)</b>	<b>DÜŞÜNCELER</b>
ADA No	PARSEL No				
161	11	8267.00 m <sup>2</sup>		413.35 m <sup>2</sup>	ADRES: KURTULUŞ MAH.
<b>İMAR DURUMU</b>					
Bu mülkiyetin İmar planı 05.04.2012 tarih ve 2012/4 sayılı meclis kararı ile belirlenmiştir.					Bina dış cephe boyası beyaz ve tonları olacaktır.
Yola Mesafesi : KROKİSİNDE			İnşaat tarzı		: -
Bina Cephesi: KROKİSİNDE (En çok)			Kat adedi (Bodrum hariç)		: -
Bina Derinliği:			Bina Yüksekliği(MAX)	Y ençok=6,50	
Arka Bahçe Mesafesi (MİN)			* JEOLÖJİK DURUM Ö A 5.1.		
NOT-1:Pafta Aksaray İmar Yönetmeliğinin 5 maddesinin 3 bendi gereği otilma mevzuatları ile KAKS ve ilineyen parsellerde, TAKS İMİNİ göstermek için çukuk mesafelerine göre uygulanır yapıdır.					
25.05.2022 DÜZENLEYEN Vazir KARAR Harita Kadastir Teknikeri		25.05.2022 KONTROL EDEN Fatma ULUDOĞAN Şehir Plancısı		25.05.2022 ONAYLAYAN Mehmet YILMAZ İmar Ve Şehircilik Müd. V.	
NOTLAR:					
1- UYGULAMA MERİ MEVZUAT, YÖNETMELİK, PLAN NOTLARI, GENELGELER VE T.S.E NİN YAYINLADIĞI ESASLARA GÖRE YAPILACAKTIR.					
2- İŞ BU İMAR ÇAPLI İMAR PLANINDA VE MEVZUATTA BİR DEĞİŞİKLİK OLMADIĞI MÜDDETÇE GEÇERLİDİR.					
İNŞAAT SAHİBİ		RESMİ		NOLU MAKBUZLA İŞLEM GÖRDÜ	
AKSARAY BELEDİYESİ					



Evrak No : 2022/1-79		T.C. AKSARAY BELEDİYESİ ŞEHİRCİLİK VE İMAR MÜDÜRLÜĞÜ			Kad. Pafta No: 30
					İmar Pafta No: -
<b>KADASTRO</b>		<b>TOPLAM</b> Alan (m <sup>2</sup> )	<b>Taks</b> (m <sup>2</sup> )	<b>Kaks</b> (m <sup>2</sup> )	<b>DÜŞÜNCELER</b>  ADRES: KURTULUŞ MAH.
ADA No	PARSEL No				
161	43	21400.00 m <sup>2</sup>		1070.00 m <sup>2</sup>	
<b>İMAR DURUMU</b>					
Bu mülkiyetin İmar planı 05.04.2012 tarih ve 2012/4 sayılı meclis kararı ile belirlenmiştir.					Bina dış cephe boyası beyaz ve tonları olacaktır.
Yola Mesafesi : KROKİSİNDE			İnşaat tarzı		: -
Bina Cephesi: KROKİSİNDE (En çok)			Kat adedi (Bodrum hariç)		: -
Bina Derinliği:			Bina Yüksekliği(MAX)		Y ençok=6.50
Arka Bahçe Mesafesi (MİN)			* JEOLOJİK DURUM:Ö.A 5.1.		
NOT:1:Planı Alanlar İmar Yönetmeliğinin 5.maddesinin 6.bendini gereği çeşitli mesafeleri de KAKS verip TAKS verilmeyen parsellerde, TAKS %60 geçerken parçıyla çeşitli mesafelere göre uygulanması yapılır.					
25.05.2022 DÜZENLEYEN Veyis KARAY Harita Kadastro Teknikeri		25.05.2022 KONTROL EDEN Fatma ULUDOĞAN Şehir Plancısı		25.05.2022 ONAY YAPAN Mehmet KARAY İmar ve Şehircilik Müd. V.	
NOTLAR:					
1- UYGULAMA, MERT MEVZUAT, YÖNETMELİK, PLAN NOTLARI, GENELGELER VE T.S.E.NİN YAYINLADIĞI ESASLARA GÖRE YAPILACAKTIR.					
2- İŞ BU İMAR ÇAPI İMAR PLANINDA VE MEVZUATTA BİR DEĞİŞİKLİK OLMADIĞI MÜDDETÇE GEÇERLİDİR.					
İNŞAAT SAHİBİ AKSARAY BELEDİYESİ		RESMİ .....		NOLU MAKBUZLA İŞLEM GÖRDÜ	

## B.6 Title deeds of parcels through which the energy transmission line passes

BU BELGE TOPLAM 1 SAYFADAN OLUŞMAKTADIR BİLGİ AMAÇLIDIR.

Tarih: 27-12-2024-11:04



Tapu Kaydı (Aktif Malikler için)

TAPU KAYIT BİLGİSİ

Zemin Tipi:	AnaTasınmaz	Ada/Parsel:	217/22
Taşınmaz Kimlik No:	10724118	AT Yüzölçüm(m2):	25580.00
İl/İlçe:	AKSARAY/MERKEZ	Bağımsız Bölüm Nitelik:	
Kurum Adı:	Aksaray	Bağımsız Bölüm Brüt Yüzölçümü:	
Mahalle/Köy Adı:	LALELİ Mah.	Bağımsız Bölüm Net Yüzölçümü:	
Mevki:	-	Blok/Kat/Giriş/BBNo:	
Cilt/Sayfa No:	3/299	Arsa Pay/Payda:	
Kayıt Durum:	Aktif	Ana Taşınmaz Nitelik:	BAG VE TARLA

MÜLKİYET BİLGİLERİ

(Hisse) Sistem No	Malik	El Birliği No	Hisse Pay/ Payda	Metrekare	Toplam Metrekare	Edinme Sebebi-Tarih-Yevmiye	Terkin Sebebi-Tarih-Yevmiye
24179346	(SN:2861290) AKSARAY BELEDİYESİ VKN:0340030591	-	1/1	25580.00	25580.00	Tesis Kadastro 16-12-1969	

BU BELGE TOPLAM 1 SAYFADAN OLUŞMAKTADIR BİLGİ AMAÇLIDIR.

Tarih: 27-12-2024-11:05



Tapu Kaydı (Aktif Malikler için)

TAPU KAYIT BİLGİSİ

Zemin Tipi:	AnaTasınmaz	Ada/Parsel:	217/23
Taşınmaz Kimlik No:	10544747	AT Yüzölçüm(m2):	4297.00
İl/İlçe:	AKSARAY/MERKEZ	Bağımsız Bölüm Nitelik:	
Kurum Adı:	Aksaray	Bağımsız Bölüm Brüt Yüzölçümü:	
Mahalle/Köy Adı:	LALELİ Mah.	Bağımsız Bölüm Net Yüzölçümü:	
Mevki:	-	Blok/Kat/Giriş/BBNo:	
Cilt/Sayfa No:	4/300	Arsa Pay/Payda:	
Kayıt Durum:	Aktif	Ana Taşınmaz Nitelik:	BAG

MÜLKİYET BİLGİLERİ

(Hisse) Sistem No	Malik	El Birliği No	Hisse Pay/ Payda	Metrekare	Toplam Metrekare	Edinme Sebebi-Tarih-Yevmiye	Terkin Sebebi-Tarih-Yevmiye
23828985	(SN:2861290) AKSARAY BELEDİYESİ VKN:0340030591	-	1/1	4297.00	4297.00	Tesis Kadastro 16-12-1969	

## Tapu Kaydı (Aktif Malikler için)

## TAPU KAYIT BİLGİSİ

Zemin Tipi:	AnaTasınmaz	Ada/Parsel:	217/109
Taşınmaz Kimlik No:	10724283	AT Yüzölçümü(m2):	6254956.00
İl/İlçe:	AKSARAY/MERKEZ	Bağımsız Bölüm Nitelik:	
Kurum Adı:	Aksaray	Bağımsız Bölüm Brüt Yüzölçümü:	
Mahalle/Köy Adı:	LALELİ Mah.	Bağımsız Bölüm Net Yüzölçümü:	
Mevki:	-	Blok/Kat/Giriş/BBNo:	
Cilt/Sayfa No:	4/386	Arsa Pay/Payda:	
Kayıt Durum:	Aktif	Ana Taşınmaz Nitelik:	MERA

## MÜLKİYET BİLGİLERİ


(Hisse) Sistem No	Malik	Ej Birliği No	Hisse Pay/ Payda	Metrekare	Toplam Metrekare	Edinme Sebebi-Tarih-Yevmiye	Terkin Sebebi-Tarih-Yevmiye
24179615	(SN:2861290) AKSARAY BELEDİYESİ VKN:0340030591	-	1/1	6254956.0 0	6254956.0 0	Tesis Kadastro 16-12-1969	

## B.7 Consent Letter and Photographs

**MUVAFAKATNAME**

ADI : 2170  
SOYADI: B02  
TC : 11-2-111-11-11

Yukarıdaki bilgiler tarafıma aittir. Aksaray İli Merkez İlçesi Kurtuluş Mahallesi 161 Ada 9 no.lu parselin mülkiyeti Aksaray Belediyesine ait olup bu alanda yakın tarihten beri kendi imkanlarımla hazırladığım 1,2 kulübe ile köpeklerimi geçici olarak barındırmakta idim. Aksaray Belediyesi yetkilileri tarafından bu alan üzerine GES projesi yapacaklarını ve yine Aksaray Belediyesine ait benim uygun bulacağım parsel üzerinde barındırma faaliyetlerime devam edebileceğimi, ayrıca taşınma esnasında kendilerinin yardımcı olabileceklerini bildirdiler. Tarafıma ait köpekleri Aksaray Belediyesinin yardımı ile Aksaray Belediyesine ait yeni alana taşıyarak geçici olarak kullandığım mevcut alanı kendi nizam ile boşaltacağımı muvafakat ederim.

17.02.2025  
2170 B02  






## Annex C -Title Deeds of the Municipality for the Sub-project Area

BU BELGE TOPLAM 2 SAYFADAN OLUŞMAKTADIR BİLGİ AMAÇLIDIR.

Tarih: 11-5-2022-09:49



### Tapu Kaydı (Aktif Malikler için Detaysız - ŞBİ yok)

#### TAPU KAYIT BİLGİSİ

Zemin Tipi:	AnaTasınmaz	Ada/Parsel:	161/9
Taşınmaz Kimlik No:	10718678	AT Yüzölçüm(m2):	11290.00
İl/İlçe:	AKSARAY/MERKEZ	Bağımsız Bölüm Nitelik:	
Kurum Adı:	Aksaray	Bağımsız Bölüm Brüt Yüzölçümü:	
Mahalle/Köy Adı:	KURTULUŞ Mah.	Bağımsız Bölüm Net Yüzölçümü:	
Mevki:	-	Blok/Kat/Giriş/BBNo:	
Cilt/Sayfa No:	1/11	Arsa Pay/Payda:	
Kayıt Durum:	Aktif	Ana Taşınmaz Nitelik:	ARSA

#### MÜLKİYET BİLGİLERİ

(Hisse) Sistem No	Malik	El Birliği No	Hisse Pay/ Payda	Metrekare	Toplam Metrekare	Edinme Sebebi-Tarih-Yevmiye	Terkin Sebebi-Tarih-Yevmiye
24169264	(SN:2861290) AKSARAY BELEDİYESİ VKN:0340030591	-	1/1	11290.00	11290.00	-	-

Bu belgeyi akıllı telefonunuzdan karekod tarama programları ile aşağıdaki barkodu taratarak;

veya Web Tapu anasayfasından (<https://webtapu.tkgm.gov.tr> adresinden) rgMQcODt-v8 kodunu Online İşlemler alanına yazarak doğrulayabilirsiniz.

1 / 2

BU BELGE TOPLAM 2 SAYFADAN OLUŞMAKTADIR BİLGİ AMAÇLIDIR.

Tarih: 11-5-2022-09:50



### Tapu Kaydı (Aktif Malikler için Detaysız - ŞBİ yok)

#### TAPU KAYIT BİLGİSİ

Zemin Tipi:	AnaTasınmaz	Ada/Parsel:	161/11
Taşınmaz Kimlik No:	10718680	AT Yüzölçüm(m2):	8267.00
İl/İlçe:	AKSARAY/MERKEZ	Bağımsız Bölüm Nitelik:	
Kurum Adı:	Aksaray	Bağımsız Bölüm Brüt Yüzölçümü:	
Mahalle/Köy Adı:	KURTULUŞ Mah.	Bağımsız Bölüm Net Yüzölçümü:	
Mevki:	-	Blok/Kat/Giriş/BBNo:	
Cilt/Sayfa No:	1/13	Arsa Pay/Payda:	
Kayıt Durum:	Aktif	Ana Taşınmaz Nitelik:	ARSA

#### MÜLKİYET BİLGİLERİ

(Hisse) Sistem No	Malik	El Birliği No	Hisse Pay/ Payda	Metrekare	Toplam Metrekare	Edinme Sebebi-Tarih-Yevmiye	Terkin Sebebi-Tarih-Yevmiye
24169266	(SN:2861290) AKSARAY BELEDİYESİ VKN:0340030591	-	1/1	8267.00	8267.00	-	-

Bu belgeyi akıllı telefonunuzdan karekod tarama programları ile aşağıdaki barkodu taratarak;

veya Web Tapu anasayfasından (<https://webtapu.tkgm.gov.tr> adresinden) aUmEKs-jdFE kodunu Online İşlemler alanına yazarak doğrulayabilirsiniz.

1 / 2

**Tapu Kaydı (Aktif Malikler için Detaysız - ŞBl yok)**

## TAPU KAYIT BİLGİSİ

Zemin Tipi:	AnaTasınmaz	Ada/Parsef:	161/43
Taşınmaz Kimlik No:	10718711	AT Yüzölçüm(m2):	21400.00
İl/İlçe:	AKSARAY/MERKEZ	Bağımsız Bölüm Nitelik:	
Kurum Adı:	Aksaray	Bağımsız Bölüm Brüt Yüzölçümü:	
Mahalle/Köy Adı:	KURTULUŞ Mah.	Bağımsız Bölüm Net Yüzölçümü:	
Mevki:	-	Blok/Kat/Giriş/BBNo:	
Cilt/Sayfa No:	1/45	Arsa Pay/Payda:	
Kayıt Durum:	Aktif	Ana Tasınmaz Nitelik:	ARSA

## MÜLKİYET BİLGİLERİ

(Hisse) Sistem No	Malik	El Birliği No	Hisse Pay/ Payda	Metrekare	Toplam Metrekare	Edinme Sebebi-Tarih-Yevmiye	Terkin Sebebi-Tarih-Yevmiye
24169297	(SN:2861290) AKSARAY BELEDİYESİ VKN:0340030591	-	1/1	21400.00	21400.00	-	-

Bu belgeyi akıllı telefonunuzdan karekod tarama programları ile aşağıdaki barkodu taratarak;

veya Web Tapu anasayfasından (<https://webtapu.tkgm.gov.tr> adresinden) C0bqFTv-vCc kodunu Online İşlemler alanına yazarak doğrulayabilirsiniz.



## 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 / Communiqués	OG Number	OG Date	Relevance/Implication for the Sub-project
<b>Environmental Permit and Licenses</b>			
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 Sub-project.
Regulation on Environmental Permits and Licensing	29115	10.09.2014	Requirements for environmental permits and licenses at all stages of the Sub-project.
Regulation on Environmental Auditing	27061	21.11.2008	Requirements for environmental audits to be performed by either Sub-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.
<b>Air Quality Control and Greenhouse Gas (GHG) Emissions</b>			
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 Sub-project vehicles, machinery, and equipment at all phases of the Sub-project.
<b>Biodiversity Conservation and Protection of Nature</b>			
Regulation on Protection of Wildlife and Wildlife Development Area	259637	08.11.2004	Measures to be taken for wildlife protection near to the Sub-project area during the planning phase of the Sub-project.
<b>Chemicals and Other Dangerous Substances</b>			
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.
<b>Noise</b>			

Regulations / Communiqués	OG Number	OG Date	Relevance/Implication for the Sub-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 Sub-project site at the construction and operation phases.
<b>Soil and Land Use</b>			
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 Sub-project.
<b>Waste</b>			
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 / Communiqués	OG Number	OG Date	Relevance/Implication for the Sub-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.
<b>Water and Wastewater</b>			
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 sub-project design, construction and operation of wastewater collection and removal systems.
<b>Structural Safety</b>			
Regulation on Structures to be Built in Natural Disaster Areas	26582	14.07.2007	Management of construction works within the scope of the Sub-project.
Regulation on Building Constructions in Earthquake Zones	26454	06.03.2007	Management of construction works within the scope of the Sub-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.
<b>Traffic</b>			
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 / Communiqués	OG Number	OG Date	Relevance/Implication for the Sub-project
<b>Health and Safety and Labor</b>			
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 medical 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 / Communiqués	OG Number	OG Date	Relevance/Implication for the Sub-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.
<b>Cultural Heritage</b>			
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**

**SPP Area : 161/43**







**SPP Area : 161/11**





**SPP Area : 161/9**







## Annex F – E&S Incident Notification Form Template

1) Incident Details		
<b>Date of Incident:</b> <span style="background-color: #e0e0e0; padding: 2px;">[Please indicate]</span>	<b>Time of Incident:</b> <span style="background-color: #e0e0e0; padding: 2px;">[Please indicate]</span>	
<b>Location of the Incident:</b>	<span style="background-color: #e0e0e0; padding: 2px;">[Please indicate]</span>	
<b>Full Name of Sub-borrower:</b>	<span style="background-color: #e0e0e0; padding: 2px;">[Please indicate]</span>	
<b>Date Reported to ILBANK:</b> <span style="background-color: #e0e0e0; padding: 2px;">[Please indicate]</span>	<b>Reported to ILBANK by:</b> <span style="background-color: #e0e0e0; padding: 2px;">[Please indicate]</span>	<b>Notification Type:</b> <span style="background-color: #e0e0e0; padding: 2px;">[ Please indicate; e-mail/phone call/media notice/other ]</span>
<b>Date Reported to WB:</b> <span style="background-color: #e0e0e0; padding: 2px;">[Please indicate]</span>	<b>Reported to WB by:</b> <span style="background-color: #e0e0e0; padding: 2px;">[ Please indicate ]</span>	<b>Notification Type:</b> <span style="background-color: #e0e0e0; padding: 2px;">[ Please indicate; e-mail/phone call/media notice/other ]</span>
<b>Full Name of the Contractor of the Subproject:</b>	<span style="background-color: #e0e0e0; padding: 2px;">[ Please indicate ]</span>	
<b>Full Name of the Sub-contractor involved in the incident:</b>	<span style="background-color: #e0e0e0; padding: 2px;">[ Please indicate ]</span>	

2) Type of incident (please check all that apply) <sup>10</sup>	
<input type="checkbox"/> Fatality <input type="checkbox"/> Lost time injury <input type="checkbox"/> Displacement without due process <input type="checkbox"/> Child labor <input type="checkbox"/> Forced labor <input type="checkbox"/> Disease outbreaks	<input type="checkbox"/> Acts of violence/protest <input type="checkbox"/> Unexpected impacts on heritage resources <input type="checkbox"/> Unexpected impacts on biodiversity resources <input type="checkbox"/> Environmental pollution incident <input type="checkbox"/> Dam failure <input type="checkbox"/> Other

3) Description/Narrative of Incident
<p><i>For example:</i></p> <p>I. What is the incident? <span style="background-color: #e0e0e0; padding: 2px;">[Please briefly describe]</span></p> <p>II. What were the conditions or circumstances under which the incident occurred (if known)? <span style="background-color: #e0e0e0; padding: 2px;">[Please briefly describe]</span></p> <p>III. Are the basic facts of the incident clear and uncontested, or are there conflicting versions? What are those versions? <span style="background-color: #e0e0e0; padding: 2px;">[Please briefly describe]</span></p> <p>IV. Is the incident still ongoing or is it contained? <span style="background-color: #e0e0e0; padding: 2px;">[Please briefly describe]</span></p> <p>V. Have any relevant authorities been informed? <span style="background-color: #e0e0e0; padding: 2px;">[Please briefly describe]</span></p>

4) Actions taken to contain the incident			
Short Description of Action	Responsible Party	Expected Date	Status

<sup>10</sup> See Appendix 2 for definitions.



**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																								
<p><i>For example:</i></p> <ul style="list-style-type: none"> <li>I. <i>where and when the incident took place,</i></li> <li>II. <i>who was involved, and how many people/households were affected,</i></li> <li>III. <i>what happened and what conditions and actions influenced the incident,</i></li> <li>IV. <i>what were the expected working procedures and were they followed,</i></li> <li>V. <i>did the organization or arrangement of the work influence the incident,</i></li> <li>VI. <i>were there adequate training/competent persons for the job, and was necessary and suitable equipment available,</i></li> <li>VII. <i>what were the underlying causes; where there any absent risk control measures or any system failures.</i></li> </ul>																								
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 <input type="checkbox"/>			Lost time injury <input type="checkbox"/>																					
<p><b>Immediate cause of fatality/injury for worker or member of the public (please check all that apply) <sup>11</sup>:</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"><input type="checkbox"/> Caught in or between objects</td> <td style="width: 50%; border: none;"><input type="checkbox"/> Medical Issue</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Struck by falling objects</td> <td style="border: none;"><input type="checkbox"/> Suicide</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Stepping on, striking against, or struck by objects</td> <td style="border: none;"><input type="checkbox"/> Project Vehicle Work Travel</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Drowning</td> <td style="border: none;"><input type="checkbox"/> Non-project Vehicle Work Travel</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Chemical, biochemical, material exposure</td> <td style="border: none;"><input type="checkbox"/> Project Vehicle Commuting</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Falls, trips, slips</td> <td style="border: none;"><input type="checkbox"/> Non-project Vehicle Commuting</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Fire &amp; explosion</td> <td style="border: none;"><input type="checkbox"/> Vehicle Traffic Accident (Members of Public Only)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Electrocution</td> <td style="border: none;"><input type="checkbox"/> Other</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Homicide</td> <td></td> </tr> </table>							<input type="checkbox"/> Caught in or between objects	<input type="checkbox"/> Medical Issue	<input type="checkbox"/> Struck by falling objects	<input type="checkbox"/> Suicide	<input type="checkbox"/> Stepping on, striking against, or struck by objects	<input type="checkbox"/> Project Vehicle Work Travel	<input type="checkbox"/> Drowning	<input type="checkbox"/> Non-project Vehicle Work Travel	<input type="checkbox"/> Chemical, biochemical, material exposure	<input type="checkbox"/> Project Vehicle Commuting	<input type="checkbox"/> Falls, trips, slips	<input type="checkbox"/> Non-project Vehicle Commuting	<input type="checkbox"/> Fire & explosion	<input type="checkbox"/> Vehicle Traffic Accident (Members of Public Only)	<input type="checkbox"/> Electrocution	<input type="checkbox"/> Other	<input type="checkbox"/> Homicide	
<input type="checkbox"/> Caught in or between objects	<input type="checkbox"/> Medical Issue																							
<input type="checkbox"/> Struck by falling objects	<input type="checkbox"/> Suicide																							
<input type="checkbox"/> Stepping on, striking against, or struck by objects	<input type="checkbox"/> Project Vehicle Work Travel																							
<input type="checkbox"/> Drowning	<input type="checkbox"/> Non-project Vehicle Work Travel																							
<input type="checkbox"/> Chemical, biochemical, material exposure	<input type="checkbox"/> Project Vehicle Commuting																							
<input type="checkbox"/> Falls, trips, slips	<input type="checkbox"/> Non-project Vehicle Commuting																							
<input type="checkbox"/> Fire & explosion	<input type="checkbox"/> Vehicle Traffic Accident (Members of Public Only)																							
<input type="checkbox"/> Electrocution	<input type="checkbox"/> Other																							
<input type="checkbox"/> Homicide																								
Name	Age/ Date of Birth	Nationality	Gender	Date of Fatality/ Injury	Cause of Fatality/ Injury	Affected Party (Employee/ Public)																		
			<input type="checkbox"/> Female <input type="checkbox"/> Male			<input type="checkbox"/> Sub-borrower employee <input type="checkbox"/> Contractor employee <input type="checkbox"/> Sub-contractor employee <input type="checkbox"/> Public																		
3b) Financial Support/Compensation Types (to be fully described in Corrective Action Plan template – template is given in Appendix 3)																								
<input type="checkbox"/> No Compensation Required			<input type="checkbox"/> Contractor Insurance																					

<sup>11</sup> See Appendix 1 for definitions

<input type="checkbox"/> Workman's Compensation/National Insurance	<input type="checkbox"/> Other
<input type="checkbox"/> Contractor Direct	<input type="checkbox"/> 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 impairment 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**

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

## **Annex H – Chance Find Procedure**

### **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.

### **Scope**

This Chance Find Procedure (CFP) will be implemented for 3129,3 kWp / 2600,0 kWe MWe Solar (Photovoltaic) Power Plant Project of Aksaray Municipality 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 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.

### **Legislation and Standards**

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

- World 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 19<sup>th</sup> century,
- Any immovable cultural asset from after the end of the 19<sup>th</sup> century, identified by the Ministry of Culture and Tourism as an important asset worthy of preservation,
- All immovable 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 XXXXXX 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.

### **Roles and Responsibilities**

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

Role	Responsibilities
<b>Contractor -Project Manager</b>	<ul style="list-style-type: none"> <li>• Overall responsibility for the development, review, approval and coordination of the numerous activities required to initiate, conduct and complete construction.</li> <li>• Ensure that this procedure is prepared, and updated as required, based on the activities undertaken as part of the project.</li> <li>• Ensure that adequate resources are made available to implement the procedures and guidelines outlined in this procedure.</li> </ul>
<b>Contractor Environmental and Social (E&amp;S) Expert</b>	<ul style="list-style-type: none"> <li>• Initiation, development, implementation and coordination of the CFP during construction.</li> <li>• 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.</li> <li>• Consultation with and reporting to relevant government bodies in case of potential archeological chance finds.</li> <li>• 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.</li> </ul>
<b>Contractor - Site Manager</b>	<ul style="list-style-type: none"> <li>• Day-to-day implementation of the provisions of the CFP in the field during construction.</li> <li>• Notify the E&amp;S Expert regarding potential chance finds during construction.</li> </ul>
<b>Employees</b>	<ul style="list-style-type: none"> <li>• Understand and comply with archeological chance finds procedures and guidelines outlined in this procedure.</li> <li>• Reporting of the potential chance finds to the Site Manager.</li> </ul>

### **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 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 site location discovered, 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.

- XXXXXX Museum Directorate will be notified at the latest within three days after the chance find is encountered. Contact details of the XXXXXX Museum Directorate are given below:

Address: XXXXXXXXXXXX

Telephone: XXXXXXXX

E-mail: XXXXXXXX

- 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 a 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.

### **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.

### **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 through supervision consultant; 3129,3 kWp / 2600,0 kWe MWe Solar (Photovoltaic) Power Plant Project of Aksaray 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.

**3129,3 kWp / 2600,0 kWe MWe Solar (Photovoltaic) Power Plant Project of Aksaray Municipality  
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:**



<b>Notes:</b>	
<b>SUBMISSION</b>	
<b>Name:</b>	<b>Date:</b>

## Annex I – Change Notification Form

Change Notification Form	
Subproject Name	
Subproject Location	
Subproject Phase	<input type="checkbox"/> Pre-construction <input type="checkbox"/> Construction <input type="checkbox"/> Operation
Name of the Institution Notifying the Change	
Date	
Category of the Change <i>(please select all that apply)</i>	<input type="checkbox"/> Legislative Change <input type="checkbox"/> Design Change <input type="checkbox"/> Schedule Change due to E&S factors <input type="checkbox"/> Project Schedule Changes due to technical, financial, legal or administrative factors <input type="checkbox"/> Changes due to E&S issues encountered at Subproject implementation <input type="checkbox"/> Contractor or Construction Supervision Consultant Change <input type="checkbox"/> Other <i>(please specify below)</i>
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**
