YEŞİLYURT BELEDİYESİ

YEŞİLYURT MUNICIPALITY

SOLAR POWER PLANT

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

SUSTAINABLE CITIES PROJECT – II

WITHIN THE SCOPE OF ADDITIONAL FINANCING

This project is co-funded by the European Union, the Republic of Turkey and the World Bank
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1. EXECUTIVE SUMMARY

This Environmental and Social Management Plan (“ESMP”) has been prepared by Yeşilyurt Municipality to carry out the necessary studies to evaluate the Environmental and Social Impacts of the Project according to the Sustainable Cities Project and Environmental and Social Standards (“ ESS”) for the Solar Power Plant Investment Project. The project is one of the sub-projects within the scope of Sustainable Cities Project-II - Additional Financing (SCP-II-AF), supported by World Bank ('WB') financing in order to support sustainable development in cities in Turkey. Investments to be made within the scope of the project will comply with both the Environmental Legislation of the Republic of Turkey and the World Bank Safeguard Policies. ILBANK will act as financial intermediary to ensure compliance with relevant WB policies and procedures.

1.1 Project Summary

Yeşilyurt Municipality solar power plant project will be located on the land belonging to Yeşilyurt Municipality in Malatya Province Yeşilyurt District Hıroğlu District Karataş Location 249 - 675 parcel, with a power of 990 kWe. With this project, the total consumption consumption of Yeşilyurt Municipality will be covered. The ratio of production to consumption is approximately 255% and the company plans to establish a production facility in accordance with the legislation. The last year consumption of Yeşilyurt Municipality is 801,000 kWh. The Eastern Anatolia Region, where Malatya is located, is one of the regions with the highest solar energy potential in Turkey, with an average annual radiation intensity of 1599 kWh/m2 and a sunshine duration of 2682 hours. The production of the SPP Project is simulated as 2,046,720 kWh. The approximate cost of the project is 896,000 € and the unit price is 700,00 €/kWp, based on market research. The loan to be paid for the project is calculated as €66,275.33 per year. In addition, the electricity unit price paid by the Authority is 2.9774 TL/kwh, which is 0.104 € at the current exchange rate (1€=28.60 TL). If the project is carried out with equity capital, the amortization period is calculated as 5 years, and if the project is carried out with a World Bank loan, it is calculated as 10 years.

Project production data was calculated using Energy Markets Regulatory Authority data, global sunshine duration and PV SYST program. In addition to contributing to the economy with an annual production of 2,046,720 kWh, the power plant will also prevent 1,268 tons of carbon emissions due to solar energy being a renewable clean energy source. The area where the power plant will be installed will not affect the local people much due to the residences located in Hıroğlu District Karataş Location, 800 meters away from the nearest residential area. While the power plant is being established, excavation work, transformer installation and approximately 230 m distance energy transmission line and field work will take approximately 7 weeks. Apart from that, the transportation of materials does not have a negative impact on the local people.

1.2 Scope

The scope of this document includes all activities to be carried out during the installation, commissioning, operation and maintenance phases of the Project . This document should be considered a "living" document and should be developed and improved according to the changing needs and conditions of the Project. For this reason, Yeşilyurt Municipality has tried to develop an approach with this plan to ensure compliance with the standards during the installation and operation phases of the Project and to respond to the needs regarding duties and responsibilities in the future.

The requirements and commitments specified in this plan are directly applicable to all Project employees, including Contractor/Subcontractor personnel.

The Environmental and Social Management Plan includes the following management issues prepared as part of this management plan:

- Air Quality Management
- Noisy management
- Contractor Management
- People Health And Security Management
- OP/4.01 Environmental Assessment
- OP/4.04 Natural Habitats
- OP/4.11 Physical Cultural Resources
- OP/7.50 International Waterways
- -OP/4.12 Involuntary Resettlement

Additionally, this ESMP overlaps and links with other Management Plans and Procedures developed for the Project:

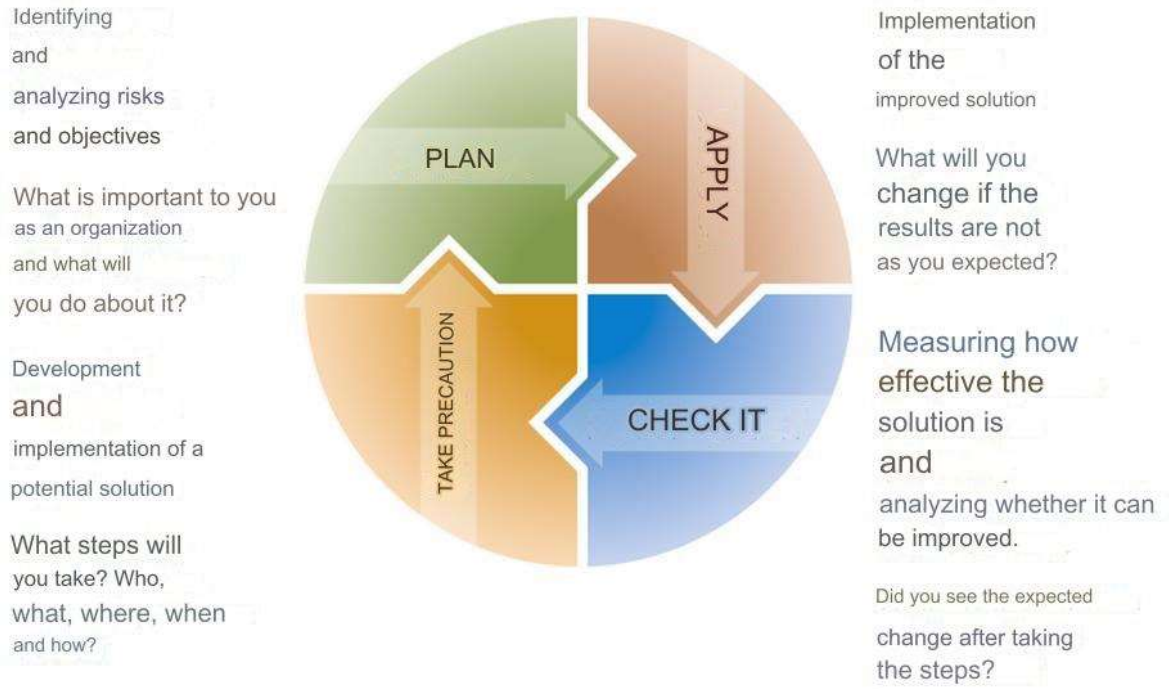


Figure 1. " Plan - Do - Check - Take Action " Principle , Quote : IFC ESMS Implementation Handbook

1.3 Aim

The purpose of this Environmental and Social Management Plan is to:

Outlining the environmental and social objectives of the project,

To provide an overview of the E&S Management System that will be implemented to ensure that environmental and social commitments regarding the construction and operation phases of the project are carried out systematically and effectively,

To provide a detailed explanation of the relevant duties and responsibilities of Yeşilyurt Municipality and its Contractors/Subcontractors,

Creating continuous improvement-oriented programs to achieve goals and objectives,

To ensure the awareness and competence of the staff regarding the policy, goals and objectives,

Conducting periodic internal and external audits, inspections and monitoring,

2. SUBPROJECT DESCRIPTION

The specific purpose of the project is; The aim is to produce electricity using solar energy, which is a renewable energy source, with the solar energy panels to be installed

within the scope of the project. In this way, Yeşilyurt Municipality will be able to use the budget it has allocated for electricity more efficiently and will be able to better respond to the needs of improving public and environmental health.

The constant increase in energy needs and the constant increase in unit costs significantly increase the energy costs of the municipality. Elimination of carbon emissions through environmental policies and international agreements is another factor of this project.

Yeşilyurt Municipality solar energy project. The 990 kWe power plant, which will be built in an area of 19,900 m2 on a land of 53,988.21 m2 in Malatya Province, Yeşilyurt District, Hıroğlu District, Karataş Locality, is connected to the Factories Feeder fed from Malatya I Transformer Center, located 230 km away, in line with the permissions given by FIRAT Eelectric Distribution Joint Stock Company and Malatya Municipality. It will be connected to the pole exiting from Yeşilyurt Central Distribution Center by making an underground transmission line. Permission for transmission lines has been received from Yesilyurt Municipality (Appendix 5). The land in question, the energy transmission line (all of which will pass underground) and the transportation roads are allocated treasury land and there will be no need for expropriation. Necessary approvals have been received in this regard. Relevant approval letters are attached.

Figure 2 Satellite Image of the Area Where the Project Will Be Done

The project area was completed in accordance with all relevant regulations by taking precautions against natural disasters such as earthquakes and floods, and consists of an area of approximately 19,900 m². The Solar Power Plant layout plan is presented in Annex-4. The project area can be reached by entering approximately 1.5 km from the Malatya-Çelikhan road.

Figure 3. Power Transmission Line

2.1 LAND ACQUISITION

Project-related land acquisition or restrictions on land use may result in physical displacement (relocation, loss of residential land, or loss of shelter), economic displacement (loss of sources of income or other means of livelihood as a result of loss of land, assets, or access to assets), or both. it could be. The term "involuntary resettlement" refers to these effects. Resettlement is considered involuntary when affected individuals or communities do not have the right to reject land acquisition or land use restrictions that result in displacement.

In-field works and transmission line works do not disturb the local people. The transmission line is an overhead line, the poles to be used for the line and the line route do not pass through private land. There is no action regarding individuals in the expropriation of the transmission line. The land in question, energy transmission line and transportation

roads are allocated treasury land and there will be no need for expropriation. Easement rights must be established on the route of the transmission line and at the pole locations.

The installation process is planned to be 7 weeks. The working order is created by receiving requests and complaints during the installation phase, and it can be ensured that the local people are not victimized. Apart from this, it is the responsibility of the contractor, under the control of the municipality and the consultant, to ensure that the installation and other workers do not cause any disturbing situation to the citizens of the region, such as noise and waste, during the installation process.

Relevant approval letters are presented in Annex 5.

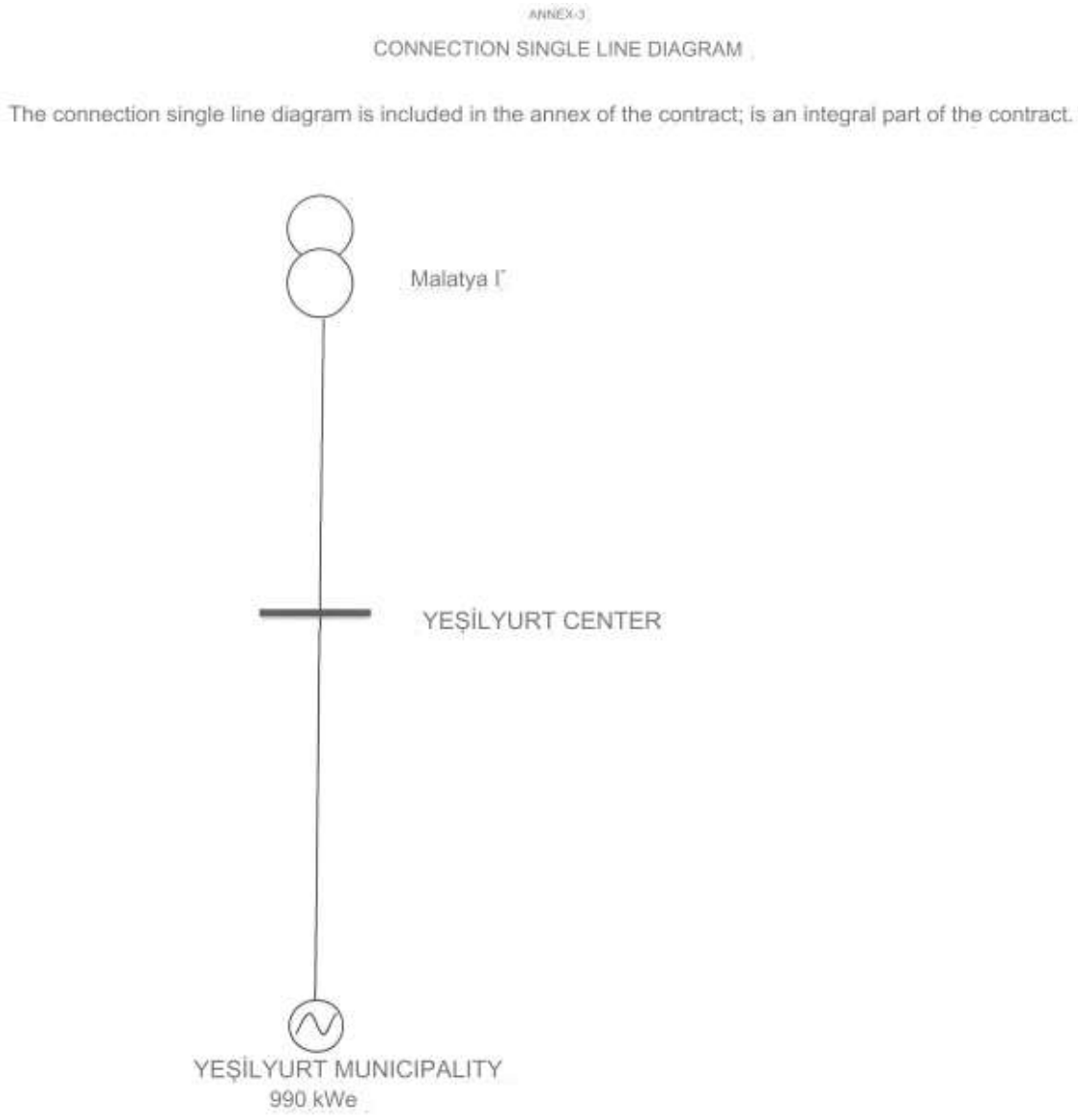


Figure 4. ENH Single Line Diagram of the Project

3. ENVIRONMENTAL AND SOCIAL SCANNING

Within the scope of the environmental and social scanning study carried out within the scope of the project (Annex 6), the risk matrix that may occur if the project is commissioned and put into operation has been discussed and prevention and mitigation strategies have been determined. The findings obtained as a result of environmental and social screening (See Annex 6) include occupational health and safety, public health, labor flow, air quality, noise level, waste management, wastewater management, etc. It addresses issues such as and the strategies to be implemented to minimize these impacts are presented in the Environmental and Social Management Plan section. In addition, the concepts of "accept, share the risk, reduce the impact and frequency, avoid" for risks are emphasized and the steps to be taken to manage the risks are given below. According to the World Bank's Environmental Assessment for Operational Policy (OP 4.01), projects are classified as Categories A, B and C.

As a result of environmental and social screening, risk categorization was evaluated and Category B was determined.

The proposed project is classified as Category B if it is probable and has minimal or no adverse environmental status impacts.

Risk assessment analysis and checklists prepared by international organizations will be examined and a Risk Assessment Guide will be created for implementation in our country. Risk Assessment Guides include identifying risks that may arise from hazards and taking necessary precautions. In our country, thanks to the Occupational Health and Safety Law No. 6331, there must be a Risk Assessment Guide in order to protect the safety of workplaces and the health of employees.

During the preparation of the Risk Assessment Guide, a Checklist and Risk Table are included. The Checklist is easy to use and understand . It allows predetermined points to be checked by giving only Yes or No answers.

The Checklist, prepared for the convenience of the user in terms of Occupational Health and Safety, includes preliminary analysis, project planning and design, tests and commissioning, and finally the operation of the power plant. In the stages examined, technical reasons predominate, and although it is not directly related to Occupational Health and Safety, it has an indirect effect. Risks where no precautions are taken against technical hazards during power plant installation will turn into Occupational Health and Safety risks in the following stages. Technical risks are included in the Checklist.

The Risk Table, which is detailed in terms of Occupational Health and Safety, is more comprehensive than the Checklist. In preparing the Risk Table, the risk value is determined by giving numerical values of the risks that may occur in the work area in advance. The Prepared Risk Table includes 3 stages for Solar Power Plants. These are installation, tests and commissioning, and finally operation and maintenance of the power plant. In the content of the Risk Table, unlike the Checklist, non-technical risks in terms of Occupational Health and Safety are examined. When using the Risk Table, hazards and risks that may arise from

hazards are determined. As a result of these, impact/harm consequences are defined. In order to determine the risk as a value, probability and severity values are determined and the risk value is created as a result of multiplying them. If the risk value is below the threshold value, the measures taken are appropriate; otherwise, the measures taken are insufficient and the measures must be increased.

The prepared Risk Assessment Table must be used during the installation of Solar Power Plants. Thanks to preliminary studies, possible risks are identified and precautions are taken. It is decided whether the measures are sufficient or not by taking into account the threshold value. If the risk value of a hazard is above the threshold value, it is seen that the measures taken are not sufficient. This may not always be the case. Although adequate precautions have been taken thanks to preliminary studies, the risk value may be above the threshold value. In this case, the risk value is above the threshold value. This situation is valid when sufficient technological development cannot be achieved or the technology is not effective.

4. LEGAL AND INSTITUTIONAL FRAMEWORK

There is sufficient legal and administrative basis in Turkey for environmental and social management during the implementation of development projects. In the ESMP study, both Turkey and the World Bank environmental and social policy documents and guides are taken into consideration. Looking at the institutional arrangement, Ministries and Organizations have established environmental and social branches for their own development work. The main legislation regarding the project is the Environmental Law dated August 1983 (amended by Law No. 5491 dated 26 April 2006). Many regulations and decrees have been put into effect within the scope of the Environmental Law. Article 10 of the "Environmental Law" states that an EIA report must be prepared for investment projects that may cause negative environmental impacts due to their planned actions. The types of projects for which an EIA report is required and the specific topics that need to be addressed in different cases are defined in the EIA Regulation No. 31907 dated 29.07.2022 issued by the Ministry of Environment and Urbanization. In addition to the EIA Regulation, other regulations regarding environment, health and safety and social issues are basically as follows:

- Regulation on Water for Human Consumption No. 25730 dated 17.02.2005
- 02.04.2015 history And 29314 number _ Waste Management Regulation
- Zero Waste Regulation No. 30829 dated 12.07.2019
- dated 26.06.2021 and numbered 31523 Packaging Waste Control Regulation
- Industrial Air Pollution Control Regulation
- 06.06.2008 dated And 2 6 898 numbered Air Quality Assessment and Management Regulation
- Exhaust Gas Emissions Control Regulation No. 30004 dated 11.03.2017

- 04.06.2010 history And 27601 numbered Environmental Noise Control Regulation
- 31.08.2004 history And 25569 numbered Regulation on the Control of Waste Batteries and Accumulators
- Medical Waste Control Regulation No. 29959 dated 25.01.2017
- 18.03.2004 History And 2 5 406 Numbered Regulation on Control of Excavation Soil, Construction and Demolition Waste
- date 08.06.2010 and 27605 Regulation on Control of Soil Pollution and Point Source Contaminated Sites No.
- Regulation on the Protection of Employees from Noise-Related Risks
- 09.12.2003 history And 25311 numbered Occupational Health and Safety Regulation
- Regulation on the Use of Personal Protective Equipment in Workplaces dated 02.07.2013 and numbered 28695
- Regulation on Noise Emission in the Environment Created by Equipment Used in Open Areas dated 30.12.2006 and numbered 26392
- Labor Law No. 4857
- Environmental Law No. 2872
- Expropriation Law No. 2942 dated 04.11.1983

5. INITIAL CASE DATA

The project area was completed in accordance with all relevant regulations by taking precautions against natural disasters such as earthquakes and floods, and consists of an area of approximately 19,900 m². Allocation of real estate in Yeşilyurt by the decision of the General Directorate of National Real Estate of the Ministry of Environment, Urbanization and Climate Change It was built for the municipality. Its property is treasury land.

Sunbathing Condition

Figure 5. Malatya Province Yesilyurt Town Sun Map

Malatya Province has an annual sunshine duration of 2,682 hours and a radiation value of 1,599 kWh / $m^{2.}$ It ranks important in terms of electrical energy production efficiency with the effect of technical, geographical and climate parameters. A warm and temperate climate prevails; There is much more precipitation in Malatya in winter than in summer. According to the Köppen-Geiger climate classification, it can be called Csa . The average annual temperature of Yeşilyurt District is 14 °C .

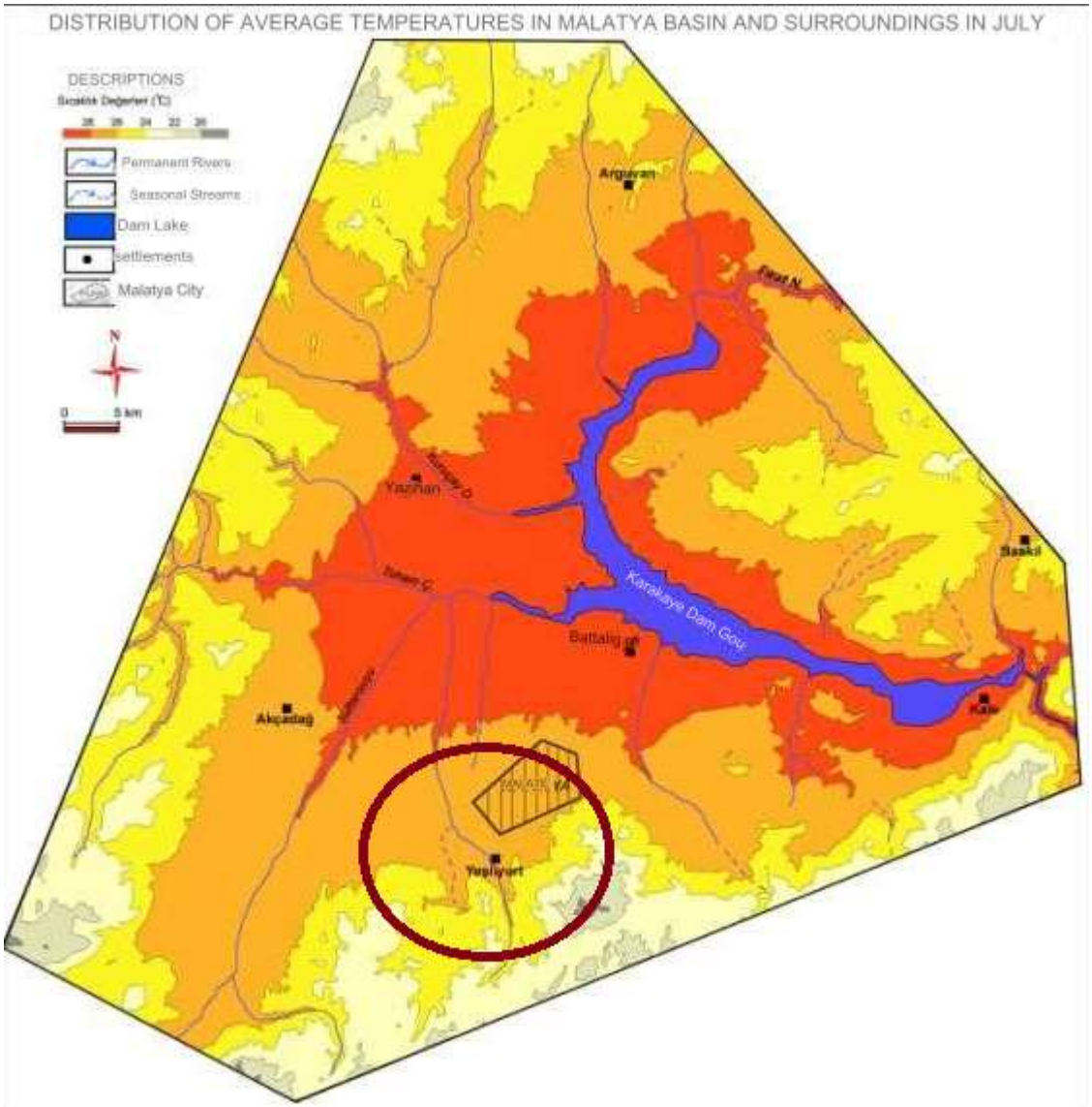


Figure 6. July Sunshine Map of Yesilyurt District

Climate Status

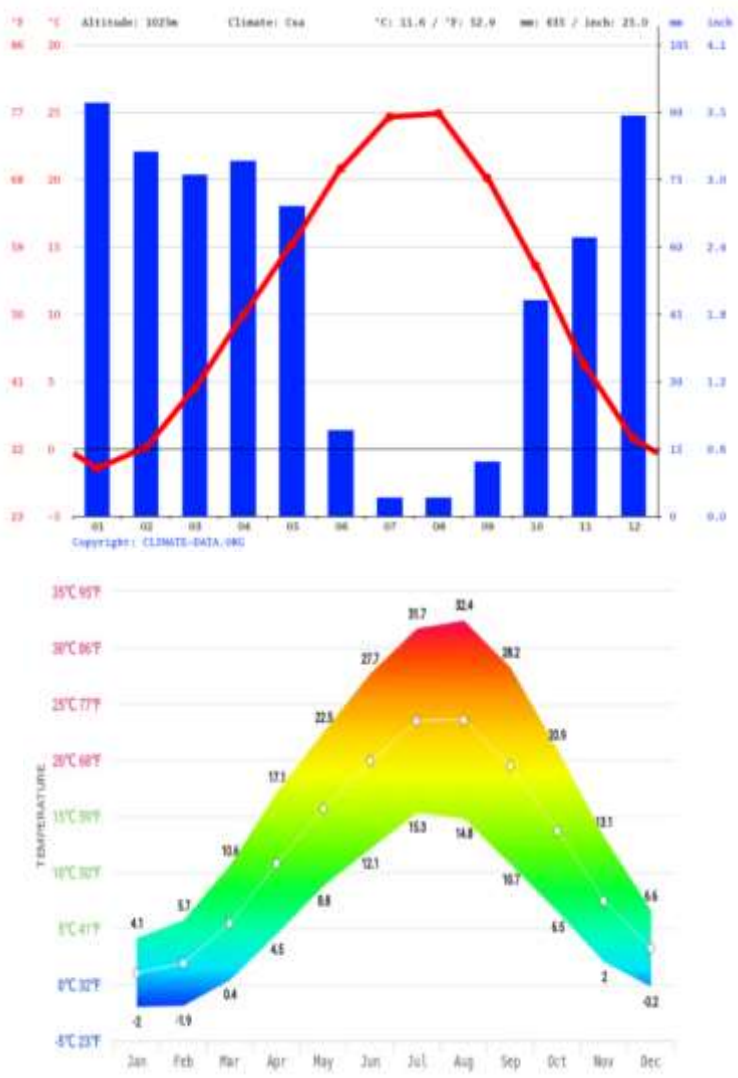


Figure 7 . Yeşilyurt District Temperature Change Graphs

Yesilyurt is a transition area between the marine precipitation regime of the Mediterranean Region and the terrestrial precipitation regime of the Eastern Anatolia Region. Therefore, although it is in the Eastern Anatolia Region, it has a less cold and less continental climate. Winters are cold and long, summers are hot and dry. The temperature fluctuates between -25, 1°C and +41.8°C. Three months are above 30°C and 2.5 months are below 0°C. It is covered with snow for one month of the year. Months with the largest precipitation are January, March, February with 193 mm precipitation. Most precipitation occurs in January with an average precipitation of 66 mm. Annual rainfall in Malatya is 574 mm. The hottest month of the year is August, with average temperature: 32°C. Generally, January is the coldest month in Malatya, with an average temperature of 4°C. (Source: General Directorate of Meteorology)

Agriculture and animal husbandry

The main agricultural products of the district are wheat, barley and fruit products. Especially the apricots and cherries of Yesilyurt district are famous. It is mostly sold in the domestic market. In addition, greenhouse agriculture is developing.

Livestock farming in the district is done in the villages of the district. The pasture availability is less compared to other districts. In addition to cattle and sheep farming, beekeeping activities are also observed. (Source: Malatya Chamber of Commerce and Industry)

Hıroğlu District Karataş Location, 800 meters away from the nearest residential area, it will not affect the local people much. While the power plant is being established, excavation work, transformer installation, transmission line with a distance of approximately 230 m and field work will take approximately 7 weeks. Apart from that, the transportation of materials does not have a negative impact on the local people.

Agricultural Areas: The project area does not remain in agricultural areas.

Forested Areas: The area where the project area is located does not fall within the borders of the forest area.

Recreation: There are no recreation areas in and around the project area.

Water Resources: Lake Van is located 950 m away from the project area.

School, Dormitory, Touristic Item, Areas with High Landscape Value, Hospital, etc .: The nearest mosque to the project area is located at a distance of approximately 25 m, the nearest school is located at a distance of approximately 200 m, and the nearest health center is located at a distance of 310 m.

Industrial Zone: The area where the project site is located is not located within the industrial zone.

Natural Natural Areas, National Park Areas, Wild Animal Production Areas: The area where the project site is located is not included in Natural Natural Areas, National Park Areas, Wild Animal Production Areas.

Yeşilyurt District, where the project area is located, has a population of 341,654 people in 2022. This population consists of 169,552 men and 172,102 women. Accordingly, the population of Yeşilyurt District consists of 49.7% men and 50.3% women. The population of Hıroğlu neighborhood is 1,112 people.

6. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

The Environmental Social Management Plan will include:

- ***Decrease***

- In the ESMP, measures and actions that reduce possible negative environmental and social impacts to acceptable levels and comply with the mitigation hierarchy are determined. Compensatory measures, if any, will be included in the plan. Especially in the ESMP

  (i) including workforce risks, occupational health and safety (OHS), land acquisition, biodiversity, involuntary resettlement, community health and safety, vulnerable groups and cultural heritage);
  (ii) equipment descriptions and operating procedures are described for each mitigation measure and situation – together with technical details – including the type of impact to which it relates and the conditions under which it is required (e.g. permanent or unexpected) ;
  (iii) Other mitigation plans needed for the project (e.g. involuntary resettlement, labour, OHS, community health and safety, stakeholder engagement or cultural heritage) are considered and consistent with these.

- ***Tracing***

  - The ESMP sets monitoring objectives and specifies the type of monitoring, explaining their connection to the impacts assessed in the environmental and social assessment and the mitigation measures described in the ESMP . Specifically, the monitoring section of the ESMP includes; (a) a specific description and technical details of the monitoring measures, including parameters to be measured, methods to be used, sampling locations, frequency of measurements, limits of detection (where appropriate) and definition of thresholds indicating that corrective action is required; and (b) (i) specific mitigation measures Monitoring and reporting procedures to ensure early detection of conditions requiring the use of mitigation measures; and (ii) to obtain information on the progress and results of mitigation efforts .

- ***Implementation Regulation, Capacity Building and Training***
  - the specific definition of institutional arrangements that determine which party is responsible for carrying out mitigation and monitoring measures is included in the ESMP (e.g. for operation, control, enforcement, monitoring of implementation, corrective action, financing, reporting and staff training).
  - the ESMP includes recommendations for identifying or expanding the parties that will be responsible for staff training and any additional measures that may be required to support the implementation of mitigation measures, and any other recommendations regarding environmental and social assessment .
- ***Application Schedule and Cost Estimates***

  - For all three topics (mitigation, monitoring and capacity building), (a) the measure implementation program that should be carried out within the scope of the project, showing its phases and coordination with the overall project implementation

plans, and (b) capital cost and recurring cost estimates and the implementation of the ESMP Funding sources are included in the ESMP . These figures are also integrated into total project cost tables .

6.1 Water Management

The water needs of 10 personnel who will work within the scope of the project will be met, and in parallel, wastewater will be generated due to the personnel. *The resulting wastewater will be collected in the septic tank and vacuumed with a sewer truck.*

During the operation phase of the project, deionized water will be used to clean the panels, and the water falling on the ground will evaporate and will not cause wastewater formation. The cleaning of the panels will be done twice a year and will be in accordance with the Occupational Health and Safety Law No. 6331.

The drinking water needs of the personnel who will work during the construction and operation phases of the project will be met by demijohns, and the potable water needs will be met from the network. In addition, the deionized water needed for cleaning the panels will be purchased.

The drinking water needs of the personnel who will work during the construction and operation phases of the project will be met by demijohns and the drinking water need will be met by purchasing, in accordance with the provisions of the "Regulation on Water for Human Consumption", which came into force after being published in the Official Gazette No. 25730 dated 17.02.2005.

wastewater amounts and the disposal method of wastewater during both the construction and operation phases of the project are given in Table 1.

Table 1. Building And Business In stages To be used Water Supply Plan

Project Period	Water use	The amount of water	Water Supply Place	Amount of Wastewater	Wastewater Disposal Method
Building	Drinking and potable water for 10 people who will take part in the land preparation phase	10 people x 224 lt / person-day* = 2.24 m ^{3} / day	Drinking water that will be needed during the land preparation and construction phase will be supplied from demijohns, and potable water will be supplied from the network by connecting to the network line located near the site.	10 people x 224 lt /person-day* = 2.24 m³/day*	It will be collected in the septic tank (3m x 3m x 2m) and will be vacuumed with a sewer truck at least once every 6 months or when it is full.
Business	Cleaning of Photovoltaic Panels (Twice a year)	4 m³/year deionized water (0.01 m³/day)	Panel cleaning will be done twice a year with chemical-free water, except on rainy days. Domestic water will be provided by purchasing.	-	During the panel cleaning process, water will evaporate and no wastewater will be generated. Any remaining water on the panel will be wiped off with a dry cloth.
	Drinking and potable water for 2 people who will take part in the operation phase	10 people x 224 lt / person-day* = 2.24 m ^{3} / day	Drinking water needed during the operation phase will be supplied from demijohns, and potable water will be supplied from the network.	10 people x 224 lt /person-day* = 2.24 m³/day*	It will be collected in the septic tank (3m x 3m x 2m) and will be vacuumed with a sewer truck at least once every 6 months or when it is full.

Drinking water to be used by the personnel who will work during the land preparation and construction phase of the project will be supplied from branded, original packaged bottled water sold in the licensed market in accordance with the provisions of the "Regulation on Water for Human Consumption".

The drinking and potable water needed by the personnel who will work at all stages of the project will be subject to regular control and inspection monitoring analyzes authorized by the Ministry of Health every year, in accordance with the criteria of the "Regulation on Water for Human Consumption", which came into force after being published in the Official Gazette dated 17.02.2005 and numbered 25730. It will be carried out in accredited laboratories and analysis reports will be kept.

6.2 Waste Management

Among the wastes that can be generated, recyclable (paper, plastic, glass, etc.) and non-recyclable wastes (food scraps, etc. organic waste) will be collected separately in garbage containers placed at various points of the project site . Wastes that can be recycled will be sent to licensed recycling companies; Domestic solid waste that cannot be recycled will be disposed of by giving it to the relevant Municipality.

For the packaging waste generated in the facility, in accordance with the colors specified within the scope of the "Zero Waste Regulation" published in the Official Gazette No. 30829 dated 12.07.2019 (blue color for paper waste, yellow color for plastic waste, gray color for metal waste, green color for glass waste). and black for non-recyclable waste) waste bins will be provided, a Zero Waste Management System will be established and data of the waste collected for the previous month will be entered into the Integrated Environmental Information System within the framework of the relevant regulation by the 15th of each month.

During the operations to be carried out within the scope of the planned project, domestic solid waste will be generated due to the personnel working. According to the data received from Turkish Statistical Institute, the daily amount of solid waste generated per person in MALATYA in 2022 is 1.16 kg/day, and accordingly, the amount of domestic solid waste that will arise from people who will work during the construction phase of the project is 11.6 kg/day (10 people x 1,000 people). 16 kg/person-day) solid waste will be generated.

Since the solid waste that will be generated within the scope of the project will not be stored in the project area for a long time, it will not cause any problems such as odor, appearance or leakage. All solid wastes (food scraps, packaging paper, pet bottles, glass bottles, etc.) that will be generated within the scope of the project will be subject to the "Waste Management Regulation", "Packaging Waste Control Regulation", "Zero Packaging Waste Control Regulation", which came into force after being published in the Official Gazette dated 02.04.2015 and numbered 29314. It will be disposed of in accordance with the " Waste Regulation" . In addition, employees will be warned that it is prohibited to discharge it into seas, lakes and similar receiving environments, streets and forests within the scope of Article 5 of the Regulation in question .

6.2.1 Waste panels

Materials such as panels, switches, solar regulators, inverters, etc., which deteriorate and become idle during or after the said activity, will be temporarily stored in the Hazardous Waste Storage Area in the existing facility, classified according to their properties, and delivered to licensed recycling companies for recycling and disposal. Wastes that cannot be recycled will be given to licensed companies for disposal in accordance with the conditions specified in the "Waste Management Regulation" published in the Official Gazette dated 02.04.2015 and numbered 29314.

6.2.2 Waste Accumulator And Batteries

Waste batteries that may be removed from vehicles in the project area will be returned to the vendors and replaced with new batteries. Batteries used in the field will be reused by ensuring that they are rechargeable. Used batteries will be collected in battery collection boxes and left at collection points belonging to (Portable Battery Manufacturers and Importers Association). The "Regulation on the Control of Waste Batteries and Accumulators" and its relevant provisions, which came into force after being published in the Official Gazette No. 25569 dated 31.08.2004, will be complied with.

6.2.3 Medical Wastes

Medical waste is not expected to be generated in the project area as the nearest health institution will be visited in case of an accident. In case of occurrence, the relevant provisions of the "Medical Waste Control Regulation", which came into force after being published in the Official Gazette dated 25.01.2017 and numbered 29959, will be complied with. Medical waste that is likely to be generated as a result of the use of first aid materials available in the facility in case of emergency; tear, puncture, explosion and transportation resistant; It will be placed in leak-proof red plastic bags made of original medium density polyethylene raw material and bearing the phrase "CAUTION MEDICAL WASTE". The bags will be filled at most ¾ and their mouths will be tightly tied, and when deemed necessary, each bag will be placed in another bag with the same features to ensure absolute sealing.

Within the scope of the wastes to be generated within the scope of the project, "Waste Management Regulation" Article 9. Within the framework of the obligations of the waste producer and the waste owner, the waste producer;

a) Taking the necessary measures to minimize waste production,
b) Collecting waste separately and storing it temporarily,
c) To prepare and present the waste management plan that it is obliged to prepare for the waste it produces and the prevention and reduction of waste,

c) Keeping records for the wastes it produces in line with the principles determined by the Ministry and making appropriate packaging and labeling,

d) To prepare municipal wastes for collection by keeping them closed in places where they are produced, such as residences and workplaces, in a way that does not harm the environment and human health, as determined by the institutions and organizations that are obliged to collect, transport and dispose of them within the scope of the relevant legislation,

e) To certify that the wastes identified with the mark (M) in Annex-4 of this Regulation and which are claimed not to contain the properties specified in Annex-3/B are non-hazardous through analyzes carried out by laboratories authorized by the Ministry,

f) Obtaining permission from the provincial directorate for temporary storage areas for which permission is required in accordance with the provisions of this Regulation,

g) To send its wastes to waste processing facilities that have received permission/environmental license in accordance with the provisions of this Regulation and the principles determined by the Ministry,

g) Fill in the waste declaration form, including the information of the previous year, using online applications prepared by the Ministry, starting from January until the end of March at the latest, approve it, print it and keep a copy for five years, while military units and institutions must submit a written declaration form. To send it to the Ministry by the Ministry of National Defense and the General Staff within the specified period and to keep a copy of it for five years,

*h) To send to waste processing facilities using (National waste transportation form) for wastes for which the use of (National waste transportation form) is mandatory and to comply with the relevant work and procedures, (Registering to the environmental information system and the waste will be sent via WASTE MANAGEMENT APPLICATION *) i) Waste of the waste processing facility If it does not accept it, by directing the carrier to another facility or by having the carrier bring back the waste and ensuring that the waste is processed in a suitable facility,*

i) To ensure the training of its employees who are responsible for operations such as collection, transportation and temporary storage of the wastes they produce, and to take all kinds of measures regarding health and safety,

j) In order to prevent pollution resulting from accidental or intentional dumping of waste and similar events, restoring the scene of the incident within one month from the moment the incident occurred, depending on the type of waste, and covering all expenses,

k) To inform the provincial directorate in case of accidental or intentional waste spillage and similar events and to submit a report containing information regarding the accident date, accident location, type and amount of waste, accident cause, waste processing type and rehabilitation of the accident site to the provincial directorate within 3 business days. ,

l) To apply to the Ministry to obtain compliance for wastes with the characteristics defined in the first paragraph of Article 19 of this Regulation, which can be considered as by-products,

m) To cover the expenses incurred for determining the quality, collection, transportation and processing of waste,

obliged to act in accordance with these provisions.

6.2.4 Excavation waste

Within the scope of the project, excavation will be carried out during the land preparation and construction phase, opening of the energy transmission line, arrangement of the land, placement of machinery and equipment, and excavation waste will be generated in this context. Excavation waste will be used as backfill material.

The machinery and equipment to be installed within the scope of the project, excavation will be carried out at a depth of 0.2 m in an area of approximately 16,000 m^2

According to this;

16,000 m^2 *0.2 m = 3,200 m^3 excavation will occur.

Will be carried out in accordance with the provisions of the "Regulation on the Control of Excavation Soil, Construction and Demolition Wastes", which came into force after being published in the Official Gazette dated 18.03.2004 and numbered 25406 . In addition, during the work to be carried out, the provisions of the "Regulation on the Control of Soil Pollution and Point Source Contaminated Sites", which came into force after being published in the Official Gazette dated 08.06.2010 and numbered 27605, will be followed. In addition, the Zero Waste Regulation, which came into force after being published in the Official Gazette dated 12.07.2019 and numbered 30829, will be complied with at all stages of the planned project.

6.3 Emission

Within the scope of the project, excavation will be carried out during the land preparation and construction phase, opening of the energy transmission line, arrangement of the land, placement of machinery and equipment , and in this context, dust emissions will occur due to the dismantling of the material, loading it into trucks, temporary unloading and storage in the determined area.Are stated in Table 12.6 of the "Regulation on Control of Industrial Air Pollution", which came into force after being published in the Official Gazette No. 27277 dated 03.07.2009 (amendment, Official Gazette No. 29211 dated 20.12.2014). It was calculated using “Emission Factors to be Used in Dust Emission Mass Flow Calculations”.

Table 2. Mass Flow Calculations Emission Factors

PROCESS	EMISSION FACTOR	
	Uncontrolled	controlled
Soil Removal	0.025kg/ton	0.0125 kg/ton
Soil Loading	0.01kg/ton	0.005kg/ton
Transportation of Materials (Total distance round trip)	0.7kg/km	0.35kg/km
Unloading	0.010	0.005
Storage	5.8	2.9

The total EIA area of the project is 19,900 m^2 and the total area to be excavated is 16,000 m^2. In total, 3,200 m^3 (16,000 m^2 *0.2 m) of topsoil will be stripped. It is planned to complete the topsoil stripping and refilling operations within approximately 42 days.

Vegetable Soil Removal and Loading to Vehicles

Dismantling

Within the scope of the project, a total of 8.73 tons/ hour of topsoil will be removed in the project area. The mass flow rate of the emission that will occur is calculated using the controlled and uncontrolled emission factor and is given below.

Controlled

Dust Emission **(E_1)** = [3.200 m^3 x 1.5 tons/m^3 x 0.0125 kg/ton] / [50 days x (10 h / day)]

= **0.12 kg/hour**

Uncontrolled

Dust Emission **(E_1)** = [3.200 m^3 x 1.5 tons/m^3 x 0.025 kg/ton] / [50 days x (10 h / day)]

= **0.24 kg/hour**

Loading of Materials to Vehicles

The mass flow rate of the emission that will occur is calculated below using the controlled and uncontrolled emission factor.

Controlled

Dust Emission **(E2)** = [3.200 m^3 x 1.5 tons/m^3 x 0.005 kg/ton] / [50 days x (10 h / day)]

= **0.048 kg/hour**

Uncontrolled

Dust Emission **(E2)** = [3.200 m^3 x 1.5 tons/m^3 x 0.01 kg/ton] / [50 days x (10 h / day)]

= **0.096 kg/hour**

- Transportation

of 200 m at the point of transporting all the extracted material to a suitable area within the project site with a truck with a carrying capacity of 20 tons . There will be 2 trips a day.

The mass flow rate of the emission that will occur is calculated using the controlled and uncontrolled emission factor and is given below.

Dust Emission: = 4,800 tons / 50 days
= 96 tons/day (2 trips/day)

Controlled

Dust Emission **(E_3)** = 0.35 kg/km x (2 x 0.20 km/trip) x (2 trips/day) x (1 day/10 h)

= **0.028 kg/hour**

Uncontrolled

Dust Emission **(E_3)** = 0.7 kg/km x (2 x 0.20 km/trip) x (2 trips/day) x (1 day/10 h)

= **0.056 kg/hour**

Emptying

Following the completion of the work, all excavation material and topsoil generated within the scope of the project will be discharged to a suitable area within the project area to be reused in filling, land leveling and landscaping work, and dust formation is expected in this context. The mass flow rate of the emission that will occur as a result of the discharge of the material is calculated using the controlled and uncontrolled emission factor and is given below.

Controlled

Dust Emission **(E_4)** = [3.200 m^3 x 1.5 tons/m^3 x 0.005 kg/ton] / [50 days x (10 h / day)]

= **0.048 kg/hour**

Uncontrolled

Dust Emission **(E_4)** = [3.200 m^3 x 1.5 tons/m^3 x 0.01 kg/ton] / [50 days x (10 h / day)]

= **0.096 kg/hour**

Storage of material (2.9 kg/ ha.day): It is planned to store 3,200 m ^{3} of material at elevations of approximately 3 m . Calculations for controlled and uncontrolled dust emissions that will occur in these processes are given below:

Excavation storage area = 3.200 m ^{3} /3 m
= 1067 m ^{2}
= 0.1067 ha

controlled

Dust Emission **(E_5)** = 0.1067 ha x 2.9 kg/ ha.day x (1 day/24 hours)
= 0.012 kg/hour

Uncontrolled

Dust Emission **(E_5)** = 0.1067 ha x 5.8 kg/ ha.day x (1 day/24 hours)
= 0.025 kg/hour

Total Emission (Controlled); **$= E_1 + E_2 + E_3 + E_4 + E_5$**
= 0.12 + 0.048 + 0.028 + 0.048 + 0.012
= 0.256 kg/hour

Total Emission (Uncontrolled); **$= E_1 + E_2 + E_3 + E_4 + E_5$**
= 0.24 + 0.096+ 0.056 + 0.096+ 0.024
= 0.512 kg/hour

"Regulation on the Control of Industrial Air Pollution" (amendment, Official Gazette No. 29211 dated 20.12.2014), which came into force after being published in the Official Gazette No. 27277 dated 03.07.2009, includes "values representing air pollution, measurements and It is stated that there is no need to determine the air quality values obtained, the calculated contribution to air pollution values and the total pollution values formed by these values, if the dust emissions emitted from places other than the chimney are less than 1 kg / hour .

Considering the situation where the dismantling, loading, unloading, transportation and storage of the excavation to be excavated within the scope of the land preparation and construction works of the project are carried out at the same time (worst case scenario), the dust emission that will occur has been calculated above, and the calculated value for the expected dust emission **is 0.256 kg for the controlled situation. /hour , and 0.512 kg/hour for the uncontrolled situation,** there was no need for air quality modeling within the scope of the construction phase of the project.

During the excavation and filling operations to be carried out within the scope of the activity, the matters specified in Annex-1 of " Regulation on the Control of Industrial Air Pollution" and the Air Quality Assessment and Management Regulation will be complied with in line with the World Bank EHS Guides, in the cases of material removal, loading, transportation and unloading.

Exhaust Gas Emission

Within the scope of the project, exhaust gas emissions will occur due to the vehicles to be used while bringing the photovoltaic panels, materials and equipment to the ESKİCAMİ SPP land, and will have a slight impact on the existing air quality. In this regard, in order to minimize the exhaust gas emissions resulting from the vehicles to be used within the scope of the project, the provisions of the "Exhaust Gas Emission Control Regulation", which came into force after being published in the Official Gazette dated 11.03.2017 and numbered 30004, will be complied with, and vehicles that have been maintained and repaired will be used.

6.4 Noisy

During the installation of the project, it is inevitable that short-term noise will occur during transportation and assembly periods that will affect the environment. Appropriate time periods can be selected to reduce this to minimum levels. The fact that the power plant will be established 800 meters away from the nearest settlement may cause short-term discomfort to the people living in the surrounding area. Excavation operations will be carried out while the energy transmission line is being constructed. Total transmission line 230 Considering that it will be 7-10 It is likely to be completed in a matter of days. During the work, regular monitoring should be done to ensure that field personnel are sensitive to this issue.

In terms of World Bank EHS Guidelines, Construction work will continue only during the day. If construction work needs to be carried out in the evening or at night, compliance will be made with the limit levels of 55 dBA and 50 dBA for the evening and night hours, respectively . Permission will be obtained from the Provincial Local Environmental Board for evening and night shifts.

After the installation of the power plant, the noise level that the equipment will emit to the environment during operation, especially the inverter panel and substation equipment, will be below 25 dB and therefore it will not pose any problem as the noise will completely disappear at a distance of 60-80 m. A complaint mechanism can be applied regarding these issues .

In case noise sources operate simultaneously, equivalent noise levels according to distances are calculated using the formula given below. Equivalent noise level distribution is given in tables and graphics.

Table 3 Equivalent Noisy of your level To the distances According to Distribution

Distance	40	50	100	200	300	400	500	750	1000
Equivalent noisy level	64.4	62.3	56.0	49.3	45.3	42.4	40.1	35.8	32.8

Table 4 Industry facilities For Environmental Noisy Border Values

Fields	$L_{daytime}$ (dBA)	$L_{evening}$ (dBA)	L_{night} (dBA)
to the noise sensitive from uses education, culture And healthfields with summer house and camp of their places density is fields	60	55	50
Commercial buildings with to the noise sensitive uses found togetherdensely populated areas aspect is located fields	65	60	55
Commercial buildings with to the noise sensitive uses together is located from those who receive workplaces busy aspect is located fields	68	63	58
Industrial fields	70	65	60

According to this situation, in theory, the noise level that will occur when all machinery and equipment are operating in the activity area is likely to be above the limit values when compared to the table above when it reaches the nearest residential area. However, working hours are made without affecting the quality of life of the local people. In the calculations made, the noise level caused by the work machines used was determined according to the distances. The noise level that will occur depending on the machines to be used during the operation phase has been calculated. The noise level that will occur during transformer, panel and inverter operation is calculated as 25 dB . .Noise levels of the equipment to be used during the preparation of the land within the scope of the project will be complied with the provisions of the "Regulation on Noise Emission in the Environment Created by Equipment Used in Open Areas" , prepared by the Ministry of Industry and Trade and published in the Official Gazette dated 30.12.2006 and numbered 26392.

6.5 Projection Effect

Another effect of solar power plants is the reflection and glare effect that occurs as a result of the image or light created by direct sunlight or a bright sky on the panels. Although the severity of glare and glare effects varies depending on the time of year and the geographical location of the power plant, the importance of the effect depends on variables such as potential receptor points (settlements in the impact area, transportation routes, airports, etc.). Since photovoltaic panels absorb sunlight , the glare and glare effects in PV type systems are lower than in systems using other solar energy technologies.

Photovoltaic panels, electrical production efficiency increase for absorption -most top level subtract and reflection -most member download for it is designed. Reflection limit for photovoltaic panels dark colorful light sucking from materials has been made and reflection inhibitor covering with covered. Nowadays panels from sun of your light on average 2% as much as it reflects.

US Federal Aviation According to the FAA, current sun of panels black from asphalt A little more light reflected water with their mass same at the level And naked soil , plant cover , roofs , glass, snow or of metal A lot under is in the direction of .

Against possible reflection and glare effects, points where there is a risk of reflection will be determined and in the first year of operation, vegetal or artificial curtains will be applied at the necessary points according to visual monitoring and complaints from nearby settlements. A highway passes right at the border of the project area, and in case of a glare effect on this road, the above-mentioned measures will be taken.

6.6 Bird Migration to your ways According to Evaluation

Turkey constitutes the southeastern borders of the wide geography defined as the Western Palearctic region. Every year, in spring and autumn, during periods defined as migration periods, very regular and large-scale bird migrations occur between the Western Palearctic Region and the central, eastern and southern parts of the African continent.

When trying to make an assessment of bird species and their habitats in any area, an important point to consider is whether the areas in question are frequently visited by birds or used for purposes such as resting, feeding or staying overnight while passing through or during the migration journey. It is revealed that it is not used. As it is known, Türkiye; It is rightly described as a "country of migration" in terms of birds. Some of the world's most important bird migration routes pass through the borders of Turkey.

While one of these routes passes from the west of the Southern Keban Dam, the other one enters our country from the Caucasus , passes through Northeastern Anatolia, and leaves our country from the south, like the first route. In spring and autumn, these movements are exhibited in opposite directions. Turkey is located on the most important bird migration routes between Europe and Africa, and due to its location, the areas on the migration routes are of great importance. The project area is not located on bird migration routes.

6.7 Work health And Security

The risk of accidents that may arise from the technology and materials to be used within the scope of the project will be low if the relevant regulations of the occupational health and safety law No. 6331 are strictly followed. In order to minimize the risk of accidents that may arise from the machinery and equipment to be used during the construction phase of the project, the operator will be obliged to fulfill the health and safety issues within the scope of the "Occupational Health and Safety Regulation in Construction Works", which came into force after being published in the Official Gazette dated 05.10.2013 and numbered 28786.

In order to prevent all possible risks to human health at all stages of the project, all health and safety rules specified in the Occupational Health and Safety Law No. 6331 and relevant regulations published in the Official Gazette No. 28339 dated 20.06.2012 will be followed.

Work accidents, fire, etc. that may occur in the project area. To respond to emergencies; In accordance with the current regulations and laws, fire extinguishing tools and equipment (fire extinguishers, buckets, shovels, etc.) in the project area, first aid materials, etc. in the quantities specified in the regulations. will be kept and placed in suitable places where everyone can easily reach them. Within the scope of the project, the Emergency Response Plan, which will be prepared to protect occupational safety and worker health, will be operational in emergencies such as natural disasters, fire and sabotage.

Table 5. Measures plan

SOURCE		POSSIBLE EFFECTS	PRECAUTIONS
WASTE WATER	**Land Preparation and Construction Phase;** Domestic wastewater will be generated due to the personnel to work.	When they are not treated or disposed of appropriately, they cause underground and surface water pollution and soil pollution, and can negatively affect human and environmental health **.**	Within the scope of the planned project, the water need of 10 personnel who will work in the construction and land preparation phase is **2.24 m³/day** , and the amount of wastewater it will create is **2.24 m³/ day** . Wastewater from people who will work in the planned project will be collected in the septic tank and vacuumed with a sewer truck .

SOURCE		POSSIBLE EFFECTS	PRECAUTIONS
SOLID WASTE- HAZARDOUS WASTE- MEDICAL WASTE- PACKAGING WASTE	**Land Preparation and Construction Phase** Municipal waste caused by personnel working in the project area Packaging waste from personnel In addition, there are hazardous waste, waste batteries and accumulators.	When not disposed of, it causes contamination of underground and surface water resources, soil pollution and odor problems for human health.	Municipal waste will be generated due to a total of 10 personnel who will work during the land preparation and construction phases of the project. Among the wastes that can be generated, recyclable (paper, plastic, glass, etc.) and non-recyclable wastes (food scraps, etc. organic waste) will be collected separately in garbage containers placed at various points of the project site. Wastes that can be recycled will be sent to licensed recycling companies; Domestic solid waste that cannot be recycled will be disposed of by giving it to the relevant Municipality. For the packaging waste generated in the facility, in accordance with the colors specified within the scope of the "Zero Waste Regulation" published in the Official Gazette No. 30829 dated 12.07.2019 (blue color for paper waste, yellow color for plastic waste, gray color for metal waste, green color for glass waste). and black for non-recyclable waste) waste bins will be provided, a Zero Waste Management System will be established and data of the waste collected for the previous month will be entered into the Integrated Environmental Information System within the framework of the relevant regulation by the 15th of each month. Since the solid waste that will be generated within the scope of the project will not be stored in the project area for a long time, it will not cause any problems such as odor, appearance or leakage. All solid wastes (food scraps, packaging paper, pet bottles, glass bottles, etc.) that will be generated within the scope of the project are subject to the "Waste Management Regulation", "Packaging Waste Control Regulation", "Zero Packaging Waste Control Regulation", which came into force after being published in the Official Gazette dated 02.04.2015 and numbered 29314. It will be disposed of in accordance with the " Waste Regulation" .

SOURCE		POSSIBLE EFFECTS	PRECAUTIONS
	Operation Phase It is possible for panels to become damaged/idle.		Panels, switches, solar regulators, inverters, etc. that break down and become idle during or after the activity in question. The materials will be temporarily stored in the Hazardous Waste Storage Area in the existing facility, classified according to their properties and delivered to licensed recycling companies for recycling. Wastes that cannot be recycled will be given to licensed companies to be disposed of in accordance with the conditions specified in the "Waste Management Regulation", which came into force after being published in the Official Gazette dated 02.04.2015 and numbered 29314. However, in accordance with the waste hierarchy, recycling of waste will be evaluated before disposal. Recycling of panels is given in detail below. Recycling of PV modules basically consists of 3 steps. The first stage is mechanical, chemical and thermal delamination (separation of layers), the second stage is chemical coating removal and the final stage is chemical extraction. To recycle the crystal, it is necessary to recover crystalline silicon from the modules by pyrolysis at 500 °C and to remove metal anti-reflection and diffusion coatings by acid etching. caused by rare precious substances (silver, gallium, indium, germanium), non-metallic substances (aluminum and glass), and hazardous substances (lead and cadmium) in PV modules are among the most important environmental problems caused by PV modules . With the latest decisions taken by the European Union Commission, PV panels are included among the Electrical and Electronic Equipment Waste. Recycling 1-ton silicone in the PV module corresponds to approximately 370 kg CO2 equivalent, which increases to approximately 800 – 1200 kg CO2 equivalent when produced with 100 % recycled raw materials . Compared to landfilling, the recycling scenario has less impact on the environment.

SOURCE		POSSIBLE EFFECTS	PRECAUTIONS
AIR POLLUTION	**Land Preparation and Construction Phase** Dust emissions from excavation works and exhaust gas from construction machinery and vehicles to be used during the land preparation and construction phase of the project emissions will occur.	Emissions may temporarily cause air pollution and indirectly soil and water pollution. It will also have temporary effects on human health and the flora and fauna of the environment.	In order to minimize dust emissions that will occur during the land preparation and construction phase; Irrigation will be done with water sprinklers on the road routes , filling and unloading operations will be carried out without blowing, vehicles will be covered with tarpaulins during the transportation of materials and the upper part of the material will be kept at 10% humidity. In order to minimize the emissions resulting from vehicles, all vehicles and equipment to be used will be routinely checked, vehicles that require maintenance will be taken into maintenance, and other vehicles will be used in the works until their maintenance is completed. In addition, they will be warned to work in accordance with the Traffic Law and care will be taken to ensure that they load in accordance with the loading standards. At all stages of the project, the provisions of the "Regulation on the Control of Industrial Air Pollution" (amendment published in the Official Gazette No. 29211 dated 20.12.2014) , which came into force after being published in the Official Gazette dated 03.07.2009 and numbered 27277 , will be complied with. *the "Exhaust Gas Emission Control Regulation" and its provisions* , which came into force after being published in the Official Gazette dated 11.03.2017 and numbered 30004, will be complied with during the land preparation, construction and operation stages of the Project .

SOURCE		POSSIBLE EFFECTS	PRECAUTIONS
NOISE AND VIBRATION	**Land Preparation, Construction and Operation Stages:** During the land preparation and construction phases of the project, noise will be generated from the operation of construction equipment and machinery equipment.	Noise has negative effects on human health and fauna.	The noise that will occur during the construction phase of the project will be local and temporary and will end at the end of construction. During this phase, regular checks of the work machines to be used will be made to ensure that the limit values specified in the regulation are not exceeded. Care will be taken to ensure that as few vehicles as possible operate at the same time. During the construction phase , noise will vary throughout the day during the works, but since the works will be carried out during the day (07:00-19:00), noise generation will be limited. During the works within the scope of the project, necessary measures will be taken to minimize noise generation, taking into account the conditions to be observed in road vehicles and the conditions to be observed in equipment used in open areas. In addition, in the project area, the issues specified regarding the "noise criteria for construction sites" will be complied with regarding the noise that will occur during the construction phase, and vehicles with traffic inspections, exhaust measurements and maintenance will be used. In cases where the recommended noise levels are exceeded during the construction and operation phases of the project and technical possibilities are insufficient to reduce noise and vibrations at the source, workers will be provided with headgear, headphones, earplugs, etc. specified in the Labor Law No. 4857. Protective clothing and equipment such as will be provided. Within the scope of the project, the limit values given in the Environmental Noise Control Regulation will be met.

SOURCE		POSSIBLE EFFECTS	PRECAUTIONS
EXCAVATION AND SOIL POLLUTION	**Land Preparation and Construction Phase** During the land preparation and construction phase of the project, excavation residue material will be generated during excavation.	If not disposed of, it causes visual pollution and dust spread.	During the excavation works to be carried out during the land preparation and construction phase, flammable, explosive and hazardous materials will not be used and during the works, the Waste Management Regulation published in the Official Gazette No. 29314 dated 02.04.2015 and the "Circular on the Regulation on the Regular Storage of Waste" No. 2010/16 and 18.03. The provisions of the "Regulation on the Control of Excavation Soil, Construction and Demolition Wastes" published in the Official Gazette No. 25406 dated 2004 will be complied with.

Table 6. Tracing plan

PARAMETER TO BE MONITORED		LOCATION OF THE PARAMETER	MONITORING METHOD	VIEWING FREQUENCY	REASON FOR WATCHING	CORPORATE RESPONSIBILITY	Cost
Ensuring Ground Safety		In the project area	With drilling devices and tools	Pre-Construction	In accordance with the Regulation on Buildings to be Built in Disaster Areas	-Investor	Included in the project budget
Excavation Waste		In the project area	Visual inspection, record and report keeping	During the excavation works, continuous	Compliance with the Regulation on the Control of Excavation Soil, Construction and Demolition Waste	-Investor -Contractor	Included in the project budget
Air Management	Dust Emission	Construction site and transportation routes	observational	throughout the entire construction	dust emissions are taken, protecting the environment and employee health, and in accordance with the Air Quality Assessment and Management Regulation	-Investor -Contractor	Included in the project budget
	Vehicle Emissions	Construction equipment exhausts	observational	During periodic maintenance periods of vehicles	Ensuring compliance with the Exhaust Gas Emissions Control Regulation	Investor -Contractor	Included in the project budget
Noisy		In sensitive areas near construction sites and work areas	With Noise and Vibration Measurement Device, by a Qualified and Accredited Company (Observational)	In cases where there is a complaint	Environmental Noise Control Regulation Regulation on the Protection of Employees from Noise-Related Risks	-Investor -Contractor	Included in the project budget
Vibration		In sensitive areas near construction sites and work areas	With Noise and Vibration Measurement Device, by a Qualified and Accredited Company (Observational)	In studies carried out at different points or in cases where there is a complaint	Environmental Noise Control Regulation Regulation on the Protection of Employees from Noise-Related Risks	-Investor -Contractor	Included in the project budget

PARAMETER TO BE MONITORED		LOCATION OF THE PARAMETER	MONITORING METHOD	VIEWING FREQUENCY	REASON FOR WATCHING	CORPORATE RESPONSIBILITY	Cost
Landscape		Areas where construction work will be carried out	Taking photos and recording with a camera	Continually observational	For landscaping works to be carried out after construction	-Investor	Included in the project budget
Waste Management	Municipal waste, Packaging Waste	In the construction area or in the area to be used as a construction site	observational Audit and Recording	Daily	Ensuring compliance with the Regulation on Soil Pollution Control and Point Source Contaminated Sites, Packaging Waste Control Regulation, Waste Management Regulation	-Investor -Contractor	Included in the project budget
	Hazardous Wastes	In the construction area or in the area to be used as a construction site	observational Audit and Recording	Continually	Ensuring compliance with the Waste Management Regulation	-Investor -Contractor	Included in the project budget
	Other Wastes (Battery, Battery, etc.)	In construction sites	Recording the Delivery to Recycling Companies	Continually	In accordance with the Regulation on the Control of Waste Batteries and Accumulators	-Investor -Contractor	Included in the project budget
Occupational Health and Safety		In all studies	Observation and recording, reporting	Continually	Ensuring compliance with Labor Laws and Regulations and World Bank Social and Environmental Standards	-Investor	Included in the project budget
Transport		On-site and off-site roads	observational	Continually	Safety of Life and Property, in accordance with the Highway Traffic Law	-Investor	Included in the project budget
Public Safety		In all studies	Observing whether permissions have been obtained from the relevant institutions within the framework of the legislation	Pre-Construction, Fulfillment of requests from relevant institutions during construction	By law	-Investor	Included in the project budget

PARAMETER TO BE MONITORED	LOCATION OF THE PARAMETER	MONITORING METHOD	VIEWING FREQUENCY	REASON FOR WATCHING	CORPORATE RESPONSIBILITY	Cost
Labor and Labor Flow	In all studies	Inspection of inappropriate working conditions, child labor, unregistered employment	Continually	Ensuring compliance with Labor Law and Regulations	-Investor	Included in the project budget
Stakeholder Engagement	In all studies	Monitoring communication problems with stakeholders	Continually	In accordance with World Bank Environmental and Social Standards	-Investor	Included in the project budget
Grievance Mechanism	In all studies	Documentation control	Continually	In accordance with World Bank Environmental and Social Standards	-Investor	Included in the project budget
Climate Change	In all studies	Calculation of greenhouse gas emissions reduced within the scope of the project (documentation control)	1 per year	Adapting to Climate Change / Reducing greenhouse gas emissions	-Investor	Included in the project budget
Impact on Local Economy, Livelihoods and Employment	In all studies	Documentation control	Continually	In accordance with World Bank Environmental and Social Standards (ESS4: Community Health and Safety)	-Investor	Included in the project budget
Effects on Vulnerable Individuals /Groups	In all studies	Documentation control	Continually	As per World Bank Environmental and Social Standards (ESS7: Indigenous Peoples/Historically Underserved Traditional Local Groups of Sub-Saharan African)	-Investor	Included in the project budget
Public Health and Safety Community Engagement	In all studies	Review of security records, review of complaint records, number and nature of resolved complaints	Monthly	In Requirement of Occupational Health and Safety, Community Health Safety and World Bank Standards	-Investor	Included in the project budget

7. STAKEHOLDER ANALYSIS and STAKEHOLDER PARTICIPATION PLAN

A stakeholder engagement plan is a plan that aims to build strong, constructive and responsive relationships by identifying the parties that may be affected by a planned project, which is necessary to properly manage the environmental and social impacts of a project.

A stakeholder is defined as any individual, organization or group potentially affected by the Project or interested in the Project and its impacts. The purpose of stakeholder identification is to identify stakeholders who may be directly or indirectly, positively or negatively affected by the Project ("affected parties") or who have an interest in the Project ("other interested parties").

A stakeholder can be defined as any person, organization or group that has an interest/stake in the project and its impacts. The purpose of stakeholder identification is to identify and prioritize, for consultation purposes, the project stakeholders who may be directly or indirectly, negatively or positively affected by the project, or who may not be directly affected but may have an interest in the project. All stakeholder groups that are interested in the outcome of the project and that may be affected by or have an impact on the project will be identified. It involves screening a wide range of potential stakeholders, including institutions, associations, NGOs and other informal groups that should be included in the stakeholder engagement process. Stakeholders are categorized by type and status according to the profile the stakeholder has within its social structure.

The purpose of stakeholder engagement is to ensure continuous communication with stakeholders to inform them about project performance, project development and investment plans, and activities to be undertaken during the construction and operation phases of the project, including their implementation. Stakeholder engagement is an ongoing activity throughout the planning, construction, operation and closure phases.

The people living in the settlements close to the project route will be primarily affected by the Project. Local people living in the region and making a living from the region will be primarily affected. In addition, local people living in the nearby settlements will also be indirectly affected.

The stakeholder analysis table documented within the scope of this project is given below.

Table 7. Stakeholder Participation Analysis Table

Parties Affected by the Project	Neighborhoods and people living in the project area and nearby settlements
Other Interested Parties	World Bank Ilbank Ministry of Environment, Urbanization and Climate Change (ÇŞİDB) Energy and Natural Resources Ministry Malatya Governorship Provincial Directorate of Environment, Urbanization and Climate Change Yesilyurt District Governorate Ilbank MALATYA Regional Directorate Yesilyurt Municipality Türkiye Electricity Distribution Inc. FIRAT Electricity Distribution Inc. The contractor Advisor
Final Beneficiary	Yesilyurt Municipality Neighborhoods and people living in the project area and nearby settlements

Within the scope of the Environmental and Social Impact Assessment studies initiated for the Project, the working group and relevant institutions have visited the project area many times and conducted project studies and on-site inspections. During these visits, local people and non-governmental organizations were informed about the project as much as possible and stakeholders' opinions and views were received.

During the construction and operation phases, the Sub-borrower shall keep the following information up to date and accessible, providing information on the development of the Project and implementation under the Project. This information will include:

- Key Project phases and timelines (e.g. obtaining permits, start of project activities, construction timeline, etc.),
- Any project-related disruptions (e.g. road closures, transportation and infrastructure disruptions) as addressed in the ESMP and presented in the GRM,
- Significant consultations/meetings with potential outcomes that could affect the community or local people (see Annex 9 for a sample consultation form); and
- EHS performance (e.g. information on accidents, monitoring results).

7.1 Announcements during Project Activities

The Sub-borrower will notify the muhtar in the impact area two (2) days in advance of any potential temporary road closure during Project activities. Similarly, the Sub-borrower will notify the affected local community two (2) days in advance of the works to be carried out at the Municipality building and/or announcement platforms.

Likewise, businesses, schools and/or hospitals that are likely to be affected by project activities will be notified two (2) days in advance of the works. Activities will be guided by the feedback received from stakeholders to avoid disruption of business operations and/or services.

7.2 Detailed Stakeholder Engagement Activities

For all Category A and B subprojects proposed for WB financing, the Borrower will consult with and take into account the views of project affected groups and local NGOs on the environmental aspects of the project during the Environmental Assessment process. The Borrower shall initiate these consultations as early as possible. For Category B subprojects, consultation with affected groups and other relevant/affected stakeholders is expected at least once after the draft ESMP is finalized. This consultation will include, but not limited to, the following foreseen topics:

- Project Objective,
- Social, environmental and ecological impacts identified to occur on the project,
- Impacts and mitigation or remediation measures being implemented,
- Duties and responsibilities,
- Monitoring and management measures and

Information about the GRM for the project.

In addition, the Sub-borrower will be responsible for stakeholder engagement as an ongoing process throughout the Project. Identifying and responding to grievances supports the development of positive relationships between projects, the public and other stakeholders. Grievances can indicate growing stakeholder concerns (real or perceived) and can escalate unless they are identified and resolved.

The GRM will be introduced and communicated to stakeholders in an easy-to-understand language and format so that they are familiar with the process, know that they have the right to file a grievance, and understand how the mechanism will work and how their grievance will be handled. In most cases, a grievance will be submitted by a stakeholder or resident by phone, in writing or by meeting with one of the company's grievance officers.

7.3 Information Sharing and Stakeholder Engagement in the COVID-19 Process

As an unprecedented process, the COVID-19 Pandemic demonstrates that all elements of Project activities, including stakeholder engagement, may be affected. Given the mandatory restrictions and social distancing measures associated with COVID-19, alternative approaches to stakeholder engagement have emerged in the short term.

With respect to information dissemination, the Sub-borrower will seek to communicate reliable and accurate information to all stakeholders by ensuring that information is easily understandable and in a culturally appropriate form and language.

To engage with stakeholders during the pandemic, it is recommended to use, but not limited to, the following tools

- Brochures
- Email
- Notice boards for public use
- Phone calls and messages

Website of the sub-debtor

In addition, changes in the Sub-Borrower's operations due to COVID-19 that may have an impact on the public will be reported accordingly. These include but are not limited to the following:

- Changes in the project due to COVID-19
- Changes in the delivery of social development programs
- Changes in employment, purchasing from local businesses, etc.
- Timeframe for resolving public complaints
- New or modified communication campaigns for public awareness on COVID-19, coordinated with relevant authorities and based on information from recognized sources such as WHO, the "Guidelines on COVID-19 Outbreak management and Operation" published by the Ministry of Health and the "Interim Recommendation for IFC Clients on Safe Stakeholder Engagement in the Context of COVID-19" published by IFC.

Finally, the Project will consider the new approaches shown in Table.8 for effective engagement during COVID-19.

Stakeholder Groups	Topics	Frequency	Methods and Materials	Lead and Support Responsibility
Official Authorities / Authorities • Malatya Provincial Directorate of Environment Urbanization Climate Change	• Updates on project activities and progress • Local procurement and employment data • About social distancing restrictions and measures related to COVID-19 Updates	When necessary	Teleconferencing Virtual meetings Written updates Project Owner's website ŞÇM	Sub-obligor
Municipalities / Neighborhoods • Malatya Municipality • Yesilyurt Municipality • Headman of Hıroğlu Neighborhood Karataş Mevkii People living in Hıroğlu neighborhood and nearby areas	• Necessary updates on project activities and progress • Updates on social distancing restrictions and measures related to COVID-19	When necessary	Teleconferencing Virtual meetings Written updates Project Owner's website ŞÇM	Sub-obligor

Stakeholder Groups	Topics	Frequency	Methods and Materials	Lead and Support Responsibility
Internal Stakeholders • All employees	• Updates on project progress and planning • Changes to the project's operational procedures and emergency and response plans • Guidance on changes in occupational health and safety and working conditions and access to subsidies (if any) • Measures to be taken in case of COVID-19 symptoms • Locations of centers dedicated to COVID-19 cases • On new working arrangements related to COVID-19 measures Updates	When necessary	Email or text message to be sent to all staff Virtual meetings Teleconference Sub-debtor's website Written updated information	Sub-Borrower, Contractor and Subcontractor(s)

7.4 Initial Activities Related to Public/Stakeholder Consultation

Following the submission and approval of the draft ESMP of the Project to ILBANK/WB, a stakeholder engagement meeting was held on 19.03.2024. The meeting minutes and other information regarding the meeting are presented in Annex 12.

The stakeholder analysis table documented within the scope of this project is given below.

Within the scope of this project, the opinions of all stakeholders will be taken into consideration and a social impact assessment of the project will be conducted. This assessment will be shaped as a result of scientific and observational-based research within the framework of literature studies, measurable sampling surveys (household and mukhtar surveys), observations and assessments.

The implementation stages of the research are planned as given below:

- Clear identification of objectives and literature review,
- Data collection process,
  - Sample design and selection
  - Development of data collection tools
  - Data collection
- Input and analysis of data into statistical software for social sciences (SPSS),
- Writing the report in line with the data obtained,
- Utilizing this data within the scope of the project,

The main objectives of this research are;

- To determine the current social and economic status of the people living in the settlements around the project area,
- To assess the socio-economic impacts of the works planned under the Project on households in the immediate vicinity and to investigate whether vulnerable/disadvantaged groups will be adversely affected,
- Eliminate negative impacts, and where elimination is not possible, mitigate and compensate for them.

The questionnaires will consist of a mix of closed questions (mainly for statistical data) and open or semi-open questions (mainly to obtain qualitative information) to cover the areas of interest identified in the literature study. The surveys planned to be implemented will be household and mukhtar surveys and their characteristics are given below.

7.5 Mukhtar Surveys

Interviews with mukhtars aim to collect general information about their settlements. The Muhtar questionnaire generally consists of questions on demographic profile and social structure, services, infrastructure, environment, cultural structure, economic activities, education, health, information on problems in the settlement, and the opinions of the Muhtars on the project.

7.6 Household Survey

The household survey aims to collect information on the general socio-economic status of the households in the study area and their general opinions and expectations regarding the project. The household questionnaire generally consists of questions aiming to

learn the demographic and economic profile of the households, infrastructure and housing situation, education, health, problems and their opinions about the project.

When assessing social and environmental impacts, all direct and indirect, short-term and long-term, planned and unplanned, known and unknown, intended and unintended, visible and invisible impacts should be considered. In some cases, all segments of society may be affected, while in other cases certain segments of society may be affected. Some impacts may remain invisible for a long time. In this context, the potential impacts of the SPP Project on the socio-economic environment in the region will be assessed and mitigation measures to be taken regarding these impacts will be defined.
Mitigation strategies will be identified in the light of the findings of all these studies and positive steps will be taken for the project in consultation with stakeholders.

7.7 Grievance Mechanism

In order to assess the Environmental and Social Impacts of the Project during the construction and operation of the Project, a Grievance Procedure should be prepared to cover all grievances raised by stakeholders, including the activities of contractors. The establishment of a grievance mechanism will require the establishment of a 24/7 hotline and comments and grievances will be collected by phone, e-mail, mail and verbally.

The Grievance Procedure will provide a channel through which employees can transparently express their opinions and complaints regarding working conditions. The Grievance Procedure includes receiving and recording the grievance, evaluating the grievance, resolving the grievance and closing the grievance. Relevant personnel will be assigned for the grievance management process. The person in charge of collecting grievances will inform the necessary units.

In order to raise awareness among employees, information on how to file a grievance and how to express their opinions and suggestions will be provided during trainings on the Grievance Mechanism. Grievance acceptance channels will be diversified or revised to facilitate employee access.

The Grievance Procedure ensures that the environmental and social risks of the Project are assessed while addressing external grievances related to the Project. The Grievance Procedure ensures that a constructive relationship is established and maintained with external stakeholders. This procedure will cover grievance receipt, assessment, validation, investigation, feedback to stakeholders, implementation of improvement actions and closure.

8. ANNEXES

Annex 1 **Parcel Area Coordinates**

Annex-2 **Application Certificate**

Annex 3 **EIA Not Required Certificate**

Annex-4 **GES Layout Plan**

Annex 5 **Energy Transmission Lines Expropriation Exemption Letter**

Annex 6 **Environmental and Social Screening**

Annex-7 **Complaint Form**

Annex 8 **Complaint Closure Form**

Annex-9 **Consultation Form**

Annex 10 **Coincidence Find Form**

Annex-11 **Field Photos**

Annex-12 **Information on the Stakeholder Engagement Meeting**

ANNEX 1

PLOT AREA COORDINATES

	UTM ZONE 37-39 (ED-6)	
CORNER NUMBER	**EAST (WORTH RIGHT)**	**NORTH (UP VALUE)**
K1	434031.16	4235848.66
K2	4344044.12	4236844.03
K3	434056.90	4236762.08
K4	434071.54	4236750.77
K5	434030.60	4236611.27
K6	433946.52	4236637.81
K7	433966.91	4236752.02
K8	433949.19	4236752.02
K9	433958.37	4236766.12
K10	433963.32	44236789.82
K11	433976.06	4236805.28
K12	433978.39	4236829.91

ANNEX-2

APPLICATION DOCUMENT

İli	MALATYA
İlçesi	YEŞİLYURT
Mah/Köy	HIRDOĞLU
Pafta No	–
Ada No	249
Parsel No	675

MALATYA KADASTRO MÜDÜRLÜĞÜ

4414 - 102 LİHKAB

APLİKASYON KROKİSİ

Parsel Köşe Koordinatları

Tapu Alanı	Yüzölçümü Yeni Hesap	Fark	Yanılma Sınırı
53988.21	53988.21	0.00	109.14

Fen Kayıt Defteri Tarihi	Fen Kayıt Defteri No	Tarihi	No
20.02.2020	43	20.02.2020	107

ED-50 KOORDİNATLARI | ITRF KOORDİNATLARI

Noktalar	Y	X	Noktalar	Y	X	Noktalar	Y	X	Noktalar	Y	X

26.02.2020

ASLI GİBİDİR

	Ölçü huzurunda yapılmıştır. Taşınmaz Maliki	Aplikasyonu Yapan Teknisyen/Tekniker	Aplikasyonu Yapan Teknisyen/Tekniker	Kontrol Eden Kontrol Memuru Mühendis/Harita Bürü	Kont. Müh.	Tasdik Olunur
Ünvanı	YEŞİLYURT BELEDİYESİ -(MALATYA)	Fatih ÇELİK Harita Tekniker	Murat GÜL Harita Teknikeri	Oğuzhan ACIL		
Adı Soyadı	Tuğrul TEMEL (Vekil)					
Tarih	24.02.2020	24.02.2020	24.02.2020			
İmza						

ANNEX-3

EIA IS NOT REQUIRED

T.C.
MALATYA VALİLİĞİ
Çevre ve Şehircilik İl Müdürlüğü

Sayı :90215094-220.03-E.4389 26.02.2020
Konu :Muafiyet

YEŞİLYURT BELEDİYE BAŞKANLIĞINA
MALATYA

İlgi : a) 20.02.2020 tarihli ve 89129665-2739 sayılı yazınız.
b) 20.03.2018 tarihli ve E.47249 sayılı Bakanlığımız yazısı.
c) 21.02.2020 tarihli ve "118202" Geçici Referans No'lu Başvuru.

İlgi (a) kayıtlı yazı ile; Belediyeniz tarafından İlimiz, Yeşilyurt İlçesi, Hıroğlu Mahallesi 249 Ada, 675 nolu parselin 19.900 m^2 kısmında yapılması planlanan Güneş Enerjisi Santrali (990 KW) projesinin ÇED Yönetmeliği kapsamında değerlendirilmesi talep edilmektedir.

25/11/2014 tarih ve 29186 sayılı Resmi Gazetede yayımlanarak yürürlüğe giren ÇED Yönetmeliği Ek-1 Listesi Madde 45- (Değişik:RG-26/5/2017-30077) Proje alanı 20 hektar ve üzerinde veya kurulu gücü 10 MWe ve üzerinde olan güneş enerji santralleri, ve Ek-2 Listesi Madde 31- (Değişik:RG-26/5/2017-30077) Proje alanı 2 hektar ve üzerinde veya kurulu gücü 1 MWe ve üzerinde olan güneş enerji santralleri (çatı ve cephe sistemleri hariç), hükümleri yer almaktadır.

İlgi (b) kayıtlı Bakanlığımız yazısında belirtildiği üzere tesisin kurulacağı alanın yatırımcı mülkiyetinde olması, proje alanının uydu görüntüsü ve projeye ait teknik verileri olduğundan söz konusu Güneş Enerjisi Santrali (990 KW / 19.900 m^2) projesi, ilgi (c) kayıtlı Referans No'lu Başvuru ile Çevrimiçi ÇED Süreci Yönetim Sisteminde (e-ÇED) incelenmiş olup 25/11/2014 tarih ve 29186 sayılı Resmi Gazetede yayımlanarak yürürlüğe giren **ÇED Yönetmeliği Listelerindeki eşik değerden az olduğundan kapsam dışı olarak değerlendirilmiştir.**

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

Bilgilerinizi rica ederim.

Serkan HANGÜN
Müdür a.
İl Müdür Yardımcısı V.

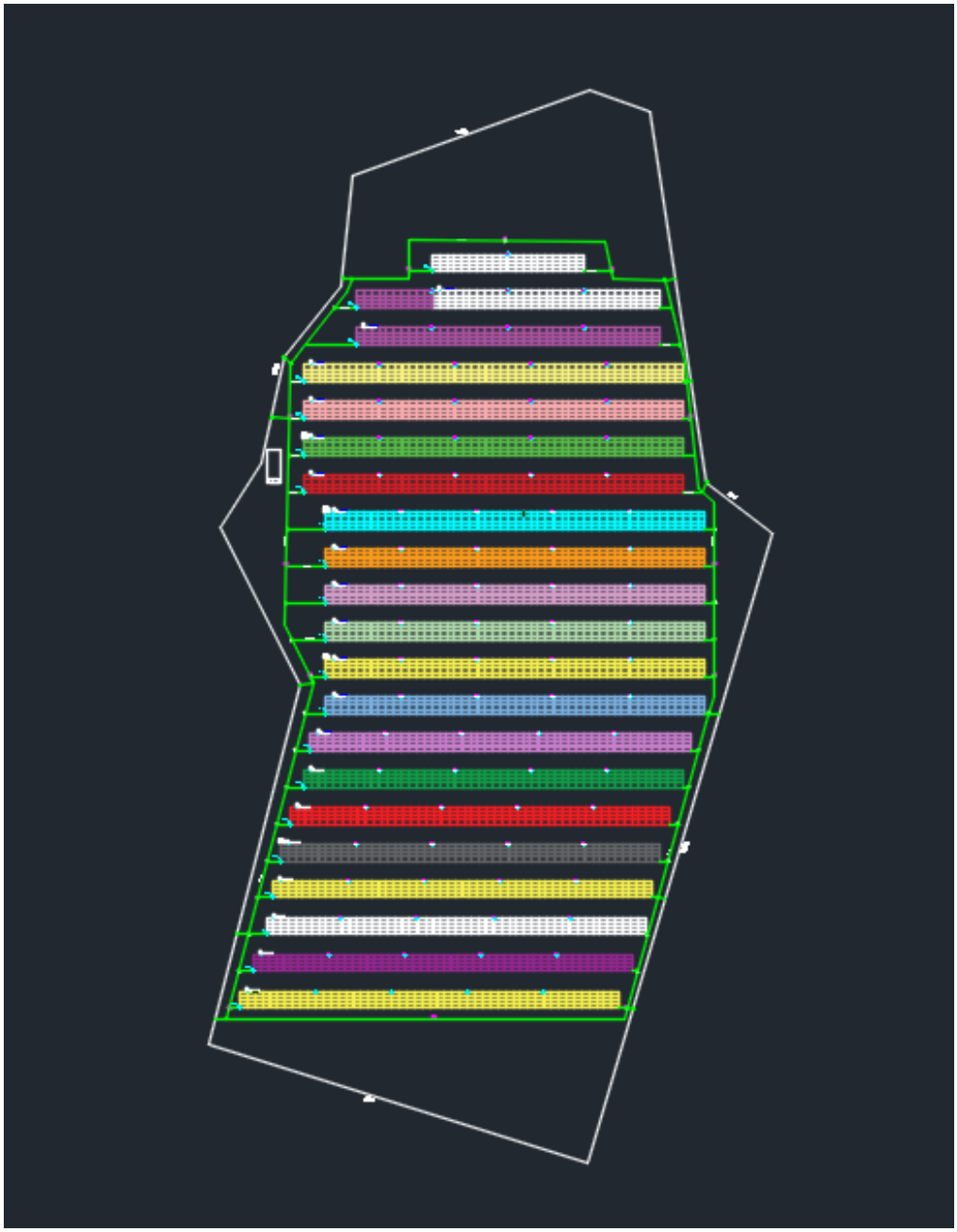
Not: 5070 sayılı Elektronik İmza Kanunu gereği bu belge elektronik imza ile imzalanmıştır.

Evrak Doğrulama Kodu : APCRGGIW Evrak Takip Adresi: https://www.malatya.gov.tr/cevre-ve-sehircilik-bakanligi
Çöşnik Mahallesi Necip Fazıl Kısakürek Cad.No:4/1 Kep Adresi :malatyacevreveschircilik@hs01.kep.tr
Telefon No : (422) 371 12 17 Belgegeçer No : (422) 371 12 21
e-posta : malatya@csb.gov.tr internet adresi : www.csb.gov.tr/iller/malatya

Bilgi için:Kemal ORUÇ
Mühendis
Telefon No:(422) 371 12 17-327

ANNEX-4

SPP LAYOUT PLAN



ANNEX-5

TRANSMISSION LINES ARTICLE

T.C.
YEŞİLYURT BELEDİYE BAŞKANLIĞI
Araştırma ve Geliştirme Müdürlüğü

Sayı : E-37631308-000-69946 06.09.2023
Konu : GES

İLGİLİ MAKAMA

Malatya İli Yeşilyurt İlçesi Hıroğlu Mahallesi 249 ada 675 parselde 05/11/2020 tarih 125880 sayılı bağlantı anlaşması ile 990 KWe gücünde güneş enerji santraline yönelik, ulaşım yolları ve enerji nakil hattı güzergahında üçüncü şahıslara yönelik kamulaştırma gerektirecek bir durum bulunmadığını ve güzergahın tamamının belediye mülkiyetli olduğunu taahhüt ederiz.

Bilgi ve gereğini arz/rica ederiz.

Erkan DİKENLİ
Başkan a.
Belediye Başkan Yardımcısı

Bu belge, güvenli elektronik imza ile imzalanmıştır.
Doğrulama Kodu: sqfIMa-p37NIM-RjbWu8-REnSr8-mo2DORKU Doğrulama Linki: https://www.turkiye.gov.tr/icisleri-belediye-ebys

Telefon No: Faks No:
e-Posta: İnternet Adresi: uygulama.belediye.gov.tr
Kep Adresi: mltyesilyurtbel@hs01.kep.tr

Bilgi için: Tuğrul TEMEL
Uzman
Telefon No:

ANNEX-6

ENVIRONMENTAL AND SOCIAL SCANNING

ENVIRONMENTAL AND SOCIAL SCREENING CHECKLIST FOR SUB-PROJECTS

Subproject Information	
Subproject title	YEŞİLYURT MUNICIPALITY, SOLAR ENERGY POWER PLANT
Subproject beneficiaries	Local People
Recommended start date	01.02.2024
Brief description of the subproject	Installation and operation of Solar Power Plant and transmission lines
Field area, location	Malatya Province Yeşilyurt District Hıroğlu District Karataş Location 249 - 675 parcel
Subproject cost	€896,000
Status of the national EIA process of the subproject	EIA Out of Scope Certificate dated 26.02.2020 and numbered 4389 is available

Environmental and social impacts related to the proposed subproject – current status			
	Yes	**No**	**Details**
the subproject [1]negatively impact legally protected areas or internationally recognized areas of high biodiversity value?		x	There is no defined area within the project site.
Will the subproject be located in or near an environmentally sensitive or protected area (in accordance with national legislation)?		x	There is no defined area within or near the project site.
Will the subproject negatively impact critical habitats or natural habitats such as forest ecosystems, wetlands, marshes, and aquatic ecosystems?		x	There is no defined area within the project site.
Will the subproject negatively affect endangered plant and animal species?		x	There is no defined area within the project site.

[1]Internationally recognized areas of high biodiversity value include, among others, World Heritage Natural Sites, Biosphere Reserves, Ramsar Wetlands of International Importance, Key Biodiversity Areas, Important Bird Areas and Alliance for Zero Extinction Fields are included.

Will the subproject affect ruins, historical monuments and settlements?		x	There is no defined area within the project site.
Are there trees or forests around the subproject area?		x	defined area around the project site .
Will the subproject negatively affect woodlands and forests?		x	There is no defined area within the project site.
Are there any flammable and flammable collapse materials around the subproject area?		x	There is no defined area around the project site.
Are there utilities such as gas or electricity lines underground?		x	There is no defined area within the project site.
Are there overhead lines such as high voltage lines in or near the subproject area?	x		There is a transformer and pump station 200 meters away.
Will people permanently or temporarily lose access to facilities, services or natural resources due to subproject activities?		x	There will be no access restrictions.
Does this subproject intervention (for the Power Plant Area, Power Transmission Line or Access Road) require the acquisition of privately owned land?		x	It does not require the acquisition of privately owned land.
If it is necessary to acquire a land parcel (for the Power Plant Area, Energy Transmission Line or Transportation Road), what is the actual land size and ownership status?			Expropriation has been made. Power plant area 19,900 m ^{2}
If new land is required (for the Power Plant Area, Energy Transmission Line or Transportation Road) and the site is privately owned, can this land be purchased with an agreement of Buyer Consent and Seller Consent (other than expropriation)?	x		No new land required. It can be purchased by agreement if necessary.
Will the subproject require acquiring public land?		x	Expropriations have been made.
Has land been acquired for the Power Plant Area, Energy Transmission Line or Access Road for the Project in the last 5 years? If yes, by what means (expropriation or voluntary purchase) was the land acquired?	x		Expropriations have been made.
If public land is to be acquired, are there any official/unofficial users using the land in question to generate income?		x	Public land will not be acquired.
Will there be loss/damage to productive trees, fruit plants or crops that are the source of income for households?		x	There is no defined area within the project site.

Is there any soil contamination observed in the subproject area ?		x	Any observed soil contamination There is no.

Environmental and social/impacts related to subproject construction/installation			
	Yes	**No**	**Details**
Will the subproject involve the use of forest trees or other natural resources as construction materials?		x	There is no need to use forest trees or other natural resources as construction materials.
the subproject emit greenhouse gases (CO_2, NOx , O_3) or ozone-depleting substances (chlorofluorocarbon, methyl bromide, etc.)?		x	There will be no greenhouse gas emissions.
toxic materials (e.g. hospital waste, industrial waste or other) be used, produced or discharged in the subproject ?		x	Hazardous and toxic substance; There will be no production, use or discharge.
Will the subproject create or cause occupational hazards?		x	It is not possible to cause occupational hazard or occupational hazard.
Will the subproject cause dust and noise pollution?		x	Necessary calculations have been made and it remains below the limit values.
Will the subproject cause water pollution?		x	resulting wastewater will be collected in a sealed septic tank and removed by a sewage tank.
Will the subproject cause soil pollution?		x	It is not a project that will cause soil pollution.
Will the subproject cause temporary disruption to the livelihood of any person/household?		x	It is not a project that will disrupt livelihoods.
Will the subproject pose a risk to public safety?		x	It is not a project that will endanger public safety.
Will there be significant OSH issues in the subproject?		x	OHS rules will be followed and relevant experts will be worked with.
Will the subproject cause additional traffic load?		x	It will not create any traffic load.
Subproject (if any) _ close sensitive buyers on any One negative to the effect From where will be ? _		x	There will be no adverse impact on the nearest sensitive receptors.
Is there a population that may be negatively affected by the subproject?		x	There is no population that will be negatively affected.
Other environmental or social impacts (describe the nature and severity of impact)	*Preparation phase: there will be no environmental and social impact .* *Construction phase: there will be no environmental and social impact .* *Operation phase: there will be no environmental and social impact .*		

Need for Subproject Classification and Safeguards Documents

Subproject Category	**xLow ☐Medium ☐Significant ☐High**
Root Causes	NO NEGATIVE ENVIRONMENTAL AND SOCIAL EFFECT HAS BEEN DETECTED UNDER THE PROJECT.
Required Environmental and Social Documents	**XESMP** **☐ISGP** **☐ESIA** **☐IIP** **☐RAP** **☐Post Social Audit**

Situation	***Institution / Official***	***Name, Signature, Date***
Preparer		
Marking and classifying as (Low, Medium, Important or High)		
Reviewed and Approved by		

ANNEX 7

COMPLAINT FORM

MALATYA YEŞİLYURT BELEDİYESİ	YESİLYURT MUNICIPALITY Project Code: ..... Yesilyurt Municipality Solar Power Plant
	COMPLAINT FORM

Person Filling in the Form:	History:
Interview Subject:	Reference No:
INFORMATION ABOUT THE COMPLAINANT	
Name-Surname	**How the complaint was received**
T.R. Identity Number:	Telephone ☐
Phone:	Face to face ☐
Address:	Website / E-mail ☐
Email:	Other (Describe) ☐

Stakeholder Type				
Public Institution ☐	People Affected by the Project ☐	Private Organization ☐	Professional Chamber ☐	NGO ☐
Interest Groups ☐	Industry Associations ☐	Labor Union ☐	Media ☐	University ☐

DETAILED INFORMATION ABOUT THE COMPLAINT	
Description of the Complaint:	
Solution method proposed by the complainant	

Name-Surname/Signature of the Registrant	Name-Surname/Signature of the Complainant

ANNEX 8

COMPLAINT CLOSURE FORM

	YESİLYURT MUNICIPALITY Project Code: ..... Yesilyurt Solar Power Plant
	COMPLAINT CLOSURE FORM
Reference No:	
DETERMINATION OF CORRECTIVE ACTION	
1	
2	
3	
4	
5	
Responsible Departments	
CLOSURE OF COMPLAINT	
This section contains the information specified in the "Complaint Registration Form" in case the complaint is resolved Complainant will be filled in and signed by the person in charge.	

History:	Name Surname / Signature of the person Closing the Complaint	Name and Surname / Signature of the Complainant
...../...../.....		

ANNEX 9

CONSULTATION FORM

	YESİLYURT MUNICIPALITY Project Code: ..... Yesilyurt Solar Power Plant
	CONSULTATION FORM

Person Filling in the Form:	Date and time:
Meeting Agenda:	Consultation Record No:
CONSULTATION INFORMATION	
Interviewed Institution:	Communication Type
Name and Surname of the Interviewee:	Telephone / Hotline ☐
Phone:	Face-to-Face Interviews ☐
Address:	Website / Email ☐
Email:	Other (Describe) ☐

Stakeholder Type

Open to the General Public	PEK ☐	Special Organization ☐	Professional Room ☐	NGO ☐
Institution ☐				
Benefit Groups ☐	Industry Associations ☐	Labor Unions ☐	Media ☐	University ☐

CONSULTATION DETAILS	
Questions about the project:	

Project concerns/feedback:	
Responses to the views expressed above:	
Recording Name-Surname/Signature	*Name-Surname/Signature of Complainant*

ANNEX 10

CHANCE FIND NOTIFICATION FORM

Yeşilyurt Solar Power Plant Project Incidental Find Notification Form		
REGISTRATION		
Name of the person recording:		
Date and time of discovery:		
Field Name	Coordinates X	Y
Description of the finding:		
Number of photos:		
Estimated weight and dimensions:		
CONTACT PERSON		
Name-Surname/Title/Task:		
Date and Time:		
Contact information:		
Speech details:		
DECISIONS		
Any protection measures to be implemented:		
Movable or immovable: If portable, please indicate the new location.		

More action is needed:	
Start date and time:	
Explanations:	
DELIVERY	
Name-Surname	History:

ANNEX-11

FIELD PHOTOS

EK-12

INFORMATION ON STAKEHOLDER ENGAGEMENT MEETING

Yesilyurt Solar Power Plant Project

Minutes of Public/Stakeholder Engagement Meeting March 25, 2024

The meeting was opened by Eyyüp ÖZPOLAT, responsible for Municipality R&D and Environmental Management. Yeşilyurt Municipality SPP project has a power of 990 kWe and will be located on 19,900 m2 land belonging to Yeşilyurt Municipality in Malatya Province Yeşilyurt District Hıroğlu Neighborhood Karataş Mevkii, 249 block 675 parcel. It is one of the sub-projects under the Sustainable Cities Project-II - Additional Financing (SCP-II-EF), which is supported by World Bank financing to support sustainable development in cities in Türkiye.

A presentation was made by Eyyüp ÖZPOLAT, the Municipality's R&D and Environmental Management Officer, providing information about the project to be

implemented and the work to be carried out within this scope. The Environmental and Social Management Plan (ESMP) has been prepared by MGS & REA JV in accordance with Turkish environmental and social legislation, World Bank Safeguard Policies including Operational Policies (OPs), World Bank General EHS Guidelines and Industrial Sector Guidelines and ILBANK's ESMF. In addition to these studies, a Stakeholder Engagement Meeting was organized on 25.03.2024 at 14:00 following the completion of the ESMP. 20 People attended the meeting.At the meeting, the Environmental and Social effects and consequences of the SPP Project, as well as its contribution to the municipal and national economy were explained

Then there was a question and answer session.

NGO Representative businessman Ahmet AKBAŞLI asked how much economic benefit the SPP investment will provide to Yeşilyurt Municipality and the people of the region.

Municipal staff Electrical Engineer Vedat KAYA stated that the GES power plant will meet the entire electricity consumption of Yeşilyurt Municipality and the surplus electricity will be sold. He stated that an annual income of 153,000 EURO will be obtained from electricity production and that the municipal investments will be covered with the income obtained and employment will increase. He also said that additional staff will be employed thanks to the project.

- Geophysical Engineer Ahmet BALAMAN from the public, does the solar power plant harm people during energy production? He asked the question.

In response, Eyyüp ÖZPOLAT, responsible for R&D and Environmental Management of the Municipality, said that the solar power plant is 800 meters away from the nearest settlement, that it will not cause harm and that there is no scientific data that power generation plants are harmful to human health.

- NGO Representative Hüseyin GÖK, How many years is the economic life of the Solar Power Plant. Do end-of-life panels harm the environment? He asked the question.

Eyyüp ÖZPOLAT, responsible for R&D and Environmental Management of the Municipality, stated that the catalog life of the panels is 25 years, and that the panels that have completed their economic life are collected and recycled in accordance with the standards and legislation.

- City Council Women Representative Kibar ASLAN asked the question: Does the Solar Power Plant have a negative impact on vegetation, drinking water and natural life? She asked the question.

In response, Eyyüp ÖZPOLAT, responsible for R&D and Environmental Management of the Municipality, stated that environmental impacts were investigated in the region where the SPP project was established, that there are no forests, natural life, rivers and underground

water resources in the vicinity. It was stated that there was no negative impact on the environment in the studies carried out.

The meeting lasted about 2 hour.

At the end of the meeting, all participants confirmed that they had received detailed information on the environmental and social impacts of the SPP Plant.

Public/Stakeholder Participation Meeting Newspaper Announcements

gündem

14 Mart 2024 Perşembe

11

1 polis memuru şehit oldu

"Sınaksız, Mardinsiz, Diyarbakırsız bir Türkiye olmaz"

CUMHURBAŞKANI RECEP TAYYİP ERDOĞAN:

SINIRLARIMIZA SET ÇEKİYORUZ!

İSMAİL KAPAN

HOKTALAR

CHP'de para pul işleri büyüyecek gibi!..

CUMHURİYİT'İN İBB BAŞKAN ADAYI KURUM:

Ücretli verdikleri yemeği marifet gibi anlatıyorlar

Özel'den İzmir'de trafik çilesi itirafı

DUYURU

MALATYA İLİ YEŞİLYURT İLÇESİ SÜRDÜRÜLEBİLİR ŞEHİRLER PROJESİ II-EK GÜNEŞ ENERJİ SANTRALİ (GES) PROJESİ HALK TOPLANTISINA DAVET

T.C. KARABÜK 2. ASLİYE HUKUK MAHKEMESİNDEN KAMULAŞTIRMA İLANI

Project Information Brochure

Ayrıca ÇSYP kapsamında uygulanacak izleme ve deneşim faaliyetleri de tanımlanacaktır. ÇSYP çalışmaları kapsamında toprak ve hava ortamları, gürültü, koku, su kaynakları, atıklar, trafik, ekosistem, projenin kurulacağı alana dair var olan doğal afet riskleri, GES kaynaklı yaşanabilecek yansıma ve parlama etkisi gibi oluşabilecek etkiler belirlenecek ve ilgili sakınım azaltma önlemleri belirtilecektir.

İzleme gerekliliklerı de ÇSYP kapsamındaki izleme tablolarında tanımlanarak sunulacaktır. Buna göre projenin inşaat aşamasında, üst toprak kaybı ve sıkışması, kirleticilerin ve kimyasalların toprağa ve yer altı sularına sızmasıyla oluşacak toprak ve su kirliliği, toz emisyonları, projenin inşaası sırasında ve geçici trafik yükünden oluşacak gürültü, atık üretimi ve iş sağlığı ve güvenliği, işletme aşamasında ise kimyasalların depolanması ve kullanımı, atıklar, gürültü, santralin yansıma ve parlama etkisi, geçim kaynakları, şikâyetler, topluluk çalışmaları, paydaş katılımı, iş sağlığı ve güvenliği ve işgücü parametreleri **ÇSYP'de belirlenen şartlara uygun olarak izlenecektir.**

Bu Çevresel ve Sosyal Yönetim Planı (ÇSYP)'nın uygulanmasından sorumlu ana kurum, projenin inşaatından ve işletme aşamalarından da sorumlu olan Yeşilyurt Belediyesi'dir. Ayrıca, projenin farklı aşamalarında çeşitli taraflar (Yükleniciler, Müşavir firma, Proje Uygulama Birimi, İLBANK, vb.) ÇSYP kapsamında çeşitli konularda sorumluluk alacaklardır. Sözü edilen tüm çalışmalar Yeşilyurt Belediyesi tarafından koordine edilecektir.

Proje dokümanları ayrıca Yeşilyurt Belediyesi'nin internet sitesi üzerinden yayınlanacaktır ve talep edilmesi halinde bu dokümanlar Yeşilyurt Belediyesi tarafından paylaşılacaktır.

5

Yeşilyurt Belediyesi, Projeden etkilenen toplulukların endişelerini ve şikayetlerini almak, çözmek ve takip etmek için bir **Şikayet Giderme Mekanizması** kurmuştur.

Tüm şikayetler, önceden belirlenmiş bir zaman çizelgesi içinde ve içeriklerine göre etkin bir şekilde alınacak, kaydedilecek ve yanıtlanacaktır.

Şikâyet Giderme Mekanizması'nın kurulmasından ve uygulanmasından sorumlu kurum Yeşilyurt Belediyesi olacaktır. Bu kapsamda proje ile ilgili beklenti, görüş, öneri ve şikâyetlerin paylaşılması için aşağıda verilen iletişim kanalları da ayrıca kullanılabilecektir:

Paydaş Katılım Toplantıları

Yeşilyurt Belediyesi:

Telefon:4448910

E-mail:info@yes@yurt.bel.tr

Tüm iç ve dış paydaşlar, projeyle ilgili şikâyetlerini ve geri bildirimlerini doğrudan devlet yetkililerine iletmek için alternatif ve iyi bilinen bir kanal olarak tüm proje paydaşlarının erişimine açık olan ve ülke çapında kullanılan Cumhurbaşkanlığı İletişim Merkezi (CİMER) gibi diğer şikâyet giderme mekanizmalarından da yararlanma hakkına sahip olacaktır.

- **www.cimer.gov.tr**
- **Çağrı merkezi:150**
- **Telefon numarası: +90 312 590 20 00**

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SÜRDÜRÜLEBİLİR ŞEHİRLER PROJESİ-II

Yeşilyurt Belediyesi
Güneş Enerjisi Santrali Projesi

Halkın Katılımı Toplantısı Bilgilendirme Broşürü

25 MART 2024
14:00
Yeşilyurt Belediye Başkanlığı Konferans Salonu

YEŞİLYURT

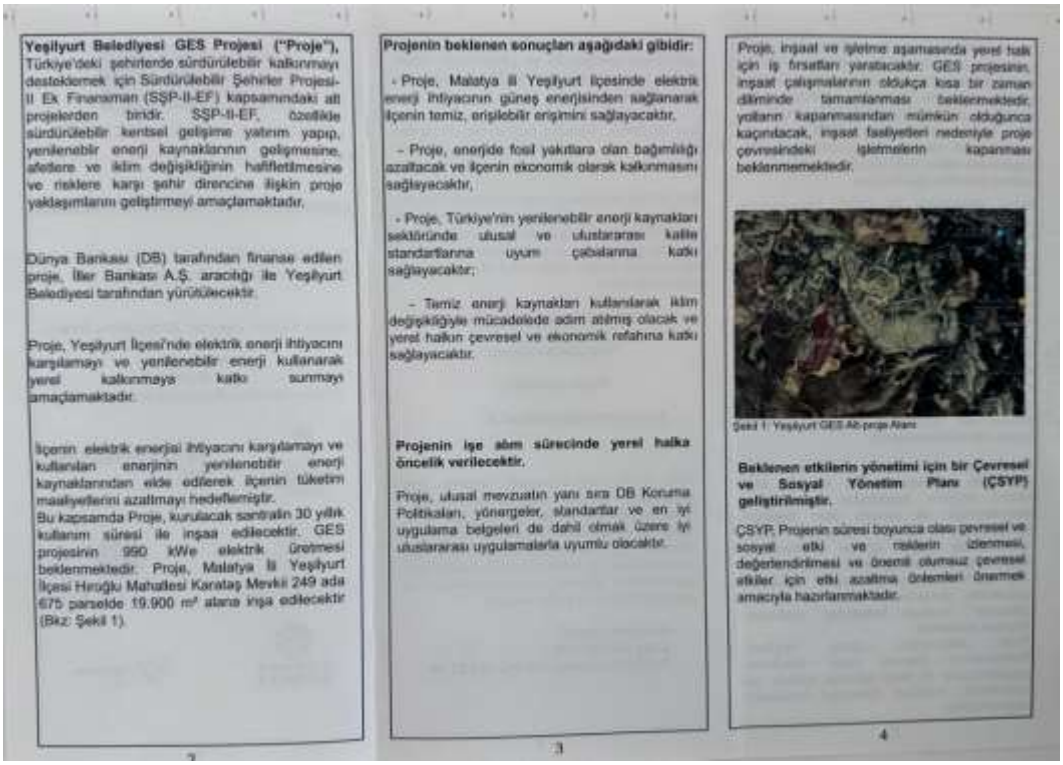
THE WORLD BANK

İLBANK

ŞEHİRLER

PVGLOBAL

1



Yeşilyurt Belediyesi GES Projesi ("Proje"), Türkiye'deki şehirlerde sürdürülebilir kalkınmayı desteklemek için Sürdürülebilir Şehirler Projesi-II Ek Finansman (SŞP-II-EF) kapsamındaki alt projelerden biridir. SŞP-II-EF, özellikle sürdürülebilir kentsel gelişime yatırım yapıp, yenilenebilir enerji kaynaklarının gelişmesine, afetlere ve iklim değişikliğinin hafifletilmesine ve risklere karşı şehir direncine ilişkin proje yaklaşımlarını geliştirmeyi amaçlamaktadır.

Dünya Bankası (DB) tarafından finanse edilen proje, İller Bankası A.Ş. aracılığı ile Yeşilyurt Belediyesi tarafından yürütülecektir.

Proje, Yeşilyurt İlçesi'nde elektrik enerji ihtiyacını karşılamayı ve yenilenebilir enerji kullanarak yerel kalkınmaya katkı sunmayı amaçlamaktadır.

İlçenin elektrik enerjisi ihtiyacını karşılamayı ve kullanılan enerjinin yenilenebilir enerji kaynaklarından elde edilerek ilçenin tüketimi maaliyetlerini azaltmayı hedeflemiştir.
Bu kapsamda Proje, kurulacak santralin 30 yıllık kullanım süresi ile inşaa edilecektir. GES projesinin 990 kWe elektrik üretmesi beklenmektedir. Proje, Malatya İli Yeşilyurt İlçesi Hıroğlu Mahallesi Karataş Mevkii 249 ada 675 parselde 19.900 m² alana inşa edilecektir (Bkz: Şekil 1).

2

Projenin beklenen sonuçları aşağıdaki gibidir:

- Proje, Malatya İli Yeşilyurt İlçesinde elektrik enerji ihtiyacının güneş enerjisinden sağlanarak ilçenin temiz, erişilebilir erişimini sağlayacaktır,

- Proje, enerjide fosil yakıtlara olan bağımlılığı azaltacak ve ilçenin ekonomik olarak kalkınmasını sağlayacaktır,

- Proje, Türkiye'nin yenilenebilir enerji kaynakları sektöründe ulusal ve uluslararası kalite standartlarına uyumu çabalarına katkı sağlayacaktır;

- Temiz enerji kaynakları kullanılarak iklim değişikliğiyle mücadelede adım atılmış olacak ve yerel halkın çevresel ve ekonomik refahına katkı sağlayacaktır.

Projenin işe alım sürecinde yerel halka öncelik verilecektir.

Proje, ulusal mevzuatın yanı sıra DB Koruma Politikaları, yönergeler, standartlar ve en iyi uygulama belgeleri de dahil olmak üzere iyi uluslararası uygulamalarla uyumlu olacaktır.

3

Proje, inşaat ve işletme aşamasında yerel halk için iş fırsatları yaratacaktır. GES projesinin, inşaat çalışmalarının oldukça kısa bir zaman diliminde tamamlanması beklenmektedir, yolların kapanmasından mümkün olduğunca kaçınılacak, inşaat faaliyetleri nedeniyle proje çevresindeki işletmelerin kapanması beklenmemektedir.

Şekil 1: Yeşilyurt GES Alt proje Alanı

Beklenen etkilerin yönetimi için bir Çevresel ve Sosyal Yönetim Planı (ÇSYP) geliştirilmiştir.

ÇSYP, Projenin süresi boyunca olası çevresel ve sosyal etki ve risklerin izlenmesi, değerlendirilmesi ve önemli olumsuz çevresel etkiler için etki azaltma önlemleri önermek amacıyla hazırlanmaktadır.

4

Photos from Public/Stakeholder Engagement Meetings


YEŞİLYURT


YEŞİLYURT
HOŞ GELDİNİZ

Participant List

Katılımcı Listesi

	İsim-Soyisim	Meslek	Temsil Ettiği Kurum /Yerleşim Yeri	Telefon	İmza
1		Kamu Çalışanı	Yeşilyurt Belediyesi Başkan Yrd.		
2		Kamu Çalışanı	Malatya / Yeşilyurt		
3		Fizik Öğretmeni	Malatya / Yeşilyurt		
4		Sivil Toplum Tem.	Kentsel gelişim Derneği		
5		Kamu çalışanı	AR-GE müdürlüğü		
6		Kamu Çalışanı	STK Temsilcisi		
7		Maden Mühendisi	Vatandaş		
8		Usta Öğretici	STK Temsilcisi		
9		BÜRO memur	Ak parti kadın kol. il yön.		
10		Büro memuru	Kent konseyi kadın meclisi		
11		İş İnsanı	Yeşilyurt / Malatya		
12		Öğretmen	Yeşilyurt / Malatya		
13		Çoçu	Vatandaş		
14		STK Temsilcisi	Malatya Muhtarlar Tutkunları		
15		STK Temsilcisi	Misafir malatya		
16		Vatandaş	Yeşilyurt		
17		STK Temsilcisi	Yeşilyurt		
18		STK Temsilcisi	Yeşilyurt		
19		Yeşilyurt Bel.	Yeşilyurt Bel.		
20		Elk.-Elektronik Müh.	Yeşilyurt Belediyesi		