Non-technical Gunnary





# **IOTA M. FIRINCI SPP**

10TA M. Finna Solar Power Plant; Within the scope of AKFEN Renewable Energy Project, Malatya is a GUNES ENERGY POWER PLANT project with a capacity of 9.95 MW to be implemented in Battalgazi location.



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## **Project Introduction**

Antalva

Akfen Renewable is developing a portfolio of photovoltaic solar energy in Turkey in provinces Konya, Amasya, Tokat, Van, Malatya, Elazığ and Denizli. The entire portfolio will be referred to as the Akfen Solar Energy Project (Project). Akfen Renewable will develop, build and operate the project with various subcontractors and intermediaries.



Adana

Mersin



EBRD As the project will have local or short-term expected environmental and social impacts [1] in accordance with EBRD's Environmental and Social Policy [2] (01.04.2019) and IFC [3] 's Environmental and Social Sustainability Policy [4] (01.01. 2012) it is classified as Class B (Category B).

Gaziantep Sanliurfa

Halep

Mardin

Erbil

Firinci Solar Power Plant is going to be the facility which will be established within the framework of this project. The power plant will be built by AKFEN Renewable in the Battalgazi district of Malatya, near Firinci village will have an installed power of 9.95 MW. The electricity coming from the facility will be connected to the national network by a 0.8 km long power transmission line in Firinci village .



Picture 2IOTA M. FIRINCI GES SATELLITE IMAGE\_01



Picture 3IOTA M. FIRINCI GES SATELLITE IMAGE\_02



## Environmental & Social Impacts, Benefits

#### Environmental & Social Assessment

According to the national environmental legislation, "Project Presentation File " of IOTA M. Firinci Solar Power Plant was prepared, "EIA is not required" decision was taken. As well as that Akfen Renewable; has conducted additional studies such as biodiversity and ecosystem assessment, social impact analysis, cumulative impact analysis and visual impact analysis in order to meet the environmental and social criteria of the EBRD. According to this context;

 $\circ$  Risk analysis studies on environmental impacts will be carried out, measures will be determined and implemented. Thus, the emergence of negative environmental effects will be prevented. During these studies, EN ISO 14001: 2015 standard will be accepted as a reference.

o Wastes generated during the construction site and operation process will be collected in closed storage areas which will be recycled and disposed in accordance with the current legislation.

 $\circ$  Efforts will be made to increase energy and global resource consumption performance (increase efficiency) without compromising activities and employee comfort conditions. EN ISO 50001: 2018 standard will be considered as a reference in these monitoring and control processes .

 $\circ$  For the purpose of protecting biodiversity in the area where the project will be implemented, all of the endemic plants, animal and insect species will be identified. and they will be observed for the next 2 years.

o Priorty will be given to local employment and to local suppliers during the construction and operation phase of the project, by doing so a supportive hand will be given to local economy.

o Technical, administrative and integrated management systems (Quality, Environment, Occupational Health and Safety, Energy Efficiency) trainings will be provided during the construction and operational phase of the project to increase the personal development of the local employees. Thus, the personal development of the local people will be supported by the staff.



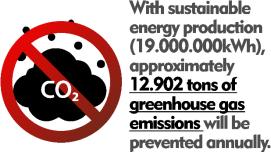






#### Prevention of CO<sub>2</sub> Emission

IOTA M. Firinci Solar Power Plant is fully compliant with the Turkish legislation in efficient use of resources, pollution prevention and control measures. According to preliminary evaluations made by the company, the facility is expected to generate 19 GWh of electricity in the first operating year. By doing so nearly 12,902.01 tonnes of CO<sub>2</sub> greenhouse gas emission will be aimed to be prevented.



#### Land Acquisition

The project will be built on 196,685  $m^2$ , on a 7<sup>th</sup> grade soil, which is classified as low-quality treasure land that gives to Akfen Renewable the right to use the land. The procedure to obtain the right to use treasury land has been completed.

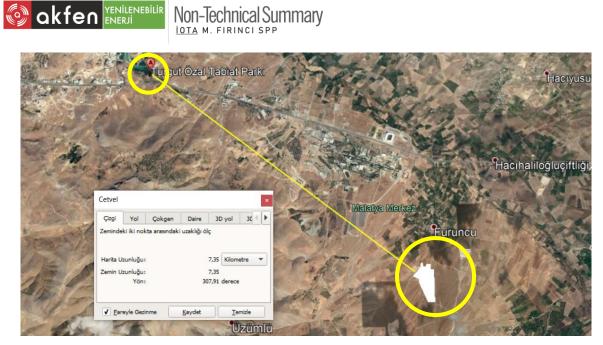
## Cultural Heritage

In case of encountering historical artifacts during construction activities, "Turkish Republic's Ministry of Culture and Tourism" will be informed, and relavant duties regarding the protection of cultural heritage will be fulfilled accordingly. Previous studies have shown that there is no cultural heritage in the project area.

## **Biological Diversity**

The closest national protection area to the project is Turgut Özal Natural Park, which is located in the northwest direction, 7.35 km from the facility. Important species in the region are not expected to be around the project site due to factors such as altitude, nearby settlements and roads. No endangered or vulnerable species have been observed in the nearby area. Further biodiversity monitoring studies will be carried out to identify, minimize and reduce the biodiversity impacts during the construction and operational phase of the project.

Picture 4IOTA M. FIRINCI SOLAR POWER PLANT - TURGUT ÖZAL NATURAL PARK SATELLITE IMAGE



## Visual Effect

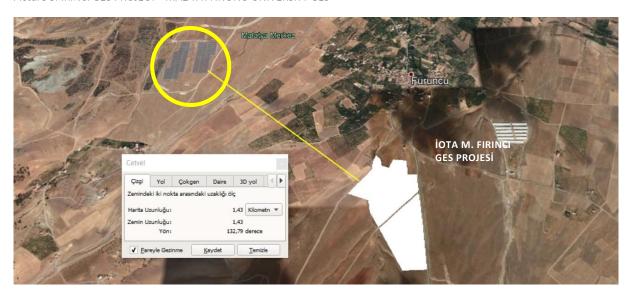
The area is at the same height as Firinci Village, 750 m away. The Solar Power Plant will not be clearly visible from the village center. The residences in the west of the project area are at a higher level and therefore the site can be seen from this point. However, IOTA M. Firinci Solar Power Plant will not occupy the entire visible area from these residences and will not dominate the view .

## Legal Terms

The project is in line with national policies, legal requirements and other plans for the development of renewable energy sources within the impact area. It serves the main strategic goal of reducing carbon emissions from electricity generation.

## **Cumulative and Indirect Effects**

Cumulative effects of Firinci SPP Project were investigated. In this context Malatya Inonu University solar power plant (5 MW) which is located ~1.5km from Firinci SPP was evaluated.



Picture 5FIRINCI GES PROJECT - MALATYA İNÖNÜ UNIVERSITY GES

AKFEN Renewable is committed to expand its existing cumulative impact assessment studies for all project sites to include all other industrial and energy facilities that may have a cumulative impact on environmental and social factors on a local scale.

#### Environmental & Social Management

YENİLENEBİLİR ENERIİ

akten

AKFEN Renewable; is committed to manage the project in accordance with the national laws, international good practices and EBRD's environmental and social policies. The company implements an environmental management system at the corporate level, which was certified according to the international standards.

• EN ISO 14001: 2015 - ENVIRONMENTAL MANAGEMENT SYSTEM - TERMS AND USER GUIDE This standard covers information about the requirements and important environmental aspects for an environmental management system that allows an organization to develop and implement policies and objectives that take into account the legal and other requirements it is obliged to comply with.

An environmental and social action plan (ESAP) named after the project has been prepared. This plan includes AKFEN Renewable, environmental and social impacts and actions to prevent, reduce or compensate risks.

## Employment & Contribution to Local Economy

Local employment will be prior during construction and operational phase, and attention will be paid to meeting the needs from local suppliers .

#### Security

- The project area will be 100% separated by wire fence, unauthorized persons will not be allowed and uncontrolled access to site will be prevented.
- Speeding on site will be strictly prohibited, contact information of drivers will be displayed on all vehicles. As well as that, it will be ensured that, drivers who do not act in accordance with the rules will be directly reported.
- Employees' attitudes and behaviors that will disturb the local community will not be tolerated. Otherwise, they will reported thru their personal contact information.

## Impact Tracking

## Monitoring the Defined Effects

Implementation of the ESAP will be monitored weekly during the construction phase and anually during the operational phase. Annual reports on environmental and social performance will also be prepared. These reports will be reviewed in accordance with the legislative requirements and the requirements of the lenders. The monitoring program will continue throughout the first two years of the plant's operational phase.

## Stakeholder Engagement

• A stakeholder engagement plan has been prepared for the project. With this plan, a mechanism has been created for evaluating and responding to new comments about IOTA M. Firinci Solar Power Plant and other facilities that make up the project. The Plan describes the Company's



approach to communicating with stakeholders, including the general public, and sharing information about the operation of the company and the project.

- Plan; will be available on the www.akfenren.com.tr website. Within the scope of this plan, stakeholders can access the grievance mechanism and current data regarding IOTA M. Firinci Solar Power Plant. Stakeholder engagement will continue throughout the life of the project. The impact of the plan will be monitored and the plan will be updated if deemed necessary.
- AKFEN Renewable is also implementing a Corporate Social Responsibility plan that envisages at least one activity per year at each project site. This plan necessitates the development and implementation of projects for the development and well-being of the local community, with at least a meeting per year with local stakeholders.
- It is possible to make personal complaints or griviances about IOTA M. Firinci Solar Power Plant in both construction and operation phases. Complaints and griviances can also be made through the website of Akfen Renewable.



Picture 6INFORMATION POSTER DESIGN FOR LOCAL FOLK

Environment and Public Relations Assistant Manager;

- will ensure that the grievance mechanism is available to all stakeholders, appropriate level of management involvement, and prompt responses will be provided against concerns.
- will ensure that the transactions are understandable and transparent, and that feedback to the concerned parties is made in a manner that does not involve punishment.

More detailed information about the project is available on the website below;

The http://akfenren.com.tr/varliklarimiz/ges-proje.



▲ It shall be noted that; the grievance mechanism will not put a barrier against traditional complaint or griviance methods and will not be an alternative to replace national legal system.

- [3] IFC International Finance Corporation (International Finance Corporation)
- 4 https://www.ifc.org/wps/wcm/connect/5bc3b859-58c8-409e-a926-0c3f9c5bdd83/SP\_Turkish\_2012.pdf?MOD=AJPERES&CVID=kilr39E

<sup>[1]</sup> EBRD - European Bank for Reconstruction & Development (European Bank for Reconstruction and Development)

<sup>[2]</sup> http://www.ebrd.com/documents/comms-and-bis/environmental-and-social-policy.pdf?blobnocache=true