

1 Project description

Akfen Renewables (the "Company") is currently developing a portfolio of (PV) power plants located in the provinces of Konya, Amasya, Tokat, Van and Malatya provinces in Turkey. This is known as the Akfen Solar Power Project, or the "Project". Akfen will develop, construct and manage the project through its various contractors.

The Project aims to provide renewable electrical energy for the national grid, which will be available for all consumers and will support Turkey's goal of reducing carbon emissions from the national generation of electricity. When completed, the plants will have a total combined capacity of approximately 85 MW comprising 70 MW of licensed solar assets and 15 MW of license-exempt solar assets.

The Project has been determined to be category B by the lenders as environmental and social impacts from the Project are expected to be site-specific or short term according to the EBRD's Environmental and Social Policy (2014) and the IFC's Policy on Environmental and Social Sustainability (2012).

Amasya Solar Power Plant is one of the Project facilities, a 10.44 MW photovoltaic power plant developed by Akfen Renewables near Kutu Village in Merkez district of Amasya province in the central Black Sea region of Turkey.



Figure 1: A satellite view of Amasya Solar Power Plant site (green) and the over ground transmission line (purple)

The Amasya Solar Power Plant consists of twelve solar power plants of 0.87 MW capacity each. The total installed power at the Solar Power Plant is 10.44 MW. A total of 95,520 thin film panels are present on-site, supported by fixed mounting

systems. The panels are connected to DC/AC invertors and twelve transformer substations using underground cables. These then connect to the grid at Kutu Village with a 1.7 km over ground transmission line operating at 33 kV.

Construction of the Amasya Solar Power Plant took place between May and August 2017, and the plant was commissioned in September 2017. The number of workers changed at different stages of work with a maximum of 30 workers present.

The extent of the site is fenced and a drainage system has been installed. Water was provided to the site via tanker during construction phase and a well has been established for use during the operational phase. Bottled water is used for drinking. A septic tank, serviced by the municipality, collects all waste water from the site.



Figure 2: Photograph of Amasya Solar Power Plant

2 Environmental and social benefits, impacts and mitigation measures

2.1 Environmental and social assessment

There was no requirement to prepare an EIA for the Amasya Solar Power Plant according to national legislation. However, the Company has undertaken additional studies including social impact assessment, cumulative impact assessment, biodiversity and ecosystem assessment studies and visual impact assessment studies in order to meet the Lenders' environmental and social criteria.

2.2 Resource efficiency and pollution prevention and control

Amasya Solar Power Plant is fully compliant with national laws regarding resource efficiency and pollution prevention and control. According to the initial estimates by the Company, approximately 16GWh of electricity is expected to be generated in the first year of operation. This is expected to

result in greenhouse gas emissions avoidance of 10,654 tonnes of CO₂ equivalent annually.

It is estimated that 84m³/year of water will be required to clean panels, with twice yearly cleaning planned. The Company has received a permit to use up to 5,400m³ of groundwater per year.

2.3 Land acquisition

The Amasya Solar Power Plant involved the acquisition of 221,043 m² of marginal agricultural land. The acquisition was completed by Akfen Renewables in 2013 and did not involve any physical displacement or involuntary resettlement. The land was purchased on a willing seller-willing buyer basis from a family of 13 owners in 2016.

2.4 Cultural heritage

A procedure was in place to manage archaeological assets that are found during construction works. Previous studies have indicated there are no known cultural heritage assets in the site area.

2.5 Biodiversity

The project is not located in or near a sensitive ecological area. The closest protected area is the Kaz Gölü Wildlife Development Area, located 47km from the Amasya site. This is considered too far away to be affected.

2.6 Visual impact

The Amasya Solar Power Plant is partially visible from the nearest village, Kutu Village, due to topography and orientation. Glint and glare effects are not expected as the panels are fixed and have anti-reflective coating. A view towards the plant from Kutu Village is presented as Figure 3. The visual impacts of the plant will not adversely affect the surrounding landscape.



Figure 3: A view of the Amasya Solar Power Plant Site from the nearest village

2.7 Consistency with policy, law and other plans

The project is consistent with the national policy towards promotion of renewable energy sources, legal requirements and other plans for the area of influence. It fulfils the main strategic goal of reducing carbon emissions from electricity production.

2.8 Cumulative and induced impacts

The cumulative environmental impact assessment studies targeting the immediate neighbourhood of the plant did not identify any other industrial or power plants that could give rise to cumulative impacts with the Amasya Solar Power Plant.

Akfen Renewables has committed to undertaking further cumulative assessments for all Project sites which will include any development in the local area which could have a cumulative impact on social and environmental factors.

2.9 Environmental and social management

The Company is committed to operating the Project in accordance with national law, good international practice and the EBRD's environmental and social policies. At a corporate level, the Company operates an Environmental Management System that is certified to international standards.

An environmental and social action plan, known as an ESAP, has been prepared for the Project. This details the actions that the Company will take to prevent, reduce and offset environmental impacts and risks.

3 Impact monitoring

3.1 Process for monitoring the identified impacts

Compliance with the ESAP will be monitored with quarterly inspections during construction and annual inspections during operation phase. Annual reports on environmental and social performance will also be prepared. The reports will be checked against legislative requirements and those of the lenders. The monitoring will continue for the first two years of operation of the power plant.

3.2 Stakeholder engagement and grievances

A Stakeholder Engagement Plan has been prepared for the Project. This provides a mechanism for the consideration and response to further comments received regarding the Amasya Solar Power Plant and the other plants forming the Project. It describes the Company's approach to interacting with stakeholders, including the general public, and the disclosure of relevant information with respect to Company's operations and the Project. It is available at the company's website at www.akfenren.com.tr. Stakeholders are provided with access to up-to-date information on the Amasya Solar Power Plant and the related grievance mechanism. Stakeholder engagement will be maintained for the duration of the Project. The effectiveness will be monitored and the Stakeholder Engagement Plan updated as needed.

Akfen also has established a Corporate Social Responsibility plan that requires an activity to be performed at each project site every year. This activity will take the form of a meeting with local stakeholders, during which the company will try to identify opportunities to contribute to the welfare and development of the local communities.

It will be possible to submit comments or grievance in person at the Iota Solar Power Plant sites during construction and operation. Comments can also be submitted using the Akfen Renewables website (<http://akfenren.com.tr/kurumsal-sorumluluk/sikayet-ve-oneriler-1>).

Alternatively, the Company's Community Liaison Officer, Mr. Burak SOLMAZ, can be contacted using the following details:

- Phone: 0 530 954 18 87
- Fax: 0312 441 68 14
- E-mail: bsolmaz@akfen.com.tr

The websites of the EBRD and the IFC will also act as a platform to receive comments.

3.3 Process for addressing any issues arising

The Community Liaison Officer will ensure that the grievance mechanism is available to all stakeholders, involves an appropriate level of management and addresses concerns promptly. They will ensure that the process is understandable and transparent and provides feedback to those concerned without any retribution.

Further information can be obtained from <http://akfenren.com.tr/varliklarimiz/ges-projeleri>.

This mechanism does not limit the public's rights to use conventional routes to place grievances and the available legal system.