

Public

Environmental and Social Data Sheet

Overview	
Project Name:	UZBEKISTAN SOLAR IPP
Project Number:	20190886
Country:	Uzbekistan
Project Description:	The project comprises the construction and operation of a PV plant with capacity of 100 MWe (130 MWp) near Tutly village in Samarkand province, in Uzbekistan.
EIA required:	yes
Project included in Carbor	n Footprint Exercise ¹ : yes
(details for projects include	ed are provided in section: "EIB Carbon Footprint Exercise")

Environmental and Social Assessment

Environmental Assessment

The project comprises the construction and operation of a PV plant with capacity of 100 MWe (130 MWp) 1.7km from Tutly village in Samarkand province, in Uzbekistan.The project will be connected to the existing High Voltage Line (HVL) via the shortest routing (2 km) of the HV overhead line, i.e. bare conductors supported by lattice towers, to connect the project substation to the 220 kV passing by national grid.

In accordance with Uzbekistan EIA requirements and international lender' requirements, an ESIA process was carried out, an Environmental and Social Impact Assessment (ESIA) report, including an Environmental and Social Monitoring and Management Plan (ESMMP), was prepared for the project and its grid connection and public consultation meetings were held in 2019 and 2020. The ESIA report was approved by the State committee of the Republic of Uzbekistan on Ecology and Environmental protection. Consequently, the environmental authorization was issued on this basis by the competent authority - State Agency on Ecology and Environmental province of Uzbekistan.

The environmental authorization document "Conclusion of State Environmental Appraisal" refers to the project as Category II (moderate E&S impacts) and approves the first stage of the Environmental Impact Assessment undertaken. Further, this document requires the promoter to submit the final Environmental Impact Statement (based on the main design) for

¹ Only projects that meet the scope of the Carbon Footprint Exercise, as defined in the EIB Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: 20,000 tonnes CO2e/year absolute (gross) or 20,000 tonnes CO2e/year relative (net) – both increases and savings.



the State Environmental Appraisal in accordance with the procedure established by legislation prior to putting the considered facilities into operation.

The promoter's ESIA report is comprehensive and and was developed using IFC Performance Standards as the benchmarkthroughout the document. The site is described to be bare terrains with little vegetation, not used for agricultural activities but occasionally used for grazing livestock. The main impacts are expected to be during construction, as with any large and temporary construction project, which employs a large number of workers and requires usage of significant amount of sanitary water and transport of large volumes of equipment. During operation, the potential environmental impacts relate to the water supply as solar panels will have to be cleaned to avoid reduced efficiency due to dust built-up. Wet cleaning is a commonly used option and requires large volumes of clean water. Dry (brush) cleaning is an alternative proposed by most of the developers but it may impact on the energy production and the equipment warranties.

Water for construction and operation will have to be sourced either through dedicated boreholes or through the extension of the supply from the nearby river. The project is located 11 km from the nearest river (Zarafshan) and 49 km from the nearest lake. The groundwater resources beneath the project area are within a set of different aquifers. The Promoter plans to use the groundwater from these aquifers for technical reasons, including washing down the PV panels. The dry cleaning of the PV modules is currently planned by the promoter to minimise water consumption, but this should be studied further during the detail design phase. Given the frequent winds, arid climate, and occasional sandstorms the presence of wind-blown particulates could increase soiling above acceptable standards unless a suitable cleaning regime is adopted.

The ESIA has identified that part of the project land (around 50%) is located within Important Bird and Biodiversity Areas (IBAs), Karnabchul Steppe (UZ018). However, the project area of 350 ha occupies very small portion (0.2%) of the total area of Karnabchul Steppe IBA, which is around 171,000 ha. A biodiversity study with an assessment of possible negative effects to the IBA resulting from the implementation of the project was undertaken in 2019 with conclusions that none of the main breeding avifauna species in the area will be significantly impacted. The study has also identified that the project area may be used occasionally by the houbara bustard (Chlamydotis undulata) which is a protected migrant bird. The solar project area is comparatively small when considered within the project steppe area interested by birds migration. Therefore, the impacts to migrant birds (such as houbaras) is considered very low or negligible.

In addition, an important population of steppe tortoises (Testudo horsfieldii) is resides within the project area. This species is classified as Vulnerable on the IUCN Red List of Species. Taking into account the regional distribution of the tortoise and following a landscape level assessment, the expected impacts on the tortoise are not significant. Mitigation measures during construction and operation have been considered within the ESIA and include the avoidance of the main construction activities during breeding/hibernating seasons, minimization of the thickness of the topsoil to be removed during the preparation works, collection and relocation of the tortoises to other sites with similar conditions at a distance of 3 to 5 km from the construction site and prior to the beginning of the main construction works. Fences with gaps allowing for movement of tortoises as well as facilities for the temporary storage of tortoises during the construction phase will be provided. A robust Biodiversity Management Plan (BMP) with a clear No Net Loss (NNL) objective and net gain where required will include additional mitigation measures will be defined to minimize impacts to wild fauna, specially related to the birds protection measures at overhead power lines. A tortoise protection programme will be developed by a qualified biologist with local experience with the tortoise needs and included as part of the BMP. With appropriate mitigation measures, the



cumulative impact on the population of tortoises in the IBA area over the lifespan of the project has been considered in ESIA to be low.

The Promoter and the EPC Contractor will develop and implement a Construction and Operation Environmental and Social Management Plan (COESMP) and provide for workers awareness and training sessions in relation to the protection of the local fauna. The EPC Contractor will also have to develop and implement a Waste Management Plan in compliance with both, National Uzbek legislation and IFC PSs

The Project will also have positive environmental impacts as solar generated electricity will displace a significant volume of gaseous pollutants such as particulate matter, SO2, NOX and CO2, compared with thermal generation. The project is also expected to increase the country's electricity supply, reduce load shedding, diversify the country's energy mix away from hydro and thus avoid, or at least reduce, the need for fossil fuel generation in the country

EIB Carbon Footprint Exercise

Solar PV power plant will not generate any absolute CO2 emissions. In accordance with the Bank's current Carbon Footprint methodology, it is calculated that based on the avoidance of electricity generation from a combination of existing and new power plants in Uzbekisthan (combined margin for intermittent generation), the total relative effect of the project is a net annual reduction in CO₂ equivalent emissions by 159 kt CO₂-e per annum.

For the annual accounting purposes of the EIB Carbon Footprint, the project emissions will be prorated according to the EIB lending amount signed in that year, as a proportion of project cost.

Social Assessment

The land is state-owned, and was selected in a collaboration with the Government of Uzbekistan which has signed a land lease agreement. The project land is part of the government reserve land which is currently used for grazing livestock, and is not used by any of the key social sensitive receptors. The project land was transferred to the promoter through the resolution of the Provincial Administration and extends over 350 ha of grazing land located 1.7 km east of the Tutly settlement, and representing the 0.7% of the 52,000 ha of available pasture land in the Tutly area. No physical resettlement is expected.

The project's main social risks and impacts relate to traffic, water usage and labour risks.

Increased traffic associated with the project, in particular during the construction phase, may pose some safety risks to surrounding communities. The development and implementation of a Traffic Management Plan and of a Security Management Plan is expected to reduce any community risks linked to traffic and security aspects.

Up to 280 workers are expected during construction, most of which will be recruited locally. When fully operational, the project is expected to employ around 24 additional people. Employment terms and conditions will be aligned with the promoter's Human Resources Policy. Specifically, during construction, workers will be subject to a Project Labour Agreement, which will also be applicable to sub-contractors and which will incorporate information such as working hours, conditions of service, minimum wage requirements and information on access to a workers' grievance mechanism. A procedure to ensure that contractors' labour and working conditions comply with Lenders' requirements and Uzbek Laws will be further put in place. Although, promoter plans to employ as many local workers as possible, providing training where needed, still a significant part of the workforce will have



to be imported. No detailed plans as to workers accommodation have been made to date. The EPC Contractor will be required to manage the construction and maintenance of workers accommodation by developing and implementing a Worker Accommodation Management Plan (WAMP). The same requirements will be in place for any temporary accommodation that might be needed for the decommissioning phase of the project.

The EPC Contractor will be required to develop a Labour and Employment Management Plan and will be required in its HR Policy to include specific measures aimed at increasing the use of local workforce. The ESIA contains numerous references to compliance with international standards for workers H&S and use of PPE. EPC contractor is also required to comply with lenders E&S standards, as indicated in the EPC Heads of Terms signed between the Sponsor and EPC contractor. H&S plan is envisaged to be developed and implemented by the EPC Contractor for the protection of workers, as well as the installation of temporary acoustic screening, and enforcing restrictions on construction activities during weekends and generally to daytime hours.

Increased water demand resulting from the future operation of the PV plant may have a significant impact on the population unless additional measures are implemented. As mentioned above, the promoter is currently planning for dry cleaning of PV panels to minimise water usage, and in addition, the promoter is considering drilling a well for the population of Tutly, that would provide drinking water from the deeper aquifer (200m depth). This would allow the population to have access to better quality water and would be a positive impact of the project. The enterprises drinking water at the site (and for the temporary workers accommodation) will be pumped from the ground water deposit at 150-200m depth and some thought should be given to if this borehole could serve the common purpose of providing water resources for the community. The promoter shall develop the technical solutions in the incoming design phase.

Public Consultation and Stakeholder Engagement

Public consultation meetings within the context of the ESIA process were held in December 2019 as part of the ESIA development. In line with local ESIA requirements for stakeholder engagement and public consultation, the promoter has visited the project areas and conducted meetings with local representatives, companies based in the province of Samarkand as well as agencies in the city of Tashkent. An official consultation was undertaken for the population of the Tutly settlement in December 2019 and additional one in September 2020. According to the promoter the public consultations were attended by a significant percentage of the local population interested by the project.

The project will further develop and implement a Stakeholder Engagement Plan (SEP), including a grievance mechanism, to ensure the continuous and effective engagement of affected and interested parties, in particular surrounding communities.

Other Environmental and Social Aspects

The promoter has a strong commitment to sustainable development highlighted in its Environmental and Social Policy that requires the implementation of an integrated management system in all activities and operations carried out by the promoter. The proper implementation of its own E&S Policy and the relevant managements systems put in place are recognised and audited by relevant external bodies and the group is certified ISO 9001, ISO 14001 and ISO 18001.

In addition, an Environmental and Social Management System (ESMS) for the construction and operational phases will be developed and implemented for the project. The ESMS will



outline the set of management processes and procedures, including the roles and responsibilities and measures to be developed/taken by the various actors for duly addressing any project-related environmental and social risks and impacts.

Conclusions and Recommendations

The ESIA study and process carried out to date are considered satisfactory in light of the EIB's Environmental and Social Standards.

The project's financing contract will include an Environmental and Social Action Plan (ESAP) that will provide the subsequent measures and actions required in line with the Bank's Environmental and Social Standards. Progress monitoring on compliance with the ESAP will further be included as requirement in the financial contract. The implementation of the ESAP will be monitored by the Lenders' Technical Advisor (LTA) and the Bank.

The finance contract will also contain an undertaking that the project will be implemented and operated in compliance with EIB's Environmental and Social Standards, including in line with the measures and actions outlined in the ESIA Study/ESMP, the ESAP and the environmental consent.

Specific conditions that will be included in the ESAP are:

- Completion of the additional biodiversity surveys, related to the protection of steppe tortoises
- Development of a robust Biodiversity Management Plan, focused on key impacts and mitigation measures during project construction and operation, with a clear No Net Loss (NNL) objective
- A tortoise protection programme will be developed by a qualified biologist with local experience with the tortoise needs and included as part of the BMP.
- Completion of the final version of the BMP, SEP, ESMS and ESMMP (each with its subdocuments) to the satisfaction of the lenders and of their advisors
- Technical solution for sustainable water consumption for the cleaning of the PV modules, including evidence of no negative impact on the water availability for the neighbourhood settlements

Additionally, the promoter undertakes to:

- Update and maintain ESAP, ESMS, ESMMP and SEP, incorporating project changes and permits and ministerial requirements as soon as available
- Obtaining relevant permits in line with local legislation
- Progress monitoring on compliance with the ESAP

With the implementation of the ESAP and the above-mentioned conditions in place, the project is acceptable for EIB financing in E&S terms.