

Public Environmental and Social Data Sheet

Overview

Project Name:	SOLARIA PV PLANTS
Project Number:	2019-0212
Country:	Spain
Project Description:	Construction and operation of 8 solar PV plants with a total capacity of c. 254 MW _p located the Spanish regions of Extremadura, Aragon and Castilla y Leon.

EIA required: yes

Project included in Carbon Footprint Exercise¹: yes

Environmental and Social Assessment

Environmental Assessment

The present operation will contribute to the achievement of the Spanish 2020 targets for the reduction of CO₂ emissions, which require additional renewable energy capacity to become operational in the coming years. The project was awarded in the third tender for renewable energy, carried out in July 2017 under the current legal framework.

The Project consists of the development, construction and operation of 8 solar photovoltaic (PV) plants with a total installed capacity of 254 MW_p, including the ancillary infrastructure for the interconnection to the grid, located in the Spanish regions of Extremadura, Aragon and Castilla y Leon. The PV plants included in the Project are listed in the table below:

PV Plant	Location	MW _p
PV El Baldío 2019	Casatejada (Cáceres, Extremadura)	20.0
PV Solaria Tordesillas I	Tordesillas (Valladolid, Castilla y Leon)	30.0
PV Solaria Tordesillas II	Tordesillas (Valladolid, Castilla y Leon)	50.0
PV Lepara Tordesillas I (i.e. Solaria Tordesillas III)	Tordesillas (Valladolid, Castilla y Leon)	14.6
PV Solaria Santiz I (i.e. Santiz I)	Valdelosa (Salamanca)	50.0
PV Lerapa Valdelosa I (i.e. Santiz II)	Valdelosa (Salamanca)	30.0
PV Guleve Palacios del Arzobispo I (i.e. Santiz III)	Palacios del Arzobispo (Salamanca)	30.0
PV Poleñino I	Poleñino (Huesca)	30.0

All solar PV plants and grid connection facilities fall under Annex II of the Environmental Impact Assessment (EIA) Directive 2014/52/EU amending the EIA Directive 2011/92/EC. Based on national and regional environmental regulations, they have been screened in by the competent authorities, requiring an EIA process, including public consultation. The competent authorities considered all the comments presented during this process, in line with the relevant legal framework. General quality of the Environmental Impact Studies (EIS), in terms of the impact assessment methodology, desk studies and field work conducted, is considered to be acceptable. Environmental permits were granted for all plants in 2018. The project schemes are mostly substantially completed and are expected to be operational by end 2019.

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: 100,000 tonnes CO₂e/year absolute (gross) or 20,000 tonnes CO₂e/year relative (net) – both increases and savings.

Luxembourg, 27.11.2019

The promoter has sufficient E&S capacity to implement the project as it has a dedicated business unit, which provides environmental and planning development services for projects developed in-house and for third parties.

In the EIAs potential environmental impacts have been analysed during the different phases of the PV plants. The potentially significant negative impacts across the Project are related to soil, hydrology, livestock and landscape. The EIA studies propose preventive, corrective and compensatory measures to prevent, eliminate, minimise or compensate these negative impacts on the environment. Following the implementation of these measures, most of the impacts detected are assessed as negligible or minor. Details on the biodiversity assessment, impacts and mitigation measures are listed in the table below:

PV Plant	Biodiversity Assessment	Impacts	Mitigation
PV EI Baldío 2019	<ul style="list-style-type: none"> The Project is part of the Natura 2000 network (Special Conservation Zone (ZEC) Tiétar River (ES4320031) and Special Protection Area for Birds (ZEPA) Río and Pinares de Tiétar (ES0000427)) but has a favourable report from the Nature Conservation and Protected Areas Service of the Directorate General for the Environment. In addition, it is an anthropised area with an eminently agricultural character, where grazing and intensive agricultural irrigation crops prevail. The evacuation line crosses the Maijón stream. However, with the adoption of appropriate preventive measures and the authorisation of the Tajo Hydrographic Confederation, a minimum impact will be ensured, avoiding damage to the water quality. The following natural values could be affected: Evergreen meadows of <i>Quercus</i> spp., gallery forests of <i>Salix alba</i> and <i>Populus alba</i>, thermophilic drills of <i>Fraxinus angustifolia</i> and forest bird communities. 	<ul style="list-style-type: none"> The erosion of the soil occupied by the Plant can be a problem during the construction phase as well as during the operation phase if the soil is kept bare. The impact produced by the evacuation line can be significant due to the possible collision of birds in flight as well as their electrocution when perching on the supports. 	<ul style="list-style-type: none"> Corrective measures such as the obligation to maintain a vegetative cover controlled by grazing or the effect that the photovoltaic panels themselves can have on the soil moisture, allow to reduce the impact associated with the Project. Some control measures to the natural vegetation shall be carried out, such as the grazing with sheep. The use of herbicides is not allowed. The promoter must incorporate the preventive measures planned against electrocution and / or collision. PV Plant perimeter fence will be of the hunting type and shall be integrated into the landscape by using plant screens or painting it in tones that allow the minimisation of visual impact. A Reforestation Plan will be carried out, which will basically consist of planting species of bushy and woody bearing on the perimeter of the photovoltaic plant. In this case, the proposed species will be <i>Retama sphaerocarpa</i> and <i>Quercus coccifera</i>.
PV Solaria Tordesillas I	<ul style="list-style-type: none"> Some Natura 2000 sites (ZEC ES4170083: "Riberas del Río Duero y Afluentes", ZEPA ES0000362: "La Nava-Rueda"), are located near the plant: a specific report assessing the impacts on the Natura 2000 was prepared and submitted by the developer concluding that no significant impacts were identified. The methodology and the conclusions of this report are considered to be aligned with good practice, and no significant direct or indirect impacts on Natura 2000 sites are expected as a result of the Project. According to EIA and DIA (Declaración de impacto ambiental i.e. the environmental permit), three protected bird species and two bat species are known to be present in the 		

Luxembourg, 27.11.2019

	<p>area where the Project will be developed. However, no direct impacts have been identified as the chosen alternative includes an underground section of the transmission line to minimise risks to birds and bats. Impacts associated with fences and the PV plant were considered minor and the EIA includes suitable mitigation to minimise associated risks</p> <ul style="list-style-type: none"> Public Utility Hills/Forests will be affected by the transmission power line, overhead and subterranean. 		
PV Solaria Tordesillas II	<ul style="list-style-type: none"> According to EIA and DIA, three protected bird species and two bat species are known to be present in the area where the Project will be developed. However, no direct impacts have been identified as the chosen alternative includes an underground section of the transmission line to minimise risks to birds and bats. Impacts associated with fences and the PV plant were considered minor and the EIA includes suitable mitigation to minimise associated risks The EIA and the DIA do not foresee direct / indirect impacts on Natura 2000 or other protected areas. 		
PV Lepara Tordesillas I (i.e. Solaria Tordesillas III)	<ul style="list-style-type: none"> According to EIA and DIA, one vulnerable bird species and two bat species are known to be present in the area where the Project will be developed. However, no direct impacts have been identified The power line crosses the stream "Arrollo de Callones" and the "Arroyo de la Laguna". For 250m it crosses an Important Bird Area (IBA) but it does not cross any plot classified as Priority or Non-Priority Habitat, nor wooded areas. The EIA and the DIA do not foresee direct / indirect impacts on Natura 2000 or other protected areas. 		
PV Solaria Santiz I (i.e. Santiz I)	<ul style="list-style-type: none"> Two flora species protected by regional law have been identified onsite, together with five Community Interest Habitats Ten protected bird species and the Iberian wolf are known to be present at the municipality where the plant is located. However, no direct impacts have been identified. The EIA and the DIA do not foresee direct / indirect impacts on Natura 2000 or other protected areas. 	<ul style="list-style-type: none"> Most relevant environmental impacts during the construction phase of the plant include soil erosion related to land movement, loss of vegetation cover and potential loss of biodiversity and abundance of animal species due to the loss of important habitats. 	<ul style="list-style-type: none"> The EIA and the DIA describe the relevant preventive, corrective and compensatory measures to prevent, eliminate, minimise or compensate for negative impacts on the environment. These measures are aligned with good international industry practice.
	<ul style="list-style-type: none"> Two flora species protected by regional law have been identified onsite, together with five Community Interest Habitats Ten protected bird species and the Iberian wolf are known to be present at the municipality where the plant is located. However, no direct impacts have been identified. The EIA and the DIA do not foresee direct / indirect impacts on Natura 2000 or other protected areas. 	<ul style="list-style-type: none"> Most relevant environmental impacts include hydrology, loss of vegetation and potentially fauna Three moderate impacts remain after corrective measures. The moderate residual impacts are caused by vegetation removal and earthworks. As a result, about 1,500 trees will be cut on the site (114.6 ha). The most relevant impacts during the operational phase are the potential mortality of fauna, loss of biodiversity and abundance of animal species, the modification of the local habitat and the barrier effect 	<ul style="list-style-type: none"> The EIA report includes preventive, corrective and compensatory proposals to prevent, eliminate, minimise or compensate for negative impacts on the environment. To compensate for these impacts, compensation measures, including replanting, are included in the EIA report and in the DIA. To compensate for tree cutting during land clearance, an afforestation plan has been designed on an area of 6,329 ha. where 2,532 units of <i>Quercus suber</i>, <i>quercus ilex</i> and <i>Quercus faginea</i> will be planted. The selection of an underground design for the transmission line minimises the risk of bird mortality due to electrocution and

Luxembourg, 27.11.2019

			collisions. The design includes passages for fauna to minimise the barrier effect.
PV Lerapa Valdelosa I (i.e. Santiz II)	<ul style="list-style-type: none"> • Six Community Interest Habitats have been identified onsite • Ten protected bird species and the Iberian wolf are known to be present at the municipality where the plant is located. However, no direct impacts have been identified. • The EIA and the DIA do not foresee direct / indirect impacts on Natura 2000 or other protected areas. 	<ul style="list-style-type: none"> • Most relevant environmental impacts include potential mortality of fauna, loss of biodiversity and abundance of animal species, the modification of the local habitat, and the barrier effect. • The remaining moderate residual impacts are caused by vegetation removal for the cutting of 350 trees at project's site. 	<ul style="list-style-type: none"> • The EIA report includes preventive, corrective and compensatory proposals to prevent, eliminate, minimise or compensate for negative impacts on the environment. To compensate for these impacts, compensation measures, including replanting, are included in the EIA report and in the DIA. • To compensate for tree cutting during land clearance, an afforestation plan has been designed: an area of 6 ha. will be replanted with 568 units of oak. The Project Owner will be responsible for the planted trees for 8 years. • The selection of an underground design for the transmission line minimises the risk of bird mortality due to electrocution and collisions. The design includes passages for fauna to minimise the barrier effect.
PV Guleve Palacios del Arzobispo I (i.e. Santiz III)	<ul style="list-style-type: none"> • Two flora species protected by regional law have been identified onsite together with three Community Interest Habitats • Ten protected bird species and the Iberian wolf are known to be present at the municipality where the plant is located. However, no direct impacts have been identified. • The EIA and the DIA do not foresee direct / indirect impacts on Natura 2000 or other protected areas. 	<ul style="list-style-type: none"> • Most relevant environmental impacts include potential mortality of fauna, loss of biodiversity and abundance of animal species, the modification of the local habitat, and the barrier effect. • One moderate impacts remain after corrective measures. The moderate residual impacts are caused by vegetation removal and earthworks. As a result, about 3,514 trees will be cut on the site (3.8 ha). • The most relevant impacts during the operational phase are the potential mortality of fauna, loss of biodiversity and abundance of animal species, the modification of the local habitat, and the barrier effect 	<ul style="list-style-type: none"> • The EIA report includes preventive, corrective and compensatory proposals to prevent, eliminate, minimise or compensate for negative impacts on the environment. To compensate for these impacts, compensation measures, including replanting, are included in the EIA report and in the DIA. • To compensate for tree cutting during land clearance, an afforestation plan with 24 ha. replanted with cork oak, holm oak and quejigo. • The selection of an underground design for the transmission line minimises the risk of bird mortality due to electrocution and collisions. The design includes passages for fauna to minimise the barrier effect.
PV Poleñino I	<ul style="list-style-type: none"> • The Project does not impact any protected natural area • No flora listed in the Endangered Species Catalog of Aragon has been identified onsite. • The area between supports 16 and 17 of the evacuation line of the PV Plant is in the zone of feeding protection of a necrophage species • The EIA and the DIA do not foresee direct / indirect impacts on Natura 2000 or other protected areas. 	<ul style="list-style-type: none"> • The most relevant environmental impacts during construction, operation and dismantling phases are the impacts on fauna such as disturbance, displacement and the barrier effect caused by the PV Plant and the risk of collision and electrocution with the aerial evacuation line. 	<ul style="list-style-type: none"> • Part of the alignment of the power line is undergrounded to minimise potential impacts in areas that are close to stork nesting platforms. The rest of the overhead route of the evacuation line will be signaled with bird beacons. • The EIA includes suitable mitigation measures to minimise soil erosion and impacts on water bodies

Luxembourg, 27.11.2019

EIB Carbon Footprint Exercise

The emissions savings are estimated at 204 000 tons of CO₂ equivalent per year, based on 438 GWh/a average annual generation over the project life and the Bank's Carbon Footprint methodology (75% operating margin and 25% of build margin).

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, where applicable

The Projects do not require physical displacement or involuntary resettlement. None of the proposed sites have nearby residential or otherwise sensitive anthropogenic receptors. The current use of the lands is for agriculture, livestock and recreation, and those activities will continue to be practised in the area, as with the normal safeguards they will not be affected by the project.

The promoter has engaged with the landowners and, for the vast majority of the plots of land, has reached voluntary agreements for the project infrastructures, in the form of leases and / or surface rights or rights of way. For the pieces of land where a voluntary agreement cannot be reached, the promoter intends to require expropriation, in line with Spanish legislation. In Spain, all projects required for the implementation of different activities within the electric sector, including generation, promoted by public or private companies, are considered public utility, and are subject to urgent forced expropriation to be carried out by the authority in the interest of the promoters.

The Bank will request the promoter to provide confirmation that all land rights have been successfully secured together with all legal rights for the installation of all project components.

Public consultation was carried out under the EIA process, as required by the EU, and as transposed into national and regional law. The promoter has not developed further stakeholder engagement activities.

Conclusions and Recommendations

Based on the information provided for all PV plants in this project, no significant environmental or social impacts are expected. They will be mitigated with detailed project control mechanisms, as defined in the environmental permits.

An additional undertaking for the promoter is to provide an annual environmental monitoring plan (*Plan de Vigilancia Ambiental – PVA*) report, for each individual site and associated facilities, ensuring the implementation and effectiveness of the environmental plans established by the promoter. Where applicable, progress and completion reports on the compliance with the required afforestation programme / compensation measures should be provided.

With the mentioned conditions in place, the EIA processes and their results are acceptable to the Bank.