

## Environmental and Social Data Sheet

### Overview

Project Name:	CASABLANCA CSP PROJECT	
Project Number:	2011-0521	
Country:	Spain	
Project Description:	Construction, operation and maintenance of a concentrated solar power ("CSP") plant located in Talarrubias (Badajoz / Extremadura / Spain) with a capacity of 49.9MW and using molten salt storage technology.	
EIA:	Required	<input checked="" type="checkbox"/>
	Not required	<input type="checkbox"/>

### Summary of Environmental and Social Assessment, including key issues and overall conclusion and recommendation

The project includes the CSP plant, 220 kV overhead tie-line of about 7 km length and associated substation. The plant's site is currently used as arable land. By virtue of its technical characteristics the project falls under Annex II of Directive 85/337/EC, as amended by 97/11/EC and 2003/35/EC, which leaves the requirement for an Environmental Impact Assessment (EIA) to be determined by the competent national authorities, according to the selection criteria established in Annex III of the Directive. In this case, the Spanish authorities have required an EIA to be carried out.

According to the EIA, environmental project impacts relate to effects on local vegetation and avifauna, water consumption and visual and noise impacts. They have been adequately mitigated, and are expected to be minor if the mitigating measures required in the environmental permit are effectively implemented.

The project grid connection is partly inside a Natura 2000 site (SPA/SCI ES4310009 "PUERTO PEÑA - LOS GOLONDRINOS") which includes protected bird species listed on Annex I of Directive 79/409/EEC. The environmental authority has performed an appropriate assessment and states in the permit that it is not likely that the project will have significant impacts on any Natura 2000 site, if the mitigating measures included in the permit are implemented.

### Environmental and Social Assessment

The outcome of the EIA procedure was favourable and the environmental permit was awarded in May 2009. The project's main environmental impacts include effects on local avifauna. The environmental permit includes a set of mitigating and corrective measures on the execution and operation of the project including, inter alia, requirements on waste management and bird protection measures concerning the connecting overhead line.

Based on the environmental permit available to the Bank, the project grid connection is partly within (ca. 2 km) a Natura 2000 site (SPA/SCI ES4310009 "PUERTO PEÑA - LOS GOLONDRINOS") which includes protected bird species listed on Annex I of Directive 79/409/EEC. The EIA includes a desk review of the protected bird species present in the area, and singles out one species (*Hieraaetus fasciatus*) that may be potentially impacted by the power line. The proposed mitigating measures (see below) are in line with the Natura 2000 site management plan, and with the conservation plan of this particular species. The environmental authority has performed an appropriate assessment and concluded in the environmental permit that it is not likely that the project will have significant impacts on any

Natura 2000 site, if the mitigating measures included in the permit are implemented. The Bank has reviewed the relevant assessment performed by the environmental authority, which includes measures to mitigate the impact the overhead tie-line will have on avifauna.

The EIA analyses three alternative paths for the HV line. All of them cross the Natura 2000 site, as the plant grid access point is an existing substation that lies in the above mentioned Natura 2000 site. The path chosen in the EIA minimizes the length within the Natura 2000 site, as well as its environmental and social impacts, including cumulative impacts, as it runs parallel to an existing overhead 400 kV power line. The EIA also analyses the possible impacts of the tie-line on birds, and proposes mitigating measures such as stopping construction works during the breeding season of concerned species, building the power line with cable at the same height as those of the existing adjacent power line, and installing bird protection devices to increase the visibility of cables. The Bank considers this approach acceptable, as it takes into account the main project impacts on the Natura 2000 site.

The environmental permit calls for a monitoring plan of the implementation of mitigating measures, with special focus on project impacts on avifauna, for the project life, with annual reporting. On the basis of these reports, the promoter and the environmental authority will analyse the monitoring results and define further mitigation measures and/or monitoring actions, if needed. The Bank will ask for copies of the first three annual monitoring reports.

The project is located in the vicinity of six other CSP plants of different promoters. The environmental authority has taken into account the cumulative impacts of these projects, mainly the impact on avifauna from overhead connection lines, which would cross the above-mentioned Natura 2000 site at different points. As a mitigating measure, the environmental authority has requested for all the projects to use a single connection tie-line (400 kV overhead line, ca. 20 km length), thus minimising the impact on the Natura 2000 site avifauna. The mitigating measures proposed above will be applied as well for the construction and operation of this tie-line.

Other environmental impacts include water consumption of ca. 1 hm<sup>3</sup>/a<sup>1</sup>, sourced from a nearby dam. The project water consumption is minimal compared to the dam's capacity (ca. 20 hm<sup>3</sup>) and small compared to other expected uses, such as agriculture (up to 6 hm<sup>3</sup>/a). The dam provides up to 0.25 hm<sup>3</sup>/a of water for human consumption in a nearby village and ca. 2 hm<sup>3</sup>/a for ecological flow purposes. Both usages are priority to all other water usages, thus in case of drought the plant would need to be shut down.

### **EIB Carbon Footprint Exercise**

Absolute CO<sub>2</sub> emissions from the project in a standard year of operation will be 15 kt CO<sub>2</sub>e/a.

The baseline emissions are calculated assuming that electricity generated by the project will displace generation from a mix of existing thermal power (grid) and new generation (CCGT). Compared to this baseline the project is estimated to save 80 kt CO<sub>2</sub>e/a.

The loan is expected to cover about 38% of total investment outlays. Pro-rated to this amount, absolute emissions will be 7 kt CO<sub>2</sub>e/a and estimated emission savings 30 kt CO<sub>2</sub>e/a.

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<sup>1</sup> 1 hm<sup>3</sup> = 1 000 000 m<sup>3</sup>.