European Investment Bank

Luxembourg, 7 April 2025

Environmental and Social Data Sheet

Overview

Project Name:	*IBERDROLA EXTREMADURA HYDROPOWER UPGRADE*
Project Number:	*2024-0047*
Country:	*Spain*
Project Description:	*Upgrade and retrofitting of 313 MW existing reverse pumping scheme in Extremadura.*

EIA required: no

Project included in Carbon Footprint Exercise[1]: yes

Environmental and Social Assessment

Environmental Assessment

The Project comprises the upgrading and modernization of two existing pumped storage hydropower plants, Torrejón and Valdecañas, located on the Tagus River. The pumping flexibility of Torrejón will be increased, while in Valdecañas, the existing pump-turbines will be refurbished to their original pumping capacity of 225 MW. In the current conditions, Torrejón operation in pump mode from Alcántara reservoir is very limited, and Valdecañas has not functioned in pumping mode since 1995 due to operational restrictions. Once completed, the scheme will allow pumping water from the Alcántara reservoir into the Valdecañas reservoir, scaling up the energy storage of the Tagus River hydro cascade and adding more flexibility to the Spanish grid. The Project includes the installation of a 15 MW battery in Valdecañas to improve the regulating capacity of the reversible turbines, especially in pumping mode. The hydro scheme is located in Extremadura, Spain and is being operated by the Promoter since 1967. The Promoter holds concession rights.

The Project aligns with the updated Spanish National Energy and Climate Plan (2023-2030), focusing on developing new electricity generation facilities using renewable energy and enhancing hydroelectric energy storage capacity through existing infrastructures. Additionally, it is consistent with the Spanish Energy Storage strategic plan.

The changes in operating rules realized by the Project will not affect the perimeter of the concession, as the new operating parameters will remain within the values (in terms of reservoir level and discharge) allowed by the original concession.

The works comprise the installation of standard electro-mechanical equipment in the two existing powerhouses and will involve a very limited amount of civil works. The main part of the works takes place inside the existing buildings, with minimal activity outdoors. Particularly, in Torrejón the works have been identified by the administration as “not

[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.

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substantial". The technologies applied are mature, reliable and widely used in the hydropower sector.

The Project is to be implemented over a period of three years and a half. Activities in Torrejón's powerhouse started in July 2023 and, in March 2024, in Valdecañas and the Project is expected to be completed by the end of 2026. The Project's administrative authorizations were issued on 05/06/2023 and 21/02/2024 respectively for Torrejón and Valdecañas.

The Project has also received the required resolutions from the Tagus River Basin Authority (CHT, Confederación Hidrografica del Tajo) in 2021 in compliance with the EU Water Framework Directive (for Torrejón on 12/05/2021 and Valdecañas on 19/08/2021).

The Project falls under Annex II of the EIA Directive 2011/92/EU, as amended by Directive 2014/52/EU and follows article 7.2.c) of the National Legislation (Law 21/2013). The Project underwent an evaluation of the likelihood of impact to the Natura 2000 (*Informe de Afección a la Red Natura 2000 y sobre la Biodiversidad*) areas:

- ZEC[2] Márgenes de Valdecañas (ES4320068);
- ZEC Monfragüe (ES4320077);
- ZEPA[3] Embalse de Valdecañas (ES0000329);
- ZEPA Monfragüe y las dehesas del entorno (ES0000014).

The competent environmental authority, considered the nature, scope, location and timeline of works vis a vis key protection objectives for elements such as breeding areas, nesting and water quality and concluded that, with the appropriate mitigants in place, significant impacts are not anticipated. The environmental positive opinions (*Informe de Afección a la Red Natura 2000*) for the Project were issued by the Dirección General de Sostenibilidad of the Junta de Extremadura on 28/04/2023 for Torrejón, and on 26/05/2023 for Valdecañas.

The following main conditions issued by the environmental authority apply:

Implementation phase:

- The Promoter must prepare an Environmental Monitoring Program to be submitted quarterly for review to the Extremadura General Directorate of Sustainability. Additional corrective and/or protective measures to correct possible detected deficiencies will be agreed during the execution of the works. Because the breeding territories of threatened species are variable over time, new settlements or breeding areas may appear. If this event occurs new limitations may be established.

Operation phase:

- The Promoter must prepare, prior to the start of the turbine/pumping operation, a Monitoring and Surveillance Plan to be approved by the environmental body. The plan will focus on (i) monitoring of physical-chemical-environmental conditions of the water, (ii) surveillance and control of invasive exotic species and (iii) disturbance to wildlife.

EIB Carbon Footprint Exercise

Project estimated emissions savings are 12 kilo tonnes of CO2 equivalent per year. Project emissions are assumed to come from energy consumption (i.e. GWh for pumping). For the calculation of the absolute emissions (A) the long-term grid emission factor (i.e. 213 ktCO2/GWh) for Spain has been taken from the EIB Carbon Footprint Methodology, Reservoir emissions were not considered as normal operations of pumping/generation cycle will occur within the same reservoir levels of the initial concession (no additional reservoir emissions due

[2] ZEC, Spanish acronym for *Zonas Especiales de Conservación* (Site of Community Importance, as per Habitats Directive)
[3] ZEPA, Spanish acronym for *Zonas de Especial Protección para las Aves* (Special Protection Areas, as per Birds Directive)

to the Project). For baseline emissions (B), intermittent grid factor for Spain (329 gCO2/kWh) has been taken from EIB Projects Carbon Footprint Methodologies, on the assumption that, due to its flexible generation nature, the plant will predominantly displace higher emission peak generation.

EIB Paris Alignment for Counterparties (PATH) Framework

The counterparty, Iberdrola S.A., is in scope and screened in to the PATH framework, because it operates in a high-emitting sector. The counterparty already meets the requirements of the EIB PATH framework with its existing alignment plan.

Social Assessment, where applicable

All foreseen installations will take place on land already owned by the Project. No expropriation or any other form of land compensation is associated with the Torrejón-Valdecañas Project.

Other Environmental and Social Aspects

The Promoter has in place an integrated health, safety, environmental and quality (HSEQ) management system including requirements for the quality management system (ISO 9001), environmental management systems (EMS) ISO 14001, Eco-Management and Audit Scheme (EMAS) Health & Safety (ISO 45001 and OHSAS 18001).

Conclusions and Recommendations

Based on the information available, the Project is expected to be acceptable in environmental and social terms for Bank financing.

Disbursements conditions: None

Undertakings for the finance contract: None

The project benefits from financing under the Recovery and Resiliency Fund (RRF) and is expected to ensure that it does no significant harm to any of the six environmental objectives within the meaning of the art. 17 of the Taxonomy Regulation (EU) 2020/852 (the principle of “do no significant harm” (DNSH)). Based on the information provided by the Promoter, a DNSH assessment was carried out for all six environmental objectives, and it was concluded that the project does not have significant foreseeable impact on any of the six environmental objectives. Overall, the project complies with the DNSH principle by satisfying the conditions stipulated in the Council Implementing Decision Annex on the approval of the assessment of the recovery and resilience plan for Spain.