

Project Name: Interconnection Portugal-Spain

(PCI 2.17 in the EC 2017 PCI list (3rd list); Project 4 – TYNDP 2016)

Project Description:

This project allows an increase of the interconnection capacity between Portugal and Spain, meeting the objectives defined for the Iberian Electricity Market (MIBEL). Larger and more volatile flows are expected between both countries due to the increase of volatile sources and the market interchanges. The project is part of the new 400 kV interconnection axis in the North between Minho and Galicia, connecting the substation of Beariz and Fontefría in Spain and the Oporto region through Ponte de Lima and Vila Nova de Famalicão substations. From this axis the section between the Oporto region and Vila Nova de Famalicão is already in service.

New interconnection between Portugal and Spain: New double circuit 400 kV OHL between Beariz (ES) – Fontefría (ES) – Ponte de Lima (PT), including new 400 kV substations Beariz, Fontefría, in Spain, and Ponte de Lima, in Portugal. For the cross-border section Fontefría – Ponte de Lima, double OHL, only one circuit will be initially installed. Total estimated length: 18 km (ES)¹ + 72 km (PT)².



Figure 1 - Midterm map of projects in the Iberian Peninsula included in TYNDP 2016

This project allows to significantly increase the Net Transfer Capacity between Spain and Portugal and will allow an effective functioning of the Iberian Electricity Market (MIBEL), necessary in the path towards a single European Electricity Market.

¹ Section Fontefría-border

² Section border-Ponte de Lima

This project crosses the Spanish-Portuguese border directly and allows a minimum interconnection capacity between those two countries of 3000-3200 MW.

According to TYNDP 2016 assessment, as a consequence of the increase of the interchange capacities between Portugal and Spain, this project provides, for the 2030 horizon, savings in variable generation cost from 0-20 M€/year to 60-80 M€/year, depending on the scenario, taking into account the expected increase of the FR-ES interconnection capacity for the 2030 horizon.

For 2030 horizon, this project will also avoid the spillage from 0-20 GWh to 290 - 570 GWh of RES, depending on the scenario.

This project is particularly relevant for the implementation of the EU energy policy targets, namely for:

- Increase the integration between Portugal and Spain in the Iberian Electricity Market (MIBEL), and between MIBEL and the European market, thus fostering competition;
- Facilitates the accommodations of RES and captures synergies from the complementary generation technologies of renewable resources (namely hydro and wind);
- Obtain complementarities between the Portuguese and Spanish electrical systems;
- Improve system reliability mainly in the border area;
- Obtain economic and environmental benefits arising from reduced reserve generating capacity, improved system stability and reduced investment to provide generation capacity to supply peak demand.

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Public Consultations

The project under consideration is submitted to public consultation (i) as part of the approval procedure of the *Plano de Desenvolvimento e Investimento da Rede de Transporte (PDIRT)* (Development and Investment Plan of the Transmission Grid), which is conducted by the *Entidade Reguladora dos Serviços Energéticos (ERSE)* (Energy Services Regulator), (ii) during the Environmental Impact Assessment (EIA), which is conducted by the *Agência Portuguesa de Ambiente (APA)* (Portuguese Environmental Agency) and finally (iii) during the administrative and technical licensing, which is conducted by the *Direção Geral de Energia e Geologia (DGEG)* (General Directorate for Energy and Geology).