

Baixo Sabor

Portugal

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In February 2009, the consortium ANDRITZ HYDRO and local partner Ensulmeci received a contract from Energias de Portugal (EDP) for the delivery, installation, and commissioning of the complete electro-mechanical equipment for the Baixo Sabor hydropower plant. The plant consists of two stages: Montante and Jusante both located on the lower course of the Sabor River, a tributary to the Douro in northern Portugal.

The scope of supply for each stage includes two reversible pump turbines with auxiliary systems, generators, power bus bars, transformers, switch gear, complete automation and control system, and auxiliary equipment for the turbine house. In 2012, ANDRITZ HYDRO assumed also responsibility for the contracted scope of supply and services of Ensulmeci.



Jusante stage reservoir

The Jusante stage of Baixo Sabor has been in commercial operation since April 2015. Following heavy rainfalls in early 2016, the maximum water level was reached at the Montante stage as well. This made it possible to run the remaining pre-commissioning tests. In February 2016, the Montante stage was also put into commercial operation.

Special challenges of the hydraulic development of this project were the extremely wide operation spectrum in regard to the water head and load at HPP Baixo Sabor Montante, and the use of reversible pump turbines for the unusually low water heads at HPP Baixo Sabor Jusante. With the successful commissioning of both stages, two important references were added to ANDRITZ HYDRO's list of pump turbine projects.

The Baixo Sabor hydropower facilities with their overall installed capacity of 190 MW contribute significantly to Portugal's ambitious goal of increasing the country's share of renewables to 31% by 2020. ■

TECHNICAL DATA

Jusante stage:

Output	2 × 18 MW 2 × 20 MVA
Voltage	6 kV
Head	30 m
Speed	150 rpm
Runner diameter	3,950 mm

Montante stage:

Output	2 × 77 MW 2 × 85 MVA
Voltage	15 kV
Head	94 m
Speed	214.3 rpm
Runner diameter	4,200 mm

