Huinco & Matucana

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Powerhouse of HPP Matucana

Peru – In June 2016, ENEL Generación Perú S.A.A. and ANDRITZ HYDRO signed a contract for rehabilitation works at the two Peruvian hydropower plants Huinco and Matucana. With a capacity of 1,283.8 MW (739.4 MW thereof produced by hydropower) Edegel S.A.A. is the largest private electric generation company in Peru.

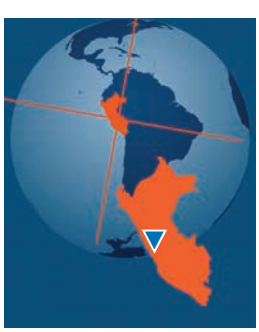
Huinco and Matucana hydropower plants are located in the province of Huarochirí, about 70 km east of Lima. After continuously operation of more than 40 years, the rehabilitation of two generators at HPP Huinco and one generator at HPP Matucana is necessary.

The Huinco storage power plant is the result of an electric expansion plan intended to adequately meet the future electricity demand in the 1920s, using the waters of the Rímac and Santa Eulalia Rivers. After damming up the lakes on the Santa Eulalia River, diverting the waters of the Rímac River to the Santa Eulalia River, and building the Callahuanca, Moyopampa, and Huampaní hydropower plants, a trans-Andean tunnel was built in the early 1960s to provide sufficient water for HPP Huinco. HPP Huinco has an installed capacity of almost 265 MW. The first of the four horizontal Pelton turbines was commissioned in 1964. Currently, it has the highest head used to produce hydroelectric energy in Peru (1,293 m). HPP Huinco was built in a cavern, due to the river course of the Santa Eulalia, which runs near HPP Huinco through a narrow gorge and enforced the construction of an underground powerhouse.

HPP Matucana is located in the highlands of Lima and is fed by the Rímac River and the Yuracmayo dam. The run-of-river power plant began its power generation in 1972. It has an installed capacity of 137 MW and counts two double horizontal Pelton turbines. The intake is connected to the plant via a 20 km long tunnel. The reservoir tank at Matucana is made up of two 500 m long underground chambers, with a capacity of 30,000 m³ each. Thanks to these chambers, the plant's nominal capacity could last up to three hours, even during dry periods.

Both projects will be carried out by ANDRITZ HYDRO Peru and Austria. The scope of delivery comprises new complete stator windings for two units at HPP Huinco a new stator for HPP Matucana, as well as installation, supervision, electrical tests and commissioning. At present, the engineering process is finished and approved by the client and the manufacturing of components in the ANDRITZ HYDRO workshop in Araraquara, Brazil, has already started. All works on-site will be carried out between 2017 and 2019.

TECHNICAL DATA		
Huinco		
Output	265	MW
Voltage	12.5	kV
Head	1,245	m
Speed	514	rpm
Stator diameter	3,300	mm
Matucana		
Output	137	MW
Voltage	12.5	kV
Speed	450	rpm
Stator diameter	3,400	mm



Machine hall of HPP Huinco