

Indonesia Cianten 1, Cianten 1B and Cianten 3

In May 2013, ANDRITZ HYDRO received an order from PT. Jaya Dinamika Geohidroenergi (JDG) for the supply, transport, installation and commissioning of the complete electromechanical equipment for Cianten 1, Cianten 1B and Cianten 3, three hydropower plants located in West Java, Indonesia.

JDG is a newly-established independent hydropower producer in Indonesia with a strategic plan to become a major independent power producer in



the emerging compact hydro energy market in Indonesia.

The order for these three plants completes the cascade of four plants on the Cianten River, developed by JDG.

The order for Cianten 2 was already awarded to ANDRITZ HYDRO in 2012 and is currently undergoing completion. All three new plants are scheduled to be completed in 12 months.

Sanjay Panchal
Phone: +91 1275 288 656
sanjay.panchal@andritz.com

TECHNICAL DATA

Cianten1/Cianten 1B/Cianten 3:

Units: 2/2/2
Output: 950 kW/3,200 kW/2,910 kW
Head: 27.70 m/95.52 m/56.70 m
Speed: 600 rpm/750 rpm/600 rpm
Runner diameter: 816 mm/780 mm/904 mm

France Fontenil, Semine, Lavalette and Vallico

In 2013 the ANDRITZ HYDRO mini-COMPACT office in Toul, France, received orders for five standardized Francis turbines with a horizontal shaft arrangement, including ancillary equipment, for four hydropower stations in France and Italy.

EDSB, a local electrical agency, awarded a contract to ANDRITZ HYDRO for the Fontenil hydropower project located in the city of Briançon, France. The order consisted of the supply of two turbines, which were installed in 2013.

HPP Semine is a private hydroelectric power plant in the region of Jura, France. ANDRITZ HYDRO's scope of supply consisted of the adaption of an old turbine. The order was confirmed in April 2013 and the plant was commissioned in December 2013.

Furthermore, the city of Saint-Etienne in France placed an order with ANDRITZ HYDRO for the supply of a turbine at HPP Lavalette. This turbine is designed to pump the compensation water of HPP Lavalette dam, which is used as the reservoir of the city's drinkable water. In December 2013 the erection was realized on site.

For the Vallico hydroelectric power plant, which is located in northern Italy, ANDRITZ HYDRO is currently in progress adapting the aged turbine.

Jean-François Bansard
Phone: +33 (0) 383 43 84 58
jean-francois.bansard@andritz.com

TECHNICAL DATA

Fontenil/Semine/Lavalette/Vallico:

Output: 1,183 kW/422 kW/256 kW/141 kW
Head: 55.21 m/21 m/48.55 m/13.55 m
Speed: 750 rpm/428 rpm/750 rpm/600 rpm
Runner diameter: 630 mm/820 mm/440 mm/556 mm

Austria Rothleiten



The Frohnleiten Energie- und Liegenschaftsverwaltung GmbH (FEL) runs HPP Rothleiten in the Austrian province of Styria. Since 1925, five Francis turbines have discharged the water of the Mur River.

After investigations about suitable forms of rehabilitation or reconstruction and upgrading, it was finally agreed to build a complete new hydropower station. In September 2013, the contract between FEL and ANDRITZ HYDRO Germany for the delivery of the complete electromechanical equipment was signed. The new run-of-river power plant will include a three-section weir. The power house equipment consists of two horizontally installed bulb turbines (runner diameter of 3,650 mm) and direct coupled medium-voltage synchronous generators (6.3 kV). A comprehensive electrical infrastructure with turbine governor, automation and excitation is also included in the scope of supply from ANDRITZ HYDRO. In addition to the improved flood protection, hydrogeological and ecological accompanying measures will be implemented.

During the construction period the operation of the old power station is to be maintained. The start of commercial operation of the new plant is scheduled for summer 2015.

Hans Wolfhard
Phone: +49 (751) 29511 491
hans.wolfhard@andritz.com

TECHNICAL DATA

Output (approx.): 2 x 5.1 MW
Head: 5.71 m
Speed: 120 rpm
Runner diameter: each 3,650 mm