Italy, Camaioni

By Stefano Rizzi
stefano.rizzi@andritz.com

In November 2015, ANDRITZ HYDRO received a contract for the supply of electro-mechanical equipment for the new Camaioni hydropower plant in Italy from HGE Srl, a private investor which has been active in the small hydro sector for many years.

HPP Camaioni is located about 30 km east of the city of Florence on the Arno River. As with most Mini Compact installations, the environmental impact is reduced to an absolute minimum and the new structure will also be utilized for educational purposes.

The scope of supply comprises a green-field power house for which ANDRITZ HYDRO deliveries will include two axial Bevel Gear Bulb turbines with a diameter of 2,150 mm and a power output of 1.05 MW, complete with synchronous generators, and mechanical auxiliaries.

Commissioning is scheduled for end of 2016 with synchronization of the first unit. ■

TECHNICAL DATA	
Output	2 × 1.05 MW
	12 MVA
Head	4 m
Speed	204 rpm
Runner diameter	2,150 mm

USA, Olmsted

By Mark Barandy
mark.barandy@andritz.com

ANDRITZ HYDRO was contracted by Utah Water Conservancy District (CUWCD) to provide two turbine-generator units, including auxiliary mechanical equipment and electrical controls, for the new Olmsted powerhouse.

The existing Olmsted hydropower plant, located at Provo Canyon near Orem, Utah, was completed in 1904 and is one of the oldest facilities in the western United States and is centerpiece of the Telluride Institute of Learning. The facility was the first corporate-sponsored school for engineering students. Now, CUWCD and the US Department of the Interior will be constructing a new hydroelectric power plant at the Olmsted site.

The project includes a new powerhouse, two new Compact units, replacing of the four existing penstocks with a single buried penstock, and construction of a new power transmission line. Operating under a net head of 102 m, the new horizontal Francis turbine units will have a nominal output of 8 MW and 3.2 MW. All works will be executed whilst preserving the existing historic powerhouse. The engineering firm, CH2M Hill, will undertake the powerhouse design.

The project is scheduled to be finalized at the beginning of 2018. ■

TECHNICAL DATA	
Output	1 × 8 MW
	1 × 3.2 MW
Head	102.5 m
Speed	514/720 rpm
Runner diameter	737/1,109 mm

Nepal, Kabeli B1

By Manoj Agarwal
manoj.agarwal@andritz.com

At the end of 2015, ANDRITZ HYDRO received an order for the Kabeli B1 hydropower station from Arun Kabeli Power Limited. The run-of-river power station is located in the Panchtharand and Taplejung Districts of Mechi Zone in the Eastern Development Region of Nepal, about 8 km from the city of Ganesh Chowk.

The intake site is located at Tharpu VDC and Thumbedin VDC with a gross head of 93.7 m. Discharge from the de-sanding basin passes to the powerhouse through a 4.5 km long penstock pipe with a diameter of 4,000 mm.

ANDRITZ HYDRO will supply two horizontal Francis turbines with an output of 12.5 MW each and associated equipment. The power generated from this project will be connected to the national grid system via an 84 km long, 132 kV transmission line called the “Mechi Corridor Transmission line”.

After completion, HPP Kabeli B1 will produce about 151.65 GWh of electrical energy per year. ■

TECHNICAL DATA	
Output	2 × 12.5 MW
Head	93.7 m
Speed	500 rpm
Runner diameter	1,354 mm
Av. annual generation	151.6 GWh