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## Green Line for Green Energy

The Maggia valley in Swiss Tessen is a renowned tourist magnet. Situated in the far south of Switzerland at the Italian border, the region enjoys a warm southern climate. The beautiful scenery and culinary delicacies add to the appeal and yearly draw thousands of visitors from home and abroad to the Maggia and the Lake Maggiore.



In line with nature and for over 100 years, the Swiss have been taking benefit of the river Maggia to run power stations. Numerous power houses set up along the river perfectly blend in with the natural environment and produce green energy.



One of them is situated in Ponte Brolla. The station was established in 1903, it was renovated in 1957 as well as in 1970 and ever since landmarked. In the course of a complete renovation in 2008 the proprietor commissioned the Maggia engineering company Azienda Elettrica Ticinese to protect not only the historically landmarked riveted frame bridge from corroding, but also to redo the sand catcher, the intake construction, steel pipes and the powerhouse including turbine.

Esthetics played a major role in bridge renovation. The top quality pressure pipes by HOBAS were dyed green to harmonize with the surroundings. Further requirements for the pipe material, such as light weight, safe and simple mounting and excellent hydraulic properties, were met by HOBAS pipe systems. The additional technical advice offered by HOBAS, reliable references, flexibility and the wide range of fittings made reaching a decision easy for the client. A total of 108 m HOBAS HydroLine pipes DN 1600, SN 5000, PN 6 were hence delivered in standard 6 m length.



All 18 pipes were flown onto the bridge by helicopter and lowered with millimeter precision. 3 tons were the maximal allowable helicopter load. Since HOBAS CC-GRP pipes are relatively light, and one of the 6 m DN 1600 pipes weighs 1.8 tons only, the transportation to the bridge could be finalized within 1.5 hours. Thanks to the technical support from HOBAS experts the constructor was able to fix the pipeline to the bridge in record time.



The new vertical Francis turbines are now fed with 6 m<sup>3</sup> water per second through two paralleling HOBAS pressure pipes. This results in an energy output of 3.7 MW at a head of merely 42 m. The client, the engineering office and the constructor



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are enthusiastic about the quality of HOBAS pipe systems and are convinced that the renovation of the old power station at the Maggia was an important contribution to sustainable environmental protection.

Overview	
Year of Construction	2008
Length of Pipe	108 m
Pressure Class	PN 6
Diameter	DN 1600
Stiffness Class	SN 5000
Installation Method	above ground
Application	HydroLine®
Client	Power Plant Ponte Brolla
Contractor	Azienda Elettrica Ticinese
Advantages	green dye to blend in with natural surroundings, light weight, safe and simple mounting, excellent hydraulic properties, technical support during installation, flexibility, range of fittings