POWERTURBINES
ENERGY FROM WATER

SUCCESS STORY: ANDORRA

GENERAL INFORMATION:

- St. Julià de Lòria (ANDORRA)
- NET PRESSURE DROP: 8 BAR
- FLOW: 21 LITERS/SECOND
- POWER: 9,5 kW
- PT — USE OF THE ENERGY: GRID TIED SELF-CONSUMPTION

BACKGROUND

The parish of St. Julià de Lòria has a drinking water network with significant flows and differences in level between the catchments and the different tanks that supply the population. These characteristics provide the network with hydroelectric potential capable of providing significant gains in the service, both from a technical and environmental point of view, as well as from an economic point of view. In this sense, the Community of St. Julià de Lòria intends to take advantage of the hydroelectric potential in the section of the network between the catchment of the “Carrabiners” source and the “Borda de l'Arena” reservoir.

THE SOLUTION

After analyzing the technical and geometric characteristics of the network between the Font dels Carabineros and the Borda de l'Arena tanks, it was decided to install a 9.5 kW microturbine in bypass on the pressure reducer located at the entrance of the tank. . With this operation, the flow in excess of the nominal flow of the turbine will also circulate through the pressure reducer to the tank. The installation is monitored at all times through the inverter.