

Maintenance, refurbishment, and repowering of hydroelectric power plants

AQUAWATT: Hydropower in the Energy Transition

Piacenza, 29th October 2024 – 11:00 – Room A

The European green deal is driving the energy transition towards a sustainable economy fostering the exploitation of renewable sources. In this ever-changing context a number of factors are posing new challenges and opportunities that call for additional investments in hydropower, although it is considered the most mature technology.

Specifically, the aging fleet requires new maintenance strategies and innovative control techniques to enhance the safety and resilience of assets and equipment. Moreover, the need to operate the hydroelectric facilities more flexibly than designed call for modernization works, including refurbishment and repowering, to cope with the new challenging requirements of the power grid, especially in terms of balancing and ancillary services.

In this workshop, AQUAWATT draws attention to innovative solutions and approaches aimed at preventing component failures and extending the lifetime of assets and electromechanical equipment.

WORKSHOP curated by AIPnD (2 hours)

Non-Destructive Testing for hydroelectric equipment

Ezio Tuberosa, President of AIPnD and Federico Raggio, vice President of AIPnD

Repowering and Refurbishment of ENEL Green Power hydroelectric plants

Stefano Albertini, ENEL Green Power

Repowering and Refurbishment of IREN Energia's Hydropower Plants in the Orco Valley

Maurizio Peretto, Nicola Brizzo, IREN Energia

Penstocks surveillance and control methods

Armin Kager, HYDRO SAFETY Engineering

Predictive maintenance of electromechanical equipment

Andrea Sasso, Sasso

Rehabilitation of hydro turbine systems and new materials for bearing applications

Gabriele Rizzi, Eurobearing