



# HPP & PSP REHABILITATION.

ENGINEERING EXCELLENCE.



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The rehabilitation and retrofitting of existing hydropower plants and pumped storage plants is becoming increasingly important worldwide. An essential factor for increasing the economic potential of these plants lies not only in their rehabilitation, but also in the optimization of their use and operation – both in individual plants and groups of plants.

Offering an extensive range of services, and having many years of experience in the interdisciplinary planning, design and coordination of hydropower plant projects, ILF is able to advise and support clients to find the most economic and technically feasible solutions for their rehabilitation projects.



In addition to providing typical consulting services for rehabilitation, ILF's services also encompass:

- Condition assessment – from walk-through and evaluation of historical information, to detailed analyses and measurements (such as fingerprint measurements, Winter Kennedy measurements, vibration measurements incl. balancing)
- Evaluation of modernization opportunities, cost and benefit analyses
- Increase of flexibility and operating range: from concept, and testing, to the final implementation of measures for individual components, individual plants or groups of plants
- Optimization of operation to minimize losses in individual plants and groups of plants, and to efficiently fulfil the changing demands of the market
- Reduction of operating and maintenance requirements and minimization of environmental impact through technical improvements

From ILF's experience, the specification of high-quality standards and a comprehensive quality control of the scope of supply and services are of increasing importance for successful project implementation.



*“The engineers’ innovative ideas in combination with the operating staffs’ experience are key factors for a successful future.”*

Peter Strohmer,  
Team Leader HPP & PSP Rehabilitation

## REHABILITATION PROJECT HIGHLIGHTS

- Porabka-Zar PSP (4x130 MW), Poland  
Technical services from tendering phase to commissioning, study of alternatives
- Qairokkum HPP (increase from 126 to 174 MW), Tajikistan  
Technical services for tender phase, and site supervision
- Andekaleka HPP & Antelomita HPP (3x35 MW, 3x1.5 MW), Madagascar  
Condition assessment and modernization concepts
- Reutte HPP (2x1.2 MW), Austria  
Modernization concepts
- Bakhvi 3 HPP (10 MW), Georgia  
Condition assessment, measurements, modernization concepts
- HPP and PSP projects in Germany (names are confidential)  
Modernization opportunities to increase flexibility, capacity and cycle efficiency of the plant components for civil and hydraulic steel structures, electro-mechanical equipment, dams and reservoirs; studies of alternatives, concept designs, permitting procedures



Reutte HPP – dam structure

Leixlip HPP – hydraulic turbine governor

Antelomita HPP – generator

Andekaleka HPP – turbine



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