

FRANCE-Nice

Optimisation of Electricity Generation Chains of Power Plants at Var



Client

Energies Var 3, France

Period

2009 - 2010

Project Cost

22.000.000 €

Abstract

Energies Var 3, a subsidiary of the company RWE Innogy GmbH, disposes of and operates a chain of 8 power plants in lower Var valley in France. Due to the lack of bed load passability of building structures, sedimentation and erosion take place in parts. Beside negative impacts upon flood discharge, sedimentation also impairs operation of the power plants.

In line with the feasibility study for maintenance as well as optimisation of electricity production, a variety of solutions for improvement of the current situation were considered and investigated, in consideration of aspects such as flood protection, load bed management, electricity generation and groundwater conditions. In view of the investment and operation costs, an alternative was chosen and proved for its effectivity.

Scope of Service

feasibility study:
survey of variants
hydraulic and morphologic calculations
economic efficiency calculation

Technical Data

Catchment area	2,800 km ²
Flood HQ ₁₀₀	3,500 m ³ /s
Sediment transport	33,000 m ³ /a
Chain of 8 power plants	4, 5, 6, 7, 8, 9, 10, 16
Stage 8	
Width of dam threshold	250 m
Head	5 m
Discharge expansion Q _A	50 m ³ /s