

### Pumped-Storage Power Plant Châtelard

Renewal of the feeder pump system

#### Project Description

- The pumped-storage power plant supplies around 102 MW to the SBB railway power grid with four synchronous generators
- A core element of the water management is the feeder pump system, which supplies the balancing reservoir to feed the pump turbine and the canal for the subsequent turbines
- The power supply and drive technology of the feeder pumps need to be updated to the latest state of the art



The challenges involved the technical requirements of the limited space and optimised planning to minimise downtimes, taking into account planned surrounding projects.

#### Role & Scope

The INP team prepared a feasibility study comparing different power supply and drive concepts, as well as the preliminary project with a detailed execution plan for the chosen concept.

- Preliminary assessments, inventory and condition assessment
- Creation of a feasibility study, including a decision matrix
- Development of the selected concept
- Technical specification of the power supply from 132kV, including all components (transformers, medium-voltage switchgear, rectifier drive) of the system
- Integration of the new system into the existing plant, including site selection and cable routing
- Review of the impact on planned additional projects at the site
- Technical design and planning of the construction implementation
- Schedule and cost planning for the construction realisation
- Preparation and presentation of the preliminary project report

#### Technical Component Details

- Transformers (132kV/15kV, 15kV/400V)
- 15kV switchgear
- Medium-voltage frequency converter (1,1MW)
- Synchronous motors
- Self-consumption system (frequency converter, LV distribution)



Customer: **SBB AG**



Location: **Valais, Switzerland**



Project Duration: **24 months**



Services: **Feasibility study and preliminary project (SIA 21 – 31)**

*“In consultation with the customer and suppliers, we developed the selected solution and created a solid foundation for the success of the project.”*

**TOBIAS, DIVISION MANAGER**  
INP SCHWEIZ AG