

Joint project: The Future of Swiss Hydropower

Overview

How can Swiss Hydropower cope with the current market framework?

What future role will Swiss Hydropower play in the 'Energie Strategie 2050'?

What does this mean for the Swiss Cantons and Communities?

	2014					2015				2016				2017				2018
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Joint Workshop Level	Short Term Drivers Long Term Drivers Institutional Setting									Framework Validation								Synthesis and Final Report
WP1 Development	HP Single Model		HP Multi Model						HP Market Feedback									
WP1/2 Application			Interface		Case Study VS			Case Study Setup		Case Study TI								
WP2 Development	Drivers, Scenarios and Data			Investment Model						Measures								
WP3 General	Relevance Analysis for: Pilot GR Case VS Case TI		Regional Impact		Stakeholder Dialogues						Translation to CSR							
WP3 Assessments			Pilot GR						Case Study GR									
			Case Study VS						Case Study TI									

Industrial partners:

Alpiq Azienda Elettrica Ticinese (AET) Forces Motrices Valaisannes (FMV) Misurio Repower



Subprojects

WP1 HP Operation

What are the short-term operational options for Swiss hydro plants to cope with the volatile market environment?

- Development of a short-term model framework
- Incorporation of different **flexibility** aspects

WP2 HP Investment

What are the long-term investment options for Swiss HP and how can uncertainty be accounted?

- Development of an investment/retrofitting framework
- Accounting for the most important sources of **uncertainty**

WP3 HP Sustainability

What are the regional impacts of these developments from a comprehensive sustainability perspective?

- Impact analysis and sustainability assessment
- Role and consequences for regional **stakeholders**

Energy Turnaround

Major challenges for Swiss Energy Strategy 2050:

- Increase of hydro output → requires retrofitting, new **investments**
- Integration of renewable generation → need for more **flexibility**
- Social Acceptance → need for regional **stakeholder** involvement

The deliverables: HP Future will ...

- Create a **flexible methodology and tooling to optimize HP operation** to cope with the envisioned increase of renewable generation
- Develop an **assessment approach for HP investments** able to cope with uncertainty and providing insights on the envisioned HP output increase
- Engage in a **comprehensive stakeholder process**, enabling better informed decision making for public bodies, regulatory authorities, electricity companies, and the Swiss citizen
- Provide **recommendations** of regulatory and market measures

Contact

René Schumann, WP1
Institute of Information Systems
rene.schumann@hevs.ch



Franco Romerio, WP2
Institute for Environmental Sciences
franco.romerio@unige.ch



Werner Hediger, WP3
Zentrum für Wirtschaftspolitische
Forschung (ZWF)
werner.hediger@htwchur.ch



Hannes Weigt, Lead
Forschungsstelle Nachhaltige Energie-
und Wasserversorgung (FoNEW)
hannes.weigt@unibas.ch

