The Future of Swiss Hydropower
A Review on Drivers and Uncertainties

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Project:

Project Team:
Weigt, UniBas: Lead, WP1 Schumann, HES-SO: WP1 Romero, UniGe: WP2, WP3 Hediger, HTW Chur: WP3, WP2

Project Partners:
Alpiq, Repower, Azienda Elettrica Ticinese (AET), Forces Motrices Valaisannies (FMV), and Misurio

Case Studies:
1. Pilot SA in Valposchiavo, Grisons (Repower)
2. Single-site in Valais (Alpiq)
3. Multi-site in Leventina, Ticino (AET, Alpiq)

Workshop and Questionnaire March 12, Berne:

45 participants from
• Business/Industry
• University/Research
• Administration
• NGO

External input from:
• Norway (A. Midttun)
• Germany (C. V. Hirschhausen)

Discussion on:
• Short-Term Challenges
• Long-Term Aspects

Main Drivers and Impacts in the HP System

Findings:
All aspects perceived as important
Market and Legal/Policy aspects most important
Natural and Technical factors less urgent

Relative Influence of Factors on the Future of Swiss HP in the Short (ST) and Long Term (LT)

Swiss HP must take all markets opportunities into account
Only Green Markets are seen not as important as the other

Influence of Markets on the Future of Swiss HP in the Short (ST) and Long Term (LT)

Market Aspects:

Market prices are on a low level, due to:
• Low emission permit prices
• Low global coal price level
• Increase of renewable generation

→ Trends are likely to remain stable in coming years
→ Little influence possibilities
→ Swiss HP needs to adjust to market environment

Policy Aspects:

Investment/Financing:
• High initial investment costs
• Debt financing
• Long Lifetimes
• Linear depreciation

Governance:
• Concessions
• Water fees
• Network fees
• Partnerwerke

→ Structure based on regulated environment
→ Adjustment process will require agreements at federal, cantonal and local level

Operation:
High labour costs in comparison to EU competitors
→ Further efficiency gains possible?

Next Steps:
• Evaluation of HP Operation: Which markets are important? How can the performance be improved?
• Development of Long Term Evaluation Approach: How to deal with high uncertainty in the long run (investment decision)?
• Initiate a comprehensive stakeholder process: To analyse the companies’ internal and external regulatory framework and design new approaches, to perform an regional impact analysis, and to investigate the interplay between Switzerland and Europe

For more information visit our project homepage:
https://fonew.unibas.ch/forschungsprojekte/projekte/hp-future/