



Research Project

The Future of Swiss Hydropower: An Integrated Economic Assessment of Chances, Threats and Solutions (HP Future)

Third-party funded project

Project title The Future of Swiss Hydropower: An Integrated Economic Assessment of Chances, Threats and Solutions (HP Future)

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Organisation / Research unit

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Department

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Status Completed

Hydropower (HP) represents a central pillar of Switzerland's energy system and thereby is a crucial element in obtaining the intended Energy Strategy 2050 targets. HP is envisioned to increase production (which includes the need for retrofitting older plants), is supposed to provide the needed flexibility to accommodate large shares of renewable energy generation, and plays an important role in regional economies and regional development (especially in mountain cantons). At the same time several uncertainties and external factors will have an impact on the current operation and future development of hydropower.

This NRP 70 cluster ***"The Future of Swiss Hydropower: An Integrated Economic Assessment of Chances, Threats and Solutions" (HP Future)*** aims at providing a comprehensive economic framework for the evaluation of and its application to assess hydropower operation, hydropower investments and the sustainability perspective on a regional level. The respective main research questions are:

1. What are the short-term operational options for Swiss hydro plants to cope with the volatile market environment?
2. What are the long-term investment options for Swiss HP and how can uncertainty be accounted?
3. What are the regional impacts of these developments from a comprehensive sustainability perspective?

Correspondingly, the cluster is organized in three main Work-Packages (WP) that are complemented by an encompassing structure. The latter ensures a close linkage of the work carried out within the individual WPs but also provides an interface to external stakeholders and other research groups. Due to the complexity of the topic and the large number of influences on Swiss HP (covering ecological, technical, economic and social aspects) the project 'HP Future' will require an open framework that ensures mutual exchange between the involved researchers and ongoing research in other projects and groups as well as with stakeholders from industry, politics and society. To ensure this openness while maintaining a close linkage between the three WPs an encompassing structure is added that provides a common starting point, a cross-check on the obtained progress between the first and second stage of the project, and a final consolidation and dissemination of the results.

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Add publication

Add documents

Specify cooperation partners