



Energy Turnaround
National Research Programme



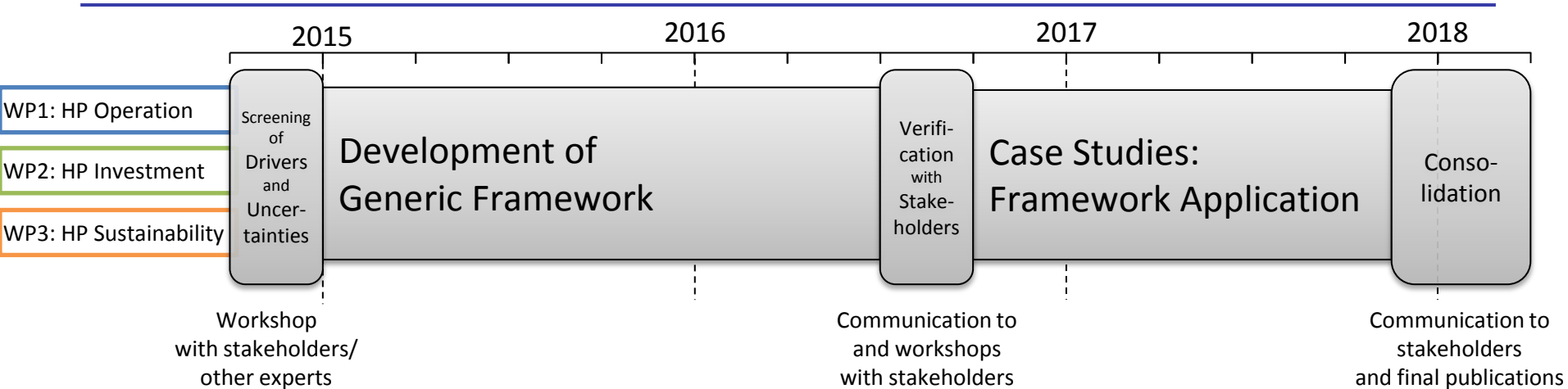
3rd Workshop: The Future of Swiss Hydropower

29.03.2019

Bern



Original Project Plan



Project Partners:

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

Linked to SCCERs

Case Studies:

1. Pilot Sus. Ass. in Valposchiavo, Grisons (Repower),
2. Single-site in Valais (Alpiq),
3. Multi-site in Leventina, Ticino (AET and Alpiq)

Project Team:

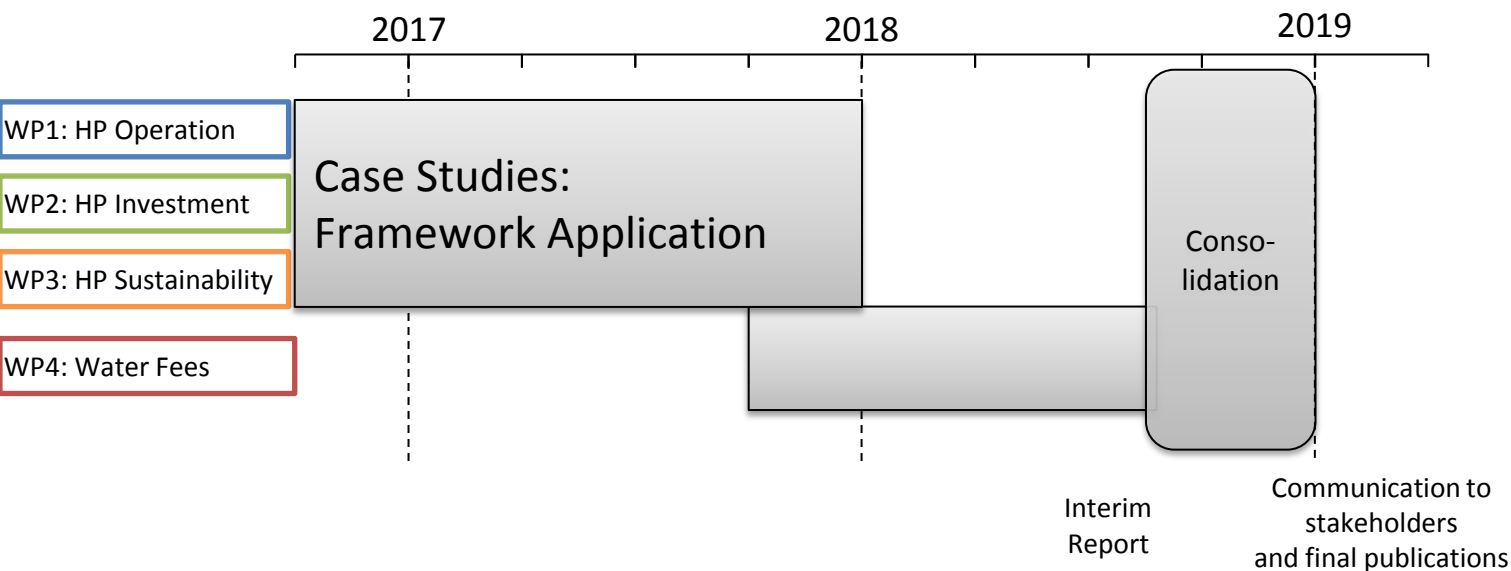
Weigt, *UniBas*: Lead, WP1

Schumann, *HES-SO*: WP1

Romerio, *UniGe*: WP2, WP3

Hediger, *HTW Chur*: WP3, WP2

Water Fee Extension



Project Team WP4:

UniBas: Market Modeling

UniGe: Investment Assessment

HTW Chur: Case Study Grison, Financial Flows

ZHAW: Cost and Profitability Assessment,
Financial Flows

Research Goals:

1. What are the distribution effects of new water fee regimes?
2. What are regional, fiscal and economic feedback effects of those changes?

Workshop Agenda

9:15 **Welcome, Introduction and Project Overview**

9:30 **Market Realities**

- Ups and downs in coming years
- Little money for flexibility
- Uncertainty will become the norm

10:15 *Break*

10:30 **Regulatory and Policy Challenges**

- Drivers and institutional issues
- More than just energy
- Water fees: company and canton perspectives

11:30 **Discussion:**

- Where can and where can't Swiss Hydro act?
- Flexible water fees: compromise possible?
- Electricity market design and hydropower
- What needs to be done until 2024?

12:15 **Summary, Open Points and Needed Next Steps**

12:30 *Lunch buffet*

Take Home Bullet-Points

Companies

- ***Flexibility won't save you (for now):***
Energy prices form the bulk with flexibility gains as topping;
focus on solid energy trade gains first
- ***Hope for high prices, plan for low prices:***
The next price drought will come; manage your liquidity and
built up financial reserves
- ***Learn to live with the risk:***
Electricity markets will remain a risky business; hedge,
diversify, and stay alert
- ***Stop optimizing, start managing:***
Include uncertainty in your investments; consider different
options and scenario sets

Take Home Bullet-Points

Policy Makers

- ***Flexibility may save them:***
When the market becomes more volatile the regulations need as well; more flexibility in concessions and water fees
- ***Don't add to the risk:***
Adjust the regulatory framework once forever in the next years; policy risk and uncertainty does not help
- ***Accept the market rule:***
The European market developments will shape a large part of Swiss HP's future; hoping to prevent this is bound to fail
- ***Be aware of risk shifts:***
Water fees flexibility will increase risk for resource owners and reduce risk to companies; design options may be used to balance this shift

Take Home Bullet-Points For Corporate and Public Governance

- ***Take a broader view:***
Water fees are an issue of distribution (equity), but can effect resource allocation (efficiency)
- ***Think comprehensive:***
Investment decisions must be guided by the total value of hydropower, not only financial aspects
- ***Take stakeholders on board:***
An integrated stakeholder process can help to optimize a project and gain acceptance
- ***Transparency is a must:***
Transparency on costs and water fees is needed on both sides, the companies and the cantons