

TR A7530 Unrestricted

Report

Political and societal dimensions of hydrobalancing from Norway towards Europe.

An assessment of drivers and barriers for further development

WP 5 HydroBalance: Societal acceptance and regulatory framework

Authors

Marte Qvenild
Jørgen K. Knudsen
Oddgeir Andersen
Gerd B. Jacobsen

Hydrobalance - Wp 5

Oddgeir Andersen



SINTEF Energy Research
Policy and Governance
2015-10-30

CEDREN

Centre for Environmental Design of Renewable Energy

**FM E**
CENTRE FOR
ENVIRONMENT-
FRIENDLY ENERGY
RESEARCH



Non-technical challenges for hydrobalancing from Norway



WP 5 tasks

- **Task 5.1:** *What are the regulatory and policy barriers and drivers related to increased use of balancing services?*
- **Task 5.2:** *How are increased uses of balancing services perceived among stakeholders at the national, regional and local level?*
- **Task 5.3:** *What are the main non-technical challenges that have to be addressed in order to design a sustainable roadmap for balancing services?*

Overview of WP5

- Qualitative methods (interviews, focus group meeting).
- Interest organizations, companies and authorities on a national, regional and local level.
- Tyin as case (scenario).



Regulatory and political factors

		Drivers	Consequence
EU	Regulations	RES Directive gives rise to increased intermittent renewable energy	Increased share of storage and balancing power
		European Price Coupling	Standardized and predictable renewable market at EU level
		Regulation on cross-border exchanges of electricity	Standardized grid codes?
		Connecting Europe Facility (CEF), EU Structural and Investment Funds, European Fund for Strategic Investment	Facilitate financial realization of PCI
		PCI-framework	Promotes interconnectors
	Strategies	Strategy for interconnectors	
		Strategy for a cross border electricity infrastructure	
	Political will	Transition towards an integrated energy system.	Bilateral agreements

Non-technical challenges for Hydrobalancing from Norway

EU/Europe

- Hydrobalancing development will depend on signals from EU, lack of a European strategy.
- A clear political commitment from European countries and the prospect of a long-term, standardized market framework will increase Norwegian political decision-makers' confidence and long-term interest.

Drivers and barriers at the national level

		Drivers	Barriers	Consequence
National	Regulations	Hydropower reservoirs	No clear statement or objective on the realization of the potential	Potential for value creation
			Lacking coordination of grid development and increased HP production	Need for reinforcement of onshore grid
		Permit processes grid and production development	Negative environmental and social consequences	Possible public opposition
	Strategies		No strategy on HB	-
	Political Will	Promoting interconnectors	HB not a high priority	-

Supporters– national level

	Driver/mitigating measure	Barrier
Supporters (industry, Energy Norway, Zero and authorities and MPs)	Norwegian balancing services great potential for a green European energy mix	Green battery erroneous
	Environmental and social consequences in grid and production safeguarded in national regulations	Public acceptance of grid and production development
	Important to be connected to EU energy system – export opportunities	Balance with support of domestic energy industry
	EU RES targets	Grid infrastructure insufficient capacity and flexibility.
		Cable ownership

Sceptics– national level

	Driver/mitigating measure	Barrier
Sceptics (The Federation of Norwegian Industries and environmental NGOs)		Green battery erroneous
		Short travelled energy prioritized
		Unpredictable consequences for domestic energy consumption
		Grid infrastructure insufficient capacity and flexibility.
		Distribution of costs and benefits (esp. host communities)
		Environmental concerns (not outweighing climate benefits)

Non-technical challenges at the national level

- Increased scepticism (2011→2015); “short traveled energy” vs. balancing services. What is best for the global environment? Can Norway really meet Europe’s need for energy?
- No national energy policy with long-term objectives for hydrobalancing.

Lessons learned the recent years

- Increased focus on the [early] involvement of stakeholders in grid projects, in order to prevent conflicts and thereby ensure more effective processes.
- Social acceptance is important!



What is social acceptance?

As reality

Community Acceptance end users, local authorities, residents → decision making on infrastructure, investments and adapted consumption; based on trust, distributional justice, fairness of process

Market Acceptance producers, distributors, consumers, intra-firm, financial actors → investing in RES-E and DG infrastructure, using RES generated power

Socio-Political Acceptance
regulators, policy actors, key stakeholders, public
→ craft institutional changes & effective policies fostering market & community acceptance

Hydrobalancing

As idea

The «need argument»

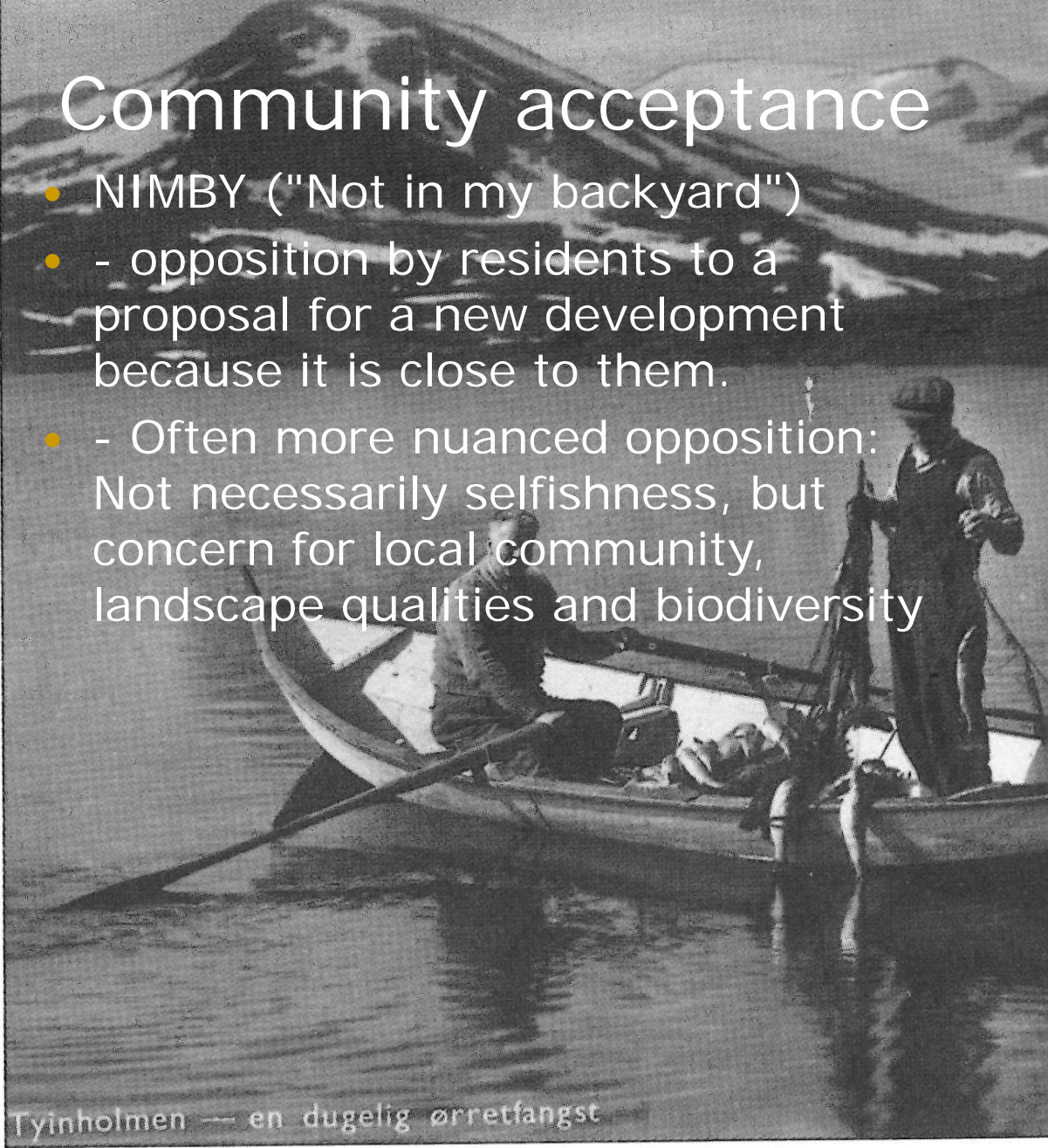
- If costs are taken locally while the benefits are nationally or globally → it will be challenging to build (local) community acceptance. Why here? Why us?





Community acceptance

- NIMBY ("Not in my backyard")
- - opposition by residents to a proposal for a new development because it is close to them.
- - Often more nuanced opposition: Not necessarily selfishness, but concern for local community, landscape qualities and biodiversity



Tyinholmen — en dugelig ørretfangst



Non-technical challenges at the regional and local level

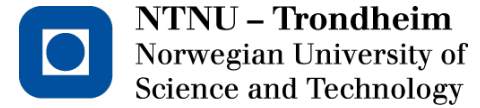
- Local and regional stakeholders are critical of carrying the local impacts on aquatic ecosystems and the recreational use, of moving towards more renewable energy globally. When the “need-argument” of HB focuses on diffuse benefits elsewhere, with few local benefits, it’s challenging to build community acceptance.
- → Early involvement of national, regional and local stakeholders, as well as compensation measures at the local level seem to be key measures in order to prevent conflicts and ensure less time-consuming processes.

Local acceptance

	Driver/mitigating measure	Barrier
Local communities (local acceptance)	Measures with least impact	Visual impacts
	Measures with least impact	Environmental impacts
	Measures with least impact	Impacts on nature based tourism
	Improve/maintain local infrastructure (ski tracks, keeping roads open over the winter, maintaining boat piers, roads, internet access)	Impacts on ice cover; ski tracks, transport to cabins, boat traffic
	Measures with least impact	Impacts on fishing during summer
		Contaminated water
	Electronic warning system	Security issues
		Lower water level during summer cannot be accepted
	Higher electricity prices and added value on electricity prices, local development funds	Reduced electricity prices is less local income
	Early involvement and information about social and environmental consequences	General public opposition

Conclusion

- *What are the main non-technical challenges that have to be addressed in order to design a sustainable roadmap for balancing services?*
- In order to realize the hydrobalancing potential from Norway it is recommended to formulate a policy strategy which encompass and balance different societal interests – both at the national and local levels, as well as providing guidelines for the coordination of different plans, regulations and interests pertaining to the related water resource and grid development needs.



Fornybar energi på lag med naturen

Contact:
post@cedren.no

www.cedren.no



NATURHISTORISK MUSEUM
UNIVERSITETET I OSLO

