



**Energy**

National Research Programmes 70 and 71

## Card

Distribution effects with a flexible water fee



# Market    # Financing    # Politics (federal government, canton, municipality)

## Distribution effects with a flexible water fee

### Results of model calculations for 2018

Implied maximum water fee		230.0	110.0	80.0	50.0	0.0
<b>Water fee income and equalisation payments</b>	Graubünden municipalities	119.7	57.3	41.6	26.0	0.0
	Canton of Graubünden	131.7	63.0	45.8	28.3	0.0
<b>Total resource potential [CHF million]</b>		820.9	758.4	742.8	727.2	701.2
<b>Cantonal contribution to resource equalisation [CHF million]</b>		10.9	8.3	8.0	8.0	9.2
<b>Number of municipalities</b>	Strong in terms of resources	44.0	38.0	38.0	35.0	26.0
	Weak in terms of resources	62.0	68.0	68.0	71.0	80.0
<b>Electricity reference price [CHF/MWh]</b>		135.0	75.0	60.0	45.0	not relevant

**Results for 2018 from the modelled scenarios for water fee levels from zero – in the event of the elimination of the water fee – and maximum water fees with a value of up to CHF 230 per MW. The modelling also considered the effects on cantonal financial equalisation.** Source: Hediger et al., “Wasserzins: Erfolgsmodell oder Hemmschuh?”, Energy Research Talks Disentis 2019, 24 January 2019

The project “The future of Swiss hydropower”<sup>1</sup> investigated the distribution effects upon changing the rigid water fee to a flexible model with a different basic amount and different reference prices in the canton of Graubünden.<sup>2</sup> This also looked at the effect on intercantonal equalisation payments and the shifts that result in the resource strength of the individual municipalities.

In Graubünden, the revenues from water fees are split roughly 50/50 between the canton and the municipalities. If the maximum water fee is increased, revenues of course also increase for both the canton and the municipalities – and they fall if the maximum is reduced. The contribution of the canton to resource equalisation, however, reveals a slightly different picture: it is at its lowest with a maximum water fee of CHF 80 per kW and CHF 50 per KW; it is higher with a higher maximum water fee but also in a scenario which sees the complete elimination of water fees as the canton would have to pay certain compensation.

The water fee also influences the number of municipalities classified as having a high and low level of resources. The higher the revenues from the water fee, the more municipalities there are that are deemed to have a high level of resources and thus that also pay into the cantonal pot for resource equalisation.



Between 2016 and 2018, the financially weaker municipalities received between CHF 26 and CHF 27 million. The financially stronger municipalities provided the canton with around CHF 18 million, while the canton itself bore the remaining CHF 8 million.

Cantonal resource equalisation therefore ensures that all municipalities also benefit from the revenues in the case of a flexible water fee – and that the burden is spread between all communities should lower revenues be generated.

## Notes and References

1 Project “**The future of Swiss hydropower**”

2 Hediger et al. “Water Fee-induced Financial Flow in Switzerland”, Final Report, April 2019