IS THERE A CASE FOR COMMUNITY-BASED PARTICIPATION IN SWISS HYDROPOWER PROJECTS?

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Overview

Financing larger scale renewable energy infrastructure projects (1 MW and upwards) in Switzerland is a complex issue and heavily dominated by utilities of small, medium and large scale. However, due to changed framework conditions in the Swiss energy market in recent years, utilities lack the needed capital and willingness to invest. As a consequence, alternative financing possibilities must be developed to keep the energy transition in Switzerland moving.

In the past few years, the concept of financial citizen participation has gained attention, especially in countries such as Germany or Denmark, where a substantial amount of the ownership of renewable energy generation capacity is already in the hands of citizen investors (Yildiz, 2014 & Walker 2008). The concept of citizen investment in renewable energy allows private individuals to be part and contribute to the realization of renewable energy projects by directly investing in projects using different business models.

In Switzerland, hydropower has been the backbone of the electricity market for many decades. The hydropower sector itself, however, is still a regulated market with limited access for outside investors. As part of the Swiss Energy Strategy 2050, hydropower capacity in Switzerland is supposed to be further increased from 36'000 GWh up to 37'400 GWh by 2035 – new hydropower projects but also enhancing existing hydropower plants are planned. This calls for new and innovative financing models.

This paper examines if there is a case for community-based participation in Swiss hydropower projects. The paper briefly reviews the existing political and legal framework, which is necessary for the development of the concept of citizen investment in Swiss hydropower projects. The empirical results on the willingness for citizen investment in Swiss hydropower projects from both private individuals and utilities are presented and analyzed with a special focus on discussing the differences between the private individuals and the utilities. Using discrete choice-based experiments, preferred preferences from both the private citizens and the utilities concerning the question of citizen investment in Swiss hydropower projects are extracted.

Methods

Discrete choice-based experiments.

Results

The study will be conducted within the next months and the first results could be presented at the conference. The results of the study will generate insights in both private individuals' and utilities' preferences for (co-)investment models in Swiss hydropower projects and whether the preferences of the two groups are alignable.
Previous work in this field shows retail investors could play an important role as financiers of renewable energy projects. Their specific preferences included among other things return on investment (high), project partner (municipal utility or energy cooperative) and holding period of the investment (2-5 years rather then 10 years). (Salm, Hille & Wüstenhagen, 2016)

Conclusions

The results will help to understand to what extent the concept of citizen investment in Swiss hydropower can contribute to driving forward the Swiss energy transition, as well as under which circumstances private individuals and utilities are willing to (co-)invest in Swiss hydropower projects. Consequently, the results will also provide insights into potential new financing models for utilities in order to successfully implement hydropower projects in Switzerland.

References

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