

## Publication

### The entanglement of top-down and bottom-up: socio- technical innovation pathways of geothermal energy in Switzerland

#### **JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)**

**ID** 4625142

**Author(s)** Ejderyan, Olivier; Ruef, Franziska; Stauffacher, Michael

**Author(s) at UniBasel** [Ejderyan, Olivier](#) ;

**Year** 2020

**Title** The entanglement of top-down and bottom-up: socio- technical innovation pathways of geothermal energy in Switzerland

**Journal** Journal of Environment and Development

**Volume** 29

**Number** 1

**Pages / Article-Number** 99-122

**Keywords** geothermal energy, energy transition, federalism, innovation pathways, Switzerland

By looking at deep geothermal energy in Switzerland, this article illustrates how innovation pathways in federal countries take entangled forms between top-down and bottom-up. The Swiss federal government presents deep geothermal energy as an important technology to decarbonize electricity production. Setbacks in early projects have slowed these efforts. Despite strong policy incentives from the federal government, no electricity is being produced from geothermal projects in Switzerland in 2019. Based on four case studies, we analyze how some cantons and cities have taken different pathways: Rather than implementing federal objectives, they favor heat production instead of electricity generation. The relative success of these initiatives led federal authorities to modify their approach to promoting geothermal energy. This study shows that federal mechanisms and instruments alone are not enough to make energy infrastructures acceptable locally. To learn from bottom-up experiences and adapt federal policies to local reality, better coordination between the federal and subnational levels is needed.

**Publisher** SAGE

**ISSN/ISBN** 1070-4965 ; 1552-5465

**edoc-URL** <https://edoc.unibas.ch/84393/>

**Full Text on edoc** No;

**Digital Object Identifier DOI** 10.1177%2F1070496519886008