

## PhD Position on Modelling Demand and Supply Dynamics in Socio-technical Energy Systems at EPFL

We are offering a 100% PhD researcher position on Modelling Demand and Supply Dynamic in Socio-technical Energy Systems at the Laboratory for Human-Environment Relations in Urban Systems (HERUS), School of Architecture, Civil and Environmental Engineering (ENAC), at the Swiss Federal Institute of Technology (EPFL) in Lausanne, Switzerland.

The research focus of HERUS is on transitions of urban systems towards sustainability. One of the key areas of our research is the energy transition. HERUS is an interdisciplinary team, consisting of social and natural scientists. We combine social science methods with material and energy flow models, using ABM or SD and where appropriate machine learning techniques. Within the SNSF (and DFG)-funded transdisciplinary research project “Modelling Demand and Supply Dynamic in Socio-technical Energy Systems”, the research of the PhD student will focus on analysing short-term energy demand patterns of individuals (e.g. households). The student is expected to develop an experimental / quantitative approach to parameterize an agent based model on the reaction of individuals to different governance scenarios and incentives structures. The ABM will be part of an energy simulation endeavour in collaboration with research groups in Germany analysing the sociological and technological components of the system.

For reference of past work please visit: <http://herus.epfl.ch/>

The PhD position will span maximal 4 years. Working language is English.

### Your job

- Responsibility for your own research under the guidance of Prof. Dr. C. R. Binder
- Collaboration with partner research groups at EPFL, Universität Oldenburg and TU Dortmund
- Research in collaboration with the HERUS research team
- Teaching (20%)

### We expect

- An excellent MSc degree, preferably in Energy, Social Sciences, Environmental Sciences, Geography, or other related fields
- Knowledge of, and high interest in the energy sector and socio-technical systems
- Good command of German (both speaking and writing) and proficiency in English
- Basic modelling knowledge (ABM)
- Strong team spirit, social skills, good communication, independence, and a high level of motivation for academic research motivated by relevant practical problems

### We offer

- Excellent working conditions: an innovative and competitive atmosphere, modern equipped working areas and an environment promoting access to the world's best scientists
- Full financial support for four years including conference visits
- The position is open as of **October 1<sup>st</sup> 2019** or upon agreement

Please send your application including motivation letter, curriculum vitae, grades, list of publications and two references until August 12<sup>th</sup> 2019 in one PDF file to:

[caroline.buehler@epfl.ch](mailto:caroline.buehler@epfl.ch).

For questions please contact the head of the laboratory: [claudia.binder@epfl.ch](mailto:claudia.binder@epfl.ch).