



**UNIVERSITÉ  
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**CYCLE DE FORMATION ÉNERGIE – ENVIRONNEMENT**

**SÉMINAIRE 2017-2018**

**« An integrative view on energy transitions »**

**Claudia BINDER**

*EPFL*

**Jeudi 17 mai 2018 à 17h15**

**Salle B001 au rez-de-chaussée – Uni Carl Vogt**

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## **L'oratrice**

Prof. Dr. Claudia R. Binder holds a PhD in environmental sciences and a *venia legendi* in Human-Environment Systems, both from ETHZ, Switzerland.

From 2006-2009 she was assistant professor for Social and Industrial Ecology at the University of Zurich, Switzerland; from 2009-2011 full professor for Systems Sciences at the University of Graz, Austria; from 2011-2016 she was full professor for Human Environment Relations at the Department of Geography at the University of Munich.

Since March 2016 she holds the Swiss Mobiliar Chair for Urban Ecology at ENAC, EPFL. She was a member of the working group “Spatial politics and planning for the energy transition” in Germany and member of the research council for the Swiss National Science Foundation / Division IV. Since 2018 she is member of the directorate of the Energy Center at EPFL

Her research interests lie in analyzing, modeling and assessing transitions towards sustainability. For doing so she develops inter- and transdisciplinary methods which are able to depict the key aspects of the ecological and the social systems and moreover the relations, feedbacks, and regulatory mechanisms between them. Her application areas are in energy, phosphorous, water, food, and land-use in the context of urban, peri-urban and rural development in Europe and Latin America.

## **La conférence**

The ongoing energy transition is seen as a key constituent for the transition towards a more sustainable society. An important element in the move towards a sustainable energy system is the transition from a mainly centralized, fossil-fuel system to a more localized, renewable one.

This transition, however, requires not only the development of new energy technologies but also radical, systemic shifts in deeply held values and beliefs, in patterns of social behavior, and in governance regimes. Thereby the ecological, technical and social systems have to be conceptualized as Social-Ecological-Technical Systems (SETS) and new integrative, interdisciplinary research approaches are needed which consider the interaction between these subsystems.

We present results of an integrative analysis of transitions which occurred in two Austrian energy regions during the last 20 years. We show I. how institutional development and infrastructure development are related to each other within time; II. whether and how demand and supply of renewable energy carries can be met at the regional level; and III. which factors in household behavior affect decision making- and consequently energy demand in the housing sector.

Finally, we present some thoughts on the resilience of such transition processes and discuss the need for further research.