

Spring Campus, April 9-13, 2018

Workshop III: “Accelerating Technological Sustainability Transitions by Overcoming Adoption and Diffusion Barriers in Energy Transitions”

April 10-11, 2018

Organized by Dr. Elisabeth Eppinger, Carsten Schwäbe, Prof. Dr. Carsten Dreher

Abstract

A number of theoretical concepts and policy programs aiming at fostering transitions towards new sustainable technologies already exists – either with a technology-specific or an un-specific perspective. However, industry, but governments as well, create barriers to the adoption and diffusion of these new technologies often because of conflicting interests such as continuing to exploit previous investments (industry) or to sustain work places (state), in particular in those regions depending on established industrial structures. Thus, accelerating transitions towards sustainable technologies includes the discussion about the phase-out of less sustainable practices in firms and in entire economies, too.

The energy transition (comprising the electricity, the mobility and the heating sector) is a good example for challenges of sustainability transitions – as well for exnovation process analyses. In Germany, for instance, even direct subsidies of less sustainable technology paths have existed, e.g. subsidizing the coal industry in the German energy sector. For the debate of the coal phase-out concepts on the transformation of regions where workers depend on this industry sector are still lacking. In consequence, the workshop encourages contributions from the broad field of energy sector issues.

Given that solutions to step out of unsustainable technology paths becomes ever more pressing, we want to focus this workshop on empirical evidence (qualitative and quantitative) and theoretical concepts on different types of challenges and barriers to the adoption and diffusion of sustainable technologies and how industry, society, and the state may remove these barriers. Accordingly, we invite contributions from different disciplines that address this issue at the micro-, meso- and macro-level, including but not limited to:

- Concepts and analysis of adoption and diffusion processes of sustainable technologies
- Transformation of regions and whole industry sectors
- Transformation of technological companies,
- Dynamic governance of innovation processes and policy directionality in the context of sustainability transitions,
- Demand-sided innovation policy for inducing sustainability transitions in markets,
- Exnovation strategies, the role of big incumbent firms and policy instruments
- The significance of start-ups and SMEs for sustainability transitions

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For the specific case of sustainability transitions within the energy sector, the following issues are of interest, but not mandatory for the workshop:

- The significance of grid extension and development for sustainability transitions at the electricity market
- Renewable energies and their relation to a centralised or de-centralised energy transition
- Technological conditions for a sustainable mobility transition – possible technological paths and required innovation policy instruments

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Tuesday 10 April 2018 • Fabeckstraße 23-25, Freie Universität Berlin

Chair: Dr. Elisabeth Eppinger, Carsten Schwäbe, Prof. Dr. Carsten Dreher, Freie Universität Berlin

<i>Time</i>	<i>Topic</i>	
9:00 am	Plenary Session, open for all participants	
	Evolutionary Management of Drug Resistance	Prof. Jens Rolff, Freie Universität Berlin
	Carbon Dioxide: Challenges and Opportunities for Chemistry and Society	Prof. Biprajit Sakar, Freie Universität Berlin
10:30 am	Coffee Break	
	<i>Workshop III: “Accelerating Technological Sustainability Transitions by Overcoming Adoption and Diffusion Barriers in Energy Transitions”</i>	
11:00 am	Key notes and panel discussion	
	The German Energy Transition between renewable energy pioneering and coal nostalgia	Prof. Marko Hekkert, Utrecht University
	Policy coordinator at DG Energy of the European Commission	Dr. Matti Supponen, European Commission Directorate General for Energy and Transport
12:30 pm	Lunch	
02:00 pm	Session A: Barriers for Sustainability Transitions at the demand-side	
	How Technology relations foster or inhibit innovation and exnovation in the energy sector	Carsten Schwäbe & Dr. Elisabeth Eppinger, Freie Universität Berlin
	Factors influencing the diffusion of electric vehicles in China	Dr. Martin Kalthaus, Friedrich Schiller Universität
	Investigating the demand-side solutions to addressing barriers in energy transitions: Study of Urban Societies in India	Anjali Ramakrishnan, Technische Universität Berlin
	Diffusion Dynamics of Sustainable Product and Service Innovation	Prof. Dr. Klaus Fichter, Carl von Ossietzky Universität Oldenburg
03:30 pm	Coffee Break	

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04:00 pm	<p>Session B: Sustainability Transitions – How to promote renewable energies?</p> <p>The multiple roles of state investment banks in low-carbon energy finance: An analysis of Australia, the UK and Germany</p> <p>Experimenting with Energyscapes: Growing up with Solar and Wind in Auroville and Eigg</p> <p>Understanding Policy Dismantling in the Renewable Energy Sector: A Comparison of Termination of Feed-in Tariffs for Renewable Electricity in Spain and the Czech Republic</p> <p>Energy transition geography of small island developing states</p>	<p>Carsten Schwäbe, Freie Universität Berlin</p> <p>Prof. Dr. Tobias Schmidt, Eidgenössische Technische Hochschule Zürich</p> <p>Prof. Dr. Sarah Strauss, University of Wyoming</p> <p>Dr. Rainer Quitzow, Institute for Advanced Sustainability Studies e.V.</p> <p>Zakia Soomaaroo, Technische Universität Berlin</p>
05:30 pm	Comfort Break	
05:45 pm	<p>Session C: Political pressure on Sustainability Transitions between innovation and geopolitics</p> <p>The Geopolitics of Cross-Border Electricity Grids: The Israeli-Arab Case</p> <p>Deliberate phase-out of established industries</p> <p>The incumbent energy providers and the transformation of the German electricity sector</p> <p>Investigating the barriers of sustainability transitions: example of Russian oil and gas sector</p>	<p>Dr. Elisabeth Eppinger, Freie Universität Berlin</p> <p>Prof. Itay Fischendler, Hebrew University of Jerusalem</p> <p>Dr. Håkon Endresen Normann, University of Oslo</p> <p>Gregor Kungl, Universität Stuttgart</p> <p>Ass. Prof. Anton Khoroshavin, Saint Petersburg University</p>
7:15 pm	We have pre-booked tables in the restaurant “Luise” near U-Bahn station Dahlem Dorf for a self-organized dinner beginning 6:30 pm.	

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Wednesday, 11 April 2018 • Fabeckstraße 23-25, Freie Universität Berlin

Chair: Elisabeth Eppinger, Carsten Schwäbe, Carsten Dreher, Freie Universität Berlin

<i>Time</i>	<i>Topic</i>	
9:00 am	Plenary Session, open for all participants	Dr. Elisabeth Eppinger, Freie Universität Berlin
	Solar Fuels Replacing Fossil Fuels - an Alternative “Energiewende” (Energy Transition) Route?	Prof. Holger Dau, Freie Universität Berlin
	Competing Technological Innovation Systems as a Challenge for Mission-oriented Innovation Policy - Insights from the German “Energiewende”	Prof. Carsten Dreher, Freie Universität Berlin
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10:30 am	Poster Session during the Coffee Break (45 minutes):	Dr. Elisabeth Eppinger, Freie Universität Berlin
	Community-Private Partnerships in Renewable Energy	Avri Eitan, Hebrew University of Jerusalem
	Engineering the capacity for innovation in the public interest – innovation of network organisations in renewable energy transitions in the case of Brasil	Andreas Kopp, University College London
	Job retraining programs in current and former coal producing regions of Germany and the US	Arron Nelson, University of British Columbia
	Open IP Models to Accelerate E-Mobility	Dr. Elisabeth Eppinger, Freie Universität Berlin
11:15 am	Session D: Sustainability Transitions between Path Dependency, Uncertainty and Policy	Dr. Elisabeth Eppinger, Freie Universität Berlin
	Path dependencies in socio-technical regimes of the brown economy	Dr. Jens Clausen, Borderstep Institut für Innovation und Nachhaltigkeit gemeinnützige GmbH
	Opportunities and challenges for the urban mobility: new technological trends	Anna Carolina Lourenço Navarro, University of Campinas, Brazil

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	How Standards' Adoption shapes Technology Adoption in Sustainability Transitions	Dr. Inéz Labucay, Martin-Luther-Universität Halle-Wittenberg
12:15 pm	World Café: Practical Implications for state and industry Discussion of possible research cooperation (projects and publications)	
13:00 pm	Lunch	
02:00 pm	Excursion: After a sightseeing tour of Berlin's city center participants can choose between two tour offers (please indicate your choice in the registration form): <ul style="list-style-type: none"> • EUREF Campus: An urban model for a modern city - a campus consisting of companies and research organizations, that coexist in a sustainable environment. • ECF Farm: An urban farm where fish farming and the cultivation of vegetables are combined to form an economic cycle of growth and sustainability while conserving resources. 	
06:00 pm	Farewell Dinner, Restaurant ,Umspannwerk Ost', Palisadenstr. 48, 10243 Berlin	