

Financing of the Energy Transition and Property Rights – The “Prosumer” at the heart of the energy Markets?

- Energy Transition: The transition from fossil to renewable energy sources;
- Facilitating consumers to become co-owners of renewables
- Addressing the problem of “energy poverty”
- Behavioural changes through co-ownership and the problem of rebound effects

Compact course / Blockseminar:

5/6/9 ECTS / MES modules: ZB Wirtschaft, ZB Politik, ZB Recht, WPM 1, WPM 6 // IBA modules: S-Module (old SPO also E-Module); Faculty of Law: Master of German and Polish Law (Module 3); SPB 5 (European Law) (without ECTS)

Dates / Termine:

Introduction Tuesday 12 April, 14h-15h, Room GD 305;

1st part Fri./Sat. 22 & 23 April, 10-13h & 14-17h, Room PG 271;

2nd part Fri./Sat. 6 & 7 May, 10-13h & 14-17h, Room PG 271.

3rd part (Presentation of results) Fri. 10 June 10-13h & 14-17h , Room PG 271.

This course is a continuation of the seminar from the previous semester; an introductory session at the beginning of the semester will give an overview to the topic. The course is held in English language.

Background: Reorganisation of energy production – The transition from fossil to renewable energy sources

This seminar develops a proposal for how to facilitate consumers to become co-owners of renewable energy sources (RES). The reorganisation of energy production, esp. the transition from fossil to renewable energy sources (“Energy Transition”) is currently acknowledged as a permanent and evolving process. Recognized as one of the main problems in this transition is enabling finance mechanisms that would cover these renewable energy projects in an uncertain and oligopolistic market. This raises the question of whether citizen’s co-ownership in RES that emerged over the past 25 years in some countries is a transitory phenomenon or a condition for the “Energy Transition” and if the latter is the case, how to further develop financial participation mechanisms in the RES sector.

The European Commission: Policy shift toward an inclusion of the so called “Prosumer”

In a recent staff paper and a HORIZON call the **European Commission** postulates that „Consumers should be considered at the heart of the energy system and become active market players“. In this context the following challenges are put forward:

- The future private consumer should be more aware, active, energy sufficient, as well as being a prosumer producing energy for their own consumption, where this is possible.
- Energy efficiency, energy savings and increased use of locally produced, including own produced, renewable energy are key tools in addressing fuel poverty.
- In this context, engagement actions are needed across Europe in order to achieve behavioural change towards more sustainable choices and decisions for energy.
- Although awareness on the benefits of collective consumer action in the field of EE and RES has increased in past years, such action is still hampered by a number of barriers, including financial and regulatory barriers and inconsistencies in grid integration practice.

- In addition, insufficient use of relevant ICT solutions and insufficient understanding of energy bills contribute to hampering the achievement of a more sustainable energy system.

The seminar investigates possible answers to meet these challenges in the context of the preparation of a fully-fledged HORIZON 2020 proposal in response to this call.

Focus: Empowering consumers to become co-owners via Consumer Stock Ownership Plans (CSOPs)

Key to empower and facilitate consumers to become co-owners of RES is the design of new finance contracts. We use the example of the “Consumer Stock Ownership Plan” (CSOP) as the necessary contract providing a financing mechanism. We focus on wind and photovoltaic power which have two pronounced structural differences to fossils: (1) they depend on weather and thus are volatile in their power production scheme and (2) they have a marginal cost of production close to zero. CSOPs enable consumers of energy utilities without savings or access to capital credit to acquire productive property, i.e., renewable energy plants while at the same time creating a system of incentives for asset formation. Responding to supply flexibility they tap the potential for demand-side flexibility facilitating smart grids.

We analyse how CSOPs can contribute to financing renewable technologies and what particular advantages their dispersed ownership structure has. As a result we show the economic viability of CSOPs contributing to the reorganisation of energy production.

Literature

Commission staff working document „Best practices on Renewable Energy Self-consumption“ Accompanying the Commission Communication „Delivering a New Deal for Energy Consumers“ {COM(2015) 339 final}

Horizon Call EE-06-2016-2017: Engaging private consumers towards sustainable energy.

RAP (2014): „Power Market Operations and System Reliability: A contribution to the market design debate in the Pentilateral Energy Forum“. Study on behalf of Agora Energiewende.

Lowitzsch, J. (2015) “Property rights and the financing of renewable energy technologies – How Consumer Stock Ownership Plans contribute to the Energy Transition”, WINIR Working paper

Lowitzsch, J. / Goebel, K. (2013) „Vom Verbraucher zum Energieproduzenten. Finanzierung dezentraler Energieproduktion unter Beteiligung von Bürgern als Konsumenten mittels Consumer Stock Ownership Plans (CSOPs)“, ZNER 3/2013

Registration until 15 April 2016 at kelso-professorship@europa-uni.de.

Performance test and credits: ECTS: 6/9. Regular attendance; term paper; oral presentation; first draft of the term paper by 1 June 2016, finalized term paper by the end of the semester.