



**University of Cologne**

Department of Economics – Chair of Energy Economics

**Seminar in Energy, Resource and Environmental Economics**

Summer Term 2016

**Innovations and Digitisation in the Energy Industry**

<b>Schedule</b>	<ul style="list-style-type: none"> <li>▪ Introductory Meeting: April 22<sup>nd</sup>, 2016 10:00 to 11:30 AM at the Institute of Energy Economics, Vogelsanger Str. 321a, 50827 Cologne             <ul style="list-style-type: none"> <li>▪ Introduction</li> <li>▪ Presentation of seminar topics</li> <li>▪ Organisational issues</li> </ul> </li> <li>▪ Submission of preferences for seminar topics until April 24<sup>th</sup>, 2016</li> <li>▪ Allocation of seminar topics to students: April 27<sup>th</sup>, 2016</li> <li>▪ Seminar: two days, probably in late May or early June             <ul style="list-style-type: none"> <li>▪ Presentation by each seminar participant</li> <li>▪ Accompanying presentations</li> <li>▪ Discussion</li> </ul> </li> <li>▪ Field trip: probably in May or early June             <ul style="list-style-type: none"> <li>▪ The field trip might be combined with the seminar meeting, depending on the cooperation partner</li> </ul> </li> <li>▪ Submission of final seminar papers until June 26<sup>th</sup>, 2016</li> </ul>
<b>Allocated Modules</b>	<p>Examination regulation 2007:</p> <ul style="list-style-type: none"> <li>▪ Major Economics – Seminar zur Energiewirtschaftslehre (Master)</li> <li>▪ Minor Energy Economics – Seminar zur Energiewirtschaftslehre (Master)</li> <li>▪ Minor Energy Economics – Seminar zur Modellierung in der Energiewirtschaft</li> </ul> <p>Examination regulation 2015:</p> <ul style="list-style-type: none"> <li>▪ Specialisation in Energy Economics – Seminar in Energy, Resource and Environmental Economics</li> </ul>
<b>Credits</b>	6
<b>Language</b>	English
<b>Examiner</b>	PD Dr. Christian Growitsch

## **1. Topic**

### Innovations and Digitisation in the Energy Industry

Digitisation is one of the most revolutionary trends of our times. In combination with the multi-purpose information and communication technology it has already changed some sectors like trade, entertainment and the financial sector tremendously. How it will change the energy sector, especially associated with innovative technologies like hydraulic fracturing, biofuels, electrofuels, and improved battery systems remains unknown.

Having said that the German government assumes the electricity market to be the first fully digitised market in the German economy. Energy supply (smart markets and grids), transport and mobility (smart mobility, electric and self-driving cars, sharing economy) and heating (smart home technologies) will evolve under the new technologic paradigm 'internet of things'.

In this seminar we are going to discuss the economics of the (digital) innovations in the energy sector. We will analyse the costs and benefits of these technologies, how they might influence competition and market structure and which market players are going to potentially gain or lose economic rents.

## **2. Cooperation Partner**

- tba

## **3. Meetings**

- Introductory meeting
- 2-day seminar meeting
- Field trip

## **4. Mode of Examination**

- Seminar Paper (maximum 5000 words)
- Presentation of work progress at seminar meeting (10 minutes)
- Accompanying presentation of a fellow student's topic (5 minutes)

## **5. General Requirements**

The seminar participants are expected to gain an in-depth insight into their topic independently. They should determine the main focus of their seminar paper. The emphasis within the own topic as well as the draft structure of the paper have to be discussed with the supervisor at an early stage. Furthermore, students should deal critically with the contributions of other participants. Active participation in the seminar discussion is expected. The Chair of Energy Economics provides a guideline for the preparation of seminar papers. This includes all design requirements.

## **6. Application**

- Applications are only possible in KLIPS, starting from February 3<sup>rd</sup>, and ending on February 18<sup>th</sup>, 2016. The formal registration will take place during the introductory meeting on April 21<sup>st</sup>, 2016.
- The registration for the seminar is binding. Students who do not hand in a seminar paper or who do not attend all meetings will receive malus points.

## **7. Organisation**

Dipl.-Vw. Gerrit Klingsch, [gerrit.klingsch@uni-koeln.de](mailto:gerrit.klingsch@uni-koeln.de)

Please do not hesitate to contact us in case of further questions.