



University of Cologne

Department of Economics – Chair of Energy Economics – Prof. Dr. Marc Oliver Bettzüge

Seminar in Energy, Resource and Environmental Economics

Winter Term 2015/2016

Regulation of Networks for Electricity and Gas

Schedule	<ul style="list-style-type: none"> ▪ Introductory Meeting: October 23rd, 2015 10:00 to 11:30 AM at the Institute of Energy Economics, Vogelsanger Str. 321a, 50827 Cologne <ul style="list-style-type: none"> ▪ Introduction ▪ Presentation of seminar topics ▪ Organisational issues ▪ Submission of preferences for seminar topics until October 27th, 2015 ▪ Allocation of seminar topics to students: October 29th, 2015 ▪ Seminar: December 17th and 18th, 2015 at the Institute of Energy Economics, Vogelsanger Str. 321a, 50827 Cologne <ul style="list-style-type: none"> ▪ Presentation by each seminar participant ▪ Accompanying presentations ▪ Discussion ▪ Submission of final seminar papers until January 17th, 2015 ▪ Field trip: one day, approximately mid to end of November
Allocated Modules	<p>Examination regulation 2007:</p> <ul style="list-style-type: none"> ▪ Major Economics – Seminar zur Energiewirtschaftslehre (Master) ▪ Minor Energy Economics – Seminar zur Energiewirtschaftslehre (Master) ▪ Minor Energy Economics – Seminar zur Modellierung in der Energiewirtschaft <p>Examination regulation 2015:</p> <ul style="list-style-type: none"> ▪ Specialisation in Energy Economics – Seminar in Energy, Resource and Environmental Economics
Credits	6
Language	English

1. Topic

Regulation of Networks for Electricity and Gas

A natural monopoly is an industry which is characterized by the fact that a single firm can serve the entire market at lower costs than two or more firms. Virtually all transmission and distribution systems in the energy industry are natural monopolies. When the liberalisation of energy markets started some 25 years ago, it was obvious that transmission and distribution networks still needed to be regulated in order to prevent grid operators from charging monopoly prices.

Regulatory mechanism can broadly be divided into cost based mechanisms and incentive based mechanisms. However, the detailed design of regulatory measures varies widely within the industry. In addition, economic theory tells little about how to translate regulatory mechanisms into actual tariffs that have to be paid by energy consumers. Industrial consumers, for example, often pay significantly lower tariffs than residential consumers. Transmission systems and distribution systems face different rules, as they fulfil different tasks for the transportation of energy. Networks for electricity and networks for natural gas each need specific regulatory measures, as their structure and cost bases have different characteristics. In Germany, power grids need to be reinforced in order to accommodate the feed-in of renewable energies. At the same time, the consumption of natural gas decreases, meaning that the usage of its distribution infrastructure is also declining; however, the effort for operation and maintenance remains the same.

Even though the European Union aims at creating a single market for energy, many important aspects of the regulatory design remain within the authority of national agencies. Consequently, the regulation of networks for electricity and gas differs between EU member states. Germany's more than 800 distribution system operators face a very different regulatory framework than Britain's only six DSOs. Against this background, this seminar focuses on current developments in the regulation of networks for electricity and natural gas. We will have a detailed look into the regulation in different countries. In addition, we will investigate the differences between networks for electricity and for natural gas. Furthermore, we will aim at understanding the structure of tariffs for the transportation of energy and the regulatory process which is connected to grid extensions.

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 possible until October 15th, 2015. Please fill in the [application form](#) provided on our webpage. The signed application form must be sent by regular mail or by internal University mail (see registration form for detailed instructions).
- Due to the excursion as part of the seminar the maximum number of participants is limited. The participants are selected according to the regulations of the Faculty of Management, Economics and Social Sciences. Generally, students who already attended other courses in energy economics will be selected first.
- Deregistration is also possible until October 15th, 2015. Please use the [deregistration form](#) provided online.
- Acceptance and rejection notifications will be sent by email on October 19th, 2015.
- With acceptance by the chair, 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

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