

## ***Summer School 'Economics of Electricity Markets'***

### ***August 26-30, 2013***

In August 2013, the Faculty of Economics and Business Administration of Ghent University organizes an international summer school on the economics of electricity markets. During this one-week summer school, participants will delve into the institutional frameworks, business landscape and long-term economic dynamics of electricity markets.

The focus of this summer school is on European electricity markets. An overview of the relevant European legislation will be presented, followed by an assessment of the long-term consequences of the European projects related to energy systems and electricity markets in particular (i.e. market liberalization, 20/20/20, ETS,...).

Electricity markets are not typical commodity markets but have very specific technical and regulatory characteristics. As supply should always equal demand, the electricity supply side needs to be managed and approached from a collective action perspective. To explore this technological imperative, a basic overview on the technologies to generate and distribute electricity will be presented, followed by a discussion on electricity system requirements such as adequate balancing and the availability of back-up assets. In this overview, (intermittent) renewable electricity generation technologies are central.

The technological overview will be complemented by an economic analysis of generation and investment costs for all the considered technologies. The basic tools of economic methodology will be presented and used in the context of changing electricity markets (LCOE, option valuation, cost-benefit and investment analysis).

European electricity markets evolved from rigid national monopolistic markets into regionally connected markets with multiple players and a growing variety of electricity products. Electricity is today traded under various contracts (day-ahead, intraday,...) and new markets are expected in due course (e.g. a European market in balancing capacity). During the summer school, the electricity market architecture will be assessed.

The functioning of European electricity markets is not only determined by technologies, generation costs or international trading in electricity products. Multiple policy goals strongly interact with electricity markets. The European Emissions Trading Scheme (ETS) attaches a price on every ton of CO<sub>2</sub> emitted and the electricity sector is among the most important ETS-sectors. Member States have

national targets for the reduction of CO<sub>2</sub>-emissions (in ETS and in non-ETS sectors), for the share of renewable technologies in the energy mix and for achieving energy-efficiency savings in all economic sectors. To realize these targets, Member States established policy schemes such as production subsidies for renewable electricity generation (Feed-in Tariffs, Green Certificates,...), investment subsidies, fiscal subsidies for efficiency investments, labeling instruments and product regulation. All these existing policy schemes somehow interact with the functioning of electricity markets. Some of these interactions can support the realization of European policy goals while other interactions risk being counterproductive. The possible interactions between markets, technologies and policy targets will be analyzed from various perspectives.

Finally, the current evolutions on European electricity markets should in principle prepare and support the transition of our energy system into an efficient and sustainable low-carbon economy by 2050. To illustrate the nature of this challenge, the main energy transition scenarios – such as Energy Transition Perspectives 2012 of the International Energy Agency (IEA) – will be discussed during the summer school. In this (part of the) course, the focus will be on the role of the electricity sector in the energy transition.

The goal of the summer school is to provide the building blocks needed to assess the dynamics of European electricity markets. Students will be confronted with multiple perspectives. The public policy perspective will be complemented by the perspective of electricity companies, electricity traders, households and electricity-intensive industries.

### **Format**

Each building block of the summer school is introduced to the participants by a series of presentations. At the end of each day, group discussions will be organized. During the summer school PhD students also have the opportunity to present their own research.

The presentations will be given by staff of the Faculty of Economics and Business Administration and by representatives of electricity companies, public administrations and research organizations. The detailed program will be available around April 2013.

The lectures will be organized at the Faculty of Economics and Business Administration in Ghent but a one-day visit to relevant organizations in Brussels can be included into the program (e.g. European Commission (DG Energy), a major utility or a national regulator).

### **Preliminary Program (as of October 15<sup>th</sup>, 2012)**

- Monday (August 26<sup>th</sup>)
  1. Overview of electricity market legislation (market integration & liberalization)
  2. European policy goals; sustainability, climate policy & energy security
  3. ETS: phase I, II & III
- Tuesday (August 27<sup>th</sup>)
  1. Electricity technologies and system requirements
  2. Economic analysis of generation technologies
  3. Investment analysis
- Wednesday (August 28<sup>th</sup>)
  1. Electricity markets & electricity trading
  2. Trading game
- Thursday (August 29<sup>th</sup>)
  1. Interactions between markets, technologies and policy goals
  2. Debating games
- Friday (August 30<sup>th</sup>)
  1. Streamlining the energy transition
  2. Electricity in the energy transition
  3. Public policy recommendations

### **Participants**

The target audience for this one-week summer school consists of MA and PhD students with a strong interest in energy issues together with young professionals working in the energy sector, public administration or consultancy companies. All participants should have a solid economic background. For international students, Ghent University can provide excellent housing facilities close to the Faculty of Economics and Business Administration.

### **Registration fees**

The registration fee for the Summer School is € 375 and includes accommodation at Ghent University (from August 25<sup>th</sup> until August 31<sup>st</sup>), the course material, lunches, social events and a closing dinner on August 30<sup>th</sup>. Without accommodation at Ghent University, the registration fee is € 175. A limited number of scholarships will be available.

### **How to register?**

A dedicated website with a registration form will be developed in the next weeks to support the summer school (<http://www.feb.ugent.be/CEEM/SummerSchools/index.htm>). To get notified once the website is operational, you can already send a message to [ruben.laleman@ugent.be](mailto:ruben.laleman@ugent.be).