



Second Summer School

## *'Economics of Electricity Markets'*

Ghent University, Faculty of Economics and Business  
Administration

August 25-29, 2014

First Announcement

Met steun van de  
Vlaamse overheid



Vlaanderen  
In Actie  
Pact 2020

## Introduction

In August 2014, the Centre for Environmental Economics and Environmental Management (CEEM/ Faculty of Economics and Business Administration, <http://www.ceem.ugent.be/en/index.htm>) of Ghent University will organize its second international summer school on the economics of electricity markets. During this one-week summer school (August 25-29, 2014), national and international experts will elaborate the institutional frameworks, business landscape, market and investment models and long-term economic dynamics of electricity markets.

The unique feature of this summer school is the combination of academic analysis and presentations by insiders from various electricity sectors (generation, transmission, retailing, regulatory affairs). All participants of last year's edition highly appreciated this approach.

## Topic and theme

The focus of the summer school is on European electricity markets. An overview of the relevant European legislation is 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, long-term decarbonization targets...).

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 and transport electricity is 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 is complemented by an economic analysis of generation and investment costs for all the considered technologies. The basic tools of economic methodology are 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 is 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 is analyzed from various perspectives. The possible impact of the new climate and energy policy goals by 2030 of the European Commission (Jan.2014) will be discussed during the summer school.

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) – is discussed during the summer school. In this (part of the) course, the focus is 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.

## Tentative programme

Monday, August 25<sup>th</sup>, 2014

- Electricity in Europe; a changing landscape
- Economics of generation technologies and investment analysis
- Efficiency; the core model

Tuesday, August 26<sup>th</sup>, 2014

- Optimal regulation of electricity markets
- Transmission network
- Electricity trading
- Electricity trading game for the participants

Wednesday, August 27<sup>th</sup>, 2014

- The challenge of intermittency
- New market models

Thursday, August 28<sup>th</sup>, 2014

- Towards 100% renewable energy
- Debate among participants on 'Towards 100% renewable energy'

Friday, August 29<sup>th</sup>, 2014

- The challenge of the energy transition
- From energy roadmaps to energy realities

## Course type

The courses are specialized courses for PhD and (selected) MA students, complemented by a trading game and a structured debate among the participants. Participants have the opportunity to present their ongoing research on themes covered during the summer school. Because of the combination of economic and technical topics, the summer school encourages participants to explore multidisciplinary approaches.

## Targeted audience

The target audience consists of PhD students, young professionals from the electricity and energy sector and selected MA students. Applications from post-doc researchers will not be considered. From our experience of last year, we aim at 40 motivated participants. Last year, we received 70 applications.

## Registration

The registration fee for the Summer School is € 475 and includes accommodation at Ghent University (from August 24<sup>th</sup> until August 30<sup>st</sup>), the course material, breakfasts and lunches, coffee breaks, social events and a summer school dinner on August 28<sup>th</sup>. Without accommodation at Ghent University, the registration fee is € 175. A limited number of scholarships will be available for participants from new EU-Member States and developing countries.

## How to register?

A dedicated website with a registration form will be developed in the next weeks to support the summer school (<http://www.ceem.ugent.be/en/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). The registration deadline is May 15<sup>th</sup>, 2014.