

# Competition and Regulation in Energy Markets

3 ECTS

TERM 3

## Professor

Prof. Albert Banal-Estanol

## Prerequisites to enroll

None

## Overview and objectives

This course explores the main issues surrounding competition and regulation in electricity and gas markets. The energy sector is experiencing irresistible forces for change driven by energy policy objectives; a reassessment of market regulation in the face of high energy prices and the response to consumer pressure to agree on what constitutes a fair price for energy. This course covers the key issues that underpin the debate across the energy industry supply chain (generation/production, supply and networks) and from a competition and regulatory policy perspective (including market power and incentive regulation).

## Course outline

1. Introduction
2. Competition in the electricity wholesale market
3. Long-term contracting in electricity markets
4. Generation capacity adequacy
5. Competition issues in (old and new) retail electricity markets
6. Natural gas markets
7. Network regulation: concepts, tools and the UK experience
8. Efficiency measurement and benchmarking
9. The energy transition and the reshuffle of network regulation

## Required activities

The module will consist of lecture and laboratory sessions. Practice is essential, and you will be guided through this during the lab sessions. There will be role play sessions to practice using the results of quantitative analysis in an adversarial setting.

## Evaluation

70% final exam (2-hour individual written examination) and 30% group coursework (divided between a 15% written report, and 15% live presentation of the report).

## Materials

Given the nature of the material, there is no suitable textbook for the whole course. Students will be referred to a variety of sources, including textbook chapters and journal articles.

We will provide slides, partially based on reports, academic papers and these two textbooks:

“The Economics of Electricity Markets: Theory and Policy,” edited by Pippo Ranci and Guido Cervigni

“Economics of Electricity: Markets, Competition and Rules” by Anna Cretì and Fulvio Fontini,

## Competencies

- To (be able to) communicate with determination and in the English Language, the results and implications of the required analytical study using a language that the receiver can relate to.
- To work within a heterogeneous team of researchers as economic analyst using specific group techniques.
- To fit in diverse professional environments and varied types of collaborations in different professional projects
- That students know how to apply the acquired knowledge and their ability to solve problems in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study.
- That the students be able to integrate knowledge and face the complexity of making judgments based on information that, being incomplete or limited, include reflections on the social and ethical responsibilities linked to the application of their knowledge and judgments.
- That the students be able to communicate their conclusions and the knowledge and the ultimate reasons that sustain them to both, specialized and non-specialized publics in a clear and unambiguous way.
- That students possess the learning skills that allow them to continue studying in a way that will be largely self-directed or autonomous.
- To identify and apply the insights of the theory, the models, and the analytical tools of modern economy to its global dimension.

- To understand and apply the quantitative methods used to solve complex problems of the economy
- Understand and apply economic theory related to the regulation of markets and competition policy.

## Learning outcomes

- Identifies the applicable knowledge of Economic Theory, particularly in the areas of microeconomics, industrial economics, information economics, game theory and strategic behavior.
- Describes the theory and models of competition and regulation in the energy sector.
- Learn to use data to identify and quantify the effects of competition policies and regulations.
- Thoroughly reads and critically evaluates research articles in the area of economic competition and regulation and identify essential contributions and the frontier of knowledge.