

Investment and Trading in Electricity Markets with ITEM-Game competition

EEM13 Special Session

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Outline

The investment decisions in power generation technologies, the trading of electricity in organized markets and the price and volume risk management are critical aspects in liberalized electricity markets, namely for power generation companies.

The special session on **Investment and Trading in Electricity Markets (ITEM)** gives the participants the opportunity to understand the main features of the liberalized electricity markets and the challenges faced by market participants in their long-term investment decisions and in their short-term trading strategies.

The ITEM session is focused on the technical and economical aspects of power generation (e.g. operational issues; investment, fuel and emissions costs) and the trading strategies of market players in electricity markets.

Participants will apply the investment and trading concepts in a hands-on approach using the ITEM-Game (www.item-game.org), an interactive simulation platform where each team (group of 2-3 participants) represent a profit maximizing power company that make decisions about the investments in power generation (nuclear, coal, CCGT, hydro, wind, solar) and the trading of its generation in a power pool (in blocks of power and price).

The session is organized as follows:

- Main concepts of investment in power generation technologies and trading power in organized electricity markets
- Team formation and setting up the ITEM-Game (one laptop for each team is required)
- ITEM-Game competition with 10 interactive rounds of investment and trading
- Discussion of the ITEM-Game competition results and analysis of the winning strategies

Lecturer

Jorge Sousa holds a PhD in Economics (Energy Markets), from the New University at Lisbon, a Master degree and Graduation in Electrical Engineering and Computer Science (Power Systems), from the Technical University of Lisbon. He is Professor at ISEL - Lisbon Engineering Superior Institute, head of the Energy Systems Division, researcher at INESC-ID and invited Professor at the New University at Lisbon in the Renewable Energies Master course. Formerly he worked for several energy companies such as the Electricité de France (EdF) and Electricidade de Portugal (EDP) in transmission network. His areas of research include power systems economics, renewable energies, risk management in energy markets, market integration, electricity markets modeling and simulation.