





## AVVISO GIORNATA DI STUDIO

# **ENERGY MARKET AND RENEWABLE ENERGY**

## LUNEDÌ 20 MAGGIO

## AULA "ANTONIO PACINOTTI"

## 14:30 ITALIAN ELECRICITY MARKET FROM AN INTERNATIONAL UTILITY POINT OF VIEW

**ING. FEDERICA ROFI** - Head of Short Term and Real Time Management, Enel Produzione **ING. ANDREA MARCHETTI** - Head of Strategy & Execution, Enel Produzione

# **15:30** HYDROGEN ENERGY SYSTEMS AND THEIR ROLE IN ENHANCING THE PROSPECTS FOR RENEWABLE ENERGY

PROF. MARC A. ROSEN – University of Ontario Institute of Technology in Oshawa

La giornata di studio è organizzata mediante i due seminari indicati, aperti a tutti gli studenti dei corsi di laurea e dei corsi di dottorato di ricerca e a tutti i docenti e ricercatori interessati all'argomento.

Per ulteriori informazioni si prega di contattare il Prof. Umberto Desideri e il Prof. Romano Giglioli.







### ITALIAN ELECRICITY MARKET FROM AN INTERNATIONAL UTILITY POINT OF VIEW

**Abstract del seminario** The energy industry is a much more dynamic sector than it is perceived and is dependent from many variables often linked to international geopolitical factors. In this seminar the characteristics of the Italian electricity system and its operation will be presented. The Italian electricity system is a complex system that bases its operation on important technical pillars and on an articulated market organization that regulates physical and economic exchanges of energy and services.

Starting from the fundamentals we will analyze, from the point of view of a large multinational utility, the logic of the main processes and activities that are carried out daily in this world in order to supply energy to consumers also drawing at their probable future evolution.

**Curriculum Federica Rofi** Federica Rofi graduated in Electrical Engineering in Pisa University in 1999. After an experience in the USA company Mirant as business developer, she joined Enel in 2002. She started her career in Energy Management supporting the company in the Italian Electricity Market start up becoming an expertise in strategy definition and in competitive dynamics forecasting. After a year in the commercial activities in East Europe Countries, she was responsible for Power and Fuel Portfolio Management defining the optimization of Enel's Italian generating plant portfolio and ensuring commercial hedging activities. Since the end of 2014 Federica is in charge of short term strategy of Enel asset leading a staff of around 40 people. She is responsible of the participation in the Italian electricity spot market and of managing the dispatch of the plants in real time. Her skills are deeply focused on Ancillary Service market dynamics and she is involved in several studies on the impact of the energy transition. She is mum of Francesca and Lorenzo and she strongly believe that innovation and being an "early mover" are key factors in continuous improvement.

**Curriculum Andrea Marchetti** Andrea Marchetti is graduated in Management Engineering in Rome University "La Sapienza" in 2007. After a short experience in the aviation industry, he joined Enel and he is working in the energy industry since more than 10 years. In his professional experience, he had the privilege to study the dynamics and complexity of the energy industry from different perspectives thanks to the roles covered in different areas of the Energy Management organization and due to the participation into strategic and international projects. This has allowed him to reach a depth and global comprehension of the business and hard skills on the Power Plants technicalities. Since 2018 he is in charge of Strategy & Execution area for the operations of all Enel assets on Italian Spot & Ancillary Services Markets.

### HYDROGEN ENERGY SYSTEMS AND THEIR ROLE IN ENHANCING THE PROSPECTS FOR RENEWABLE ENERGY

**Abstract del seminario** The prospects for renewable energy are enhanced through the use of hydrogen energy systems in which hydrogen is an energy carrier. As easily accessible fossil fuel supplies become scarcer and environmental concerns increase, hydrogen is likely to become an increasingly important chemical energy carrier. When the world's energy sources become less fossil fuel-based, hydrogen and electricity are expected to be the two dominant energy carriers for the provision of end-use services, in a hydrogen economy. Thus, hydrogen energy systems allow greater use of renewable energy resources. In this presentation, the role of hydrogen as an energy carrier and hydrogen energy systems, and their economics, are described and reviewed.

**Curriculum Prof. Marc Rosen** Dr. Marc A. Rosen is a Professor at the University of Ontario Institute of Technology in Oshawa, Canada, where he served as founding Dean of the Faculty of Engineering and Applied Science. Dr. Rosen was President of the Engineering Institute of Canada. He is a registered Professional Engineer in Ontario, and serves as Editor-in-Chief of several journals and as a Director of Oshawa Power and Utilities Corporation. With over 60 research grants and contracts and 800 publications, Dr. Rosen is an active teacher and researcher in sustainable energy, environmental impact, and energy technology (including renewable energy and efficiency improvement). Much of his research has been carried out for industry, and he has written numerous books. Dr. Rosen has worked for such organizations as Imatra Power Company in Finland, Argonne National Laboratory near Chicago, and the Institute for Hydrogen Systems near Toronto. Dr. Rosen has received numerous awards and honors.