

Registration Form

Please, fill this form and email or fax a copy before
September 10th to:
Dr. Emilio Ghiani
Department of Electrical and Electronic
Engineering - Piazza D'Armi - 09123 Cagliari, Italy
Phone: +39 070 675 5872/5883
Fax: +39 070 675 5900
email: emilio.ghiani@diee.unica.it

Name: _____

Company: _____

Position: _____

Address: _____

Phone: _____ Fax: _____

E-mail: _____

Company main activity: _____

COURSE FEES

The course fee includes lectures, documentation, coffee breaks and lunches.

Members of the EES UETP:	€525
University non members of the EES UETP:	€900
Industry non members of the EES UETP:	€1500

The Course Secretariat will acknowledge the registration by email after receiving the Registration Form filled in any part.

The organization will send an invoice to each registered participant, after receiving the payment.

ACCOMMODATION

Special Prices have been arranged.

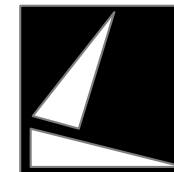
The price for a single-room with breakfast ranges from 55 to 125 €

A list of hotels will be communicated under request to Dr. Emilio Ghiani (emilio.ghiani@diee.unica.it).

Hotel accommodation should be booked individually with a note – “For EES-UETP Workshop”.

INFORMATION AND REGISTRATION

Dr. Emilio Ghiani
Department of Electrical and Electronic
Engineering - Piazza D'Armi - 09123 Cagliari, Italy
Phone: +39 070 675 5872/5883
Fax: +39 070 675 5900
email: emilio.ghiani@diee.unica.it



Electric Energy Systems
University Enterprise Training Partnership
<http://www.eesuetp.unibo.it/>

2007 Course Program

**Electricity networks
of the future:
theoretical and practical
issues to design the new
distribution system**

September 24th-26th, 2007
University of Cagliari
Sardinia, Italy



Dept. of Electrical and Electronic
Engineering
University of Cagliari
Cagliari, Italy



OBJECTIVES

The electricity market liberalization, concerns on pollution and climate change as well as on the fuel availability and price are creating the conditions for the development of a novel power system with a higher penetration of Distributed Energy Resources (DER). In the foreseen novel distribution system customers will actively participate in the market by selling the energy produced within their premises, with or without the exploitation of renewable energy sources, or by responding to demand response programs. The final goal is to fulfill the commitment of satisfying the rising demand of high quality power at lower costs, without burden the environment beyond reasonable levels.

For these and many other reasons the concept of active network has been recently introduced to delineate the evolution of the power delivery system. The new electricity networks must be:

- **Flexible:** fulfilling customers' needs whilst responding to the changes and challenges ahead;
- **Accessible:** granting connection access to all network users, particularly for renewable power sources and high efficiency local generation with zero or low carbon emissions;
- **Reliable:** assuring and improving security and quality of supply, consistent with the demands of the digital age with resilience to hazards and uncertainties;
- **Economic:** providing best value through innovation, efficient energy management and 'level playing field' competition and regulation.

The scope of the course is to give participants a vision of the short, medium and long term scenario by highlighting the expected evolution of the distribution grid, the participation of DER to energy and service markets and the DER contribution to alleviate the vulnerability of the whole power system. Models, algorithms and tools for planning, designing and operating the grid of the future,

taking into account risks and uncertainties, will be provided during the course as well as some practical applications.

INTENDED AUDIENCE

This course is intended for professionals from transmission and distribution companies, post-graduate and PhD students, researchers professional engineers, and consultants.

COURSE DURATION

Three days, from Monday the 24th to Wednesday the 26th of September, 2007.

CONTENTS

Monday 24th

- Introduction to electricity distribution networks. Conventional electricity distribution network design (**E. Lakervi**)
- Innovative Networks – The Smartgrid Technology Platform (**N. Hatziargyriou**)
- Planning innovative distribution systems (**F. Pilo**)
- Overview of microgrids - Requirements and tools for managing and controlling island systems (**N. Hatziargyriou**)
- Scheduling of distributed resources (**A. Borghetti**)

Tuesday 25th

- Microgrids islanding operation and black -start (**J. Peças Lopes**)
- MultiMicrogrids operation strategies (**J. Peças Lopes**)
- The role of DG in the energy market (**G. Strbac**)

- Active management of distribution networks (**G. Strbac**)

Wednesday 26th

- Demand side integration in innovative distribution systems - The value of responsive loads in the competitive wholesale electricity market (**A. Baitch**)
- Distribution network protection in innovative distribution systems (**M. A. Redfern**)

INSTRUCTORS

Alberto Borghetti, University of Bologna, Italy

Alex Baitch, BES (Aust) Pty Ltd, Australia

Nikos Hatziargyriou, NTUA ,Greece

Erkki Lakervi, Helsinki University of Technology, Finland

João Peças Lopes, INESC Porto, Portugal

Fabrizio Pilo, University of Cagliari, Italy.

Miles Redfern, University of Bath, UK

Goran Strbac, Imperial College London, UK

COURSE COORDINATOR

Fabrizio Pilo

University of Cagliari,
Dept. of Electrical and Electronic Engineering,
Power Systems Lab.

Cagliari, Italy
pilo@diee.unica.it