ACCOMMODATION

Special Prices were arranged at Hotel Ibis Porto S. João (5 minutes walking distance from INESC TEC), Hotel D. Henrique (15 minutes walking distance from INESC TEC) and Hotel Intercontinental (down town).

Please contact directly:

Hotel Ibis (Porto S. João) *** Phone: (+351) 22 551 31 00 Fax: (+351) 22 551 31 01

Single and double room: €47,50 (property not included)

http://www.ibishotel.com

Hotel Axis Business & SPA ****

Phone: (+351) 229 052 000 Fax: (+351) 229 052 009

Double room: €62 (imit included)

http://www.axishoteis.com/

Hotel Hotel NH Collection Porto Batalha****

Phone: +351 227660600

Reservations: +351 210 020 848 ,

Single and double room: €150 (included) http://www.ihg.com/intercontinental/hotels/gb

en/porto/prtha/hoteldetail

When making a reservation please mention

"INESC TEC EES- UETP"

COURSE FEES

The course fees include lectures attendance, documentation (pen and binder), coffee breaks and lunches.

Members of the EES-UETP: 367.50 EUR

University non-members of the EES-UETP: 900.00 EUR Industry non-members of the EES-UETP: 1500.00 EUR

The Course Secretariat will send an invoice/receipt to each registered participant, after the reception of the filled Registration Form, together with the bank transfer.

> Other information can be found at: http://www.ees-uetp.com/

> > or by phone

Mrs. Rute Ferreira +351 22 2094106

INFORMATION, REGISTRATION AND COURSE LOCATION

Mrs. Rute Ferreira

Secretariat: rmf@inesctec.pt

Phone: +351 22 2094106 Fax: +351 22 2094150

Prof. Manuel Matos

Course Coordinators: manuel.matos@inesctec.pt Phone: +351 22 2094106 Fax: +351 22 2094150

Dr. Ricardo Bessa

Course Coordinator: rbessa@inesctec.pt

Phone: +351 22 2094216 Fax: +351 22 2094150



Electric Energy Systems University Enterprise Training Partnership

http://www.ees-uetp.com/

2016 Course Program

Risk Management in Power Systems: from Theory to Practice

June 15th - 17th, 2016



INESC TEC Campus da FEUP Rua Dr. Roberto Frias, s/n 4200 - 465 Porto

> Organized by INESC TEC

OBJECTIVES

The integration of variable Renewable Energy Sources (RES) in electric power systems implies major changes in power system operation and planning procedures, as well as in the design of electricity markets. This requires advanced computational tools to handle RES uncertainty and variability and new regulatory frameworks.

This course aims to cover different theoretical and practical aspects of risk management in power systems, such as operating/static reserve long-term monitoring, setting operating reserve requirements, network planning and dynamic line rating. New electricity market frameworks (e.g., stochastic electricity market-clearing) to better integrate RES and market bidding strategies for RES power plants are also covered in this course.

Finally, emergent topics such as integration of RES and demand-side management (DSM) in distributions networks and isolated power systems are covered.

COURSE DURATION

Three days – from June 15th to June 17th, 2016.

The number of attendees is limited.

The course is held only with the minimum number of 12 people

CONTENTS / SCHEDULE

Day 1. Power System Planning Wednesday, June 15

9h00-9h15 - Registration

9h15-9h30 - Course Opening (Manuel Matos)

9h30-10h30 - Risk management in the Portuguese electric power systems (Albino Margues)

10h30-11h00 - Coffee-break

11h00-12h30 - Paradigms of decision-making under risk (Manuel

12h30-14h00 - Lunch

14h00-16h00 - Transmission network planning (Keith Bell)

16h00 -16h30 - Coffee-break

16h30-18h30 - Monitoring the reserve capacity of a power system (Manuel Matos)

Day 2. Power System Operation and Electricity Markets Thursday, June 16

8h30-10h00 - Uncertainty forecast of renewable energy (George Kariniotakis)

10h00-10h30 - Coffee-break

10h30-12h00 - Setting the operating reserve requirements and

stochastic unit commitment (Ricardo Bessa)

12h00-13h30 - Lunch

13h30-15h00 - Probabilistic power flow (Julio Usaola)

15h00-16h30 - Participation of renewable generation in the

electricity market (Julio Usaola)

16h30-16h45 - Coffee-break

16h45-18h45 - Future electricity markets (Athanasios Papakonstantinou)

Day 3. Isolated Power Systems and Flexibility Friday, June 17

8h30-10h30 - Integration of renewable energy sources and demandside management into distribution networks (Damien Ernst)

10h30-11h00 - Coffee-break

11h00-12h30 - Integration of renewable generation in isolated systems (João Catalão)

12h30-14h00 - Lunch

14h00-15h30 - Dynamic Line Rating (Andrea Michiorri)

15h30-16h30 - Final discussion and course closure (Ricardo Bessa)

INSTRUCTORS

Manuel Matos,

INESC TEC/FEUP, Portugal

Ricardo Bessa,

INESC TEC, Portugal

João Catalão

INESC TEC/FEUP, Portugal

Athanasios Papakonstantinou,

Technical University of Denmark, Denmark

George Kariniotakis

MINES ParisTech/ PERSEE, France

Andrea Michorri,

MINES ParisTech/ PERSEE. France

Julio Usaola

Universidad Carlos III de Madrid, Spain

Keith Bell

University of Strathclyde, Scotland

Paulo Marques

Head of System Operations - REN, Portugal

Damien Ernst

University of Liège, Belgium

COURSE COORDINATORS

Prof. Manuel Matos

Faculty of Engineering of University of Porto and Center for Power and Energy Systems of INESC TEC, Portugal

Dr. Ricardo Bessa

Center for Power and Energy Systems of INESC TEC, Portugal