

# Advanced Training Course 2018

Deployment of renewable energy solutions:  
challenges and opportunities  
Milan, 12 -23 november 2018



## Agenda 1st Week (12-16 Nov)

Monday  
12<sup>th</sup> Nov 2018  
WELCOME SESSION – GENERAL OVERVIEW  
09.15-17.00  
BL25 – Politecnico di Milano, Campus Bovisa

### Morning

9.15-10.00 **Registration**  
**WELCOME SESSION**  
10.00-11.00 F. Inzoli - Head of Department of Energy, Politecnico di Milano  
R. Vigotti – Res4Med - Res4Africa Secretary General, Res4Med Initiative  
11.00-11.15 **Coffee break**  
**ENERGY TRANSITION**  
11.15-13.15 R. Vigotti - Res4Med - Res4Africa Secretary General, Res4Med Initiative

13.15-14.00 **Lunch**  
**Afternoon**

**THE FUTURE FOR AFRICA: OPPORTUNITIES AND CHALLENGES**  
14.00-16.00 General overview – F. Grimaccia, Politecnico di Milano  
The future for Africa: opportunities and challenges – E. Colombo, Politecnico di Milano  
16.00-16.15 **Coffee break**  
16.15-18.15 Energy and Environmental challenges including climate change and resilience – S. Caserini, Politecnico di Milano TBC

Tuesday,  
13<sup>th</sup> Nov 2018  
LEADING RES TECHNOLOGIES: WIND – TENDERING AND PROCUREMENT  
9.00-18.00  
BL25 – Politecnico di Milano, Campus Bovisa

### Morning

09.00-11.00 **WIND**  
Wind: state of the art, future development and comparison – A. Zasso, Politecnico di Milano  
11.00-11.30 **Coffee break**  
11.30-13.15 Visit to Wind Tunnel – A. Zasso, Politecnico di Milano

13.15-14.00 **Lunch**  
**Afternoon**

**TENDERING AND PROCUREMENT**  
14.00-16.00 Seci  
16.00-16.15 **Coffee break**  
16.15-18.15 **Leadership**, Enel Green Power – PWC

Wednesday,  
14<sup>th</sup> Nov 2018

EUROPEAN RESEARCH CENTER - ISPRA  
*Private transfer departure from Double Tree by Hilton, via Ludovico di Breme 3, 77  
Milan (08:00 am) to JRC Ispra*

**Morning**

**JRC ISPRA – SOLAR TECHNOLOGY**

08.00-09.30 Transfer to JRC Ispra  
09.30-10.00 Welcome and refreshments  
10.00-12.00 The World PV Deployment and the Mediterranean – TBC, JRC  
Photovoltaic Geographical Information System – TBC, JRC

12.00-13.30 **Lunch**

**Afternoon**

**PV TEST FACILITIES**

13.30-14.30 PV the necessity for standards in reliability and performance JRC  
14.30-16.00 Visit to the European Solar Test Installation Laboratories  
16.00-16.30 Coffee Break  
16.30-17.15 Open discussion on relevant topics for the Mediterranean countries  
17:15 Transfer to Milan

Thursday,  
15<sup>th</sup> Nov 2018

RES REGULATORY FRAMEWORKS AND POLICY  
9.00-18.00  
BL25 – Politecnico di Milano, Campus Bovisa

**Morning**

**REGULATORY FRAMEWORKS**

09.00-11.00 Regulatory framework for RES: the Italian experience in European context – M. Delfanti,  
Politecnico di Milano – L. Lo Schiavo, ARERA

11.00-11.15 **Coffee break**

**POLICY**

11.15-13.15 Outlook of Environmental Social and Governance approach - C. Aquino, ERM

13.15-14.15 **Lunch**

**Afternoon**

**STORAGE**

14.00-16.00 Energy Storage state of art and future developments – Role of storage in the network operation  
– M. Merlo, Politecnico di Milano

16.00-16.30 *Coffee break*

**16.30-18.00 O&M for RES**

Ricci - Università Politecnica delle Marche

Friday,  
16<sup>th</sup> Nov 2018

GRID OPERATION AND PROGRAM MANAGEMENT  
9.00-16.00  
BL25 – Politecnico di Milano, Campus Bovisa  
POLIHUB, Politecnico di Milano Campus Durando

**Morning**

**GRID OPERATION**

09.00-11.00 Grid operation state of the art and future developments – A. Berizzi, Politecnico di Milano

11.00-11.15 **Coffee break**

11.15-13.00 The challenges of TSO to Manage Renewable variability generation + Focus on TERNA's Storage  
Lab variability generation – L. Ortolano, TERNA

13.00-14.00 **Lunch**

**Afternoon**

**PROGRAM MANAGEMENT**

14.00-16.00 Program Management – TBD (DIG) - Politecnico di Milano

16.15 **Art and Culture: Visit to Brera - Pinacoteca**

## 2st Week (19-23 Nov)

<b>Monday,</b> 19 <sup>th</sup> Nov 2018	<b>ACCESS TO ENERGY AND RES</b> 9.00-17.00 BL25 – Politecnico di Milano, Campus Bovisa
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### Morning

09.00-10.45 **ACCESS TO ENERGY** – L. Leonardi, Politecnico di Milano  
10.45-11.15 **Coffee break**  
11.15-13.15 Hydro – Ing. De Beni- Italgel- Digitalization in hydropower

13.15-14.00 **Lunch**

### Afternoon

14.00-16.00 Geothermal – TBD - EGP  
16.15-16.15 **Coffee break**  
16.15-17.15 Biomass and Waste – L. Lombardi/J. Barbieri, M. Grosso, Politecnico di Milano

<b>Tuesday,</b> 20 <sup>th</sup> Nov 2018	<b>BASIC ECONOMICS AND FINANCE OF RENEWABLE TECHNOLOGIES</b> 9.00-18.00 Università Bocconi Milano– Scuola di direzione Aziendale Via Bocconi 6, Milano
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### Morning

09.00-11.00 **INVESTMENT EVALUATION**  
Strategic planning and investment analysis: how to structure an asset allocation system - Investment analysis and value creation: sorting investment by categories and valuation methodology – Risk and value creation – F. Pippo, Bocconi

11.00-11.15 **Coffee break**

11.15-13.15 **INVESTMENT EVALUATION**  
TBD (Cassa Depositi e Prestiti)

13.15-14.00 **Lunch**

### Afternoon

14.00-16.00 **PROJECT FINANCE**  
Infrastructure and financial markets: what we are talking about? Private capital for infrastructure projects: the essence of Project Financing – S. Gatti, Bocconi

15.45-16.15 **Coffee break**

16.15-18.15 **CORPORATE FINANCE**  
Project finance as a network of contracts. Project finance as a risk management tool – S. Gatti, Bocconi

<b>Wednesday,</b> 21 <sup>th</sup> Nov 2018	<b>BASIC ECONOMICS AND FINANCE OF RENEWABLE TECHNOLOGIES</b> 9.00-18.00 Università Bocconi Milano– Scuola di direzione Aziendale Via Bocconi 6, Milano
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### Morning

09.00-10.00 **RES4Med and Africa President** - A. Cammisecra (EGP)

**BASIC ECONOMICS**  
10.00-11.00 An introduction to power systems regulation. Market failures and economic externalities – M. Di Castelnuovo, Bocconi

11.00-11.15 **Coffee break**

11.15-13.00 From externalities to decarbonization. The integration of renewable technologies – M. Di Castelnuovo, Bocconi

13.00-14.00 **Lunch**

### Afternoon

14.00-16.00 **AUCTION**  
Bidding in auctions and auctions formats – M. Ottaviani, Bocconi

15.45-16.15 **Coffee break**

16.15-18.15 Bidding incentives and Role of information – M. Ottaviani, Bocconi

Thursday,  
22<sup>th</sup> Nov 2018

CESI RESEARCH CENTER AND FRIEM  
9:00 – 17:00  
CESI headquarter / FRIEM headquarter

**Morning**  
9.00-9.15 **CESI Headquarter (CESI)**  
Welcome and company presentation  
TBD (Polimi)  
The impact of Variable Renewable Energy Sources on the Italian Power System, S. Pasquini CESI  
Implementation of PV capacity in the ME markets - M. Gori - F. Schultz, CESI  
Storage system for the integration of RES generation into power system - O. Lamquet, CESI  
9.15-10.30 Non programmable RES and their impacts on power system - B. Cova - G. Callegari, CESI  
10.30-11.00 **Coffee break**  
11.00-13.30 Visit to CESI Labs  
13.30-14.30 **Lunch @CESI**  
**Afternoon**  
15.00-17.00 **FRIEM Headquarter (via Edison, Segrate)**  
**Friem Headquarter**

Friday,  
23<sup>th</sup> Nov 2018

RES FUTURE PERSPECTIVES  
9.30-12.30  
BL25 – Politecnico di Milano, Campus Bovisa

**Morning**  
09.00-10.45 PROPHET LAB visit – Sonia Leva, Politecnico di Milano  
10.45-11.15 **Coffee break**  
11.15-12.15 **Final considerations by participants**  
12.15-12.45 **Closing ceremony (Politecnico di Milano, RES4MED, Enel Foundation)**