

CEER Specialised Training on Renewables and Electricity Market Design

28-29 November 2016

CEER Office, Cours Saint-Michel 30a (5th floor), 1040 Brussels

DRAFT PROGRAMME

Renewable electricity generation levels have increased dramatically in Europe over the last decade, particularly in the form of wind and solar power, such that renewables are now a central part of Europe's electricity mix. In many Member States this has been driven by Government policy as part of the agenda to address climate change. The increase in intermittent renewable generation poses major technical and regulatory challenges to Europe's energy regulators in overseeing both energy networks and markets in consumers' interests.

This CEER course addresses these emerging regulatory issues. It examines methods of designing and implementing renewable generation subsidy schemes such that they are efficient and properly integrated into Europe's wholesale electricity markets. The course addresses how electricity network operators should be regulated to effectively manage increased generation intermittency while maintaining security of supply. The course also explains to participants how renewable generation is driving a re-think in energy market design, in order that markets are financially sustainable for both efficient renewable and non-renewable forms of electricity generation, while protecting the consumers.

Monday, 28 November 2016 – 10:00-17:45

10:00-10:15 Opening remarks and roundtable introduction of participants

- **Ms Yvonne Finger, BNetzA**

SESSION 1 INTRODUCTION TO RENEWABLES AND THE POLICY DRIVERS

10:15-11:15 Overview of EU policy drivers with respect to renewables, covering decarbonisation, security of supply, intermittency, affordability, ownership and the key EU legislation/policies including Renewable Energy Directive, Energy Efficiency Directive, 20:20:20 targets, European Emissions Trading Scheme, 2030 targets and New Market Design.

- **Mr Ivo Schmidt, European Commission, Secretariat General**

Discussion/ Q&A (20 min)

11:15-11:30 *Coffee break*

11:30-12:15 Designing market interventions: The changing nature of subsidies – emerging lessons from the new Energy and Environment State Aid Guidelines.

- **Ms Tatiana Marquez Uriarte, European Commission, DG COMP**

Discussion/ Q&A (20 min)

12:15-13:00 Introduction to the different types of renewable energy technologies, defining terms, their production costs (and changes over time) and the implications of increasing levels of renewable energy on wholesale electricity markets (e.g. merit order effect) and the roles of regulators.

- **Mr José Antonio Castro Fernandez, CNMC**

Discussion/ Q&A (20 min)

13:00-14:00 Lunch break – CEER office

SESSION 2 RENEWABLES SUPPORT SCHEMES IN EUROPE

14:00-14:45 Overview of the main support schemes in Europe, their design, cost and interaction with wholesale markets: pros and cons.

- **Ms Yvonne Finger, BNetzA**

Discussion/ Q&A (15 min)

14:45-15:45 Case studies of different national approaches to designing and implementing renewable subsidy schemes:

- Support mechanisms in Spain with experiences and lessons learned with feed-in tariffs, feed-in premiums, capacity remuneration including auctions
- Experiences with auctions support scheme in France

- **Mr José Antonio Castro Fernandez, CNMC**
- **Mr François Berthelemy, CRE**

Discussion/Q&A (20 min)

15:45-16:00 Coffee break

SESSION 3 INTEGRATION OF RENEWABLES AND NEW MARKET DESIGN

16:00-16:45 The impact of renewables on wholesale energy markets, including on the finances of non-renewable generators and energy retail prices and how to design support mechanisms more market compatible

- **Mr Peter Stratmann, BNetzA**
- **Mr Alain Marien, CREG**

Discussion/Q&A (15 min)

16:45-17:30 Group work on the impact of renewables on wholesale energy markets and how to design support mechanisms more market compatible

- **Mr Peter Stratmann, BNetzA**
- **Mr Alain Marien, CREG**

17:30-17:45 Wrap up of Day 1

- **Ms Yvonne Finger, BNetzA**

17:45-18:45 Reception drinks – For those who wish to join, we will host a small drinks reception at the CEER office – all participants and lecturers welcome!

- END FIRST DAY-

Tuesday, 29 November 2016 – 09:00-16:45

SESSION 3 INTEGRATION OF RENEWABLES AND NEW MARKET DESIGN

- 09:00-11:00** Visit to a TSO regional operational coordination centre in Brussels
Participants will have a chance to learn of the need for pan-European TSO operational coordination and discuss the challenges posed by the renewables revolution. Participants will have a chance to see the infrastructure (including IT systems) in place to perform such operational coordination activities.
- 11:30-12:30** The variability challenge and how to design intra-day and real-time markets, incorporating demand flexibility
- The key for balancing renewables
 - The flexibility challenge: making the power system more flexible through the market
 - Impacts on balancing and reserve markets
 - Smart metering
- **Mr Stefan Vögel, E-Control**
- Discussion/Q&A** (20 min)
- 12:30-13:15** Ways of managing renewables beyond day-ahead market – Case study on future's market approach by renewables in Portugal
- **Mr Ricardo Pacheco, ERSE**
- Discussion/Q&A** (15 min)
- 13:15–14:15** *Lunch break – CEER office*
- 14:15-15:00** Case study on network and market changes to facilitate increased levels of increased intermittent renewable generation – Ireland
- **Mr Robert O'Rourke, CER**
- Discussion/Q&A** (15 min)
- 15:00-15:45** The integration of distributed renewables and the challenges for DSOs, self-consumption and net-metering, design of retail tariffs including network and policy costs
- **Mr Bjørnar Fladen, NVE**
- Discussion/Q&A** (15 min)

15:45-16:30 Group work on the integration of distributed renewables and the challenges for DSOs, self-consumption and net-metering, design of retail tariffs including network and policy costs

- **Mr Bjørnar Fladen, NVE**

16:30-16:45 Course wrap-up

- **Mr Alain Marien, CREG**

- END SECOND DAY -