The Westin Grand Berlin, Germany
9th – 11th September 2015

Interactive Workshop on 9th September
Storage solutions: achieving flexibility within ancillary services
Led by:
Nick Kitchin
Managing Director
Cumulus Energy Storage Ltd

Attending this Premier marcus evans Conference will Enable You to
• Explore latest developments and requirement of Electricity Balancing Network Code
• Discover opportunities of intraday market in imbalance elimination
• Overcome challenges of renewable energy integration into the grid
• Enhance flexibility within ancillary services
• Taking advantage of demand side response management
• Develop storage solutions for a better intermittency management

Learning from Key Practical Case Studies
• Statnett share experience on their early implementation activities regarding Electricity Balancing
• Energinet.dk discusses how the Nordic Balancing Market was developed
• ENTSO-E talks about learnt lessons from the development of electricity market-coupling
• TenneT GmbH, Enel Green Power Iberia, Terna, 50Hertz share their views on introduction of renewable energy into the system
• Iberdrola divulge approach to intermittency management through developing storage solutions
• Shared views on market design for Demand Response participation from DONG Energy, E-Control, RTE, Vattenfall

Expert Speaker Panel
Thomas Kudela
Senior Energy System Architect
Power Hub Technology
DONG Energy
Dr. Christos Papadopoulos
Regional Director Europe
Energy Exemplar
Ralph Baumann
Head of Origination and Business Development
Alpiq AG
Peter Hoffmann
Head of System Operations
TenneT TSO GmbH
Kjell Barmsnes
Head of Market Development
Statnett
Convenor
Convenor ENTSO-E Working Group Ancillary Services
Mathieu Fransen
Senior Expert in electricity markets
ACM – Dutch Authority for Consumers and Markets
Co-chair
ACER Electricity Balancing workstream
Ignacio Zumalave
Head of Electricity Short Term Markets in Spain and Portugal
Iberdrola
Darko Kramar
TSO Division, Assistant Director
ELES
Milan Vukasovic
International Project Manager
Austrian Power Grid AG
Esther Bos
TenneT NL

Martin Høgh Møller
International Advisor
Energinet.dk
Athanasios Troupakis
Market Advisor
ENTSO-E
Sebastian Ziegler
Market and Process Development
Energy Economics
50Hertz Transmission GmbH
Stefan Vögel
Electricity Department
E-Control
Edoardo Fiorino
Head of Ancillary Services and Production
Terna
Per Sundell
Head of Business Development
Vattenfall
Tony Hearne
Manager, IVADN Project
ESB Networks
Colas Chabanne
Senior Market Designer
RTE
Dr. Endre Balog
Senior business consultant,
Market Management Solutions
Alstom
Dr. Stefan Janson
Asset Portfolio Management
EnBW
Santiago Dominguez Rubira
Head of Operation and Maintenance
Enel Green Power Iberia
Mr. Hanuš Beran
Chairman of the board of directors
Taures, a.s.
Mohit Saigal
Head of Business Development, Markets
ABB

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Power and productivity for a better world™
Day One
10th September 2015

08.30 Registration and Coffee
08.55 Opening Address from the Chair

HARMONIZATION OF THE EUROPEAN ELECTRICITY MARKET: CROSS BORDER MARKET DEVELOPMENT

09.00 ACER Qualified Recommendation for the Electricity Balancing Regulation
- Current developments and future changes to the code
- Process design and the timeline for regional and European implementation
- The importance of Coordinated Balancing Area’s: Creating a consistent framework for implementation
- Cooperation between TSOs
Mathieu Fransen
Senior Expert in electricity markets
ACM – Dutch Authority for Consumers and Markets
Co-chair
ACER Electricity Balancing workstream

09.40 Electricity Balancing Regulation: Early implementation activities
- Coordinated Balancing areas: A stepwise approach to the European integration model
- Standard balancing products
- Cost Benefit Analysis: Development of methodologies
- Learning through pilot projects
Kjell Bärnsnes
Head of Market Development
Statnett
Convener
ENTSO-E Working Group Ancillary Services

10.20 An excellent opportunity to speak to your peers and network effectively. Exchange your views and business cards.

10.30 Refreshme

10.50 Comparative Market Modelling and Optimisation of Reserves and Balancing Services provision by Batteries and Other related Technologies through DSR and Storage: The Power of PLEXOS
- The new Battery Storage Class in PLEXOS
- Modelling and Optimisation of Reserves and Balancing Services provision of Batteries
- Comparative Modelling and Optimisation of Reserves and Balancing Services provision by different Storage Technologies
Dr. Christos Papadopoulos
Regional Director Europe
Energy Exemplar

11.30 How will the future of market harmonization look?
- Challenges of market harmonization
- Balancing: Integration and its operational efficiency
- To what extent should the harmonization take place?
- What are the key features of cross-border market development?
Athanasios Troupakis
Market Advisor
ENTSO-E
Kjell Bärnsnes
Head of Market Development
Statnett
Convener
Entso E-Wroking Group Ancillary Services

ORGANIZATION OF EUROPEAN ELECTRICITY BALANCING MARKET

12.15 Case Study
Regional Balancing Market with Demand Side participation
- Integration of demand side and distributed generation into Virtual Power Plant
- Simulations of the future trans-national reserve-balancing market between Austria, Italy and Slovenia
- Assessment of economics, power grid impacts, RES integration etc. of a trans-national MIB
Darko Kramar
TSO Division, Assistant Director
ELES
Milan Vukasovic
International Project Manager
Austrian Power Grid AG

12.55 Lunch

13.40 Case Study
Development of Nordic RPM
- Nordic regulating power market as model for European integration?
- ENTSO-E pilot project No.5: Future perspectives
- Challenges for cross-border ancillary services
- Can the project show the path forward for a harmonized balancing market?
Martin Høgh Møller
International Advisor
EniRNet.dk

14.40 Organisation of cross-border market design
- Correlation of different markets: Reverse versus intraday versus balancing
- How balancing responsibilities will be shared and controlled by market participants
- Challenges and impacts on cross-border ancillary services
- Effective measurement of market efficiency
Esther Bos
TenneT NL

INTERCONNECTION BETWEEN ANCILLARY AND WHOLESALE MARKET

15.20 Case Study
Lessons learnt from the development of electricity market coupling
- Lessons learnt from day-ahead market coupling
- Developments of market processes
- Developments on IT side
Athanasios Troupakis
Market Advisor
ENTSO-E

16.00 Refreshme

16.20 Interaction between intraday and balancing markets
- Increasing demand for short term flexibility
- Elimination of balancing needs by means of self-balancing
- Market roles and incentives for balance responsibility
- Products and markets for trading flexibility
Stefan Janson
Asset Portfolio Management
EnBW AG

17.00 Keynote Address
How would a renewable dominated system look like?
- Challenges for the power system
- What means maturity for the renewables?
- Symbiosis between RES and storage
- Necessary adjustments for our IT Systems
Peter Hoffmann
Head of System Operations
TenneT TSO GmbH

17.40 Closing Comments from the Chair

INTERACTIVE CONFERENCE MASTER CLASS

17.45 Use of PLEXOS to Assess the Operational and Costs’ Effects of Grids and Markets Integration along with Balancing and Ancillary Services
Dr. Christos Papadopoulos
Regional Director Europe
Energy Exemplar

18.00 Integrated Systems and Markets Modelling and Analysis of Load, Generation, Transmission flows and Balancing Services
- Grid and Market Integration and effects on overall costs
- Grid Congestion Forecasting and Management: Modelling and Optimisation with Power Flow Controllers (FACTS) devices in PLEXOS
- Forward and Balancing Markets

19.10 Modelling of Ancillary Services Products and Requirements
- Use of stochastic modelling for renewable integration analysis and forecasting ancillary services requirements and costs
- Co-optimisation of energy and ancillary services procurement integrated with unit commitment and transmission model
- Provision and Valuation of Flexibility
  – Modelling Different Technologies and Services
  – Provision of spinning, Regulation up/down, load-following, replacement, operational, pump, interruptible load reserves

20.00 Closing Remarks from the Master Class Leader
20.05 End of the Day One
Day Two

11th September 2015

08.00 Registration and Coffee
08.25 Opening Address from the Chair

THE INTRODUCTION OF RENEWABLE ENERGY TO ANCILLARY SERVICES AND BALANCING

08.30 Case Study
The impact of renewable energy on the system management
- Assessing the impact of renewables involvement into the system
- The rise of renewables and the need for flexibility of conventional plants
- Extension of renewables into ancillary services
- Balancing renewable energy

Edoardo Fiorino
Head of Ancillary Services and Production
Terna

10.10 Prequalification of renewable energy within balancing and ancillary services
- Renewables product definition and their extension
- Identification and specification of products
- Technical parameters: Product length, time and etc.

Sebastian Ziegler
Market and Process Development
Energy Economics
50Hertz Transmission GmbH

10.50 IT solution challenges of the European single electricity market
- Drivers around the establishment of a single electricity market
- IT solutions approach to meet challenges
- Real implementation project on flow-based market integration

Dr. Endre Balog
Senior business consultant, Market Management Solutions
Alstom

11.10 Providing flexibility from Demand Side Response to the Ancillary Services and Energy market
- The increasing value of flexibility in the system
- Commercial aggregation of distributed flexibility: DONG Energy’s Power Hub
- Balancing islanded micro grids: The case of the Faroe Islands
- Enabling the full potential of flexibility and DSR: What are the challenges?

Thomas Kudela
Senior Energy System Architect
Power Hub Technology
DONG Energy

12.10 Lunch

13.10 Regulatory View on Demand Response Participation in Balancing Market
- Participation of “new” players specially demand side
- Addressing barriers to progress
- Creating incentives for participation

Stefan Vogel
Electricity Department
E-Control

13.50 Demand Side Response management in Sweden
- Market opportunities in Sweden
- Challenges in mid-size industry segment
- Industry case example

Per Sundell
Head of Business Development
Vattenfall

14.30 Case Study
Market design for demand response: The French experience
- What are the main obstacles to the development of demand response management?
- How can independent DR operators participate to DR?
- How should market design evolve to allow DR participation?
- What is the role of TSOs?

Colas Chabanne
Senior Market Designer
RTE

15.10 Integrating and automation of processes for short-term market operations
- Better decision support for operators within day-ahead, intraday and balancing market windows
- Coordination between national and cross-border balancing markets
- Modelling renewables and demand response in balancing markets
- Unifying market processes onto one market platform

Mohit Saigal
Head of Business Development, Markets
ABB

15.50 Deployment of flexibility products
- The impact on flexibility on various actors
- Opportunities and threats for DSOs
- How best to deal with Congestion Management
- Evolution of capacity market: Ensuring flexibility within ancillary services

Tony Hearne
Manager, IVADN Project
ESB Networks

16.30 Dispatch methods, control quality, and needs of ancillary services
- How various dispatch methods affect area control error?
- Needs of ancillary services with various dispatch methods
- What can be done to minimize the costs?
- What can be done to increase quality of control?

Mr. Hanuš Beran
Chairman of the board of directors
Taures, a.s.

17.10 Development of flexible storage facilities: Solution to intermittency management
- Current requirements for future installation devices: Ancillary services and storages and their role in ancillary services and balancing
- The need for more electricity reserves: Effective management of dynamic effects on power generation
- Searching for economically viable options: Looking for cheaper storage solutions

Ignacio Zumalave
Head of Electricity Short Term Markets in Spain and Portugal
Iberdrola

17.50 Case Study
Pumped Storage in flexibility markets: The future of a flexibility electricity market design
- Pump storage as an economic option for balancing
- Interaction of Spot, Intraday and Ancillary Service markets
- Intraday market: 15 minutes products and flexibility needs
- Virtual pumped storage products as a means to get hold of flexibility

Ralph Baumann
Head of Origination and Business Development
Alpiq

18.30 End of Conference