

Energy Security with Renewables



A joint conference by
German Institute for Economic Research,
Florence School of Regulation,
and Institute for Research in Technology Madrid in cooperation with the IEA

Berlin, November 24/25 2016

The European Energy Union envisages important developments for the power sector: According to the Commission's modelling, the economic pathway of decarbonizing the energy sector involves 27% of renewable in the European energy mix by 2030. This is backed by a corresponding renewable target, and will most likely result in significantly higher shares of renewables in the power sector. Regulators and power consumers request that this is achieved while ensuring secure and economic electricity supply -and investors are looking for clarity to guide strategic and financing choices. The EU Commission has announced a set of documents that will outline its perspective on key policy choices for fall of 2016. At the conference we will discuss whether and how proposals for the individual elements can fit into a consistent picture?

Among decision makers from ministries, parliament, energy companies and recognized scientists and policy advisors we want to discuss how the design of short-term power markets contributes to secure and efficient system operation realizing the synergies of the integrated European power system. We then explore the role of renewable remuneration mechanisms as complement to short-term price signals and EU ETS for economic delivery of the renewable objectives. Analogous we then want to discuss the role of EU ETS and other policies for strategic choices on investment in conventional technologies and the portfolio of flexibility options.

Thursday November 24 | 10.30 am to 11.00 am

Setting the scene

Market outlooks for RE, differentiated by (i) power / overall system (ii) dispatchable versus wind/solar (iii) different countries (iv) from perspective of different stakeholder groups based on World Energy Outlook

Laszlo Varro (International Energy Agency)

Thursday, November 24 | 11.00 am to 1.00 pm

Session 1

Flexing the muscles: Is the power market robust for new technologies?

Chair: Karsten Neuhoﬀ (DIW Berlin)

Opening comments: Clara Poletti (Italian Regulatory Authority for Electricity Gas and Water) Alberto Pototschnig (ACER)

Intraday and balancing markets are gaining in importance to ensure economic and secure operation of Europe's power system with increasing shares of wind and solar as well as flexibility and storage technologies. However, currently TSOs lack visibility and coordination of intraday developments resulting in increasing out of market interventions to align market outcomes with physical requirements. It is also discussed whether intraday and balancing products and market places are aligned with needs of different generation and flexibility options, or whether their differences across EU member states restrict optimization potential and complicate coordination between TSOs. How can all flexibility and generation technologies be fully integrated across borders? Is the whole EU transmission network actually coordinating enough to maximize its capacity or does this require smaller pricing zones?

Thursday, November 24 | 2.00 pm to 3.30 pm

Session 2

Dressing up: What policy will attract finance at low cost for renewables?

Chair: Teresa Ribera (IDDRI)

Opening comments: Irene Otero-Novas (Thesis Energy), Jana Nysten (Becker Büttner Held)

Large scale deployment of wind and solar requires very large volumes of capital. The returns necessary to attract investors may well be the main determinant of Europe's power prices. Hence we want to explore how power markets can remunerate renewable generation and how this will impact the attractiveness of renewable for investor classes that can offer low-cost finance. How can regulatory risks and market failures best be addressed? What are the implications of auctions? What is the role of financial instruments offered for example by the European Investment Bank? What are risks for current and future consumers and tax payers?

Thursday, November 24 | 4.00 pm to 5.45 pm

Session 3

How to ensure renewables to contribute to energy security?

Chair: Jean-Michel Glachant (EUI)

Opening comments: Andrew Claxton (EPEX), Leigh Hancher (University of Tilburg), Catherine Mitchel (Exeter University)

In European debates renewables are still often portrayed as gap filler, while their energy security contribution is better recognized in other regions. What is needed for generation adequacy to be considered at regional or European level, so as to allow for reducing back-up requirements and mobilizing flexibility at regional and European scale? How can an integrated perspective on short-term power market design and renewable remuneration mechanisms enhance predictability and visibility of power flows – and thus allow for higher utilization and more secure operation of power systems? How can renewable remuneration mechanisms not only hedge electricity producers against the risk of low power prices, but also help insure electricity consumers against periods of high electricity prices? Is integration of renewables into the European power market only possible once renewable remuneration mechanisms are abandoned? To date discussions have focused on the distortions that renewable support mechanisms can create to the fragmented European short-term markets. Assume the power market has flexed its muscles. Can we imagine design choices of renewable remuneration mechanism that will suit the market – or is the emperor better-off naked?

Friday, November 25 | 9.00 am to 10.30 am

Session 4

Can EU ETS provide pathway for fossils generation and flexibility options?

Chair: Simon Mueller (International Energy Agency)

Opening comments: Daniele Agostini (ENEL), Michael Grubb (University College London)

The EU 2030 strategy defines a 2030 target for renewables while for the remainder of the power sector it is largely argued that the emission trajectory embedded in EU ETS will guide investment and closure choices for gas, coal and lignite. In recent years, the potential of higher carbon prices under EU ETS did deter new investments in coal power stations. But can EU ETS also support strategic choices on new investment, large-scale re-investment or closure of gas, coal and lignite power stations? We want to discuss whether the strength and credibility of EU ETS are sufficient to achieve this objective. What are the uncertainties remaining about the role of gas, coal and flexibility options? What political risk can emerge from interactions with energy security and local economic development? We want to discuss the implications for investors so as to assess for what time frames it would be possible to develop a shared perspective on the role of key technologies necessary to guide public and private choices. Could policy provide support to address some of the uncertainties and barriers during a transition – and what risks could the additional policy interventions pose?

Friday, November 25 | 11.00 am to 12.45 pm

Session 5

What will empower consumers?

Chair: Carlos Batlle (Comillas University)

Opening comments: Anna Colucci (European Commission), Grzegorz Nowaczewski (Virutal Power Plant)

Retail competition with suppliers fighting for margins may no longer be the key issue for secure, sustainable and economic power supply. Local generation, digitalization or small scale storage are turning consumers into prosumers. Who will engage with the consumers – old or new retail companies – or third parties? What market design and regulation do they require - enhanced retail competition, third party access, or neutral regulated platforms? Can this be the starting point for unlocking flexibility from new devices, consumer response and multiple energy carriers and efficiency potentials in electricity and beyond – or will it result in uncertainty and reduce system integration? What can catalyze the development?

Friday, November 25 | 12.45 pm to 1.00 pm

Concluding remarks