

Transition to power systems with weather-dependent generation

Workshop within the framework of the UoC Emerging Group on Energy Transition and Climate Change as well as the UoC Forum on Energy

When? 7.-8.11.2016

Where? Energiewirtschaftliches Institut (EWI), Vogelsangerstr. 321a, 50827 Köln

Objectives

- Presentation and discussion of the UoC Emerging Group on “Energy Transition and Climate Change”, the UoC Forum on “Market design and regulation for stochastic electricity supply chains”, as well as related work by external workshop participants
- Topics and funding opportunities for future research and collaboration

Participants

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24	Dr. Sabrina Wahl	Hans-Ertel Zentrum	wahl@uni-bonn.de

Agenda

MONDAY

10:00 - 11:00

Arrival & Small Snack

11:00 - 13:00

Session 1: Introduction and ET-CC (Chair: Susanne Crewell)

- **Susanne Crewell & Felix Höffler:** Welcome and information
- **Susanne Crewell & Felix Höffler:** Introduction to the UoC's ET-CC and Energy Forum
- **Christopher Frank:** An evaluation and post-processing of high resolution reanalyses for renewable energy applications
- **Philipp Henckes:** Twenty Years of European Wind Power Production - Balancing Effects in Europe with a Focus on Germany
- **Frank Obermüller:** Do we need regional feed-in tariffs? Disincentives for building wind capacities at the right location

13:00-14:00

Lunch break

14:00-15:30

Session 2: Power system economics I (Chair: Simeon Hagspiel)

- **Anthony Papavasiliou:** Remuneration of Flexibility using Operating Reserve Demand Curves: A Case Study of Belgium
- **Pierre Pinson:** Towards pricing of uncertainty and variability in electricity markets
- **Andreas Knaut:** Retail Unbundling and Tariff Design in Electricity Markets

15:30-16:00

Coffee break

16:00-17:30

Session 3: High-resolution meteorology I (Chair: Philipp Henckes)

- **Nils Küchler:** The vertical structure of clouds and their interaction with solar radiation
- **Sara Dal Gesso:** Towards a hierarchy of models to study the cloud-climate feedback
- **Remco Verzijlbergh:** Addressing renewable energy integration challenges with local weather forecasting

18:00

Workshop Dinner: Pizzeria Piccola, Venloer Str. 410-412

TUESDAY

09:00 - 10:00

Session 4: Power system economics II (Chair: Andreas Knaut)

- **Jakob Peter & Simeon Hagspiel:** Capacity adequacy to ensure reliability of supply in in multi-regional power systems
- **Klaus Eisenack & Paul Neetzow:** Electricity grid and storage – complements or substitutes?

10:00 - 10:30

Coffee and Snacks

10:30 - 12:00

Session 5: High-resolution meteorology II (Chair: Sara Dal Gesso)

- **Stefanie Meilinger:** The role of energy meteorology for grid management and dispatch
- **Hendrik Elbern:** Predictability of aerosols for solar energy: a case for concentrated solar power
- **Jonas Berndt:** Short- and shortest-term meteorological forecasting for wind power predictions: An ultra large ensemble approach

12:00 - 13:00

Lunch break

13:00 - 14:30

Session 6: Wrap-up and future actions (Chair: Simeon Hagspiel)

- **Sonja Kloppenburg:** Funding possibilities for European research collaborations
- **Simeon Hagspiel:** Wrap-up of previous and existing work
- **All:** Topics for future research and collaboration and next steps

Organizing Committee

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