



School of  
Management and Law

Electricity Markets with a  
High Share of Renewables  
Experiences and Future  
Challenges

Friday, 29 May 2015  
9.00 am – 6.00 pm

From Research to Practice.  
Crossing Borders.



# Electricity Markets with a High Share of Renewables

## Experiences and Future Challenges

Electricity markets in European jurisdictions as well as around the world are in a state of transition. Growing penetration of renewable energy in electricity markets holds the promise of a more sustainable energy future. However, the integration of highly variable, non-storable, and somewhat unpredictable renewables such as wind and solar also raises serious issues for power system security, industry economics, and current business models. All stakeholders – system and market operators, market participants, network businesses, energy users, regulators, and policy makers – face new challenges as well as opportunities. Much will depend on the electricity industry arrangements including wholesale and retail electricity market design and network regulation. These will determine what is possible, who can participate, and, of course, how costs and benefits are distributed among stakeholders. For the Swiss electricity industry internal developments, such as those related to the Energy Strategy 2050, play a role, but also the impact of renewable energy policy and the rise of capacity mechanisms in neighboring countries. These developments are overshadowed by the recent rejection of a preliminary bilateral agreement in the electricity sector by the European Union.

Against this rapidly changing and uncertain background, the Energy Policy Analysis Group (EPAG) at the ZHAW School of Management and Law, together with the Centre for Energy and Environmental Markets (CEEM) at the University of New South Wales (UNSW Australia), is hosting a Symposium on Electricity Markets with a High Share of Renewables. Bringing together experts from various countries, it aims to examine experiences gained internationally to date, consider emerging challenges, and identify ways in which they might be managed. Following on from this international perspective, stakeholders from a range of backgrounds will identify and discuss investment challenges faced by the Swiss electricity industry. The Symposium will conclude with workshops on methodological approaches underpinning academic research in the field.

We look forward to welcoming you to Winterthur.

**Dr. Regina Betz**

Joint Head, Energy Policy Analysis Group

**Dr. Brigitta Kratz, LL.M.**

Senior Research Fellow, Energy Law

**Assoc. Prof. Iain MacGill, PhD**

Joint Head, Centre for Energy and Environmental Markets

ZHAW School of Management and Law

UNSW Australia

# Partners

## EPAG

The Energy Policy Analysis Group is an interdisciplinary group of researchers set up by the ZHAW School of Management and Law and part of SCCER CREST. It investigates economic and regulatory issues related to energy with a focus on the design of policies and development of markets to enhance renewable energy uptake, reduce greenhouse gas emissions, and foster efficient energy use.

## CEEM

The Centre for Energy and Environmental Markets seeks to provide Australian leadership in interdisciplinary research in the design, analysis, and performance-monitoring of energy and environmental markets and their associated policy frameworks. It involves researchers from the UNSW Faculties of Engineering, Business, Sciences, Social Sciences, and Law.

## SFOE

The Swiss Federal Office of Energy is a national competence center at the Federal Department of the Environment, Transport, En-

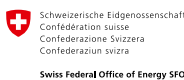
ergy and Communications (DETEC). It creates the prerequisites for a sufficient, crisis-proof, broad-based, economic and sustainable energy supply and ensures the maintenance of high safety standards in the production, transport, and utilization of energy.

## CTI

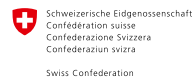
The Commission for Technology and Innovation is the innovation promotion agency of the Swiss Confederation. CTI has been given the task of launching the call for bids and of establishing and supervising the Swiss Competence Centers for Energy Research (SCCERs), supported by the Swiss National Science Foundation (SNSF).

## SCCER CREST

The Competence Center for Research in Energy, Society and Transition aims to contribute to the energy transition in Switzerland by providing detailed, evidence-based recommendations on policies to reduce energy demand, foster innovation, and increase the share of renewables in a cost-efficient way. It covers the complete action area “economy, environment, law, and behavior”.



### In cooperation with the CTI



Commission for Technology and Innovation CTI

# Program

Friday, 29 May 2015

**8.30 am**      **Registration**

**9.00 am**      **Welcome**

Prof. Jens Lehne, Dr. oec. et lic. iur., Head, Department of Business Law,  
ZHAW School of Management and Law

## **PART 1**      **INTERNATIONAL EXPERIENCES**

**9.10 am**      **Keynote Speeches**

### **Swiss Energy Strategy 2050 and electricity market design**

Dr. Matthias Gysler, Chief Economist, Swiss Federal Office of Energy

### **RES-E integration in Spain: Status quo and outstanding issues**

Dr. Pablo Rodilla Rodríguez, Institute for Research in Technology,  
Comillas Pontifical University, Madrid

### **A new market design for a new electricity system: Building a sustainable economic basis for the transition of the power sector**

Dr. Felix Christian Matthes, Research Coordinator, Oeko-Institut, Berlin

### **Increasing renewable electricity penetration – the Irish experience**

Dr. Lisa Ryan, Senior Power Systems Researcher, University College Dublin

### **High renewable penetrations in the Australian National Electricity Market (NEM): Challenges and opportunities**

Assoc. Prof. Iain MacGill, PhD, Joint Head, CEEM, UNSW Australia

**11.00 am**      **Coffee Break**

## **PART 2**      **FUTURE CHALLENGES**

### **11.30 am**      **Workshops I**

#### **Electricity market design**

- Dr. Cornelia Kawann, Head of Market Surveillance, EICom
- Dr. Regina Betz, Joint Head, Energy Policy Analysis Group, ZHAW
- Dr. Jenny Riesz, CEEM, UNSW Australia

#### **Renewable energy policy**

- Dr. Frank Rutschmann, Head of Renewable Energy Section, SFOE
- Dr. Anna Ebers, University of St. Gallen
- Assoc. Prof. Iain MacGill, PhD, Joint Head, CEEM, UNSW Australia

#### **Grids and networks**

- Dr. Arthur Janssen, Head of Market Development & Design, Swissgrid
- Prof. Dr. Hannes Weigt, FoNEW, University of Basel
- Dr. Andreas Ulbig, Power Systems Laboratory, ETH Zurich
- Dr. Luke Reedman, Grids and Energy Efficiency Program, CSIRO Energy Flagship

### **1.00 pm**      **Lunch**

**2.00 pm**      **Afternoon Keynote Speech**

**An international perspective on the rise of renewables**

Simon Mueller, Energy Analyst, System Integration of Renewables,  
International Energy Agency

**2.30 pm**      **Panel Discussion**

**Renewable energy policy, future market design, and bilateral agreement: What are the implications for the Swiss electricity industry?**

- Dr. René Burkhard, Head of Renewable Energies & Guarantees of Origin and Managing Director of Foundation KEV, Swissgrid
  - Dr. Matthias Gysler, Chief Economist, SFOE
  - Dr. Felix Christian Matthes, Research Coordinator, Oeko-Institut
  - Dr. Urs Meister, Project Manager, Avenir Suisse
  - Gianni Operto, Operto AG CleanTech Consulting
  - Bernhard Signer, Head of Origination & Sales, Repower AG
  - Niklaus Zepf, Head, Corporate Development, Axpo Group
- Moderator: Dr. Christian Schaffner, Executive Director, Energy Science Center, ETH Zurich

**4.00 pm**      **Concluding Remarks I**

Summary and conclusions for Parts 1 + 2

**Coffee Break**

## **PART 3 RESEARCH METHODS**

### **4.30 pm Workshops II**

#### **Energy system models**

- Prof. Dr. Hannes Weigt, FoNEW, University of Basel
- Dr. Jan Abrell, Center for Energy Policy and Economics, ETH Zurich
- Dr. Monika Freunek, Institute of Sustainable Development (INE), ZHAW
- Dr. Peerapat Vithayasrichareon, CEEM, UNSW Australia

#### **Experimental economics**

- Dr. Regina Betz, Joint Head, Energy Policy Analysis Group, ZHAW
- Dr. Andreas Hefti, Energy Policy Analysis Group, ZHAW
- Peiyao Shen, CEEM, UNSW Australia

#### **Empirical analyses**

- Johanna Cludius, Energy Policy Analysis Group, ZHAW
- Dr. Corinne Moser, Institute of Sustainable Development (INE), ZHAW

### **6.00 pm Concluding Remarks II**

Final summary and conclusions

#### **Closing Reception**

Drinks and snacks

# Organization

## TARGET AUDIENCE

Research community, policy makers, and industry stakeholders

## ORGANIZERS

Energy Policy Analysis Group (EPAG),  
ZHAW School of Management and Law

Centre for Energy and Environmental  
Markets (CEEM), UNSW Australia

## REGISTRATION

Please register online at:

[www.zhaw.ch/zow/electricity-markets](http://www.zhaw.ch/zow/electricity-markets)

Registration deadline: 25 May 2015

## FEE

Conference fee: CHF 300

Rate for students, ZHAW employees and  
members of SCCER CREST: CHF 100

A limited number of places is available to students at a further discount. For details, please contact the conference manager.

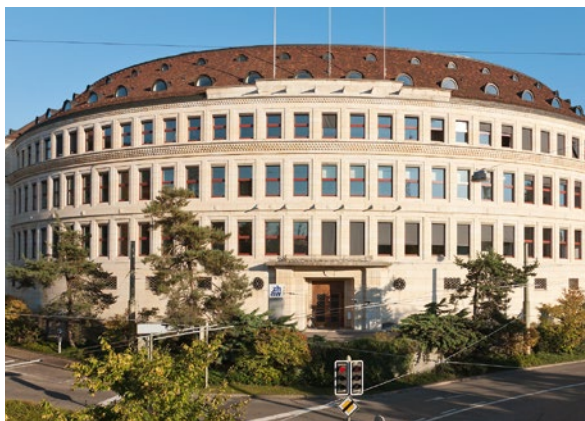
## VENUE

ZHAW School of Management and Law  
Auditorium  
Volkart Building (SW)  
St.-Georgen-Platz 2  
8400 Winterthur  
Switzerland

## CONTACT

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