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9<sup>TH</sup> ST. GALLEN FORUM FOR MANAGEMENT OF RENEWABLE ENERGIES

«DISRUPTIVE DECENTRALIZATION? ENERGY MARKETS AT A CROSSROADS»

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# DISRUPTIVE DECENTRALIZATION? ENERGY MARKETS AT A CROSSROADS

Over the past two decades, the energy system has started to shift from central infrastructure towards decentralization. While renewable energy comes in both centralized (e.g. large hydro or offshore wind) and decentralized forms (e.g. solar photovoltaics), recent technological trends have opened the possibility of even more disruptive decentralization. The convergence of small-scale energy conversion and storage with electric mobility and digital technology makes energy systems with high degrees of local autonomy a real possibility. This creates opportunities for new self-consumption business models and peerto-peer trading of renewables, but also challenges the current institutional framework of energy markets.

At #REMforum 2018, the 9th St.Gallen Forum for Management of Renewable Energies, the thought leaders of tomorrow's energy markets will share the latest insights and discuss new business opportunities.

This unique, annual event connects managers, investors and other key stakeholders in the global energy transition and features inspiring speakers, insightful debates, interactive workshops and extensive networking opportunities.

#REMforum is hosted by the Chair for Management of Renewable Energies at the University of St.Gallen, one of the leading European Business Schools.

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Welcome to #REMforum 2018!

Prof. Dr. Rolf Wüstenhagen

## PROGRAMME | THURSDAY, MAY 31, 2018

#### 13.30-17.30 PRE-CONFERENCE WORKSHOP

*In partnership with:* 

# The Push for Electric Mobility in Asia – Business Opportunities for Swiss SMEs







Venue: Einstein Congress, HSG-Campus "E", Berneggstr. 2, 9000 St.Gallen (downtown)

- Prof. Dr. Roger Moser, Director, ACC-HSG, University of St.Gallen (Moderator)
- Dr. Pankaj Agarwal, CEO, Panitek Power AG
- Prof. Dr. Tomas Casas-i-Klett, Director China Competence Center, University of St.Gallen
- Wei Chuen Chua, Regional Vice President Europe, Singapore Economic Development Board
- Florian Kind, Project Manager, Panitek Power AG
- Prof. Dr. Markus Prandini, Head Competence Center Asia Business, ZHAW
- Abhishek Raju, India Represenative & Serial Entrepreneur, ACC-HSG

#### **18.30 Apéro & Gala Dinner** *Venue*: *Restaurant Lagerhaus, Davidstr.* 42, *St.Gallen*

#### **DINNER SPEECH**

#### **Decarbonization and the Power of Habits**

Sille Krukow, Founder & Behavioral Expert, Krukow, DK Hosted by Prof. James W. Davis, Ph.D., Center for Energy Innovation, Governance and Investment, University of St.Gallen

## PROGRAMME | FRIDAY, JUNE 1, 2018

08.30	Registration	& Coffee
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#### 09.00 **DISRUPTIVE DECENTRALIZATION?**

#### INTRODUCTION TO THE CONFERENCE THEME

Prof. Dr. Rolf Wüstenhagen, Chair for Management of Renewable Energies, University of St.Gallen

#### 09.20 PANEL DISCUSSION

# Thriving in Times of Disruption: How do Incumbents and New Entrants react to Decentralization?

- Heli Antila, Chief Technology Officer, Fortum Oyj, FI
- Thierry Lepercq, Executive Vice President, ENGIE, FR
- Samuel Leupold, former CEO, Ørsted Wind Power A/S, DK
- Dr. Urs M. Springer, Founder and CEO, Blockstrom AG, CH

Moderator: Dr. Melinda Crane, Chief Political Correspondent, Deutsche Welle TV

#### 10.20 Networking Coffee

# 10.50 Decentralized Smart Energy Markets: How Digital Technology will Accelerate a Clean Energy Transition

 Prof. Dr. Wolfgang Ketter, Director, Institute of Energy Economics, University of Cologne, DE

#### 11.10 The Opportunities of Blockchain for Renewable Energy Technologies

Dr. Christoph Sutter, Head Renewable Energies, Axpo Group, CH

#### 11.25 PANEL DISCUSSION

#### Implementing a Clean Digital Energy System: From Vision to Value

- Prof. Dr. Wolfgang Ketter, Director, Institute of Energy Economics, University of Cologne, DE
- Dr. Christoph Sutter, Head Renewable Energies, Axpo Group, CH
- Dr. Andreas Ulbig, Co-founder and COO, Adaptricity AG, CH (tbc)

Moderator: Dr. Melinda Crane, Chief Political Correspondent, Deutsche Welle TV

#### 11.55 8th Consumer Barometer of Renewable Energy: The Customer Perspective

- Julia Cousse, University of St. Gallen
- Q&A with Erol Bilecen, Raiffeisen Schweiz, Patrick Kutschera, Energie Schweiz and Prof. Dr. Rolf Wüstenhagen, University of St. Gallen
- **12.25** Networking Lunch

#### 13.45 WORKSHOPS

- I The Convergence of Electric Mobility and Power Markets: V2G Business Models
- 2 NUDGING Consumers towards Electric Mobility
- 3 Community Solar as a Business Opportunity for Municipal Utilities: Best Practices in Product Design and Communication (in German)
- 4 Electrifying Corporate Fleets: Scaling Up Low-carbon Transport in a B2B Context (in German)
- 5 How to Sustain Social Acceptance of Wind Energy? Best Practices in Participatory Project Development
- 6 Blockchain: Turning Digital Disruption into Profitable Business Models

#### **15.45** Coffee Break

#### 16.00 PANEL DISCUSSION (TOGETHER WITH 6. ENERGIEKONGRESS)

#### E-Mobility Outlook: Fast Lane or SloMo?

- Prof. Dr. Konstantinos Boulouchos, Head Swiss Competence Center for Energy Research (SCCER) Mobility, CH
- Prof. Dr. Nina Hampl, Sustainable Energy Management, Alpen-Adria-University of Klagenfurt, AT
- Moritz Meenen, Co-founder & CEO, ElectricFeel AG, CH
- Fabian Scherer, Co-Lead, SBB Green Class, CH

Moderator: Dr. Melinda Crane, Chief Political Correspondent, Deutsche Welle TV

#### 16.50 CLOSING REMARKS

- Philipp Egger, Managing Director, Energieagentur St.Gallen
- Prof. Dr. Rolf Wüstenhagen, Chair for Management of Renewable Energies, University of St.Gallen
- 17.00 Apéro Riche

## PRE-CONFERENCE MAY 31, 2018, 13.30–17.30



#### **PRE-CONFERENCE WORKSHOP**

#### The Push for Electric Mobility in Asia – Business Opportunities for Swiss SMEs

*Venue: Einstein Congress, HSG-Campus "E", Berneggstr.* 2, 9000 *St.Gallen (downtown)* In partnership with:







- Prof. Dr. Roger Moser, Director ACC-HSG, University of St.Gallen (Moderator)
- Dr. Pankaj Agarwal, CEO Panitek Power AG
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- Prof. Dr. Markus Prandini, Head Competence Center Asia Business, Deputy Head International Management Institute, ZHAW
- Abhishek Raju, ACC-HSG India Represenative & Serial Entrepreneur

E-mobility, car-sharing and autonomous driving are slowly but surely paving their way into the mainstream mobility & transportation sector. However, unlike in the age of the combustion engine, it is not Europe that might lead the way into the future but Asia – especially China, Singapore and increasingly India. Participants in this workshop can expect three major benefits:

- Insights from e-mobility & transportation (infrastructure) experts & practitioners from Asia.
- Possibility to participate in a pre-workshop Expert (Delphi) Panel offering you an anonymous, online opinion benchmarking opportunity about policy, societal and technological developments in the e-mobility & transportation sector in Asia.
- Creating your own insights about potential strategies in the e-mobility & transportation sector in Asia through a scenario development exercise during the workshop.

The workshop will result in specific insights about e-mobility in Asia and allow for inspiring peer-to-peer discussions.

## WORKSHOPS JUNE 1, 2018, 13.45–15.45

#### **WORKSHOP I**

#### The Convergence of Electric Mobility and Power Markets: V2G Business Models

- Dr. Emmanuelle Reuter, University of St.Gallen (workshop leader)
- Merla Kubli, ZHAW & University of St.Gallen (workshop leader)
- Alexsandra Asfour, Head E-Mobility, SAK AG
- Peter Majer, Head of Innovation in Business Development, badenova AG & Co. KG, DE
- Marcel Morf, Head Innovative Energy Solutions, Alpiq AG, CH

Forecasts predict a considerable growth of electric mobility for Europe. With the electric charging of vehicles, the mobility and power sector, two previously relatively independent sectors, move closer together. New business opportunities emerge at this intersection, but also challenges arise. Solutions center around dynamic charging management of vehicles, vehicle-to-grid and vehicle-to-home concepts. Overall, it appears that there is a large potential for new ways of value creation between the mobility and electricity sectors. On the other side, given the multitude of players involved, coordination is key to secure grid stability and customer value for EV drivers. In this workshop, participants will learn about and discuss different business models at the intersection of electric mobility and the electricity system. Based on the inputs of experts, the participants will develop specific ideas for value creation and capture and discuss drivers and barriers.

Venue: Olma Messen St.Gallen, hall 2.1, 1st floor

#### **WORKSHOP 2**

#### **NUDGING Consumers towards Electric Mobility**

- Dr. Karoline Gamma, University of St. Gallen (workshop leader)
- Jana Plananska, University of St. Gallen (workshop leader)
- Maurice Codourey, Strategy Advisor in Healthcare and Expert Neurocommunications, CH
- Dr. Ulf Hahnel, Consumer Decision and Sustainable Behavior Lab, Department of Psychology, University of Geneva, CH
- Dr. Julia Hildermeier, Clean Vehicles and Emobility Officer, European Federation for Transport and Environment, BE

In this workshop we will present and discuss low-invasive interventions (nudges) to promote electric mobility. Recent examples employed in the industry, insights from psychology and behavioral economics as well as expertise from a behavioral insights team will be presented. Based on this discussion workshop participants will gain insights on how practitioners (private industry & policy makers) can use these nudges to motivate consumers to shift their preferences towards electric mobility. Further, this workshop will introduce a recently started 3-year research project in which two Swiss Universities will work on identifying and testing the promising nudges to promote efficient car purchases.

Venue: Olma Messen St.Gallen, hall 2.0, ground floor

#### **WORKSHOP 3**

# Community Solar as a Business Opportunity for Municipal Utilities: Best Practices in Product Design and Communication (in German)

- Alexander Stauch, University of St.Gallen (workshop leader)
- Christian E. Favre, Project- and Portfolio Manager, Projekt Miinstrom, Regional Werke AG Baden, CH
- Peter Graf, Head Energy and Marketing, St.Galler Stadtwerke, CH

The aim of this workshop is to introduce the concept of community shared solar and to elaborate solutions in product designs and promotion strategies. In the first part of the workshop, results from recent research and project managers' key learnings for a successful product launch in the field of community solar will be presented. The second part will be an interactive group work. Groups will be challenged with case-based tasks to design and promote a community solar product. They will be supported by experienced product managers. After the case elaboration, group presentations and discussions with the audience will follow. At the end of this workshop, participants will have knowledge about the concept of community shared solar, possibilities and challenges when it comes to product design and its implementation, and important marketing aspects for a successful promotion.

Venue: Olma Messen St.Gallen, hall 3.0, ground floor

#### **WORKSHOP 4**

## Electrifying Corporate Fleets: Scaling Up Low-carbon Transport in a B2B Context (in German)

- Pascal Vuichard, University of St.Gallen (workshop leader)
- Marco Reber, CEO, Post Company Cars AG, CH
- Beat Stemmler, Head Excellence Center Sustainability & Energy, ISS Facility Services AG, CH

In Switzerland, only 1% of new cars in 2016 were powered exclusively by electricity. Considering that the mobility sector is responsible for 38% of the Swiss  $CO_2$ -emissions, the share of electric cars is very low. Electric mobility is the most promising measure to significantly reduce  $CO_2$  emissions in the mobility sector: Pollutants and  $CO_2$  emissions during travel are completely eliminated, and the significantly higher efficiency of electric drives reduces the total energy consumption of road traffic. The Swiss government expects that electric cars will account for 30 to 40% of the total vehicle fleet in 2050. A significant step forward could be electrification of corporate fleets. What roles do car dealers and local authorities play? With input from industry and regulators, this workshop will explore the most important levers in an interactive group work.

Venue: Olma Messen St.Gallen, hall 1.2 "grün", 2nd floor

#### **WORKSHOP 5**

# How to Sustain Social Acceptance of Wind Energy? Best Practices in Participatory Project Development

- Nathalie Dällenbach, University of St.Gallen (workshop leader)
- Dr. Bettina Knothe, Head Department of Conflict Consulting, Competence Centre for Nature Conservation and Energy Transition, DE
- Dr. Stefan Rieder & Chantal Strotz, Interface, CH
- Chad Walker, Dept. of Geography and Planning, Queen's University, Ontario, CA

Social acceptance is a central building block for the success of decentralized energy systems. However, wind energy projects repeatedly face opposition at the local level. Identifying the underlying cause for lacking support is often not straightforward. Project developers need to deal with complex and sometimes emotionally loaded planning phases. In this workshop, we intend to identify what it takes to sustain community acceptance of wind projects in different country-specific contexts at project management level. The workshop includes three steps: First, leading experts will share their insights on recent developments in two international wind energy markets. Second, two contrasting experiences of specific Swiss wind projects will be presented. One is a rather smooth project development experience, the second a more conflict-ridden example. Third, based on the learnings from the two cases, participants will discuss stakeholder management strategies aiming at sustaining local acceptance.

**Venue:** Olma Messen St.Gallen, hall 1.2 "rot", 2<sup>nd</sup> floor

#### **WORKSHOP 6**

#### **Blockchain: Turning Digital Disruption into Profitable Business Models**

- Prof. Dr. Moritz Loock, University of St.Gallen (workshop leader)
- Julia Cousse, University of St.Gallen (workshop leader)
- Geneviève Bubel, Project Manager Business Development M&A & Innovation, EWZ
- Julien Gil, Project Engineer, Sunchain, FR
- Olaf Stehr, IT Architect, Axpo Trading AG, CH

Blockchain is a buzzword that is of increasing interest to the energy industry. But how is this technology interesting for business model innovation in the energy sector? What novel value does it offer to customers? How can it be used to solve the energy transition and climate change challenges? To address these questions, the workshop will be organized as follows: First, the participants will be introduced to the technology, its risks and opportunities. Second, they will get insights on one project that makes use of a blockchain-based peer-to-peer platform for the marketing of electricity between decentralized renewable energy producers and consumers. Third, participants will hear about another project which offers the opportunity to use solar energy away from the production plant, thanks to blockchain technologies. Finally, the workshop participants will explore the application of blockchain for business model innovation in the energy domain.

Venue: Olma Messen St.Gallen, hall 3.1, 1st floor

## SPEAKERS AND MODERATORS







- PANKAJ AGARWAL CEO, Panitek Power AG
- HELI ANTILA Chief Technology Officer, Fortum Oyj
- ALEXANDRA ASFOUR Head E-Mobility, St.Gallisch-Appenzellische Kraftwerke AG







- EROL BILECEN product portfolio manager at Raiffeisen Switzerland Cooperative
- KONSTANTINOS BOULOUCHOS Head SCCER in Efficient Technologies and Systems for Mobility
- GENEVIÈVE BUBEL Project Manager Business Development M&A and Innovation, EWZ







- TOMAS CASAS-I-KLETT Director China Competence Center, University of St.Gallen
- WEI CHUEN CHUA Regional Vice President Europe, Singapore Economic Development Board
- MAURICE CODOUREY Strategy Advisor in Healthcare and Expert Neurocommunications







- JULIA COUSSE University of St.Gallen
- MELINDA CRANE Chief Political Correspondent, Deutsche Welle TV
- NATHALIE DÄLLENBACH University of St.Gallen







- JAMES W. DAVIS Center for Energy Innovation, Governance and Investment, University of St.Gallen
- CHRISTIAN E. FAVRE Project- and Portfolio Manager, Projekt Miinstrom, Regional Werke AG Baden
- KAROLINE GAMMA University of St.Gallen







- JULIEN GIL Project Engineer, Sunchain
- PETER GRAF Head of Energy and Marketing, St.Galler Stadtwerke
- ULF HAHNEL Consumer Decision and Sustainable Behavior Lab, University of Geneva

# Detailed CVs can be found on www.REMforum.ch







- NINA HAMPL Sustainable Energy Management, Alpen-Adria-University of Klagenfurt
- JULIA HILDERMEIER Clean Vehicles and Emobility Officer, European Federation for Transport and Environment
- **WOLFGANG KETTER** Director, Institute of Energy Economics, University of Cologne







- FLORIAN KIND Project Manager, Panitek Power AG
- BETTINA KNOTHE Head Department of Conflict Consulting, Competence Centre for Nature Conservation and Energy Transition
- SILLE KRUKOW Founder & Behavioural Expert, Krukow







- MERLA KUBLI University of St.Gallen
- PATRICK KUTSCHERA Head of SwissEnergy Office, SFOE
- THIERRY LEPERCQ Executive Vice President, ENGIE







- **SAMUEL LEUPOLD** former CEO, Ørsted Wind Power A/S
- MORITZ LOOCK University of St.Gallen
- **PETER MAJER,** Head of Innovation in Business Development, badenova AG & Co. KG, DE







- MORITZ MEENEN Co-founder & CEO, ElectricFeel AG
- MARCEL MORF Head Innovative Energy Solutions, Alpiq AG
- **ROGER MOSER**, Director ACC-HSG, University of St.Gallen (Moderator)







- JANA PLANANSKA University of St.Gallen
- MARKUS PRANDINI Head Competence Center Asia Business, Deputy Head International Management Institute, ZHAW
- **ABHISHEK RAJU** India Represenative & Serial Entrepreneur, ACC-HSG

## SPEAKERS AND MODERATORS







- MARCO REBER Geschäftsleiter, Executive MBA in Controlling & Consulting
- EMMANUELLE REUTER University of St.Gallen
- STEFAN RIEDER Managing Director, Interface







- FABIAN SCHERER Co-Lead, SBB Green Class
- URS MARTIN SPRINGER Co-founder and CEO, Blockstrom AG
- ALEXANDER STAUCH University of St.Gallen







- OLAF STEHR IT Architect, Axpo Trading AG
- BEAT STEMMLER Head Excellence Center
   Sustainability & Energy, ISS Facility Services AG
- CHANTAL STROTZ Interface







- CHRISTOPH SUTTER Head Renewable Energies, Axpo Group
- PASCAL VUICHARD University of St.Gallen
- CHAD WALKER Dept. of Geography and Planning, Queen's University, Ontario, CA



 ROLF WÜSTENHAGEN Good Energies Chair for Management of Renewable Energies, University of St.Gallen



# «DISRUPTIVE DECENTRALIZATION? ENERGY MARKETS AT A CROSSROADS»



#REMforum MAY 31 – JUNE 1, 2018 ST.GALLEN

9<sup>TH</sup> ST.GALLEN FORUM FOR MANAGEMENT OF RENEWABLE ENERGIES

### **HOST**

Good Energies Chair for Management of Renewable Energies: the first of its kind at a leading European business school – **www.goodenergies.iwoe.unisg.ch** 

In cooperation with EGI-HSG – Center for Energy Innovation, Governance & Investment **www.egi.unisg.ch**, partner of SCCER CREST – Competence Center for Research in Energy, Society and Transition.

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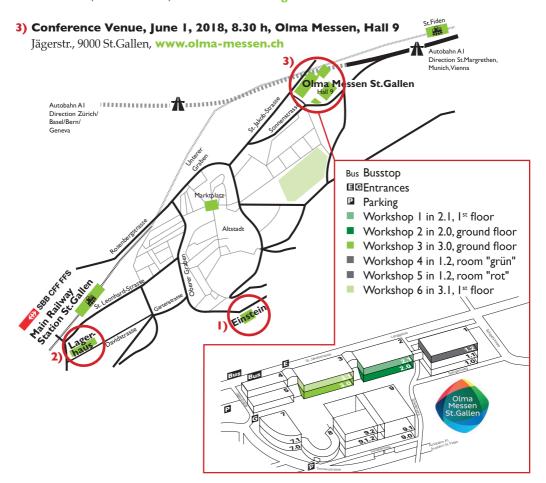
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## **TRANSPORTATION**

For conference on Friday take bus no. 3 direction "Heiligkreuz", exit at "Olma Messen". From venue back to train station take bus no. 3 direction "St.Gallen Bahnhof".

### **VENUE**

- I) Pre-Conference Workshop, May 31, 2018, 13.30 h Einstein Congress, HSG-Campus "E", Berneggstr. 2, 9000 St.Gallen, https://www.unisg.ch/en/universitaet/besucher/tagungsorthsg/campuse
- **2)** Welcome Dinner, May 31, 2018, 18.30 h, Restaurant "Lagerhaus" Davidstr. 42, 9000 St.Gallen, www.restaurantlagerhaus.ch





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# University of St.Gallen (HSG) Institute for Economy and the Environment (IWÖ-HSG)

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6. Energiekongress «Energiestrategie vor Ort umsetzen»

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