

Summer Academy 'Energy and the Environment' 2017

Towards 100% renewable:

Connecting energy sectors for a global energy transition

16- 21 July 2017 | Greifswald and Berlin | Germany

Renewable energy investment exceeded investment in conventional energy for the second year in a row in 2016, in spite of low oil prices. However, most progress is made in the electricity sector. The heating, cooling and especially the transport sector are more challenging to decarbonize, and continue to be dominated by conventional energy sources.

On top of that, energy policy around the world is giving off mixed signals. While China is moving forward with the mass-scale development of renewable energy, other countries are slowing down. Germany's rapid integration of renewable energy is decelerating, the European Union introduced lower, nationally non-binding targets for 2030, while the United States' commitment to climate policy and renewable energy is wavering under the new government.

The 14th annual Summer Academy 'Energy and the Environment' will show that further renewable energy expansion is still achievable, addressing the need to move beyond electricity and connect it with the heat and transport sector in a sustainable, smart energy system.

The Academy features workshops, visits to a wind energy farm and a renewable electricity storage plant, a three-day conference program, and a social evening program, ending with a festive barbecue in Berlin.

Towards 100% renewable:

## Connecting energy sectors for a global energy transition

Summer Academy 'Energy and the Environment' 2017

### Summer Academy - Part I: Greifswald

Sunday 16 - Tuesday 18 July 2017

The Summer Academy 'Energy and the Environment' opens with a meet and greet at the University of Greifswald on Sunday 17 July, followed by a welcome dinner in Greifswald.

On Monday morning the Academy will open with a short [introduction to smart energy systems](#): An energy system where the electricity, heat and transport sector are connected and supplied with renewable energy sources.

A [collaborative workshop](#) will facilitate the exchange of international insights and interdisciplinary expertise between Summer Academy participants

The Academy will then [visit a wind farm](#) in Mecklenburg-Vorpommern, where participants will learn more about the German legal framework for remuneration of renewable energy and the im-

plications of grid congestion. After the visit the group will visit the beach at the Baltic Sea.

On Tuesday, the Academy starts with a lecture on the German approach to connecting the electricity, transport and heat sector to integrate renewable energy system-wide, a concept known as [Sektorenkopplung](#).

This concept relies on a diversified and interconnected energy system, in which storage plays an important role. In the afternoon, the Academy will leave Greifswald and [visit a power-to-gas plant](#) where excess renewable electricity is converted to gas, which can be stored in the gas grid.

The Academy will then move on to Berlin, where an intensive three-day conference program starts on Wednesday.





## Summer Academy - Part II: Berlin

Wednesday 19 - Friday 21 July 2017

The Berlin program of the Summer Academy features three days of conferences and workshops by an international and interdisciplinary teaching faculty, who complemented their academic achievements with years of experience working in the field.

On Wednesday, the Academy begins with a broad insight into climate change, and will then turn to international [climate policy](#) post-Paris Agreement, paying attention to important role played by the [EU](#). The program will then narrow its focus the national context of [Germany](#) and offshore wind, and have a close-up look at the transition plans of energy giant [India](#).

On Thursday, the program focuses on [smart energy systems](#): Moving renewable energy integration beyond electricity by connecting heat and transport into a smart energy system. The day opens with an indepth insight into a design of a smart energy system with all sectors connected to a sustainable energy supply. Next is the topic of [sto-](#)

[rage](#), an important bridge in an energy system based on intermittent renewables, followed by the EU's perspective on low-carbon solutions in the [heating](#) sector. The focus then moves to energy efficiency and [circular economy](#) with a collaborative workshop.

Friday morning addresses [mobility](#), opening with insights into hydro and electric vehicles. The program then addresses the potent concept of car-sharing and driverless cars, followed by the potential of micro [smart grids](#) connecting renewables with [electric vehicle fleets](#). The program ends with a visionary insight into drivers for a sustainable mobility sector.

Integrated discussion rounds and collaborative workshop formats allow for participants to exchange expertise with each other as well as with the teaching faculty, building a professional and social network that will serve them a lifetime.

# Program - Greifswald

Sunday 16 - Tuesday 18 July 2017

## Welcome and dinner

Sunday 16 July | Greifswald

- 16:45 Meeting at the University of Greifswald | Rubenowplatz  
Tour of the University and Welcome | Prof. Michael Rodi
- 18:00 Reception and dinner on the ship Pomeria | Salinenstraße | Greifswald

## Introduction to smart energy systems

Monday 17 July | Alten Augenklinik, Rubenowstr. 2b, room 2 | Greifswald

- 10:00 Introduction to the Summer Academy and to smart energy systems  
Anika Nicolaas Ponder | Research coordinator | IKEM
- 10:30 Exchanging expertise: Towards 100% renewable energy worldwide  
*Participatory workshop moderated by:*
- Sam Holleran | Design Fellow | Design Trust for Public Space
  - Bernd Riedel | Co-Founder | Ellery Studio for Creative Strategy
- 12:30 Lunch
- 14:30 Visit: Wind energy park in Mecklenburg-Vorpommern | Interview with operator
- 16:00 Beach walk at the Baltic Sea (Lubmin)

## Smart energy systems and the German energy transition

Tuesday 18 July | Alten Augenklinik, Rubenowstr. 2b, room 2 | Greifswald

- 10:30 *Sektorenkopplung: Connecting energy sectors in the German energy transition*  
Julia Sandén | Consultant | BBHC  
Simon Schäfer-Stradowsky | Managing Director | IKEM
- 11:15 *Synergistic Value of Hybrid Energy Systems: Renewable Power and Hydrogen Production*  
Gunther Glenk | PhD Candidate | Energy Markets | TUM School of Management
- 12:00 Lunch | Travel to Berlin
- 15:00 *Technical visit: Power-to-gas hybrid power plant*
- 18:00 Arrival in Berlin



# Program - Berlin

Wednesday 19 - Friday 21 July 2017



## From international climate policy to national ambitions: The rise of renewables

9:15 - 10:15

### Welcome address

Prof. Michael Rodi

*University of Greifswald | Director of IKEM*

10:15 - 11:00

### Global Energy Consumption and the State of Climate Change

Paola Parra

*Climate Policy Analyst | Climate Analytics*

11:00 - 11:30

Coffee break

11:30 - 12:30

### Moving forward:

### The Paris Agreement and the Future of International Climate Policy

Arne Riedel

*Fellow | Legal team | Ecologic Institute*

12:30- 13:30

Lunch break

13:30 - 14:15

### EU Climate and Energy Policy: Decarbonisation and Energy Security

Prof. Dr. Rafael Leal-Arcas

*Professor of European and International Economic Law | Queen Mary University of London*

14:15 - 15:00

### Going Offshore: Fostering Germany's Energy Transition from the Seas

Andreas Wagner

*Director | Foundation Offshore Wind Energy*

15:00 - 15:20

Coffee break

15:15 - 16:00

### Renewable Energy in India: Challenges and Prospects

Dr. Uday Shankar, Ph.D (University of Delhi)

*Assistant Professor of Law | Heidelberg, Germany*





## Smart energy systems:

### Policy and technology for 100% renewable energy integration

Thursday 20 July 2017

9:15 - 10:15

#### Towards 100% Renewable Energy: Electricity and Beyond

Alexander Franke

*SRU - German Advisory Council on the Environment*

10:15 - 11:00

#### The Role of Energy Storage in a Renewable Energy System: Policy and Technology Roadmap

Helena Teschner

*Policy and market specialist | German Energy Storage Association*

11:00 - 11:30

Coffee break

11:30 - 12:15

#### Decarbonisation Strategies for the Heating Sector in Germany

Dr. Matthias Deutsch

*Agora Energiewende*

12:15- 13:15

Lunch break

13:15 - 14:00

#### The view from Brussels: Framework, Status and Perspectives for the Development of Energy Efficient Heating and Cooling

Giuseppe Nastasi

*Lawyer | Milieu Ltd.*

14:00 - 14:15

#### Circular Economy and Energy Efficiency in a Smart Energy System

Dr.-Ing. José Mercado

*Senior Research Associate | IKEM*

14:15 - 14:45

Coffee break

14:45 - 16:00

#### Workshop: Smart Energy System Optimization: The Role of Energy Efficiency

Moderated by:

- Dr.-Ing. José Mercado | IKEM





# The mobility challenge: Policy and innovation for a green transport sector

Friday 21 July 2017

- 9:15 - 10:30 **Roadmap for a Sustainable Transport System: Hydrogen and Electric Mobility in Germany**  
Dr. Kathrin Goldammer  
*Managing Director | Reiner Lemoine Institute*
- 10:30 - 11:00 Coffee break
- 11:00 - 11:45 **Sharing: The Key to a Sustainable Urban Transport**  
Gunnar Nehrke  
*Bundesverband Carsharing*
- 11:45 - 12:30 **Food for Thought: The Role of Driverless Cars in Tomorrow's Mobility Sector**  
Dennis Nill and Matthias Hartwig  
*Mobility department | IKEM*
- 12:30 - 13:30 Lunch break
- 13:30 - 14:15 **New mobility concepts: Integrating EV fleets into micro smart grids**  
Lucas Hänke de Cansino  
*Corporate Development | Inno2grid GmbH*
- 14:15 - 14:45 Coffee break
- 14:45 - 15:30 **Making Urban Transport Solutions Effective for Global Climate Change Mitigation**  
Prof. Dr. Felix Creutzig  
*Mercator Research Institute on Global Commons and Climate Change*
- 15:30 Conclusion of the Summer Academy 2017
- 19:00 **Goodbye barbecue for all participants and teaching faculty**  
*Neukölln, Berlin*



## Registration

The Summer Academy 2017 'Towards 100% renewable: Connecting energy sectors for a global energy transition' will welcome 25-30 interdisciplinary participants working in the field of sustainability. Applicants must have relevant experience in the field, and are selected based on their interest in the program, as well as academic/professional achievements. The Academy aims to find a representative mix of disciplines, nationalities, as well as gender.

The fees cover all workshops and conferences, lunch throughout the event, as well as transport from Greifswald to Berlin. Last but not least, the fee includes the festive barbecue on the last day of the Summer Academy in Berlin.

Registration forms are available on our site:

[www.ikemsummeracademy.de/applications](http://www.ikemsummeracademy.de/applications)

You can also write to us for an application form, comments or questions:

[summeracademy@ikem.de](mailto:summeracademy@ikem.de)

	 Business	 Governments	 NGO/University	 PhD	 Students
Full program	€ 800	€ 650	€ 520	€ 410	€ 350
Greifswald program	€ 320	€ 290	€ 260	€ 240	€ 220
Berlin program	€ 730	€ 560	€ 430	€ 330	€ 250
1-Day participation		€ 260			€ 140





# Summer Academy 'Energy and the Environment'

14 years of international cooperation



Transition from Nuclear Energy to Renewable Energy Sources  
2004 - Greifswald, Germany



Implementing Kyoto - Chances and Challenges for Transition Countries  
2005 - Irkutsk, Russia



Emissions Trading in Europe – Review and Preview  
2006 - Greifswald, Germany



Bridging the Divide in Global Climate Policy: Strategies for Enhanced Participation & Integration  
2007 - Budapest, Hungary



Realizing the Paradigm Shift towards Energy Sustainability: Climate Change,  
Technological Innovation, and the Challenge of an Optimal Instrument Mix  
2008 - Greifswald, Germany



Bridging the Divide in Global Climate Policy 2.0: From Bali to Copenhagen  
2009 - Amsterdam, the Netherlands



Transnational Energy Grids: Challenges on the Way to Sustainable Energy Transmission  
2010 - Greifswald, Germany



Socio-Economic Opportunities and Drivers on the Way to a Low-Carbon Society  
2011 - Guildford and London, the United Kingdom



Energy Transition: Expansion and Integration of RES  
2012 - Berlin, Germany



Climate Change and the Energy Challenge: Energy Efficiency and Renewable Resources  
2013 - Brussels, Belgium



Energy Transition 2.0: Further Deployment and Market Integration of Renewable Energy  
2014 - Berlin, Germany



Governing Climate Change: A Multi-Level Approach to Energy System Transformation  
2015 - Greifswald and Berlin, Germany



Sustainable Cities: Low-Carbon Policy for the Urban Energy Transition  
2016 - Greifswald and Berlin, Germany



Towards 100% renewable: Connecting energy sectors for a global energy transition  
2017 - Greifswald and Berlin, Germany



Prof. Michael Rodi  
Founder of the Summer Academy  
IKEM | Institute for Climate Protection, Energy and Mobility

Management & organisation:  
Anika Nicolaas Ponder | Research fellow  
Pauline Horng | Event & research assistant  
Michael Holton | Research fellow

[summeracademy@ikem.de](mailto:summeracademy@ikem.de)  
[www.ikemsummeracademy.de](http://www.ikemsummeracademy.de)  
Impressions of the Summer Academy:  
[gallery.ikemsummeracademy.de](http://gallery.ikemsummeracademy.de)

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