

LOCAL RENEWABLES CONFERENCE FREIBURG 2012

Cities and regions explore smart grids and smart solutions

25-26 October 2012



An I.C.L.E.I Initiative

PROGRAMME

Freiburg 
IM BREISGAU

I.C.L.E.I
Local
Governments
for Sustainability

Welcome to Local Renewables Freiburg 2012

Welcome to the international conference Local Renewables taking place from 25 to 26 October 2012 in Freiburg! For the fifth time since 2007, Freiburg is the place where experts from around the world meet in order to discuss local strategies and solutions for the global climate challenge.

Political decisions of the Federal Government and the German Parliament from spring 2011, in favour of a gradual fadeout of nuclear energy (following the nuclear disaster in Fukushima), have made it obvious: a massive combined approach to improve energy efficiency and expanding the use of renewable energy resources – water and wind power, solar and bio energy as well as geothermal energy – are crucial for a successful energy transition. This includes the significant expansion of decentralised facilities for combined heat and power (CHP) generation, in order to produce energy locally, produce as efficiently as possible, and use it locally as far as possible.

However, equally important are the creation of new structures for the transport and the distribution of electrical energy. On the one hand, this requires smart grids – networks that can transport renewable energy from the source to the consumer and to ensure a secure energy supply for all. On the other hand, this requires new approaches and intelligent network structures that can function in an integrated system of production, storage, consumption and network management.



Smart grids – intelligent and communicating networks – can store energy, deal with peak demands and ensure a stable supply of energy for consumers when they need it. But most importantly, they can also help save energy by connecting existing network structures in a sensible and more efficient way, connecting smart grid to smart grid.

It is therefore not only essential that we construct and implement new grids, but also that we use the existing energy management networks in a more intelligent way. Improving the application of the existing infrastructure is an important requirement for the success of the energy transition based on the use of renewable energy sources and alternative supply systems. This endeavour presents a great future challenge for political direction, scientific research, sound business models, and informed energy users. Because of this, the Local Renewables Conference for 2012 has set the focus on smart technologies. It provides a forum for dialogue and the exchange of experiences in this field.

My gratitude is owed to all those who have made this conference possible: the speakers, the sponsors from politics, industry and associations, as well as our cooperation partner, the European Secretariat of ICLEI - Local Governments for Sustainability, which is here in Freiburg. Without their experience, their dedication and their international network this conference would not be the same.

In the name of the hosting city, I sincerely hope that all participants will engage in inspiring discussions, make interesting experiences and have a great stay in Freiburg!

Dr. Dieter Salomon
Mayor of the City of Freiburg im Breisgau

A handwritten signature in black ink, appearing to read 'Dieter Salomon'. The signature is fluid and cursive, written on a white background.

Local Renewables Freiburg 2012: Opportunities and overview

More efficient energy use is the key to reach massive environmental and social benefits. According to the European Commission, it could create 2 million jobs by 2020 and of course also contribute to our energy supply security. The Local Renewables Freiburg 2012 Conference provides a unique opportunity to find out more about some of the most innovative strategies of urban and regional sustainability – exploring how smart grids can contribute to increase energy efficiency, while helping the transition to widespread use of renewable energy.

Take advantage of the opportunities offered!

- Learn about the latest developments in strategies and technologies of smart grids. Get inspired to maximise the energy savings potential and reduce your city's CO₂ emissions in the process.
- Network with key stakeholders. Make contact with leading authorities in the renewable energy sector.
- Exchange experiences.
- Get answers to your questions on how to make your city or town ready for the challenges of the future.

The organisers: ICLEI European Secretariat and the City of Freiburg

The City of Freiburg is internationally renowned for its innovative approach to sustainable energy management and its use of local renewable energy sources. The recipient of several awards in this regard, the city is an inspiring example for attendees and the perfect venue to host this conference. Freiburg is also the host city of the ICLEI European Secretariat, part of the international membership association of local governments and municipalities committed to promoting sustainable development at the local level. The year 2012 is special. It marks the 20th anniversary of ICLEI Europe's seat in the City of Freiburg as well as the fruitful collaboration between the two entities, also marked through the 5th Local Renewables Conference.

Local Renewables Conference Series

Local Renewables Freiburg 2012 is the 5th conference of a series that began in Freiburg, Germany, in June 2007 with the event "Powerful local action for secure and sustainable energy in Europe". Since this initial conference Local Renewables has analysed a variety of topics linked to renewable energy such as urban policy and public planning (2009), mobility (2010), and green buildings (2011).

The conference series aims to advance the switch to renewable energy sources and accelerate sustainable development. Local Renewables achieves this through showcasing ground-breaking ideas and approaches to reduce energy consumption in cities and towns.

Programme overview

Thursday 25 October	Friday 26 October	
Registration	Plenary 3	
Plenary 1	Support mechanisms for financing smart grids	
Conference opening: Renewable energy and smart grids in the European Energy Strategy. Making smart grids a reality	Coffee break	
Coffee break	Plenary 4	
Plenary 2	Panel discussion: Rolling out smart grids as part of the green local economy agenda – finding viable investment options	
Smart grid deployment: How to optimise renewable energy production and use through urban-rural-regional cooperation	Plenary 5	
Lunch break	Summary and outlook	
Parallel workshops	Lunch break	
<td style="text-align: center;">A1</td> <td style="text-align: center;">B1</td>	A1	B1
Building a smart grid: First lessons from practical experiences	Urban-regional cooperation for renewable energy	
Coffee break	Study tours	
A2	Sun, wind, water, wood: Freiburg's renewable energy mix at a glance	
Decentralised energy production, centralised management and storage	Redevelopment of the neighbourhood Weingarten, Freiburg	
B2		
Encouraging framework to support deployment – "Smart grids in practice"		
Evening reception		

Thursday, 25 October 2012

Morning

08:45 Registration opens

09:30 - 11:00 – Kaisersaal

Plenary 1 – Conference opening: Renewable energy and smart grids in the European Energy Strategy. Making smart grids a reality

During the opening plenary participants are welcomed to Freiburg. The event's main focus is presented: the concept of smart grids. What are they and how do they fit into the vision of European and local energy and sustainable development?

Facilitator: Wolfgang Teubner, Managing Director, ICLEI European Secretariat

Welcome by host city – Dr. Dieter Salomon, Mayor, City of Freiburg, Germany

Opening key-note – *European perspectives for smart grid development from a local to large-scale*

Per-Olof Granström, Secretary General, EDSO for Smart Grids (European Distribution System Operators)

Policy and thematic experts share their views and knowledge on how to make smart grids a reality: Which are the key elements of smart grids? What lessons have been learned in previous developments? What is the state-of-the-art in smart grid implementation?

- Speakers**
- **Smart grid development in Europe and the role of local governments**
Ádám Szolyák, Policy Officer, DG Energy, European Commission
 - **Needs and perspectives to accelerate the transition to renewable energy**
Christine Lins, Executive Secretary, Renewable Energy Policy Network for the 21st Century (REN21)
 - **Smart grid model projects in Germany: Lessons learned and future developments**
Ludwig Karg, Head of E-Energy Ancillary Research, B.A.U.M. Consult GmbH, Germany

11:00 - 11:30 Coffee break

11:30 - 12:30 – Kaisersaal

Plenary 2 – Smart grid deployment: How to optimise renewable energy production and use through urban-rural-regional cooperation

This plenary explores how to optimise smart grid inter-connections in an urban area, ideally linking to other smart grids covering a whole region. The inter-connectivity and the use of local resources – for electricity, heating and cooling – will help to ensure energy security, stable prices and local jobs. It can also help to keep money in the local or regional economy, supporting local development. How is this being dealt with today?

Facilitator: Maryke van Staden, Climate & Air Coordinator, ICLEI European Secretariat

- Speakers:**
- **EU policy problems – Smart grids: Local and regional perspectives**
Jens Zvirgzdgrauds, Administrator, Commission for Environment, Climate Change and Energy (ENVE), EU Committee of the Regions
 - **The Basque Country's strategy to support the development of smart grids**
Txaber Lezamiz, Technology Development Manager, Basque Energy Agency (EVE), Spain
 - **Energy landscapes: A powerful concept for sustainable energy transition**
Sven Stremke, Assistant Professor, Landscape Architecture, Wageningen University, The Netherlands

12:30 - 14:00 Lunch break

Thursday, 25 October 2012

Afternoon

Parallel sessions

The A stream of the parallel sessions will focus on technology options, while the B stream will deal with regional renewable energy concepts and how they have been linked to local and regional pilot projects for the development of smart grids. Expert speakers will present on pressing issues. This will be followed by a question and answer session.

14:00 - 15:30 – Kaminsaal

Parallel sessions 1

Session A1 – Building a smart grid: First lessons from practical experiences

Selecting appropriate technologies to manage and operate smart grids is a key decision point. This requires an understanding of the energy supply and demand side, and outlining an intelligent smart grid management concept dealing with generators, grid(s), and consumers. What are the key areas to be addressed, and how can these be dealt with effectively from a technology perspective?

Facilitator: Ruud Schuthof, Director Strategic Services, ICLEI European Secretariat

- Speakers:**
- ***EcoGrid EU project – A prototype for European smart grids***
Marianne Bechstein, Energy Economist, Research Group Energy and Communication Technology (EnCT), Germany
 - ***Smart grids experiences in Europe, an emerging market***
Hugo Niesing, Founder, Resourcefully, The Netherlands
 - ***eTelligence: The E-Energy Lighthouse-project from the E-Energy region Cuxhaven***
Michael Stadler, Project Manager E-Energy Project eTelligence, Business Technology Consulting (BTC) AG, Germany

14:00 - 15:30 – Rokokosaal

Session B1 – Urban-regional cooperation for renewable energy

Cities and towns need to cooperate with their surrounding regions to optimise the use of local renewable resources and develop local expertise, as they will have to also draw on their surrounding resources to generate sufficient energy for their needs. This includes establishing wind parks, creating biomass partnerships from raw material to sustainable energy, or using roof space to generate solar energy. Such approaches require a common vision and close cooperation between multiple stakeholders and political decision makers. How is this being dealt with within existing projects? How can one develop a joint vision and strategy?

Facilitator: Carsten Rothballer, Climate Policy Officer, ICLEI European Secretariat

- Speakers:**
- ***Analysis of renewable energy potentials in the region of Freiburg***
Christian Neumann, Head of Project Development, Energy Agency Region Freiburg, Germany
 - ***From local needs to global approach – smart energy and smart grids: the Aosta valley experience in the AlpEnergy project***
Marcello Chiaberge, Aggregate Professor, Department of Electronic and Telecommunication (DET-LIM), Politecnico of Turin, Italy

15:30 - 16:00 Coffee break

Thursday, 25 October 2012

Afternoon

16:00 - 17:30 – Kaminsaal

Parallel sessions 2

Session A2 – Decentralised energy production, centralised management and storage

Two of the big challenges for the optimal use of renewable energy are energy storage and the coordinated management of energy production facilities. This workshop looks into potential solutions for these challenges, combining decentralised production with centralised management and storage concepts.

Facilitator: Maryke van Staden, Climate & Air Coordinator, ICLEI European Secretariat

Speakers: • ***The importance of storage in future energy systems***

Gerhard Stryi-Hipp, Head of Energy Policy, Fraunhofer Institute for Solar Energy Systems (Fraunhofer ISE) Germany; President of the European Technology Platform on Renewable Heating and Cooling

• ***Grid-scale storage***

Tjark Thien, Research Associate, Institute for Power Electronics and Electrical Drives (ISEA) RWTH Aachen University, Germany

• ***Intelligent energy management in the Provence-Alpes-Côte d'Azur region***

Carolina Tranchita, Project Manager, European Institute for Energy Research (EIFER), Germany

16:00 - 17:30 – Rokokosaal

Session B2 – Encouraging framework to support deployment – “Smart grids in practice”

How can smart grids be developed on a regional and local level and support the efficient use of renewable energy? This workshop will explore first answers from model projects that have been implemented. Achievements as well as obstacles are issues that need further exploration. Topics will range from technical to financial and strategic challenges.

Facilitator: Wolfgang Teubner, Managing Director, ICLEI European Secretariat

Speakers: • ***Smart grids model region Salzburg***

Norbert Dorfinger, Project Manager, Business Field Grids & District Heating Department, Salzburg AG, Austria

• ***The role of a rural region in the future energy system – Results from the Renewable Model Region Harz***

Britta Zimmermann, Research Associate, Fraunhofer Institute for Wind Energy System Technology (Fraunhofer IWES), Germany

• ***The green industrial municipality “Smart City Kalundborg”***

Claus S. Madsen, Vice President, Planning, Development and Business, Municipality of Kalundborg, Denmark

**Starting at 18:00: Evening reception
hosted by the City of Freiburg**

The City of Freiburg has the pleasure to invite all participants to a cocktail reception held in the Kaisersaal. Welcome by Dr. Dieter Wörner, Director of the Environmental Protection Agency of the City of Freiburg.

Friday, 26 October 2012

Morning

09:00 - 10:30 – Kaisersaal

Plenary 3: Support mechanisms for financing smart grids

The development of smart grids is currently still in an exploratory stage and mainly based on model projects supported by public funds. For this purpose, cutting-edge technology is needed as much as a strong relationship between R & D, technology providers, implementing agents and institutions. What are the current approaches to funding the development of smart grids and what are the financial and market perspectives for the next decade? Is it possible to get citizens and users involved too?

Facilitator: Wolfgang Teubner, Managing Director, ICLEI European Secretariat

- Speakers:**
- **Financing priorities in the perspective of the European Energy Strategy**
Jana Viktoria Nysten, Policy Advisor, European Renewable Energies Federation (EREF)
 - **Using the EIB ELENA programme for the development of smart grids**
Ilias Efthymiopoulos, General Director, Aegean Energy Agency, Greece
 - **Local renewables enabled by local energy markets**
Clive Tomlinson, Managing Director, Net Trajectory Ltd, United Kingdom

10:30 - 11:00 Coffee break

11:00 - 12:30 – Kaisersaal

Plenary 4: Rolling out smart grids as part of the green local economy agenda – finding viable investment options

The expansion of decentralised regional energy production from renewable sources represents a high potential to contribute to the local economy and to generate income through participatory investment models. Ultimately, increasing production and use of renewable energy will depend on an improved distribution network and storage capacity managed through smart grids at the same time. Altogether such concepts for regional energy production can build up a strong pillar of a local green economy. This session will explore how the investments in such regional value chains can be triggered and managed.

Facilitator: Monika Zimmermann, Director Capacity Center, ICLEI World Secretariat

Introduction: Building to Grid – The potential of architecture for smart grids

Rolf C. Buschmann, Managing Director, EnEd GmbH – Clean Energy Solutions, Germany

E-Energy Project Model City Mannheim

Robert Thomann, Innovation Manager, Corporate Department Technology & Innovation, MVV Energie AG, Germany

- Panellists:**
- Robert Thomann, Innovation Manager, Corporate Department Technology & Innovation, MVV Energie AG, Germany
 - Rolf C. Buschmann, Managing Director, EnEd GmbH – Clean Energy Solutions, Germany
 - Sven Stremke, Assistant Professor, Landscape Architecture, Wageningen University, The Netherlands
 - Ilias Efthymiopoulos, General Director, Aegean Energy Agency, Greece

Friday, 26 October 2012

Afternoon

12:30 - 13:00 – Kaisersaal

Plenary 5 – Closing plenary

The closing plenary will give an overview of the topics discussed during the conference. It will focus on the needs of local governments and other key stakeholders involved to move forward in the roll-out of smart grids. To conclude the conference organisers and the host city bid farewell to participants.

Speaker: Rian van Staden, Principal & Senior Consultant, Intelligent Renewable Energy, Germany

13:00 - 14:30 Lunch break

14:30 - 16:30

Study tours

All participants are invited to join the study tours showcasing interesting and innovative sustainable energy solutions in practice – renewable energy, energy efficiency and sustainable buildings and districts in the Green City of Freiburg. All study tours will depart from the conference venue. Participants will travel by tram. During the study tours luggage can be stored at the conference venue.



Sun, wind, water, wood: Freiburg's renewable energy mix at a glance

Find out where the local renewable energy sources are located, using a tram and walking tour to the eastern districts of Freiburg and the beautiful Dreisam valley. Learn more about how the forest provides tons of wood, changed into chips for the co-generation power plant. See how wind turbines generate energy on windy days. Observe one of the 35 micro-hydro power plants of the region. Use the opportunity to climb onto the roof of the first German "solar stadium" and learn about the sustainability policy of the local football team SC Freiburg.

Guide: Aiforia



Redevelopment of the neighbourhood Weingarten, Freiburg

Explore the district of Weingarten, a multi-cultural area that faces challenges as an economically disadvantaged area. During the tour you will have the chance to explore how urban redevelopment is a key aspect of the revitalisation of the area. Observe Freiburg's refurbished high-rise in Bugginger Straße 50, a unique example of passive house standard applied to a multi-family building. Learn about modern techniques that create a feeling of environmental responsibility among inhabitants, and find ways to improve residential areas and public space.

Guide: Innovation Academy e.V.



Wann ist ein Geldinstitut gut für die Regio?

Wenn es Initiativen ergreift und unterstützt, von denen auch die Umwelt profitiert.

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Freiburg-Nördlicher Breisgau

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NEIGHBOURHOOD



FORESIGHT

Ensuring quality of life today or looking to the future is a big question for many energy providers. For others, it's a big plus.

How can public living spaces guarantee quality of life for several people while ensuring sustainability? This is just one of many questions which has recently been answered e. g. in Frankfurt: by working together as part of the Thüga Group's public utility network, municipal companies such as Mainova AG are in a position to be able to guarantee energy and water supplies over the long term. Independent, perfectly tailored to the market and future-oriented – the big plus for a total of now 450 cities with over 8 million people. More information at [thuega.de](https://www.thuega.de)


The big plus for everyone

Frankfurt am Main: Quality of life for 680,000 residents in the form of natural gas, electricity, heat and water – provided by Mainova AG, part of the strong Thüga Group.

Useful information:

Registration and information desk

The registration desk is located in the foyer on the 1st floor of the Historisches Kaufhaus. It will also serve as info point.

Registration desk opening time:

- Thursday, 25 October 2012: from 8:45 to 18:00
- Friday, 26 October 2012: from 8:30 to 14:30

Conference venue: Historisches Kaufhaus

The Historisches Kaufhaus, a landmark representative of the local history, is situated in the heart of Freiburg's old town. Each room of this impressive building boasts its own unique character.

For more information, visit:

www.historischeskaufhaus.freiburg.de

Address:

Historisches Kaufhaus Freiburg
Münsterplatz 24, Freiburg, Germany
Closest tram stop:
Bertoldsbrunnen (tram lines 1-2-3-5)

Local Renewables Freiburg 2012 – A sustainable event

The objective of making an event sustainable is to minimise its negative environmental and social impact, while increasing the awareness of how important sustainability is among participants and other stakeholders, and ensure that a positive sustainable legacy remains.

The organising team of the Local Renewables Freiburg 2012 Conference has applied sustainable criteria in every aspect of the conference to minimise negative environmental and social impacts generated by this event, both during its preparation and implementation. The actions taken focused on reducing the consumption of resources and greenhouse gas (GHG) emissions whenever possible.

Some measures taken include: reducing the amount of print products before and at the event in favour of electronic communication; using mostly 100 percent recycled and totally chlorine free (TCF) paper for printed material; implementing waste reduction and recycling measures at the venue; encouraging the use of public transport; preferring local and biological products for catering and selecting a centrally located venue that is easily accessible.



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Sponsor

Conference secretariat

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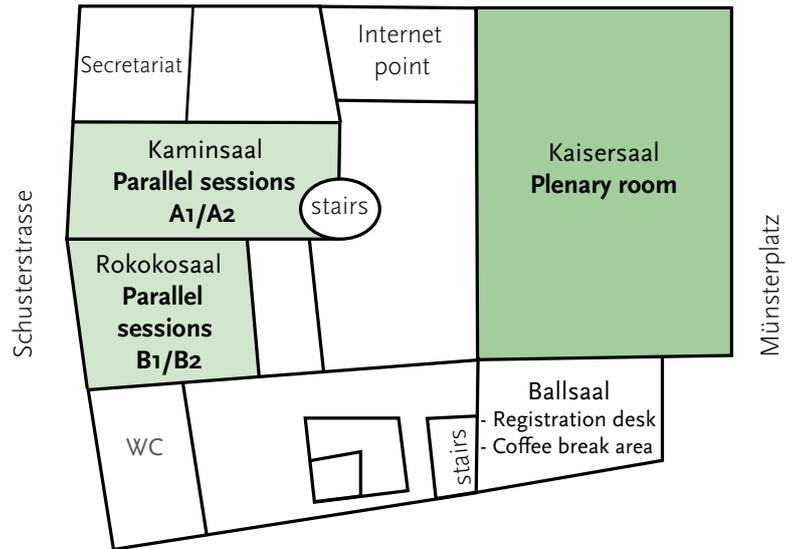
Conference venue

Historisches Kaufhaus

Münsterplatz 24
79098 Freiburg, Germany
Closest tram stop:
Bertoldsbrunnen (tram lines 1-2-3-5)

Conference secretariat at the venue

Historisches Kaufhaus, 1st floor
Mobile: +49 (0)171 834 78 07 (only on 25-26 October)



Organisers



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www.local-renewables-conference.org/freiburg2012