

LOCAL RENEWABLES CONFERENCE 2016

ENERGISING THE SMART CITY AND REGION

26-28 October 2016, Freiburg and Basel



Kanton Basel-Stadt



CONFERENCE PROGRAMME



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www.local-renewables-conference.org

WELCOME TO LOCAL RENEWABLES 2016

City of Freiburg

Welcome to the 7th Local Renewables Conference in Freiburg. We are happy to host this conference, with the City of Basel, in an effort to find solutions that take us further along the road towards more sustainable cities and regions. It is a significant and hopeful sign that more than 72 countries have ratified the Paris Agreement; this signifies a global commitment to actively fight climate change. This ratification has provided a new boost to sustainable concepts coming from the local and regional level, as well as to the promotion of renewable energies. Exchange between high-ranking experts from around the world at Local Renewables creates a solid foundation for learning from innovative sustainability concepts in cities and regions, and discussing new paths for global sustainability strategies.

On behalf of the City of Freiburg I would like to thank all organisers, speakers, partners and sponsors who created this platform that allows forward-looking strategies. I would like to thank all participants for joining us and I wish you fruitful discussions and a nice stay in Freiburg.

Dr. Dieter Salomon

Lord Mayor of the City of Freiburg



City of Basel

Far beyond the regional borders Basel is well known for its museums, for the pharmaceutical industry, the carnival, the zoo and the big trade fairs like "Art Basel" and "Basel World". Besides these highlights Basel is also proud of its ambitious energy policy. Therefore, we are very happy to welcome the participants of the 7th Local Renewables Conference in Basel this year to show them some of the most recent and innovative projects of our local energy policy.

Thank you for visiting us. On behalf of the Executive Council I wish you an inspiring study tour and a nice stay in Basel.

Christoph Brutschin

Member of the Executive Council of the Canton of Basel-Stadt
Head of Department of Economic, Social and Environmental Affairs



ICLEI – Local Governments for Sustainability

On behalf of ICLEI – Local Governments for Sustainability I am proud to welcome our international guests to the 7th Local Renewables Conference together with our hosts, Green City Freiburg and the City of Basel. We are particularly pleased that with the involvement of Basel we, for the first time, have a cross-border hosting arrangement that underlines the regional and international dimension of the issue that we have to address – the transition to a 100% renewable energy society.

Digitalisation and smart infrastructures today are seen as key drivers of economic development and growth, but we must ensure that they work in support of a decentralised transition towards renewable energy and the decarbonisation of our energy system. It is equally important that economic returns go towards benefitting cities and regions, as well as their citizens.

I look forward to learning from good examples, and getting inspired by new perspectives and ideas to continue on this path together with you at Local Renewables 2016.

Wolfgang Teubner

Regional Director Europe
ICLEI – Local Governments for Sustainability



LOCAL RENEWABLES 2016: Energising the smart city and region

The global energy needs are set to increase 40% by 2030. In response, the EU Energy Union recognises the importance of putting cities and regions central in making energy more secure, affordable and sustainable. European cities are searching for innovative ways of meeting the energy demands, whilst responding to citizen needs. Smart technologies are increasingly considered as appropriate solutions to improve citizens' life quality and respond to the EU climate and energy ambitions.

Energy provision and usage are core elements in the quest for a smart city. But the question arises whether a smart city can also be a sustainable city.

- What role can, and should, smart technologies play in the search for improved energy efficiency and quality of life in a city?
- What are the opportunities and limitations of new technologies for urban energy transformation?
- What is the role of social innovation and citizen engagement?

10 years advancing the agenda of renewable energy in cities

Since 2007, the Local Renewables Conference Series has been the international hub for advancing the agenda in renewable energy among policy-makers from various levels of government, energy experts, energy services providers, procurers, researchers and business representatives.

2007

Local Action
for secure and
sustainable energy
in Europe

2009

Urban Policy
and
Public Planning

2010

Sustainable
Mobility

2011

Green
Buildings

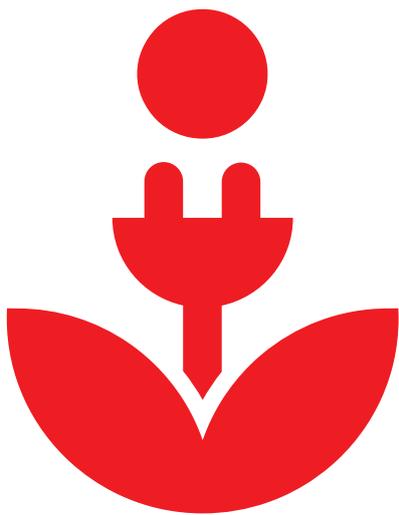
2012

Smart Grids
and
Smart Solutions

2014

Regional
Development
through
Energy Transition

Natur genießen ist einfach.



Sponsor

[sparkasse-freiburg.de](https://www.sparkasse-freiburg.de)

Wenn man einen Finanzpartner hat, der sich auch für die Umwelt engagiert. Wir setzen uns für Projekte zu erneuerbaren Energien und Klimaschutz in ganz Deutschland ein.

Sprechen Sie uns darauf an.

Wenn's um Geld geht



ORGANISERS

City of Freiburg & Green City Freiburg



It is with some justification that Freiburg regards itself as one of the birthplaces of the environmental movement. Freiburg's sustainability process began as far back as the 1970s with the successful action against the Wyhl nuclear power plant, one of the founding myths of the alternative-green movement. This was then continued by socio-civic initiatives that formed part of the "Local Agenda 21" process and the signing of the Aalborg Commitments, as well as the associated sustainability targets set by the Freiburg Sustainability Council and adopted by the Municipal Council in 2009, which form the basis for any political action.

The Sustainability Management Unit was set up at the start of 2011 as a coordination and central control office, to systematically develop the green profile of the City of Freiburg for the future. A wealth of projects and the innumerable activities and initiatives that help to implement Freiburg's sustainability targets, attest to the city's comprehensive commitment to sustainable development. For its commitment, the city of Freiburg was honoured with the German Sustainability Award in 2012, presented for the first time to towns and municipalities, as the most sustainable city in Germany.

Freiburg is regarded today as a model for the reconciliation of "soft" ecology and "hard" economics. Environmental policy, solar technology, sustainability and climate protection have become the drivers of economic and political growth along with urban development. And yet, what matters even more than prizes and global back-slapping, is the fact that the people of Freiburg identify strongly with this policy and their city.

City of Basel



Kanton Basel-Stadt

The charming City of Basel lies where the Rhine, one of Europe's most important waterways, bends north and flows out of Switzerland towards the North Sea. This exceptional location at the heart of the three-country-triangle that joins Germany, France and Switzerland is what lends Basel its openness, economic strength and cultural diversity. The focus here is mainly on transport and planning, education, energy and environment, the economy and culture.

As an Energy City, Basel received the European Energy Award®GOLD for the first time in 2006 and was able to improve by additional percentage points at the recertification in both 2010 and 2014. The aim of the Energy City label is to make measurable and visible how municipalities and cities use their scope for action to boost energy efficiency and to promote the development of renewable energy as well as environmentally friendly mobility. Basel is a certified "city on its way to the 2,000-Watt Society". The Canton of Basel-Stadt was honoured with this new label by the Swiss Federal Office of Energy on 1st October 2014, for its ambitious energy policy.

ICLEI – Local Governments for Sustainability – a global network



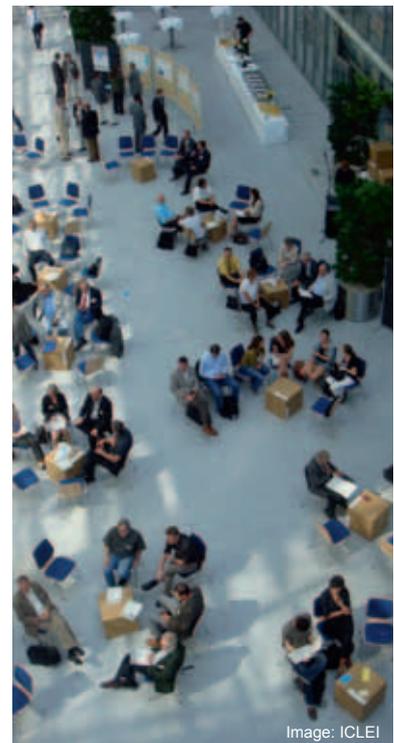
ICLEI, founded in 1990 as the International Council for Local Environmental Initiatives, is the world's leading network of over 1,500 cities, towns and metropolises committed to building a sustainable future.

ICLEI believes that local governments are best placed to overcome environmental, social and economic challenges and achieve a transformation to sustainability and an improved quality of life for their citizens. ICLEI supports its members to find sustainable solutions by creating a movement of peers driving positive change on a European and global scale through projects, initiatives, and programmes. ICLEI champions the role of local and regional governments at international level by raising their concerns within the European and global policy arena.

The ICLEI European Secretariat, based in Freiburg (Germany) and Brussels (Belgium), supports members across 35 countries in Europe, Northern Africa, the Middle East and West Asia. ICLEI is involved in EU policy processes for urban sustainability, working together with European networks, the European Commission, the Committee of the Regions, and many other organisations advancing sustainability.

PROGRAMME OVERVIEW

Wednesday 26 October	Thursday 27 October	Friday 28 October
9:00 – 10:00 Registration	9:00 – 9:30 Registration	9:00 – 9:30 Registration
10:00 – 11:30 Japan Forum	9:30 – 11:00 Plenary 2	9:30 – 11:00 Plenary 3
12:00 – 13:00 Lunch	11:00 – 11:30 Coffee Break	11:00 – 11:30 Coffee Break
13:00 – 13:20 Welcome	11:30 – 13:00 Breakout Sessions 1	11:30 – 12:30 Plenary 4
13:20 – 14:30 Plenary 1	13:00 – 14:30 Lunch	12:30 – 13:00 Plenary 5
14:30 – 18:00 Study Tour in Basel	14:30 – 16:00 Breakout Sessions 2	13:00 – 14:30 Farewell Lunch
18:30 Welcome Reception in Basel	16:00 – 18:00 Study Tours in Freiburg	
	19:00 Cocktail Reception in Freiburg	



Let's start by organising a sustainable conference

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

The organising team of the Local Renewables Conference 2016 has applied sustainability criteria both during its preparation and implementation. The actions taken focused on reducing the consumption of resources and greenhouse gas (GHG) emissions.

Some measures taken include: reducing the amount of print products before and at the event in favour of electronic communication; using mostly 100 % 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 regional and organic products for catering, and selecting a centrally located venue that is easily accessible.

9:00 – 10:00 Registration

10:00 – 11:30 Japan Forum

(HISTORISCHES KAUFHAUS, 1ST FLOOR, KAISERSAAL)

Japan after Fukushima, perspectives for a transition to renewable energy - which lessons could be learned from Europe?

Speakers:

Eri Nakajima – Vice Governor, Nagano Prefecture, Japan

Takanori Hoda – Chief, Energy Policy Section, Environmental Department, City of Odawara, Japan

Tatsushi Isoe – President, Miyama Smart Energy Co. Ltd., Japan

Akio Nishiizumi – Vice-Mayor, City of Matsuyama, Japan

Facilitator: **Monika Zimmermann** – Deputy Secretary General, ICLEI Global

12:00 – 13:00 Lunch

13:00 – 13:20 Welcome

(HISTORISCHES KAUFHAUS, 1ST FLOOR, KAISERSAAL)

Dr. Dieter Salomon – Lord Mayor, City of Freiburg, Germany

Akio Nishiizumi – Vice-Mayor, City of Matsuyama, Japan

13:20 – 14:30 Plenary 1

(HISTORISCHES KAUFHAUS, 1ST FLOOR, KAISERSAAL)

Smart infrastructures: opportunities and risks for local renewable energy?

Smart technologies that seek to integrate urban infrastructures, buildings and vehicles based on ICT solutions are increasingly considered appropriate solutions both to improve citizens' quality of life and implement the EU climate and energy goals. This plenary session will provide insight into the implementation of smart technologies in Europe in the field of energy generation, distribution and storage.

The plenary will reflect on questions such as:

- What do smart technologies entail?
- What can we expect smart solutions to deliver?
- Can renewables be effectively promoted by smart solutions?
- What are the limitations and risks of smart technologies?

Panellists:

Holger Robrecht – Deputy Regional Director, ICLEI Europe

Prof. Dirk Helbing – ETH Zürich, Switzerland, A Digital Manifesto

Guillermo Amann – Vice-President, T&D Europe

Facilitator: **Florian Lennert** – Director, Intelligent City Forum

WEDNESDAY 26 October 2016

14:30 – 18:00 Study Tour in the City of Basel

THE BUS TRANSFER OF PARTICIPANTS TO BASEL WILL BE ORGANISED BY THE CONFERENCE TEAM

The Gundeldingerfeld is a former industrial site that has undergone a sustainable transformation. The site is located in the residential and commercial district of Gundeldingen, which lies within walking distance from Basel's main train station. A variety of Gundeldingerfeld's features will be on display during the tour, including:

- The integration of the existing structures
- Repurposing of the site for different uses (office space, kitchens, recreational spaces)
- Social networking
- A colourful solar facade with "Second Life" storage in a former coal silo (a project as part of the "2000-Watt Society - Pilot Region Basel"; the project is accompanied by a study from the University of Applied Sciences and Arts Northwestern Switzerland)



Images: Gundeldingerfeld

18:30 – 20:30 Welcome Reception in the City of Basel
(GUNDELDINGERFELD)

The City of Basel invites all participants to a Welcome Reception at Blindkuh Basel. A restaurant that fosters dialogue between sighted people and those with visual impairments, and opens up new perspectives for young and old alike. Blindkuh is one of the largest private-sector employers for people with impaired vision. Welcome by **Christoph Brutschin**, Member of the Executive Council of the Canton of Basel-Stadt and Head of Department of Economic, Social and Environmental Affairs.

Blindkuh Basel
Gundeldingerfeld
Dornacherstrasse 192
Basel

THE BUS TRANSFER OF PARTICIPANTS TO FREIBURG WILL BE ORGANISED BY THE CONFERENCE TEAM

THURSDAY 27 October 2016

9:00 – 9:30 Registration

9:30 – 11:00 Plenary 2

(HISTORISCHES KAUFHAUS, 1ST FLOOR, KAISERSAAL)

Smart EU: Smart cities and 100% Renewable Energy in the EU Energy Union

The European Energy Union aims to ensure that Europe has access to secure, affordable and climate-friendly energy. Wiser energy use while fighting climate change is considered both a spur for new jobs and growth and an investment in Europe's future. This plenary will explore the role of cities and, more specifically, local renewable energy in the EU Energy Union from a policy standpoint.

Panellists:

Stefan Dörig – Counsellor, Policy on Energy, Galileo, Mission of Switzerland to the European Union

Antonella Battaglini – Chief Executive Officer, Renewables Grid Initiative

Claire Roumet – Executive Director, Energy Cities

Manon Dufour – Head of Office, E3G Brussels Office

Facilitator: **Wolfgang Teubner** – Regional Director Europe, ICLEI Europe

11:00 – 11:30 Coffee Break

11:30 – 13:00 Breakout Sessions Round 1

A1 – Pathways and practice towards decarbonising the heating and cooling sectors
(HISTORISCHES KAUFHAUS, 1ST FLOOR, ROKOKOSAAL)

Local district heating and cooling networks play a decisive role to deliver on all the EU overarching energy and climate objectives such as contributing towards 80-95% greenhouse gas emission reduction targets by 2050 and at least 27% renewable energy by 2030. To achieve these goals, significant investments need to be made in new low-carbon technologies, renewable energy, energy efficiency and grid infrastructure. For the next 30 years cities and companies need to develop clear strategies and roadmaps in order not to lock their capital in carbon intensive infrastructure. Currently, Europe has more excess heat as demanded by its entire building stock. Capacity, tools and services are required to speed up integrated network development, reduce planning, implementation and operation costs, and improve network efficiency. This session is designed to outline options and insights for cities, utilities and energy companies.

Speakers:

Dr. Rainer Elsland – Research Associate, Fraunhofer ISI, Karlsruhe, Germany

Thomas Nowak – Secretary General, European Heat Pump Association (EHPA), Belgium

Morten Hofmeister – Project Manager, PlanEnergi, Denmark

Sofia Lettenbichler – Project Officer, Euroheat & Power

Facilitator: **Carsten Rothballer** – Coordinator, ICLEI Europe



THURSDAY 27 October 2016

11:30 – 13:00 Breakout Sessions Round 1

B1 – Constructing a sustainable future through the built environment
(HISTORISCHES KAUFHAUS, 1ST FLOOR, KAMINSAAL)

Buildings are responsible for 40% of energy consumption and 36% of CO₂ emissions in the EU. Investments in retrofitting of dwellings, especially in the residential sector, need to be scaled-up in order to achieve the EU Climate and Energy 2030 goals. An integrated vision, and concerted actions by all relevant stakeholders (public sector, research, industry, financial institutions, property owners, social housing, etc.) is necessary to put in place actions able to respond successfully to these challenges.

Through this session, participants will gain an insight into the latest developments at European level, including the update of the Energy Performance of Buildings Directive (EPBD), as well as the Energy Union, and will have the opportunity to explore how regulatory frameworks and innovative financing can support the roll-out of the deep-renovation of buildings in Europe. Social impacts and technical solutions will also be explored and discussed in a holistic manner, providing a 360 degree overview of how a sustainable future for buildings in Europe could look like.

Speakers:

Marika Roša – Board Member/ Project Manager, Ekodoma, Latvia

Nicolaie Moldovan – City Manager, City of Alba Iulia, Romania

Annarita Ferrante – Associate Professor, University of Bologna, Italy, ABRACADABRA project

Leandro Madrazo Agudin – Professor, Universitat Ramon Llull, Spain, OPTIMUS project

Facilitator: **Giorgia Rambelli** – Coordinator, ICLEI Europe

13:00 – 14:30 Lunch

14:30 – 16:00 Breakout Sessions Round 2

A2 – Air Quality and Smart Cities
(HISTORISCHES KAUFHAUS, 1ST FLOOR, ROKOKOSAAL)

Citizens and ecosystems are still exposed to air pollution that breach European standards and daily limit values exceed in many cities in 22 of the 28 EU Member States. Air pollution is an environmental, economic and a social problem, but most of all it poses the single largest environmental health risk in Europe today, as being responsible for more than 403,000 premature deaths originating from long-term exposure in Europe. Transport, energy generation, industry, households and waste management all contribute, particularly in urban areas. Smart City concepts and solutions indicate promising pathways to significantly reduce pollutants. New sensing systems, urban plans and business models emerge to enable instant steering and create an integrated, resilient and low-pollutant infrastructure. The session will showcase and share lessons learnt of implementing them from different actors' perspectives.

Speakers:

Alexander Stankiewicz – RheinEnergie AG, Germany

Bjørn Ove Berthelsen – Chief Engineer and Project Manager, City of Trondheim, Norway

Marisa Catalan – Wireless Sensor Networks Research Line Manager, i2CAT Foundation, Spain

Patrick Driscoll – Project Developer, Smart Sustainable Cities, Norwegian University of Science and Technology (NTNU), Norway

Facilitator: **Simon Clement** – Coordinator, ICLEI Europe

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Stop guessing, start measuring.

THURSDAY 27 October 2016

14:30 – 16:00 Breakout Sessions Round 2

B2 – Navigating the local energy transition – About challenges and how to use them constructively (HISTORISCHES KAUFHAUS, 1ST FLOOR, KAMINSAAL)

The European Union has set for itself the targets of a 40% cut in greenhouse gas emissions compared to 1990 levels and at least a 27% share of renewable energy consumption until 2030. Even though this comprehensive energy transition is a challenge for society at large, the decentralised character of renewable energy will lead to new and more sites of energy generation at the local and regional level. However, implementing Renewable Energy Solutions (RES) is not always free of conflict. National regulation, procedural hurdles, opposing local groups, and many more difficulties might challenge the successful implementation of RES projects. Being prepared for that kind of opposition and knowing how to navigate such conflicts is therefore essential for local actors and the energy transition at large.

Speakers:

Prof. Timothy Moss – Integrative Research Institute on Transformations of Human-Environment Systems, Humboldt University Berlin, Germany

Volmar Delheij – Programme Manager, Urban Planning and Infrastructure, Parkstad Limburg, The Netherlands

Anne Schiffer – Energy Campaigner, Friends of the Earth Scotland

Facilitator: **Peter Ulrich** – Officer, ICLEI Europe

16:00 – 18:00 Study Tours in the City of Freiburg

Study Tour 1: The Sustainable Model District of Vauban

Find out about the urban development of this highly ecological district. A former military base that was redeveloped into a new district for 5.000 inhabitants in the 1990s, Vauban is an internationally known model of sustainable urban planning. During this study tour participants will learn more about renewable energy, citizen engagement and energy efficient building design.



Image: Gyuszkó I dreamstime

THURSDAY 27 October 2016

Study Tour 2: Fraunhofer Institute for Solar Energy Systems

The Fraunhofer Institute for Solar Energy Systems ISE is the largest research institute for renewable energies in Europe. Participants will learn about the innovative technologies behind the Energiewende (“Energy transition”), such as photovoltaics, solar thermal energy, energy-efficient building technology, smart grids, electric mobility, energy storage and smart cities.



Images: Fraunhofer ISE

Study Tour 3: Badenova: Developing an innovative combination of heat pumps hydroelectric power and biofuels

Using a combination of heat pumps, hydroelectric generators and wood pellet heating, Badenova WÄRMEPLUS - a subsidiary of Badenova - has developed an innovative and efficient solution for heating and cooling for over 100 apartments and office space. A key aspect of the concept is integrating an existing pond, which can be used both for heating (via a heat pump) and climate-friendly cooling during the summer months. The heat pump is powered by a new hydropower generator in the nearby river as well as rooftop photovoltaic systems. The wood pellet-fired furnace can be turned on to provide extra heat when there is high demand. The energy needs of the eight-building complex are entirely met without the use of fossil fuels, reducing the CO₂ emissions to nearly zero. At 25 tones per year the CO₂ emissions are 90% lower than conventional heating systems, which translates to about 240 tones of CO₂ saved each year.



Images: Badenova

19:00 – 21:00 Welcome Reception in the City of Freiburg (NEUES RATHAUS, 1ST FLOOR, HISTORISCHER RATSSAAL)

The City of Freiburg will offer participants a networking evening reception.
Welcome by **Dr. Dieter Salomon** – Lord Mayor, City of Freiburg.

Neues Rathaus
Rathausplatz 2-4
79098 Freiburg



Image: EWTM/Reach

FRIDAY 28 October 2016

9:00 – 9:30 Registration

9:30 – 11:00 Plenary 3

(HISTORISCHES KAUFHAUS, 1ST FLOOR, KAISERSAAL)

Smart Cities: Governance challenge or business model for local renewables in smart cities

This plenary looks into challenges of governance, privacy and ownership related to local renewables in emerging smart cities. From a city perspective, smart technologies should solve actual challenges that cities and their citizens are facing. But is this always the case in practice? Who pays for the service and who owns the data? Is there a role for local renewable energy projects – especially community-driven ones – in smart cities?

Panellists:

Simone Pflaum – Head of Sustainability Management, City of Freiburg, Germany

Jochen Ehlgötz – Managing Director, Technology Region Karlsruhe, Germany

Prof. Dr.-Ing. Dipl.-Wirtsch.-Ing. Hans Wilhelm Alfen – General Manager, Alfen Consult GmbH

Iker Martínez – Economic Sustainability Engineer, City of Donostia/San Sebastián, Basque Country

Roman Mendle – Smart Cities Program Manager, ICLEI Global

Facilitator: **Shu Zhu** – Regional Director & China Representative, ICLEI East Asia

11:00 – 11:30 Coffee Break

11:30 – 12:30 Plenary 4

(HISTORISCHES KAUFHAUS, 1ST FLOOR, KAISERSAAL)

Smart Cities: Energy for driving the urban transition?

To effectively perform the long-term ambition of a decarbonised economy, cities will need to start transforming to 100% renewables-based. Some programmes for large-scale transformation actions have started. Yet, experiences are limited. The panel will debate the potential and risks of smart city strategies for urban transformation, with a view to both city and global level.

Panellists:

Klaus von Zahn – Head of Environment Office, City of Freiburg, Germany

Niko Kynnäräinen – Director of Business Development and CEO, Turku Science Park, Finland

Peter Tramberend – Representative of ETC/ULS Environment Agency Austria

Eugenio Leanza, Head of Division, JESSICA and Investment Funds, European Investment Bank (EIB)

Facilitator: **Wolfgang Teubner** – Regional Director for Europe, ICLEI Europe

12:30 – 13:00 Plenary 5

(HISTORISCHES KAUFHAUS, 1ST FLOOR, KAISERSAAL)

Summary and outlook

13:00 – 14:30 Farewell Lunch

USEFUL INFORMATION



CONFERENCE VENUE

HISTORISCHES KAUFHAUS

Address

Münsterplatz 24
79098 Freiburg im Breisgau
Germany

Conference Secretariat: 1st floor
Registration: 26-28 October
09:00 – 09:30 – 1st floor



STAY TUNED!

Don't miss any news during the conference. For latest programme updates, presentations and pictures visit our website:

www.local-renewables-conference.org



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WiFi access will be available for the Local Renewables Conference participants (login details will be provided at the conference).

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