



# URBAN TRANSFORMATION TO A CIRCULAR ECONOMY

**LOCAL RENEWABLES 2018**

24-26 October 2018, Freiburg and Basel



**CONFERENCE PROGRAMME**



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## WELCOME TO LOCAL RENEWABLES 2018

### City of Freiburg

Welcome to the 9th Local Renewables Conference in Freiburg. We are happy to host this conference, together with the City of Basel and ICLEI, in an effort to find solutions that take us further along the road towards more sustainable cities and regions.

Climate change continues unabated. Global greenhouse gas emissions are increasing year on year, even though the facts are known, and despite international accords such as the Paris Agreement. While local politics cannot replace measures and strategies on the international and national levels, they can bring about important and correct decisions in their own respect. The promotion of renewable energy and the sensible use of resources are essential to reach the goal of climate-friendly cities and climate neutrality. Exchange among 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 the participants for joining us, and I wish you fruitful discussions and a pleasant stay in Freiburg. Welcome!

### City of Basel

Compared with other cantons of Switzerland, the Canton of Basel-Stadt is holding a top position in one special domain: with 5250 inhabitants per square kilometer the population density of Basel is by far the highest in Switzerland. In comparison, Geneva is counting 2000 inhabitants per square kilometer, Zurich 900 and many other regions far below 300.

Therefore, it's evident, we do have a lack of space in Basel. But this challenge is pushing invention. On your study tour to the district of Erlenmatt you will learn, how we try to cope with this issue by converting a former freight yard into an area of sustainable urban development.

On behalf of the Executive Council I wish you an inspiring study tour. Thank you for visiting Basel.

### ICLEI – Local Governments for Sustainability

Together with our hosts, the Green City of Freiburg and the City of Basel, ICLEI – Local Governments for Sustainability is proud to welcome our international guests to the 9th Local Renewables Conference. This marks the second time Local Renewables is hosted 'cross-border', and we are particularly pleased to continue this arrangement in view of regional ambitions for a transition to 100% renewable energy.

Renewable energy is a key element in the transformation to a circular economy in cities and regions. Energy recovery, for example, can be an ideal starting point for a wider circular perspective, particularly in energy intensive sectors such as heating and cooling. Energy recovery also comprises a strategy towards limiting the input of virgin materials and also upcycling materials – thus decreasing environmental pressures locally and globally.

I look forward to engaging in discussions with representatives of cities, researchers and other stakeholders, and being inspired by innovative ideas and success stories from Europe and beyond.



**Martin W.W. Horn**  
Lord Mayor of the City  
of Freiburg



Image: Daniel Infanger

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



**Wolfgang Teubner**  
Regional Director Europe  
ICLEI – Local Governments  
for Sustainability

## LOCAL RENEWABLES 2018:

### URBAN TRANSFORMATION TO A CIRCULAR ECONOMY

Rising global material and energy needs remain a major challenge, with cities and regions being central players in making energy more secure, clean and sustainable. To transform from a linear to a circular economy there is a growing need to take advantage of renewable resources, including energy.

Local Renewables 2018 highlights renewable energy as a key element of the successful transformation to a circular economy in cities and regions.

- What role does renewable energy play in a circular economy?
- How can cities manage the transformation from a linear to a circular economy?
- What is the role of sector integration?
- What investments are needed and what are the financing options?
- How can relevant stakeholders, such as citizens, public authorities and the private sector be engaged?

### A SUSTAINABLE CONFERENCE

As a sustainable event, Local Renewables aims to minimise its negative environmental and social impact, while increasing the awareness about the importance of sustainability.

Measures taken include: Reducing the amount of print products before and at the event; using mostly 100% recycled and chlorine free (TCF) paper; implementing waste reduction and recycling measures; offering regional and organic products for catering and selecting a central venue that is easily accessible by foot or public transport.

### ADVANCING THE AGENDA OF RENEWABLE ENERGY IN CITIES SINCE 2007



## PROGRAMME OVERVIEW

### Wednesday 24 October

12:00 - 13:00  
Registration and Lunch

13:00 - 13:20  
Welcome

13:20 - 14:30  
Plenary 1

14:30 - 18:00  
Study Tour in Basel

18:30 - 21:00  
Welcome Reception  
in Basel

### Thursday 25 October

9:00 - 9:30  
Welcome Coffee

9:30 - 11:00  
Plenary 2

11:00 - 11:30  
Coffee Break

11:30 - 13:00  
Breakout Sessions 1

13:00 - 14:30  
Lunch

14:30 - 16:00  
Breakout Sessions 2

16:00 - 18:30  
Study Tours in Freiburg

19:30  
Welcome Reception  
in Freiburg

### Friday 26 October

8:45 - 9:15  
Welcome Coffee

9:15 - 11:00  
Plenary 3

11:00 - 11:30  
Coffee Break

11:30 - 12:30  
Plenary 4

12:30 - 13:00  
Plenary 5

13:00 - 14:30  
Farewell  
Lunch

### Main venue

The main conference venue is:

#### Historisches Kaufhaus in Freiburg

Münsterplatz 24  
79098 Freiburg im Breisgau,  
Germany

For details on the reception in  
Freiburg, see page 9.



Image: FWTMI/Raach

**12:00 – 13:00 Registration and Lunch** HISTORISCHES KAUFHAUS, FREIBURG

**13:00 – 13:20 Welcome**

**Martin Horn** – Lord Mayor of the City of Freiburg

**Wolfgang Teubner** – ICLEI Regional Director for Europe

**13:20 – 14:30 Plenary 1**

**Renewable Energy: a driver for circular economy**

While renewable energy has been a major topic on the global environmental agenda for decades, circular economy, although in principle not new, is an emerging concept that aims at keeping products and materials at their maximum utility for as long as possible. This not only means reducing input of virgin materials and decreasing associated environmental pressures, but also maintaining if not broadening nature-based services. Local energy use and circular economy are intertwined in the sense that the energy use of materials will sustain the highly complex and increased up- and recycling processes. This session discusses the importance of decarbonisation of the energy system through local renewables for the circular economy.

Panellists:

**Dr. Anna Petit-Boix** – Postdoctoral Researcher, Chair of Societal Transition and Circular Economy, Circulus Project

**Matthias Nabholz** – Director of the Office for Environment and Energy of the City of Basel, Switzerland

**Dr. Sébastien Vanneste** – Business Developer, Central CLC Innovation Hub of EIT RawMaterials

**Catarina Freitas** – Head of Department for Environment, Climate, Energy and Mobility, City of Almada, Portugal

Facilitator: **Holger Robrecht** – Deputy Regional Director, ICLEI Europe

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

BUS TRANSFER TO BASEL WILL BE PROVIDED BY THE CONFERENCE AT 14:30  
START OF THE TOUR IN BASEL AT 15:30

**Visit to the sustainable urban development area Erlenmatt:**

One of the last construction land reserves in the densely populated area of Basel, a former freight yard is being turned into a sustainable and energy efficient community since 1998. The area includes 1.400 apartments, offices and business areas, over 5 ha of green spaces as well as a school and kindergarten. Erlenmatt West is the first area to be realised according to the standards of the 2000 Watt Society of Switzerland.



**18:30 – 21:00 Welcome Reception in the City of Basel**

**Senevita Erlenmatt**, Erlenmattstrasse 7, Basel

BUS TRANSFER BACK TO FREIBURG WILL BE PROVIDED BY THE CONFERENCE

**9:00 – 9:30 Welcome Coffee and Registration** HISTORISCHES KAUFHAUS, FREIBURG

**9:30 – 11:00 Plenary 2**

**Sector integration as a requirement for a circular economy - how does it work?**

In an urban context, moving towards a circular economy entails challenges and opportunities for sectors such as mobility, housing, nutrition, digital infrastructure, but also more generally, for technology development, urban land use management, environmental justice and social cohesion. Integrating different sectors with high energy consumption carries a lot of advantages. For instance, excess electricity production from wind turbines or solar panels can be used to produce H<sub>2</sub> fuel cells powering mobility in cities.

This plenary discusses, how in order to fully capitalize on these developments, providers and consumers need to be spatially integrated to form synergies rather than being organized based on municipal jurisdictions. Also, the support of international standards for sector integration and innovation in circularity oriented product and service specification will be discussed.

Panellists:

**Dr. Anna Braune** – Director Research and Development, German Sustainable Building Council

**Mario Kliesch** – Asset Management, Quality and Standardization, Westnetz GmbH

**Raffaella Gueze** – Manager, Sustainability, Environment and Energy Department, City of Bologna, Italy

**Katarzyna Szymczak-Pomianowska** – Director, Sustainable Development Department, City of Wroclaw, Poland

Facilitator: **Simon Clement** – Coordinator Sustainable Economy and Procurement, ICLEI Europe

**11:00 – 11:30 Coffee Break**

**11:30 – 13:00 Breakout Sessions Round 1**

**A1 Local and regional level cooperation: adding value to the energy transition**

The challenges posed by climate change and urbanisation cut across sectors and levels of government: from transnational to regional and local. To ensure a sustainable, clean and fair energy transition, cities and regions must work together to develop effective strategies within the scope of circular economy. This session introduces transferable best practices and scalable approaches on how cities and regions can together develop policies and actions to address the shift towards more sustainable energy systems and foster a better quality of life for their communities.

- How can cities and regions work together to manage energy transition and boost local sustainable development?
- What are the roles and competences of different players at the local, regional, national and EU level? How can engagement of communities be ensured?
- What obstacles exist (e.g. legislative and financial) to support the energy transition?

Speakers:

**Ronald Hall**, Principal Advisor, Directorate-General for Regional and Urban Policy, European Commission

**Piotr Nowakowski** – Specialist, KAPE Poland, WinWind Project

**Tiina Vikman** – Senior Specialist, City of Turku, Finland

**Lea Ranalder** – Project Manager, REN21

**Michele Zuin** – Officer, ICLEI Europe, Abracadabra Project

Facilitator: **Giorgia Rambelli** – Coordinator for Sustainable Resources, Climate and Resilience, ICLEI Europe

**11:30 – 13:00 Breakout Sessions Round 1**

**B1 CapaCITIES: A pathway towards low carbon & circular economy**

The session will focus on low carbon and renewable energy initiatives being undertaken in Indian and European cities. The cities will present initiatives aiming to address increasing energy demands on one hand and the need to make energy clean and sustainable on the other, helping to create energy secure cities as well as low carbon pathways. The Indian city cases discussed are part of the CapaCITIES Program supported by the Swiss Agency for Development and Cooperation (SDC), and range from the use of solar photovoltaic systems for common utilities to charging stations for e-rickshaws to waste management. The session will also feature a presentation by South Pole Group on the design of bankable projects and accessing financial mechanisms to implement them.

Speakers:

**Emani Kumar** – Deputy Secretary General, ICLEI – Local Governments for Sustainability

**Chandra Singh Kothari** – Mayor, Udaipur Municipal Corporation, India

**Asok Narayan Bhattacharya** – Mayor, Siliguri Municipal Corporation, India

**Anna Huttunen** – Project Manager, CitiCAP, City of Lahti, Finland

**Hans-Peter Egler** – Director, Public Affairs, South Pole Group

Facilitator: **Mirjam Macchi Howell** – Program Manager, Global Programme Climate Change Environment, Swiss Agency for Development and Cooperation

**13:00 – 14:30 Lunch**

**14:30 – 16:00 Breakout Sessions Round 2**

**A2 THERMOS Inspire: Circular Heating and Cooling**

Heating and cooling in buildings and industry currently accounts for half of the energy consumption in Europe with significant impact on national and local GHG emission rates and public and private budgets. As planners and providers of infrastructure and services, local governments should increasingly implement strategic projects that enable the move to a circular energy generation and consumption model.

The session will focus on key challenges and opportunities local authorities are facing when putting circular energy initiatives to drive low carbon district heating and cooling networks. It will discuss concrete examples from the cities of Granollers (ES), Islington (UK) and Torino (IT) of how waste heat can be included in district energy systems. Participants will be introduced to the THERMOS open-source thermal energy planning software as a practical tool to facilitate the implementation of circular energy supply.

Speakers:

**Joshua Thumin** – Center for Sustainable Energy (CSE)

**Marta Chillida Munguet** – City of Granollers, Spain

**James Wilson** – Islington Council, United Kingdom

**Prof. Massimo Santarelli** – University of Torino, Italy

Facilitator: **Carsten Rothballe** – Coordinator for Sustainable Resources, Climate and Resilience, ICLEI Europe

The session will be complemented by Study Tour 3 to the urban development area 'Gutleutmatten', which has implemented a leading innovative thermal concept.

THERMOS

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 723636.



**14:30 – 16:00 Breakout Sessions Round 2**

**B2 The waste water utility of the future: A key player of the circular city?**

An event of INCOVER (Innovative Eco-Technologies for Resource Recovery from Wastewater).

In this session researchers from the INCOVER project will present their work on innovative technologies for recovering a variety of resources from wastewater. These are, amongst others: recycled water, organic acids, bio-fertilisers, and bio-methane. A panel of municipal representatives and other experts from the public waste water sector will then be asked to provide their opinion on the feasibility of the presented technologies and the application of the products within a circular city context.

Speakers:

**Juan Antonio Alvarez Rodríguez** – Research Strategy Manager on Environment, AIMEN

**Francis Meerburg** – Research Study Responsible in R&D, Aquafin

**Christian Loderer** – Project and Innovation Manager, Kompetenzzentrum Wasser Berlin

**Alexander Wolf** – Project Engineer, Water Treatment Systems, Solarspring

**Andreas Aurich** – Scientist, UFZ-Helmholtz Centre for Environmental Research

**Gerard Pol-Gili** – Project manager, Renewable energies, Eurometropolis of Strasbourg

**Prof. Pedro Antonio García Encina** – Department of Chemical Engineering, University of Valladolid

**Peder Gregersen** – CEO, Center of Recycling

Facilitator: **Barbara Anton** – Coordinator for Sustainable Resources, Climate and Resilience, ICLEI Europe



**16:00 – 18:30 Study Tours in the City of Freiburg**

**Study Tour 1: Green Industry Park**

**Climate protection and energy efficiency in Freiburg's largest industrial area:** As part of the "Green Industry Park Freiburg" initiative, Freiburg's oldest and largest industrial area is being developed since 2014 into an advanced, sustainable, energy- and resource-efficient industrial space to serve as a model for the entire country. This transformation involves the networking of committed companies and individual company solutions, the joint development of innovative projects, as well as the identification and utilization of potential savings, cooperation and optimization in the field of environmental and climate protection. The bus will stop at pharmaceutical company Pfizer, where the sustainable energy concept of the building will be explained.



### Study Tour 2: Former Landfill Eichelbuck

**From waste mountain to energy mountain:** The City of Freiburg and the administrative district of Breisgau-Hochschwarzwald have delivered about 6,5 mil tons of non-recyclable waste to the Eichelbuck landfill between 1972 and 2005. Now the landfill is in a “re-cultivation” phase to be concluded in 2020, and is being transformed into an energy mountain. It provides heating and power to households, and hosts Freiburg’s largest photovoltaic system.



Image:ASF

### Study Tour 3: THERMOS study visit to ‘Gutleutmatten’

Visit to one of Freiburg’s most important urban development projects: ‘Gutleutmatten’. The quarter is to provide homes and infrastructure, including heating and cooling, for 1200-1300 citizens including kindergartens and other community institutions in inner Freiburg’s largest remaining free development area.



Images: Stadt Freiburg

### 19:30 Welcome Reception in the City of Freiburg (NEUES RATHAUS, 1ST FLOOR, HISTORISCHER RATSSAAL)

Neues Rathaus  
Rathausplatz 2-4  
79098 Freiburg



Image: FWTM/ Raach

FRIDAY 26 October 2018

**8:45 – 9:15 Welcome Coffee and Registration** HISTORISCHES KAUFHAUS, FREIBURG

**9:15 – 11:00 Plenary 3**

**Transforming to circular cities – how to finance it?**

Besides the use of new, more participatory tools such as crowd financing and energy performance contracting with multiple shareholders, an equally important question is how to use established European and national financing instruments to create local and regional circular economy loops. This plenary discusses challenges and opportunities of societal and urban transformation and related financing models.

Panellists:

**Dr. Luise Noring** – Research Director, Sustainable Urbanisation Team, Copenhagen Business School

**Peter Hirsch** – Analyst for Energy Efficiency and Climate Change, European Bank for Reconstruction and Development

**Tom Jess** – Senior Researcher, E3G Brussels

**Rohit Sen** – Strategic Cooperation and Business Development Manager, bettervest GmbH

**Mario Lionetti** – Project Adviser, Executive Agency for Small and Medium-sized Enterprises, European Commission

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

**11:00 – 11:30 Coffee Break**

**11:30 – 12:30 Plenary 4**

**Local circular economy contributions to national, EU and global climate targets – what strategies to apply?**

Cities and other sub-national governments are key in executing nationally set targets and contributing to internationally determined goals. They are closest to the management of decentralised energy production and the promotion of a supporting investment climate. Cities are well-placed to connect their circular economy strategies with their commitment to ambitious climate action. This plenary discusses how cities can avoid trade-offs between their circular economy and locally determined contributions or even raise their ambition bars in energy and GHG savings through ambitious and well-designed circular economy projects.

Panellists:

**Catherine Trautmann** – President of the Port of Strasbourg, Vice President of the Eurometropole de Strasbourg, France

**Andrew Cooper** – Member of the European Committee of the Regions, Kirklees Council, United Kingdom

**Elina Rantanen** – Chair of the City Council, City of Turku, Finland

Facilitator: **Monika Zimmermann** – Former ICLEI Deputy Secretary General; Senior Consult

**12:30 – 13:00 Plenary 5**

**Summary and outlook**

Speakers:

**Roman Mendle** – Smart Cities Program Manager, ICLEI

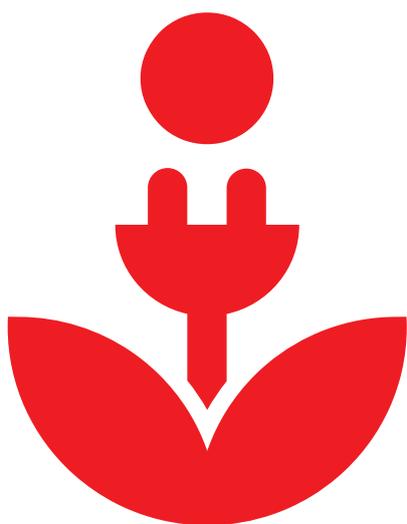
**Monika Zimmermann** – Former ICLEI Deputy Secretary General; Senior Consult

Facilitator: **Holger Robrecht** – Deputy Regional Director, ICLEI Europe

**13:00 – 14:30 Farewell Lunch**

# Natur genießen ist einfach.

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.





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