

LOCAL RENEWABLES FREIBURG 2011

Green Buildings and Renewable Energy:

The Way Forward in Urban Development

Freiburg im Breisgau, Germany, 27-28 October 2011



Final Invitation

www.local-renewables-conference.org/freiburg2011



Local Renewables Freiburg 2011

This event will address some of the most pressing and important issues in the field of urban sustainability – making sustainable buildings and districts a reality: from building design to construction, enhancing user comfort while reducing energy demand, effectively optimising energy efficiency and integrating renewable energy into buildings – with the ultimate aim of improving quality of life.

Themes

- The framework for sustainable construction and urban planning: policy, regulations
- Financing models and mechanisms
- Cool design, hot technologies – sustainable energy for buildings and districts
- Cost-effective renovation solutions for existing building stock
- Possible today: examples of zero emission districts across Europe
- Can it be done? Smart grids, sustainable district heating and cooling
- Exploring challenges in the value chain of energy efficient building

Local Renewables Conference Series

The international conference Local Renewables Freiburg 2011 is part of a series of events that began in Freiburg, Germany in June 2007 with the conference “Powerful local action for secure and sustainable energy in Europe” and was followed by “Urban policy and planning for the post-carbon age” in April 2009 and by “Changing fuels or changing patterns? The role of renewables in sustainable urban mobility” in 2010.

This conference series aims to:

- encourage communities to switch to renewable energy sources – thereby accelerating sustainable development world-wide;
- showcase trend-setting ideas and approaches in reducing energy consumption in cities and towns.

Since 2009 the series has been expanding in two directions: annual conferences held in Freiburg, Germany, and further events organised in other cities around the globe to reach out to as many local actors as possible, such as those held in San Francisco, United States, in July 2009 and 2010, as part of the Intersolar North America conference.

Why attend the conference?

- A great conference programme designed for you – a mix of plenaries, parallel sessions, networking events and study tours!
- Get an update on the latest design approaches, materials and technologies from experts in the field
- Obtain inspiration to explore energy savings potential in buildings, contributing to your community’s CO₂ emissions reduction targets
- Use networking opportunities, make contacts with leading authorities in the built environment and your peers: local decision-makers, city planners, architects, engineers and financial experts, among others
- Exchange experiences and brainstorm on creating a low carbon reality, making your city fit for the future
- Find out more about the Covenant of Mayors and ICLEI Europe’s role in this growing initiative
- Explore options and support offered by the SCI-Network (Sustainable Construction & Innovation through Procurement Network)
- Join inspiring, informative study tours to one of Freiburg’s exemplary districts and successful green buildings



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Why Freiburg?

Freiburg, one of Germany’s most progressive cities in terms of sustainable development, provides the perfect setting for Local Renewables 2011. For many years, Freiburg has always been a step ahead of legal regulations when it comes to energy-efficient buildings.

The city sees green buildings as an area that offers more scope for political action in reducing CO₂ emissions locally than any other sector. That is why Freiburg has set its own benchmarks and made passive house construction mandatory for new building projects. With their highly efficient heating and control systems, passive houses and energy-plus houses have helped the city to radically limit emissions from fossil fuels and to decrease its carbon footprint.

Equally important is Freiburg’s focus on thermal insulation in old buildings. The city’s experience has shown that 1 Euro in subsidies is matched by 7 Euro in private investment in energy efficiency improvements such as new windows and modern heating systems. These investments have been proven to cut down on utility costs and increase the value of a property, while bringing down CO₂ emissions.

The host city of Local Renewables will provide the perfect backdrop to the conference, inspiring participants with powerful evidence that green buildings are not a faraway future vision but rather a realistic possibility for today’s world.

Related events

Study tour: Green districts and sustainable buildings 2 days, 2 cities in 2 countries

This FREE study tour is offered by ICLEI Europe exclusively to local government representatives.

When? 25 – 26 October 2011, 2 full days of energy

What? Tour to Basel and Freiburg. The programme will explore innovative local policy, strategies and local action ideas.

Who? For local political decision-makers and technical municipal staff working on Local Energy Action Plans

Why? Just starting with your municipal (climate / energy / building) Action Plan? Get inspired. Needs ideas for local measures? Want to solve problems? Learn from sustainable energy experts!

Register soon! Limited space available: ICLEI Europe, Giorgia Rambelli - giorgia.rambelli@iclei.org

This study tour takes place within **Covenant capaCITY**, an Intelligent Energy Europe co-funded project, offering training to local governments across Europe. ICLEI Europe reserves the right to approve participation.

The SCI-Network – Sustainable construction and innovation through procurement

The SCI-Network connects European public authorities looking to procure innovative and sustainable solutions within their construction projects.

Five working groups have been established within the network to investigate best practice in different areas:

- Environmental assessment tools
- Innovative technical solutions
- How to encourage innovation in construction procurement
- Life cycle/whole life costing
- Innovative financing and contracting approaches

The Network will hold a meeting on Wednesday 26 October 2011 to discuss draft recommendations prepared by the groups. If you are interested in joining this meeting and contributing to the discussion please contact simon.clement@iclei.org. Space is limited.

To find out more about the network, visit www.sci-network.eu.

Programme

TIME	Thursday 27 October 2011	Friday 28 October 2011
	Registration	
09:00	Plenary 1: Conference opening – Energy and buildings: potential for changing. Policies in support of energy efficient building	
11:00	Plenary 2: Technical solutions, clever design – Energy efficient solutions for new and existing buildings	
13:00	Lunch	
15:00	Session A1: District renovation: economic development and good quality of life Session A2: Renovating historical buildings: where to invest?	Session B1: Driving energy efficiency innovation at all stages of the public construction process Session B2: District heating & cooling: technical solutions Session B3: Cutting-edge implementation in buildings and building systems
17:00	Plenary 4: Future perspectives on energy efficient buildings - challenges in the value chain	
	Plenary 4: Summary and outlook	
19:00	Study visits Vauban Rieselfeld Buggingerstraße	
	Reception Hosted by the City of Freiburg at Rathaus, Historischer Ratssaal	

The latest version of the programme is available at: www.local-renewables-conference.org/freiburg2011/programme



Thursday, 27 October 2011

08:00

REGISTRATION OPENS

09:00 – 10:30

PLENARY 1: CONFERENCE OPENING – ENERGY AND BUILDINGS: POTENTIAL FOR CHANGING POLICIES IN SUPPORT OF ENERGY EFFICIENT BUILDING

Buildings contribute to around 36 percent of the EU's CO₂ emissions, accounting for 40 percent of total primary energy consumption. Improving the energy performance of buildings is key to contributing to the EU climate and energy objectives, namely a 20 percent reduction in greenhouse gas emissions by 2020, a 20 percent increase in energy savings by 2020, and using 20 percent renewable energy by 2020. The opening plenary will examine the political framework for these elements in buildings from a European, national and sub-national perspective – with speakers reviewing the current situation, identifying the options, and solutions and policies needed to accelerate the process, both for new buildings and existing European building stock.

Facilitator: Wolfgang Teubner, Executive Director, ICLEI European Secretariat

Welcome by host city – Otto Neideck, Deputy Mayor, City of Freiburg, Germany

A discussion on the current context, challenges and opportunities related to accelerating the translation of the European Energy Performance of Buildings Directive (EPBD) into national legislation, to help bring about local improvements at a local level.

- **Local perspective** – Otto Neideck, Deputy Mayor, City of Freiburg, Germany
- **State level perspective** – Helmfried Meinel, Secretary General to the Minister of Environment Baden-Württemberg, Germany
- **National perspective** – Christian Stolte, Head of Division for Energy-efficient Buildings, German Energy Agency GmbH (dena) (tbc)

10:30 – 11:00

Coffee break

11:00 – 12:30

PLENARY 2: TECHNICAL SOLUTIONS, CLEVER DESIGN – ENERGY EFFICIENT SOLUTIONS FOR NEW AND EXISTING BUILDINGS

Existing standards and regulations and the latest state-of-the-art of technology in the building sector will be placed under the microscope in this plenary. Bringing together experts from different fields – such as science, planning and business – speakers and participants will explore key technical developments, standards and solutions for clever building design. A number of questions will be addressed, such as, which of these cutting edge technologies can most easily be rolled-out and why are passive house and similar efficiency standards not yet widely applied. How can we engage the interest of local decision-makers in choosing the optimal solutions with regard to energy efficiency?

- **Technical options and design for energy efficiency** – Dr. Afroditi Synnefa, National & Kapodistrian University of Athens, Greece
- **Cutting edge technologies for today and tomorrow** – Sebastian Herkel, Engineer, Fraunhofer Institute for Solar Energy Systems (ISE), Germany
- **Adaptation of real estate to smart grids** – Rolf C. Buschmann, Prof. Aux UCLV, EnED, Solar Info Center GmbH, Germany
- **Current technologies and solutions** – Christoph Conrad, Head of Energy Efficiency and Automation, Siemens

12:30 – 14:00

Lunch



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14:00 – 15:30

PARALLEL
SESSIONS**A1: DISTRICT RENOVATION: ECONOMIC DEVELOPMENT AND GOOD QUALITY OF LIFE**

Existing building stock makes up 75 to 80 percent of European building stock. Only 20 percent of buildings are less than 20 years old. This means old buildings have a vast potential for energy efficiency improvements and reducing electricity and heating bills, as well as a huge potential to reduce emissions. Therefore, increasing energy efficiency in old buildings should be a priority in most cities and towns. This session will present some great examples of how this can be done by refurbishing the building envelope (roof, facades) and integrating renewable technologies. Renovation costs are often not much higher than that of a “normal” renovation, with substantial cuts in energy costs accompanying astute retrofitting.

Facilitator: Maryke van Staden, Project Coordinator, ICLEI European Secretariat

- **Integrating district renovation concepts into the city Climate Action Plan** – Perrine Flouret, Grenoble, France (tbc)
- **Renovating districts efficiently: the planning process** – Kartarina Leopoldova, Head of the Environmental Department, Brno, Czech Republic (tbc)
- Marian Maras, Head of the Office for Energy, Environmental Protection and Sustainable Development, City of Zagreb, Republic of Croatia (tbc)

B1: DRIVING ENERGY EFFICIENCY INNOVATION AT ALL STAGES OF THE PUBLIC CONSTRUCTION PROCESS

Every public construction project - whether a renovation project or a new building - involves a multitude of different public and private actors, with various and complex procurement procedures. The leap from wanting to reach a sustainable outcome to actually achieving one is equally complex. The SCI-Network has been exploring different methods for encouraging innovative, sustainable outcomes within the typical procurement process for construction projects. This session will explore some recommendations. Issues include, how to engage with the private sector before tendering for construction services, how to set up procedures to maximise expert involvement, and how to assess the life-cycle costs of construction in the decision-making process.

Facilitator: Simon Clement, Project Coordinator, ICLEI European Secretariat

- Mathew Galvin, Responsible Procurement Manager, Greater London Authority (GLA)
- **How to procure energy efficient public construction - recommendations for local governments** – Isa-Maria Bergman, Expert Consultant, Motiva Oy
- **Promoting sustainability in the urbanisation of the El Boscarró Nord business and industrial estate** – Joan Estrada i Aliberas, Environment, Landscape and Energy Unit Director, INCASÒL (Catalan Land Institute), Spain

15:30 – 16:00

Coffee break

16:00 – 17:30

PARALLEL
SESSIONS**A2: RENOVATING HISTORICAL BUILDINGS: WHERE TO INVEST?**

Historical buildings can consume a significant amount of energy and in many cases, it is particularly difficult to improve their energy efficiency, due to restrictions protecting monuments and the sensitive building structure. European historic building centers are the hallmark of the continent, drawing countless tourists, yet also have enormous needs in terms of retrofitting. In this session, experts from various European retrofitting projects will discuss the challenge of retrofitting historical buildings and how to do so efficiently while complying with (or creating new) rules and regulations for the conservation of ancient structures.

Facilitator: Dr. Alexandra Troi, Vice Head of the Institute for Renewable Energy, European Academy of Bozen/Bolzano (tbc)

- Dr. Christian Hanus, Zentrum für Bauen und Umwelt Donau Universität, Krems, Austria
- NN, Aberdeen City Council, Scotland, United Kingdom (tbc)
- Francesco Tutino, Energy Specialist, Bologna, Italy (tbc)

B2: DISTRICT HEATING & COOLING: TECHNICAL SOLUTIONS

District heating and cooling by means of efficient systems using renewable energy can play a significant role in the supply of low-carbon energy in Europe. Whether optimising systems by using waste heat and heat recovery or linking to geothermal energy or hydro-power, there are many different solutions to make heating / cooling more efficient. This session will address how to improve the effectiveness of sustainable energy district systems for roll-out, as well as the policies needed to support this and replace non-optimised individual heating concepts.

Facilitator: Sabine Froning, Managing Director, Euroheat & Power

- Peter Odermatt, CEO, Stadswarming Purmerend B.V., Netherlands
- Klaus Preiser, Managing Director, Badenova-Tochter WärmePLUS, Germany
- Johan Saltin, Project Manager Heat and Power, Växjö Energie AB, Sweden

19:00

RECEPTION HOSTED BY THE CITY OF FREIBURG – RATHAUS, HISTORISCHER RATSSAAL

Friday 28 October 2011

09:00 – 10:30

PLENARY 3: INTELLIGENT FINANCING MECHANISMS AND MODELS FOR NEW AND EXISTING BUILDING STOCK

This plenary will examine how to finance the challenge of making European building stock more efficient from two different perspectives. Moving away from a practical perspective, experts from different organisations and institutions will present different financing schemes and models for public, commercial and private retrofitting and building projects. These will then be discussed and compared by the city representatives and participants. The focus will then broaden and speakers will explore whether the current framework conditions can be improved and what needs to be done, from a political perspective, to achieve optimal results.

- William Gillet, Head of Unit, Executive Agency for Competitiveness & Innovation (EACI), European Commission, Belgium
- Michael Geißler, Managing Director, Berliner Energie Agentur (BEA), Germany
- Peter Odermatt, CEO, Stadtsvarming Purmerend B.V., Netherlands
- Zarpana Massud-Baqa, Assistant Vice President, Asset Management - Environmental & Social Capital, Deutsche Bank AG

10:30 – 11:00

Coffee break

11:00 – 12:30

PARALLEL SESSIONS

A3: ZERO EMISSIONS DISTRICTS

Achieving “zero emissions” and optimising energy demand status requires the careful planning and design of buildings, their surrounding districts / zones and also of the city’s overall urban planning concept. This requires the exploration of a low energy building policy, a creative district energy concept, a recycling policy, interconnected mobility concepts, and ways to promote the effective integration and use of local renewable energy sources such as wind, water, solar and geothermal energy. Last but not least, it is essential to focus on promoting behavioural change among users. This session focuses on different city types that are planning / have started implementing a zero emissions district, outlining their achievements, how setbacks were overcome, and future ambitions.

Facilitator: Wolfgang Teubner, Executive Director, ICLEI European Secretariat

- Annette Egetoft, Senior advisor, Environmental Department, Copenhagen, Denmark
- Klaus Hoppe, Head of Energy Department, Freiburg, Germany
- Andreas Koch, Project Manager, European Institute for Energy Research (EIFER)

B3: CUTTING-EDGE IMPLEMENTATION IN BUILDINGS AND BUILDING SYSTEMS

This session will explore cutting-edge technology options in the building sector. What works well and why? Various technologies that increase energy efficiency, measure energy demand and integrate renewable energy sources into buildings will be examined. This includes examples such as smart metering, innovative ventilation and insulating techniques. The main issue up for discussion will be: What is technically possible? What makes sense to implement today? What can those involved in building construction and design plan for over the next 5 to 10 years?

Facilitator: Rian van Staden, Principal Consultant, Intelligent Renewable Energy

- **Twenty years of passive house design: the experiment becomes standard** – Meinhard Hansen, architect, Germany
- **Heat pumps: effective contribution to energy efficiency?** – Marek Miara, Fraunhofer Institut für Solar Energiesysteme, Germany

12:30 – 13:30

Lunch

13:30 – 14:45

PLENARY 4: FUTURE PERSPECTIVES ON ENERGY EFFICIENT BUILDINGS – CHALLENGES IN THE VALUE CHAIN

From conception to completion, the building value chain is extremely complicated. Furthermore, it involves a number of stakeholders who often have conflicting interests and requirements. Frequently, these urban planners, developers, investors, owners and end users also have competing priorities and a differing comprehension of the value of energy and the need for sustainable energy solutions. The panel discussion will bring together representatives of various stakeholders to discuss their interests and which incentives, rules or regulations need to be implemented in order to optimise the involvement of all key stakeholders and achieve success in the retrofitting and construction of low energy building.

Facilitator: Gino Van Begin, Regional Director, ICLEI European Secretariat

- Karl-Franck Meinzer, Director-MRCIS, Schofield and Partners, Geneva, Switzerland; Member of the International Sustainability Alliance
- Alexander Krohn, Deputy Head of the Energy Department, Heidelberg, Germany
- Yvonne Iversen, FHH Fondshaus Hamburg, Gesellschaft für Unternehmensbeteiligungen mbH & Co., Germany (tbc)

14:45-15:30

PLENARY 5: SUMMARY AND OUTLOOK**Facilitator:** Rian van Staden, Principal Consultant, Intelligent Renewable Energy

A presentation of the key findings and outcomes of the Local Renewables 2011 Conference, and an overview of local sustainability initiatives and in particular, the integration of renewable energy and energy efficiency measures into buildings in the coming years.

16:00 – 18:15

STUDY VISITS**STUDY VISITS****Vauban**

Find out about the development of this highly ecological district. A former military base redeveloped in the 1990s into a mostly residential district for 5.000 inhabitants, Vauban is an internationally renowned model of sustainable urban planning. During this study tour you will learn more about Vauban's renewable energy, citizen engagement and low-, passive-, zero- and surplus energy buildings.

**Rieselfeld**

This tour consists of a walk through the Federal State of Baden-Württemberg's largest neighbourhood development project, a model of modern ecological housing for 11.000 people. All residences are built as low-energy buildings, and the use of renewable energy and district heating form part of the project's farsighted energy concept. In this tour you will have the opportunity to explore the district's low energy buildings, open spaces, green spaces and nature reserves.

**Buggingerstraße 50**

Freiburg's Buggingerstraße 50 is Germany's first high rise building that can claim a passive house standard following its renovation. The retrofit project which started in 2009 and was completed in late 2010 resulted in a state of the art building which now consumes 78 percent less energy than the original building. Even though rents have increased slightly, the tenants now benefit from substantially lower energy costs. On this tour you will learn about all stages of the retrofitting process and the challenges encountered by different stakeholders.

**Conference Venue: The Solar Info Centre (SIC)**

The Solar Info Center is an innovative building concept, combining practical sustainable measures with a progressive office space strategy.

The SIC building uses passive solar energy and high levels of insulation to reduce heating requirements and to improve energy efficiency. The external electricity supply is sourced from 100 percent renewable sources, and is augmented by the 55 kWp photovoltaic system on the roof.

The window arrangement maximises natural light whilst avoiding overheating and during the summer cool night air is drawn through ventilation units to keep temperatures low. In addition, the foyer and conference rooms are cooled using geothermal sources located at a depth of 80m. In winter, the same system is used to preheat outside air.

**Solar Info Center**

Emmy-Noether-Straße 2, 79110 Freiburg im Breisgau, Germany
www.sic-freiburg.de

Public Transport

Bus 11 from the Hauptbahnhof (station), direction "IKEA".
 The SIC is in front of the "Fakultät für angewandte Wissenschaft" stop.

Fee and registration

Business Fee 470 Euro

Standard Fee 370 Euro

Reduced Fee 280 Euro

(For ICLEI members, CCP participants, SCI network participants, local governments of new European Union member states, an accession or a candidate country of the EU and local governments of developing countries)

Student Fee (25 years and younger) 150 Euro

The conference fee covers admission to the event, public transport within the city during the conference days, participation in all sessions, including study tours, conference materials, lunches, coffee breaks and an evening reception.

Registrations after 10 October 2011 will be subject to a late fee of 50 Euro.

For more information and to register visit

www.local-renewables-conference.org/freiburg2011/registration

Language

The conference language is English. Language support may be offered if there is sufficient interest and with an additional fee. For delegations bringing their own translator, the participation fee of the translator will be waived.

Conference Secretariat

ICLEI European Secretariat

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Accommodation and travel

Accommodation and travel costs are **not** included in the registration fee.

Located near the German, Swiss and French borders, Freiburg can be reached easily from anywhere in Europe and the rest of the world. The use of train travel to and from Freiburg is highly recommended.

To encourage the use of public transport within the city, all the conference participants will receive **free public transport tickets** valid for the duration of the event.

A limited number of rooms have been pre-booked at a negotiated "Local Renewables/ICLEI" rate and the offer is subject to availability. October is tourist high season in Freiburg, so make sure to book your accommodation as soon as possible.

More information to make your travel easier can be found at

www.local-renewables-conference.org/freiburg2011/practical-information

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