

Local Government Climate Roadmap

Strong and
Comprehensive
Post-2012 Global
Climate Agreement

Copenhagen 2009
UNFCCC COP 15

Poznan 2008
UNFCCC COP 14

Bali 2007
UNFCCC COP 13

LOCAL ACTION FOR CLIMATE PROTECTION AND ADAPTATION – A SERIES OF LOCAL STORIES

Freiburg im Breisgau, Germany

Implementing and managing a long-term climate strategy

STORY IN SHORT: A city with a long history of environmental awareness and action, Freiburg is a renowned solar and green city, which has been systematically addressing the issue of climate change. With a combination of energy savings, energy efficiency and renewable energy, it presents a diversity of local climate action, also highlighting the need for municipal leadership and community involvement. The latest Climate Protection Strategy 2030 - aiming for a 40% CO₂ reduction by 2030 – reaffirms that climate change mitigation continues as a long-term priority for the city administration and citizens, building on local climate action implemented across many sectors.

Starting a long-term process

Since the 1970s Freiburg and its inhabitants have been concerned with sustainable energy. The initial aim of moving away from nuclear energy towards the use of renewable energy sources (RES), expanded into a comprehensive climate protection approach. From the energy supply concept developed in 1986, the city moved forward, adopting its first Climate Protection Action Plan in 1996 - with a target to achieve 25 percent (%) carbon dioxide (CO₂) reduction by 2010.

In 2002 an additional target was added, namely to generate 10% electricity from RES by 2010. Such target setting has helped to focus where action was needed, moving forward on political commitment. Consensus among the City Council that local climate protection is a local responsibility and priority has helped to ensure continued financial support and strengthened the overall implementation process. Throughout this process transparency of plans and the involvement of local citizens, politicians and the business sector have been essential factors in the Action Plan's development and implementation.



Freiburg's cathedral spire and wind turbines
© City of Freiburg

Regular reviewing of developments

With the most recent greenhouse gas (GHG) inventory carried out in 2006/7, the sources of emissions were identified: 80% originated from energy use in households, industry and from smaller users, while most of the remainder came from the transport sector. Total CO₂ emissions for the city were around 1.9 million tonnes per year - reduced by 14% between 1992 and 2007, while the per capita emissions were reduced by 20% to 8.5 tonnes per person. The baseline year of 1992 is used as a basis for comparison of GHG developments.

With the 2006/7 review it became clear that the city would not reach its 25% CO₂ reduction target by 2010, but could achieve a reduction in the range of 15 to 20%. This development led to a re-assessment of the overall strategy, the identification of problem areas, setting new targets with a new target year, the development of an action plan to address an intensification of mitigation action in a number of areas, and monitoring the implementation thereof. This cyclical approach is useful to address continuous improvement, supporting decision-makers and staff with a logical process that includes evaluation and reporting - ideally implemented until a community has become climate neutral and climate resilient.

Moving forward step-by-step

Freiburg has built up an impressive range of expertise and implemented excellent and diverse examples in local climate action, with a selection of very effective measures implemented presented below:

- **Energy:** Switching to 50% co-generation for electricity and heating in the city, large and small combined heat and power (CHP) plants were built running on gas (e.g. methane captured in landfill) or wood chips. Active solar energy systems - photovoltaics (PV) to generate electricity and solar thermal systems for hot water - were installed on private and municipal buildings, as well as on the local soccer stadium. A small proportion of small hydro (water) power, biomass and wind energy were also added to the local energy mix.
- **Transport:** The integrated transport system was extended, linking non-motorised mobility (walking and cycling) to public transport options (bus, tram, train), with incentives and disincentives encouraging behaviour change.
- **Districts and buildings:** The development of new low energy city districts designed with sustainability in mind, connect to these integrated transport plans and have buildings designed to reduce energy demand. The most efficient standard achieved is the passive house standard, but low energy buildings also address the effective use of active and passive solar energy – for heating / cooling, natural lighting and ventilation.

Building on these activities, the new Climate Action Plan continues to focus on energy savings in existing buildings, improved efficiency in co-generation of heat and electricity, expanding the use of solar and bio-energy, improving energy efficient street lighting and integrated transport concepts, as well as raising public awareness and motivating citizen engagement.



Public transport and bikes
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Involvement in international climate initiatives

Freiburg is one of the most visited destinations to learn about local renewables implementation and local transportation plans. It is internationally well-known for its environmental centres and policies, and a participant in the Cities for Climate Protection (CCP) Campaign. Furthermore, the city regularly hosts international conferences regarding local renewables and local sustainability. It is also the host city of the European Secretariat of ICLEI - Local Governments for Sustainability.



Freiburg is centrally-located in southwest Germany

City profile & contacts

Freiburg is a medium-sized city situated in southwest Germany. It is the primary entry point to the Black Forest, and is in a major wine-growing region. The city has developed an identity as a "Solar Region", and since 2008 also profiles itself as a "Green City".

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