

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

Barcelona, Spain

Working towards a new energy model to tackle climate change

STORY IN SHORT: Barcelona ranks among the cities of the Western world with the lowest per capita emission levels of greenhouse gases (GHG) – under 4 tonnes of CO₂ equivalent per inhabitant per year. The fostering of an urban structure of a diverse city marked by its compactness and complexity is a key factor in this respect. Barcelona also works to tackle climate change with actions to reduce energy consumption, increase efficiency and utilize available renewable energies. This commitment was strengthened when Barcelona signed the Covenant of Mayors, promoted by the European Union.

Barcelona's energy improvement plan

In the year 2002, the Barcelona City Council approved the Barcelona Energy Improvement Plan (PMEB), which is linked to Barcelona's Local Agenda 21 objectives. This pioneering measure formed the general framework for the city's energy policy, providing a set of 55 local action measures ranging from normative actions to education programmes. A number of these measures are explained below.

Electricity, heating and cooling supply

The new Energies Generation Plant Zona Franca – Gran Via de l'Hospitalet combines diverse systems which make it uniquely efficient: the pioneering utilisation of the residual cooling from the regasification plant of the port, the construction of a biomass plant and a tri-generation plant.

This system stands out within the Mediterranean context because of the substantial change it makes to the city's energy model. It is also the first time in Barcelona that cooling and heating will be distributed massively to private users through the district network. This project is expected to provide savings of 13,400 tonnes of CO₂/year.

Improvement of the lighting system

The goal of the Lighting Improvement Plan of Barcelona is to provide city streets with necessary lighting, in a well-oriented and efficient way. In recent years the number of street lamps has been increased while the energy consumption has been reduced by over 3.7 million kWh/year of lamps.



Panoramic view of Barcelona
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We are late but still in time

Imma Mayol, Deputy Mayor of Barcelona believes, "the world will be sustainable, not when it gives us everything we demand from it but does not have, but when we ask it only for what it really can offer us. To govern is to go against trends. Firm decisions and decisive governing are needed in order to change. The actions to face climate change in the next ten or twenty years will have a big effect on future generations. The lesson is clear: we are late, but if we try for real, we are still in time."



Photovoltaic solar panels at Barcelona's seafront
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Promotion of solar photovoltaic energy

The promotion of photovoltaic installations in municipal facilities brought the installed power in 40 installations to 1,870 kWp and the energy production to an estimated 2,000,000 kWh/year, at the end of 2008.

Another pioneering example is the installation in the Barcelona Metropolitan Area of 100 units of a new model of solar-powered bus stops. These bus stops provide dynamic information about the time remaining until the arrival of the next bus and of any incidents in the bus service. The new bus stops run completely on solar energy and have a five day autonomy.

Barcelona's Solar Thermal Ordinance

Barcelona's Solar Thermal Ordinance regulates the introduction of active systems to capture and use low temperature solar energy (solar thermal collectors) in order to produce domestic hot water in buildings and constructions in the city, regardless of whether they are public or privately owned. According to this Solar Bylaw all new buildings and buildings undergoing major refurbishment are obligated to use solar energy to supply 60% of their running hot water requirements. More than 50 Spanish cities are now "replicating" this initiative taking Barcelona as a model.

Involvement in international climate initiatives

For many years Barcelona has assumed a leadership role and worked together with various city networks and prominent bodies to reclaim that local governments are to be considered indispensable actors in the international climate negotiations, particularly within the sphere of the UNFCCC.



Barcelona is located on the Mediterranean coast

City profile & contacts

Barcelona, the capital of Catalonia, is an open, cosmopolitan city that faces the Mediterranean Sea and occupies an area of 100 sq km, with a population of 1,615,908 inhabitants in 2008. The city has followed and lobbied for ambitious agreements to be reached, even acting without a formal assigned role in climate negotiations. Barcelona wants to have voice and vote, and to continue to be a part of the solution.

Department: Environment Department

Email: agenda21@bcn.cat

Website: www.bcn.cat/mediambient



www.iclei.org/climate-roadmap

E-mail: climate-roadmap@iclei.org

The local stories are produced by ICLEI – Local Governments for Sustainability in cooperation with the cities described. They shall enrich the knowledge on local action as contribution to the Local Government Climate Roadmap, a joint activity of local government associations and networks towards COP 15.

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