



Home to an estimated 256.000 inhabitants, Bergen is the second largest city in Norway. To fulfil its ambitious objectives in the fields of environment, sustainable development and climate mitigation, the municipality is relying on a set of key priorities.

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# Bergen

ENERGY AND CLIMATE STRATEGY – KEY INGREDIENTS



## 1 Securing Appropriate Funding

The Bergen City council has established a dedicated fund to finance activities and projects in the field of energy efficiency. The *Climate, Environment and Energy Fund* aims to boost the energy efficiency market through government incentives and a set of policy instruments, supporting the wider uptake of sustainable energy technologies and encouraging expertise in the field. In the long run, the Fund will play a crucial role in supporting the objectives of *Bergen's Sustainable Energy Action Plan*. The municipal council has so far committed an estimated 800 000 to the fund, from the city's own resources. Funding is also available from the *Bergen Programme for Transportation, Urban Development and the Environment*, a political agreement for financing road and light trail investments, running until 2015 and which is to be partially financed through toll revenues.



## 3 Involving Young Generations

The Bergen City Council is involved in the *Eco-Schools* programme for environmental management, a holistic, participatory approach that fits very well with the Covenant methodology. The programme is based on the following steps:

- The establishment of an Eco-schools committee responsible for overall coordination
- The preparation of a review or assessment of the environmental impact of the school
- The development of an Action Plan using the results of the school environmental review
- The monitoring and evaluation of undertaken activities
- The integration of environmental education in the curriculum work
- The involvement of the entire community into the activities of the school
- The drafting of an Eco-Code. The completion of all the above-mentioned steps, within a year after the launch of the programme, leads to the award of the so-called *Green Flag*.



## 2 Putting Your own House in Order

In an effort to lead by example and act as a role model, the city council has developed an environmental policy for its own operations, including the definition of CO<sub>2</sub> reduction targets to reduce the carbon footprint of its vehicle fleet. The energy labeling of all municipal buildings larger than 1,000 m<sup>2</sup> is also in the pipeline and is to be completed by the end of 2011. All municipal departments, schools, kindergartens, agencies, and other entities will be environmentally certified through the support of the *Climate Fund*.



## 5 Land Use

The most important policy instruments for evolving land use and urban development with lower greenhouse gas emissions from transport are:

- Concentration of transport hubs where there is good public transport cover and good access to local services
- Location policies where firms with large volumes of visitors are channelled towards public transport hubs located centrally within the urban structure
- Avoid building plans in the outer city that lead to urban sprawl
- Coordination of land use policy and regional housing policy in respect of public transport cover and local services.



## 4 Bringing all Stakeholders Around the Table

One example of such cooperation is the *Climate Forum*, a meeting place intended to bring together players from the business community, public authorities, organisations and research institutions. The forum provides an opportunity to discuss climate-related matters, which pose scientific, commercial and political challenges, in an informal atmosphere. In May and October, the city also organises *Climate festivals* including a broad range of activities involving schools, inhabitants and private sector, conferences, concerts, etc.



## 6 Sustainable Urban Transport

The Climate and Energy action plan launches a range of measures that are brought together under the heading of policy instruments and measures within land use and transport:

- Planning and further development of the Light Railway network
- Concentration along the Light Railway and developing the city centre
- Parking
- Low emission zones
- Cycle routes
- Pedestrian precincts and universal design
- Information strategy for increased use of local recreation facilities
- Shore power to ships in harbour.



## 7 Electrification of Transport

*Bergen Light Rail* is a gigantic environmental project, primarily because an urban light railway is a very environmentally friendly means of transport. In addition, *Bergen Light Rail* entails extensive concentration of building developments along its route, so that an increasing number of people can benefit from the existing infrastructure. The overall result, therefore, is lower energy consumption and greater environmental gains for Bergen. The weightiest policy instruments for realising electrification of the vehicle population lie with the national authorities, but municipal authorities must also contribute through measures and policy instruments that are controlled locally:

- Building, and supporting the building, of charging points
- Parking for rechargeable vehicles
- Purchasing rechargeable vehicles for the City's own use and setting requirements for rechargeable vehicles to be used when procuring services.



## 9 Consumption Patterns and Waste

Our increased consumption means that we produce more waste. Bergen has for a long time had problems with the siting of return points, especially in the centre. Finding suitable return points for hazardous waste has proved particularly complicated, but there are now stations for such waste all over the city. Waste containers in the streets in Bergen city centre are another challenge. The construction of a waste suction network is planned for the whole of the centre, and work on this has been started. The collection of electrical and electronic waste is another challenge, and solutions with possibilities for recycling and good management are being discussed and implemented.



## Bergen Smart City

## 8 Bergen Is a Smart City

Smart cities can be identified along different main axes: a smart economy; smart mobility; a smart environment; smart living; and smart governance. These axes connect with traditional regional theories of urban growth and development. In particular, the axes are based on theories of regional competitiveness, transport and technology, economics, natural resources, human and social capital, quality of life, and participation of citizens in the governance of cities.

*Bergen Smart City* is a cooperation between the city, private sector and NGOs. Bergen has much to gain from energy efficiency. By adopting modern, energy efficient technology, Bergen could reduce the city's stationary energy consumption by 29 per cent – without affecting the inhabitants' standard of living or comfort.



## 10 Adaptation to Climate Change

Bergen has carried out a risk and sensitivity analysis that is unique in a national context. The City has good knowledge about the risk of flooding, high winds, high water levels, large waves, extreme precipitation and landslide dangers as a result of extreme weather and climate change. This knowledge will be used to reduce the risk of accidents and catastrophes and to ameliorate the consequences. These elements have led to there being extensive involvement in the city about what we as an urban community can do about climate challenges.



## 12 Cities of the Future

The City of Bergen is taking part in a national program named *Cities of the Future*. In this program we are particularly working with Land use and transport, Heating, Consumption patterns and waste and Adaptation to climate change.



## 11 The Human Dimension

In order to successfully reach our aim for a future in accordance with our environment, we need integrated, coordinated, social and environmental programmes combined with human rights; we need to finance our plans and develop a social economy.

One example from Bergen is the project *New energy around Damsgårdssundet*, where the transformation of a run down industrial area close to the city centre is being transformed. Action is taken with regard to seven dimensions:

- Democracy, participation and responsibility
- Infrastructure: quality, environment, energy and universal design
- Housing programme
- School as the heart of the community
- Industrial and cultural development, work places
- Health and welfare
- Skill and Competence.

