



## Best Practice: Copenhagen Climate Plan

REPORT UPDATED: MARCH 2, 2010

**CITY:** Copenhagen

**POLICY AREAS:** ENVIRONMENT, ENERGY, CITY PLANNING

### BEST PRACTICE

With the newly adopted and ambitious **Copenhagen Climate Plan**, the City of Copenhagen will reduce CO<sub>2</sub> emissions by 20% by 2015. The City has set itself the ambitious target of becoming the world's first carbon neutral capital by 2025.

### ISSUE

Under the Copenhagen Climate Plan, CO<sub>2</sub> emissions are to be reduced by 20% from 2005 to 2015, from an emission level of 2,500,000 tonnes CO<sub>2</sub> per year to 2,000,000 tonnes. This eliminates 500,000 tonnes of CO<sub>2</sub>. Furthermore, the City has set itself the target of becoming the world's first carbon neutral capital by 2025. The focus is not just on CO<sub>2</sub> reductions – the plan aims to draw national and international recognition in 2015 and 2025. The fact that Copenhagen aims to become the world's first carbon neutral capital by 2025 significantly shapes the city's efforts - international partnerships are vital to their effort. Copenhagen is seeking information regarding funding and other implementation tools from many outside sources.

### GOALS AND OBJECTIVES

Copenhagen's goals are to focus on the greatest proportion of energy usage which is in electricity and heating, to reduce vehicle traffic and to prepare the City for unexpected changes in weather patterns.

The Climate Plan includes 50 specific initiatives focused on CO<sub>2</sub> reductions over the next 5 – 15 years. The initiatives are inter-related, and have been grouped into six action areas as follows:



### IMPLEMENTATION

Since 1990, the City of Copenhagen has reduced its CO<sub>2</sub> emissions by more than 20 % in terms of electricity, district heating and transport. The Copenhageners emit on average 30 % less CO<sub>2</sub> than the Danish average. The city's cycle paths, public transport, recreational areas, pedestrian streets, wind turbines, district heating networks and visionary town planning are move the Danish capital towards becoming a model for cities around the world.

Over the past few years Copenhagen has established new green and recreational areas. The recreational beach park on Amager, the waterfront at Islands Brygge, and the green areas in Ørestaden are good examples of how the city has been made more green and livable.

The City set up a program management group which consists of Directors of Department from 6 different city administrations. This management group has been set up in order to secure that the initiatives will be anchored in all administrations and that project managers will have the support they need from the relevant administrations. This management group will secure that the projects are all carried out and that the goals in the Climate Plan are reached.



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### **Integrating climate into energy supply**

#### *Reaching the 2015 target*

In Copenhagen 98 % of all homes are connected to the city's district heating system, which is powered by both power plants and the incineration of waste. Today, 73% of electricity is generated by coal, natural gas and oil. By joining forces with energy companies, vast CO<sub>2</sub> reductions will be met. This includes a 75% decrease in CO<sub>2</sub> based on upgrading the energy supply using biomass in power stations, erecting wind turbine parks, and increasing reliance on geothermal power and renovating the district heating network.

#### *Reaching the 2025 vision*

A new, integrated energy system is needed to fulfill the vision of a carbon neutral Copenhagen. Copenhagen's power infrastructure is ideally suited for adding a diversified selection of renewable energy sources. What is still needed is a system for storing energy over time and seasons which can operate regardless of wind and weather conditions.

### **Greener transport**

#### *Reaching the 2015 target*

One third of people working or studying in Copenhagen travel mainly by bicycle. But the number of cars is increasing. Thus, the challenge is to make traveling by metro, bicycle, bus and train more attractive. The municipal vehicle fleet will be converted into hydrogen-powered and electrical cars. All city administrations will develop implementation plans for environmentally friendly transport.

#### *Reaching the 2025 vision*

Developing a transport system which contributes to a carbon neutral capital requires goal oriented urban planning, based on reduced transport needs, improved access to public transportation and improved bicycle and pedestrian flows. An infrastructure to support electrical and hydrogen-powered cars must be created.

### **Energy efficient buildings**

#### *Reaching the 2015 targets*

Copenhagen has a strong focus on climate, both in new construction projects and in renovation projects. Energy conservation must be a requirement for buildings which the municipality rents. The City will advise owners of private and public buildings, consultants and trade workers about necessary energy conservation measures. Advanced heat sensitive photographic techniques will be used to visualize heat losses from buildings.

#### *Reaching the 2025 vision*

By 2015, a number of the City's buildings will have become significantly more livable. New building construction initiated after adoption of the Climate Plan will make up 15 % of the municipality's total real estate holdings. Therefore, it is important that the buildings meet the best energy efficiency standards. Energy savings among Copenhageners, businesses and the municipality are central to the reduction of emissions needed to achieve carbon neutrality by 2025.

### **Copenhageners and climate**

#### *Reaching the 2015 targets*

Copenhageners emit much less CO<sub>2</sub> than the average Dane. The City will continue to focus on electricity and heating consumption, means of transport, purchases and waste recycling in households, work places, schools, institutions and the City itself. A strong focus is on reaching children and youth, education and changing personal habits.

#### *Reaching the 2025 vision*

New collaborative modalities and partnerships will be created, and the City will take the lead. Copenhagen will employ additional specific initiatives to raise awareness, inspire and educate residents.

### **Climate in urban development**

#### *Reaching the 2015 targets*

City planning will include a focus on the availability of public transport and easy-to-use bike routes. Buildings that are constructed or renovated must be green – including grass on rooftops and plants along the external walls, serving to insulate against cold in the winter and heat in the summer.



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### *Reaching the 2025 vision*

Municipal plans will actively ensure the creation of neighborhoods with minimal transport and energy requirements. The City will create pilot projects in certain areas focused on climate-friendly planning for the future.

### **Adapting to the future climate**

The City will develop a Climate Adaptation Plan, which will ensure that climate adaptation is undertaken in the best and most cost effective way possible, including long-term investments and planning.

### **COST**

The initiatives in the Climate Plan will be financed year by year, and will be integrated in the annual budget. Financing will come from different sources depending on the initiative. Certain areas, such as building renovation schemes will have their own budget headings.

### **RESULTS AND EVALUATION**

Each year, Copenhagen will complete a status report regarding the outcome of the objectives, goals and activities of each specific initiative. The status of Copenhagen's Green Accounts, the programs associated with Copenhagen's goal of becoming an eco-metropolis by 2015, can be found at [www.kk.dk/greenaccounts.com](http://www.kk.dk/greenaccounts.com). In 2012 a more comprehensive midterm report on the Copenhagen Climate Plan will be completed outlining the focus areas in the years to follow.

### **TIMELINE**

The Copenhagen Climate Plan was adopted by the City Council in August 2009. In Fall 2009, the program management group was set up and in 2010, 34 of the 50 initiatives in the Climate Plan will be initiated. A number of initiatives will be completed during 2010 but the majority will be in effect until 2015. Meanwhile, the policies and actions which are necessary in order to reach the 2025 vision will be developed further.

### **LEGISLATION**

In order for the City to reach the targets in 2015, it is important that certain taxes, specifically those on bio-fuels, are not raised. The City of Copenhagen plans to lobby the Government for the right to introduce congestion charges, since these will be an important way of regulating the number of cars in the future. Furthermore, experiences from other cities show that the extent of air-pollution in the inner city will fall.

### **LESSONS LEARNED**

A focus area for the municipality is external financing, aside from the City's budget. A lesson learned is that there should be a stronger focus on co-funding of future projects and a more comprehensive plan to seek partnerships for co-funding of projects. Another lesson learned is the value of unanimous support by the City Council. The plan would not have been possible without such strong support.

### **TRANSFERABILITY**

The Copenhagen Climate Plan has been developed with a strong political focus. The findings in the plan can be used internationally, nationally as well as locally. The concrete initiatives are transferable to other cities and regions.



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