



THEME: PLANNING AND DESIGN

Climate protection programme - KliP
City of Vienna

Summary and background

In 1999 the City of Vienna launched its climate protection programme (KliP), which has turned into a highly ambitious and committed environmental project. The objective is to make Vienna a model city in terms of climate protection by 2010. With the KliP measures launched to date a total of 2.2 million tons of CO₂ emissions annually have been avoided.

Objectives and achievements

The work for the climate protection programme started already in 1996. The objective was to set up a programme with concrete and realistic measures for achieving CO₂ reductions by 2010. It was also seen vital from the beginning that the programme would be adopted by the Vienna city council. The development work was done under different departments and resulted in several working documents. These documents were prepared by the project coordinators with a support of an extensive consultation from the administration and relevant stakeholders.

Development of the climate programme was divided into three "KliP teams": energy, mobility, and purchasing and waste. In time more subgroups were established under these three teams and as a result, more than 300 people participated in setting up the concrete measures. The political discussion on KliP started in 1998 and it was voted at the city council in November 1999.

After the climate programme was adopted by the city council, a climate coordinator was to be appointed in the chief executive office of the Vienna City administration. This coordinator was set to be in charge of the organisation, coordination and the promotion of the programme; making sure that concrete measures were implemented throughout the city administration. The climate coordination became a virtual organisation with a contact point under the chief executive office ("Executive Office for the Co-ordination of Climate Protection Measures", in short: MD-KLI). The coordination consists of a network of more than 40 experts in all relevant fields: from energy management to housing, and from spatial planning to transport. The more detailed work is carried out through different projects as well as in smaller working groups with the collaboration of other relevant actors.

Today KliP includes actions in 5 areas: district heating and power generation, housing, enterprises, mobility and the city administration. Successful measures have already been implemented under all five areas. KliP has reached an important role in Vienna and today when new plans such as the transport master plan or the city development plan are being developed either the KliP contact point (MD-KLI) or one of the experts are always involved in the development process.

1. District heating and power generation

The first thematic area concentrates on increasing the efficiency of fuel utilisation in Vienna's energy production facilities as well as raising the percentage of renewable energy sources used for energy production.

The efficiency in Vienna's power stations has already increased from an annual average of 60.4 % (in 1996) to 68.4 % (in 2005). Also many new energy production units using renewable energy sources have been developed, including photovoltaic installations, 8 wind turbines, and landfill gas plant. There are also further projects foreseen such as a cogeneration plant using biomass, biogas plant that will turn organic waste and food scraps into biogas and heating and cooling 4 new underground stations with geothermal energy.

2. Housing

The housing area includes four objectives:

- Reducing heat consumption through thermal renovation in old buildings;
- Stricter requirements for thermal insulation in new residential buildings;
- Promoting the use of renewable energy sources in heating; and
- Avoiding construction materials containing halogenated hydrocarbons.

In total 137,360 apartments have been renovated between 1990 and late 2005, which has reduced CO₂ emissions by 216,500 tons annually. Statutory minimum requirements for thermal insulation in new buildings are stricter; compliance with ecological standards constitutes a prerequisite for municipal subsidies; and all subsidized projects are now built in accordance with low energy standards.

The fuel mix for heating in residential buildings has been markedly improved in recent years. The main measure has been extending the district heat network. By late 2005 approximately 251,200 apartments received district heat. Subsidies were introduced for conversion to district heat, condensing boilers for natural gas and renewable energy sources (biomass, reverse cycle heating systems). Emphasis was also placed on solar thermal: the city has introduced a special subsidy, which is applicable to residential buildings and business premises.

While the share of electricity used for heating and water heaters has dropped, electricity consumption in private households is still rising. This is due largely to the increasing trend in electrical and electronic equipment¹. The City of Vienna is now preparing an energy saving concept with an attempt to curb this trend.

3. Enterprises

The KliP objectives for enterprises are similar than the ones pursued in housing:

- Reducing heat consumption through thermal renovation for existing "old" business premises;
- Stricter requirements for thermal insulation in new business premises;
- Replacing carbon-intensive energy sources to less carbon-intensive or renewable energy sources for heating and water heaters; and
- Reducing CO₂ emissions from production processes by increasing efficiency and switching to other energy sources.

¹ In 1990 households in Vienna consumed approximately 2,086,000 MWh of electric power, by 2003 that figure had already risen to approx. 2,331,000 MWh (source: energy balance for provinces, Statistics Austria).

Among the most positive aspects is the high share of district heating, which in 2003 was nearly 30 % for the production sector and just under 50 % for the services sector. Unfortunately, though, the share of electricity used also rose due to an increase number of new air conditioning systems.

Commercial buildings or parts of buildings used for business purposes are regularly adapted to new thermal and energy standards. Many businesses, especially small ones, are located in residential buildings (mixed utilisation), which means that thermal renovation measures are carried out as part of the overall apartment building renovations. A number of businesses are participating in the "ÖkoBusinessPlan Wien", an environmental services package for businesses. This includes a series of additional climate protection measures, such as switching to alternative energy sources, saving energy during production, avoiding waste and launching mobility projects.

4. Mobility

Traffic continues to be a major cause of greenhouse gas emissions. Traffic-related CO₂ emissions in Vienna have risen by approximately 15.1 % between 1990 and 2003². KllP Vienna includes a number of measures geared primarily towards:

- Avoiding traffic;
- Shifting from motorized private transport to environmentally transport modes (public transport, bicycle and walking); and
- Increasing vehicle efficiency.

The City of Vienna chose to elaborate the 1994 transport concept and prepare the 2003 Transport Master Plan Vienna as a basis for all relevant measures. The Master Plan was passed by the City Council in autumn 2003 as a modern urban traffic concept valid for the next 20 years. Its main objective is to reduce motorized private traffic from 35 % to 25 % by the year 2020 in favour of public transport, bicycles and walking.

The plan includes measures such as extension of the underground and tangential tramlines; granting priorities and acceleration rights to public transport; and extending the bicycle line network by 1,000 km by the year 2006. Structural measures for safer crossroads, pedestrian-friendly traffic light phases, smooth transitions for level differences, 30 km/h speed limits for densely built-up areas, 2.0 m minimum width for pavements, as well as new footpaths to encourage people to go short distances on foot. Further development of parking space management, a state-of-the-art traffic management system and extensive awareness raising campaigns are to contribute towards reducing greenhouse gas emissions from motorized private transport.

5. City Administration

The area of city administration is particularly important because of its model role. Sets of measures are being implemented in reducing energy consumption in public buildings, mobility, procurement and eco-management systems at the City Administration.

The project "ÖkoKauf Wien" was established to make procurement (supply, services, construction work) more ecological. There are currently eighteen working groups preparing ecological criteria, making sure to include economics, quality requirements, protection of employees and appropriateness for use. Criteria are drawn up for lighting, office material, construction material, electrical appliances, civil engineering and building construction, food, as well as for vehicles, furniture, cleaning agents and disinfectants. The criteria catalogues are

² This is well below the average Austrian increase of 83 %.

updated regularly. In addition to the environmental gains the project has made significant economic savings.

The project Umweltmanagement in Amtshäusern der Stadt Wien (PUMA) introduces environmental management systems to all office buildings, schools, day-care homes, public swimming pools, hospitals and other institutions within the city administration. This is to be achieved at three levels: the administration as a whole (strategic and structural objectives and project-oriented environmental policies), level of units (basic rules) and the level of individual facilities (detailed measures). The objective is to systematically set suitable organisational measures for all areas (energy, mobility, procurement, waste, etc.) to ensure continuous improvement and savings. Multi-departmental teams were installed to prepare the ground.

Lessons learned

On the political level, it seems to be easier to reach a broad political consensus on the strategic objective of climate protection rather than decide on specific measures how to reach this objective. Therefore, it is indispensable to involve all relevant people, to ask their views on the specific problems and to seek their cooperation. Partnership approach has been one of the key success factors of KliP. A close cooperation between all participants in the network of experts, departments and institutions has proved to be very beneficial.

It has to be mentioned that the KliP measures cover a wide range: they vary from clearly identified measures (e.g. modification of legislation; publication on energy saving) to measures with a rather high level of investment (e.g. construction of a biomass co-generation power station). Some measures required some years before they concrete enough to be implemented (e.g. development of a new urban development plan which takes into account climate protection).

Scarce financial and personnel resources however, prevent a faster implementation of the different elements of the KliP. Also the lack of coordination and support from the different levels of government to the important objectives of KliP hinder the implementation. For example the liberalisation of the EU energy markets and the national tax systems do not encourage climate protection measures

Next steps - Prospects

Climate protection is a major concern for the City of Vienna. To make it a success further CO₂ reduction measures need to be developed. One of the biggest challenges for climate protection is the fact that, despite the most diverse positive measures, e.g. improved thermal insulation in buildings; people continue to consume growing amounts of energy. Vienna's plans for the future give a top priority to energy saving, an aspect very much neglected in the course of liberalisation of energy markets in the past. As with the Climate Protection Programme before, a multi-party process launched in 2004 is to prepare an "Energy Saving Concept" for the City of Vienna. The process is to assess private households, businesses, services, industry, public institutions, agriculture and traffic as to their potential for saving energy and subsequently to define the necessary framework conditions and implementation measures. The KliP contact point (MD-KLI) is also a part of the coordination of the „Energy Saving Concept“.

The City of Vienna has already taken measures to reduce greenhouse gases in the waste management sector as well. A group of experts is currently working out further climate protection measures in waste management. The work to update the KliP for the period after 2010 has started in early May 2006. A proposal as to how Vienna's climate protection policy should be continued following the end of the KliP (2010) will be worked out on the basis of an evaluation of the existing KliP measures. This will contain not only – as previously – measures

to reduce greenhouse gas emissions but also the measures needed to adapt to the changes in the climate that have already taken place. It is planned that the draft for updating the Climate Protection Programme ("KliP II") will be submitted to the City Council for adoption in 2009.

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