



# Climate Change in Focus in the Helsinki Metropolitan Area

Helsinki Metropolitan Area Climate Strategy 2030

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## Background

The greenhouse gas emissions of the Helsinki Metropolitan Area accounted for about 8 per cent of total Finnish emissions in 2004. These emissions amounted to about 6.3 tonnes of carbon dioxide equivalent per resident, which is 10 percent less than in 1990. The region's emissions have grown in recent years, with a 12 per cent rise between 2000 and 2004. Emissions are currently too large for effective mitigation of climate change. At the same time the greenhouse gas emission reduction targets of the European Union and Finnish government must be achieved. The Helsinki Metropolitan Area Council YTV is monitoring progress and reporting in the region.

In association with the cities of Helsinki, Espoo, Vantaa and Kauniainen, YTV has prepared a climate strategy for the Helsinki Metropolitan Area extending until the year 2030. A strategy report was completed in December 2007 and has now been approved by the board of YTV and by the participating cities. This strategic work will continue through a preliminary agreement and action programme.

## The aim is to cut CO<sub>2</sub> emissions by one-third

The Helsinki Metropolitan Area climate strategy seeks to reduce per capita greenhouse gas emissions of the Helsinki Metropolitan Area by 39 per cent of the 1990 level by the year 2030.

In order to achieve this objective, mitigation of climate change must become a crucial element in all planning and policymaking in the cities of the Helsinki Metropolitan Area.

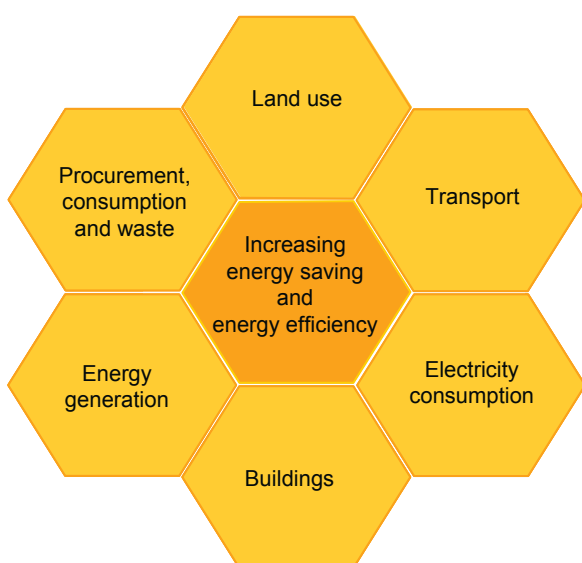


Figure 1. The strategy deals with those sectors, in which cities have significant possibilities to reduce energy consumption and greenhouse gas emissions.

The main objective of the strategy is to improve energy efficiency and conserve natural resources so that regional greenhouse gas emissions fall and the region becomes more competitive.

Emissions caused by energy consumption mainly arise from heating of buildings, use of electricity and transport. City decisions and guidance will have a substantial impact on these emissions. More precise sectoral visions, operating policies and methods have therefore been specified for the six city sectors causing the greatest emissions. This was achieved in association with key city officials.

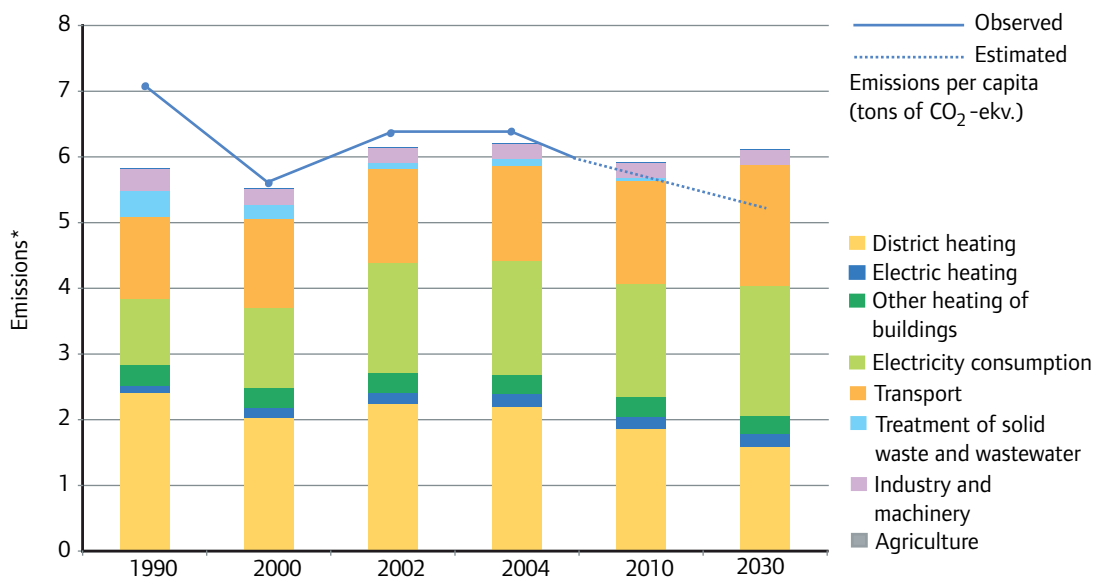
Emission control measures are proposed for land use, transport, consumption of electricity, building construction, procurement of goods and services, and energy production and consumption.

## City measures to cut emissions

The Helsinki Metropolitan Area climate strategy focuses on measures that can be implemented by the cities through decisions, actions and guidance. The cities can serve as pioneers and good examples, introducing intersectoral partnership practices to cut CO<sub>2</sub> emissions.

## Cities as forerunners

- Assessment of greenhouse gas emissions will be incorporated into project planning and monitoring.
- Climate change and its mitigation will be included in the curriculum for all levels of education and training, from preschool education to training of city employees and public education of city residents.
- Solar and wind energy installations will become part of school buildings in the near future as one aspect of encouraging public awareness.
- The energy efficiency of all public buildings will be measured and monitored with a view to reducing greenhouse gas emissions.



\* Columns represent total emissions (millions of tons of CO<sub>2</sub>-ekv.) and the line represents emissions per capita (tons of CO<sub>2</sub>-ekv.).

Figure 2. Heating of buildings, consumption of electricity and traffic cause most emissions that are assessed on the basis of energy consumption.

### Per capita electricity consumption will be reduced

- Enhancing city procurement procedures to support improved energy efficiency.
- Preparing procurement and tendering guidelines that allow for energy efficiency.
- Introducing the latest, most energy-efficient technologies for outdoor and indoor lighting. Reducing energy consumption of office equipment and computer hardware.
- Ascribing the true costs of energy to the consumer. Increasing real-time measurement of consumption and advising of opportunities for energy saving when invoicing.
- Training city employees to improve awareness in both procurement and the use of equipment, and preparing guidelines for saving electricity in various functions. Continuing public education campaigns in schools and nurseries. Arranging energy saving campaigns for the general public in partnership with other cities and the state.

### Energy efficiency in buildings

#### Improving energy efficiency in new buildings and in the existing building stock

- Preparing planning and implementation guidelines for new construction projects and renovation projects that incorporate energy efficiency

- Including energy efficiency as a selection criterion in the choice of planners, contractors and maintenance organisations.
- Providing financial incentives for low energy construction and converting to low energy housing construction by the 2010s and minimal energy housing construction by the 2020s.
- Participating in new technology development projects for repair and renovation construction.
- Continuing energy audits of city owned buildings and investing with a view to energy conservation.
- Developing and maintaining various financing and grant procedures to encourage investment in energy efficiency and effectively publicising these procedures.

#### Guiding choices of heating and cooling systems

- Advising the public on the whole life-cycle impacts of various heating and cooling methods at the time of seeking building and other permits.
- Establishing financing and grant procedures to encourage investment in energy efficiency.
- Promoting district cooling in lieu of separate cooling appliances in buildings. Promoting the installation and use of heat pumps in areas lying beyond the range of district heating networks.
- Favouring solar heating and electrical systems in residential buildings.



### **Improved building maintenance and assessment of need of new facilities**

- Enhancing use of space and investigating the availability of existing premises before embarking on construction.
- Introducing and using new control and guidance technology in maintenance and energy consumption analysis.
- Training maintenance staff when releasing new buildings for occupancy.

### **Greenhouse gas emissions from transport will be cut by at least 20 per cent, with policies favouring public transport, walking and cycling**

#### **Influencing the volume of traffic and patterns of mobility by improving the status and service standards of public transport, walking and cycling**

- Transport pricing will provide incentives for using public transport. Public transport transfers and their general amenity will be improved with real-time information on timetables and connections.
- Urban planning will incorporate direct and easy access to stations, stops and services for pedestrians and cyclists. Routes will be constructed, managed and maintained in winter to a high standard.
- Urban planning will provide for adequate and secure cycle parking at places of work and services, and in the vicinity of public transport stations.
- Commuting plans will be prepared for workers and

distance work will be encouraged.

- Free car parking places for city employees will be discontinued.

#### **Reducing transport emissions from city functions**

- Low emission requirements for motor vehicle and other procurement.
- Widespread introduction of public transport subsidies for commuting city employees.

#### **Promoting the use of low-emission vehicles**

- Specifying and announcing environmental zones based on motor vehicle emissions.
- Exempting low-emission motor vehicles from parking fees and granting other benefits.

#### **Improving logistics**

- Improving the efficiency of city goods and distribution transport by such means as introducing the latest technology for optimising haulage routes and logistics.

#### **Land use**

##### **Compacting community structure**

- More effective zoning and implementation for areas near to rail transport stations.
- Creating a joint regional implementation plan for land use and transport with a view to reducing greenhouse gas emissions.

- Including greenhouse gas emission calculations when assessing alternatives and impacts in master plans, important zoning plans and major construction projects.
- Locating new shopping centres in the vicinity of the existing community structure and effective public transport connections.

### Enhancing the use of renewable energy

- Renewable energy production will be included at all planning levels and in all local building ordinances.
- Energy-efficient construction must be a requirement when developing new site areas.
- The planning process must guide placing and volumes of buildings to improve conditions for using solar energy in individual projects.

### Selecting energy-efficient products in procurement

- Promoting material and energy-efficiency and low emissions in city procurement.

- Procuring low-emission vehicles and promoting their use. Formulating common environmental criteria for procurement.
- Establishing environmental criteria for working machinery specifying fuel consumption and carbon dioxide emissions.

### Preventing waste formation

#### Advising the population on how to avoid generating solid waste

#### Continuing co-operation with industry and services

- In environmental permits, including a duty to prevent waste formation.
- Promoting prevention of waste formation and material efficiency in the operations of small and medium-sized businesses.
- Optimising waste collection logistics and using low-emission fuels in solid waste collection vehicles.

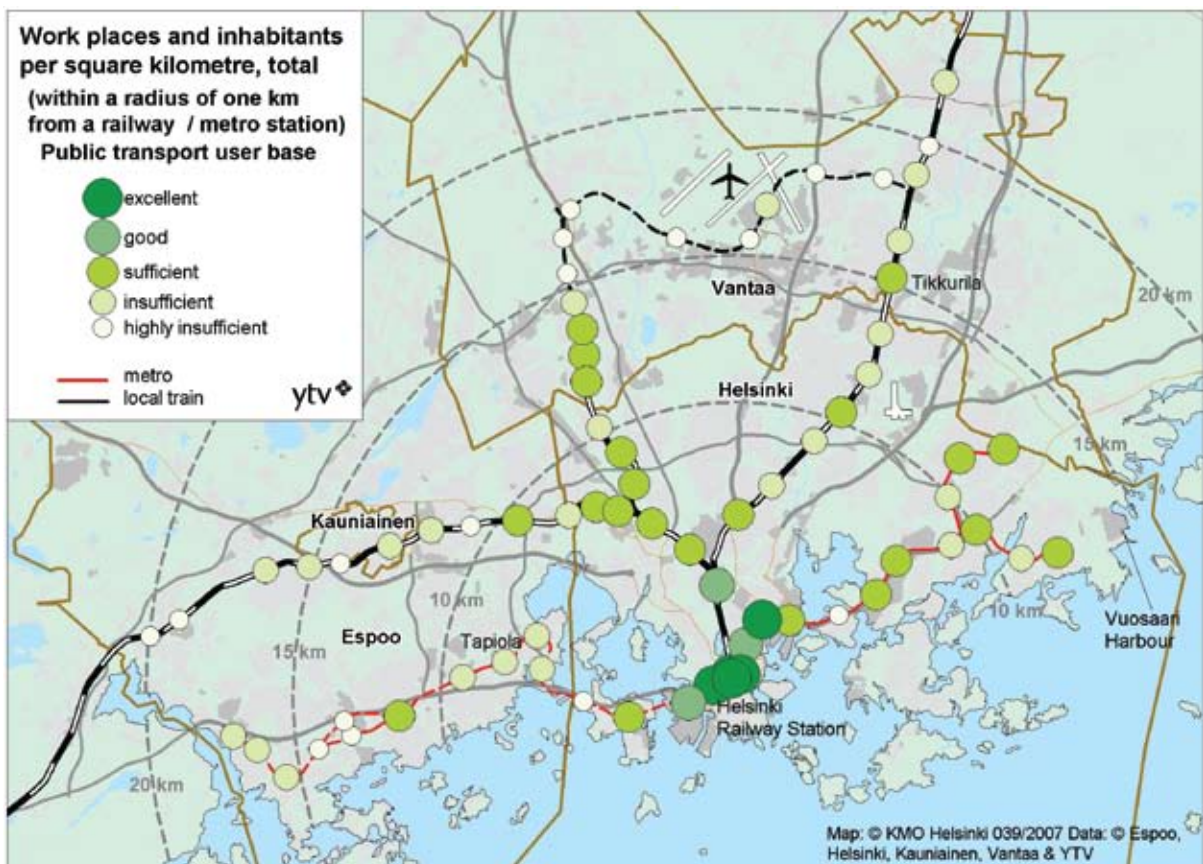


Figure 3. There is plenty of space for construction of new housing and work places around the railway and the metro stations.

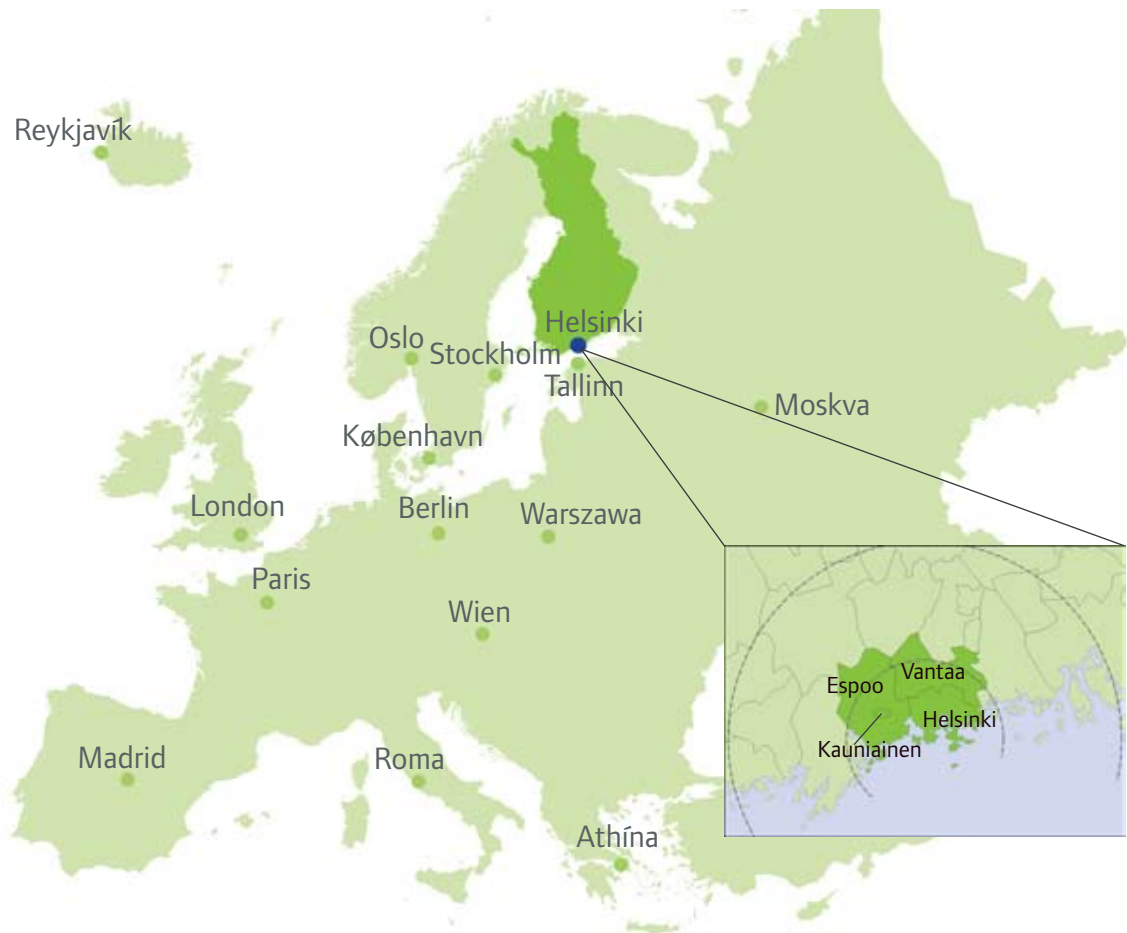


### **Energy production and distribution, district heating and renewable energy sources**

- Replacing fossil fuels with renewable energy sources.
- Surveying regional sources of renewable energy.
- Encouraging the choice of combined heat and power at suitable sites.
- Enlarging the district heating network.
- Arranging for municipal energy companies to take part in studies to investigate the use of district heating return flows at suitable sites.
- Participation of energy companies in studies investigating waste heat sites and heat recovery prospects at small (e.g. condensation heat from ice rink refrigeration) and large (e.g. wastewater treatment plants) sites.
- Extending district cooling networks and replacing separate cooling installations in buildings.

**In order to achieve the aim of cutting greenhouse gas emissions, climate change must become a crucial element in all planning and policy making by the cities of the Helsinki Metropolitan Area**

**More information:  
[www.ytv.fi/climatechange](http://www.ytv.fi/climatechange)**



## YTV in brief

The Helsinki Metropolitan Area Council YTV is a statutory cooperative body for the cities of Helsinki, Espoo, Vantaa and Kauniainen. YTV is responsible for waste management, regional transport and air quality monitoring in the Helsinki Metropolitan Area. It also makes the Helsinki Metropolitan Area transport strategy and conducts research and studies on the region's development. YTV further provides services to other municipalities in the Helsinki Region on contractual basis.

The total population of the YTV area exceeded one million in spring 2007. The population grows around one per cent a year. A fifth of Finland's population lives in the four cities of the YTV area and there arises a third of the whole country's gross national product. The YTV area offers workplaces for over 630 000 people. Here are a quarter of the whole country's workplaces. The combined land area is 759 square kilometres.

The Helsinki Region comprises a wider metropolis area around Helsinki. Within this bigger area live around 1.3 million people.

YTV was established in 1970. The most recent Act on YTV dates back to 1986. The highest decision-making organ of YTV is the Assembly of Member City Representatives, to which representatives are elected by the member cities. The budget is 290 million euros (2008), of which 90 million euros come from municipal contributions. YTV is organised in four result areas i.e. the Transport, Waste Management, Regional and Environmental Information sections, and Common Services for the YTV.

[www.ytv.fi/climatechange](http://www.ytv.fi/climatechange)

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