

City of Hannover (Germany) Energy and Climate Protection Unit

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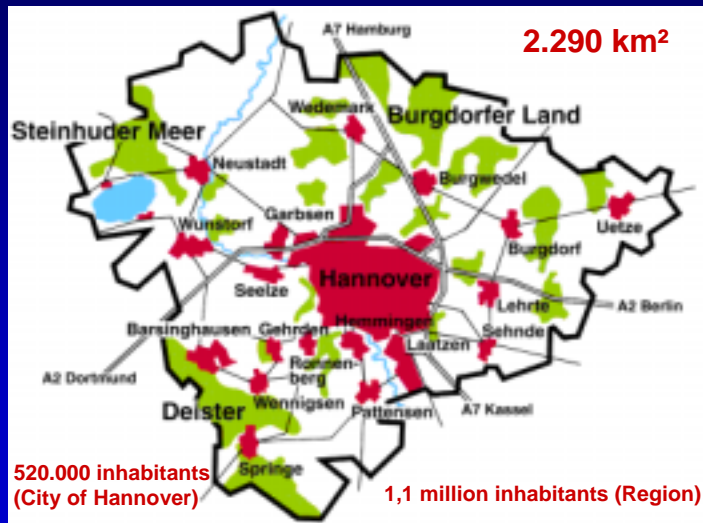
## Climate Protection in Hannover

## Hannover in Europe



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## Hannover Region



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## Good framework conditions

### Political will

In 1992 the City Council committed itself to a 25% reduction in CO<sub>2</sub> emissions from 1990 to 2005.

### Experts in the administration

Energy and Climate Protection Unit founded in 1994 to devise and implement the municipal climate protection programme in association with all local stakeholders.

### Non-Governmental Organisations

Hannover has many citizens committed to energy efficiency and prepared to work through the political parties.

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## **Local utility with its 'enercity' brand** *(75% owned by the City)*

### Products

electricity, gas, water, district heating, services

### Power plants

- one coal and two gas-fired combined heat and power plants
- eleven small, de-centralised combined heat and power plants
- hydro-electric plants
- various solar cell installations and biomass power
- pioneer activities on demand side management (since 1992)



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## **'proKlima' climate protection fund**

### Partners with financial commitments

- Enercity (Stadtwerke Hannover AG) - 4 Mio. €/year
- City of Hannover - 1 Mio. €/year
- five towns in the Region Hannover

### Partners without financial commitments *(stakeholder involvement)*

- Ruhrgas AG and Thüga AG (each with 12% holdings)
- Hannover Chamber of Craft Trades
- Alliance of Industrial Energy Customers (VEA)
- Lower Saxony Consumer Advice Centre
- Environmental Protection Citizens Initiatives

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## **The contract** *(signed in 1998)*

The contract partners committed themselves to co-operate on climate protection and to set up a climate protection fund to support measures which go beyond current legal standards and which would not be possible - at least, not to this extent - without support.



[www.proklima-hannover.de](http://www.proklima-hannover.de)

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## **Funding activities**

- old buildings (insulation, new heating systems, energy passports, quality assurance)
- new buildings (high efficiency Low Energy Houses, Passive Houses, quality assurance)
- solar thermal heating
- solar energy in schools and sports clubs

ca. 3 Mio. € for ca. 2.500 applications per year

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## Tasks of the climate protection agency *(founded in 2001)*

- networking with private sector partners and local authorities in the Hannover Region
- public relations work (press, trade fairs, promotional events)
- technical conferences on climate protection
- information and advice service

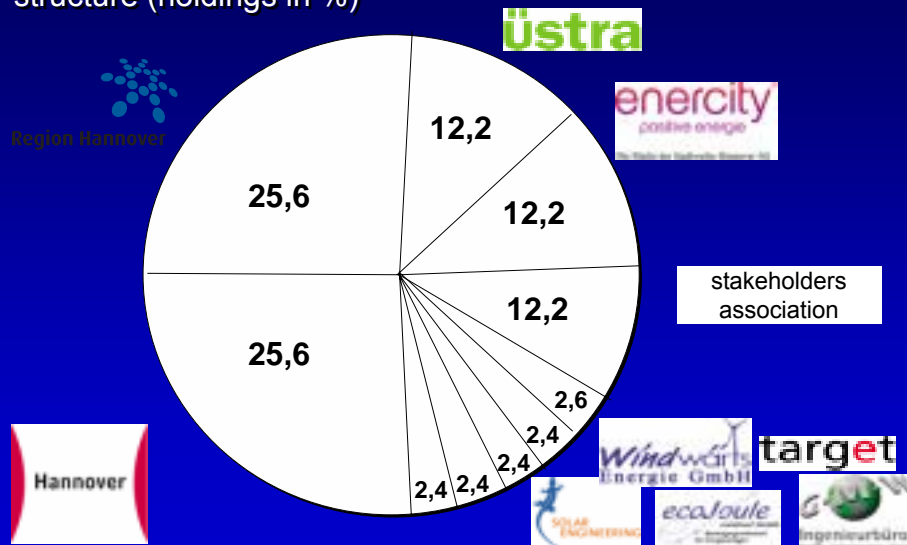
[www.klimaschutz-hannover.de](http://www.klimaschutz-hannover.de)



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## Climate protection agency

structure (holdings in %)



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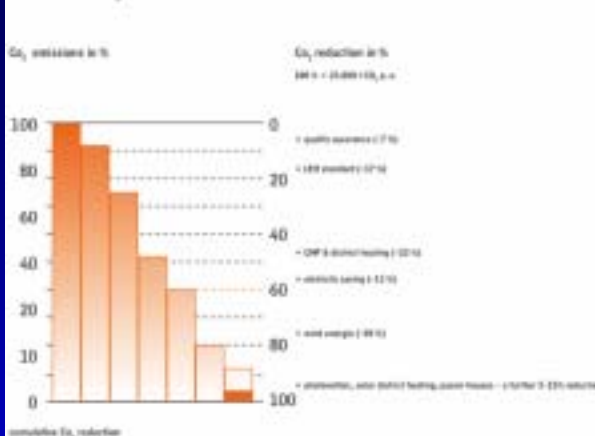


## Kronsberg ecological development

- new city district with 3.000 dwellings
- built 1996 -1999
- comprehensive example of visionary urban planning and construction
- overall 80% less CO<sub>2</sub> emissions than from normal developments

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Reduction of CO<sub>2</sub> emissions at Kronsberg



### CO<sub>2</sub> reduction

- Low Energy House construction methods with quality assurance
- district heating network, supplied from CHP plants
- electricity saving programme

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## Zero emission development

### Aims

- overall 100% cut in CO<sub>2</sub> emissions
- 300 new homes

### Instruments

- Passive House Standard
- energy provision from renewable sources (biomass, solar thermal and photovoltaic)
- compensation for CO<sub>2</sub> emissions from electricity use (heat pumps and domestic electricity) by investment in external renewable energy facilities

2005-06 planning phase

2007-08 start of construction



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## 'Concerto'

Integrated EU project: 'Energy saving in the building stock and use of renewable energies'

### Aims

- 60-70% savings on end energy for heating
- use of renewable energies wherever possible.

### Measures

- energy efficient retrofitting of multi-occupancy houses (dating from 1950-1970) of several Hannover housing associations to a high energy efficiency standard and use of renewable energy by conversion from coal to biomass for the existing district heating network.

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- retrofitting of detached and semi-detached houses to a high energy efficiency standard and use of wood pellet boiler, solar thermal, and/or photovoltaic systems
- quality assurance monitoring

### Preconditions

good cooperation between the various participants - local authority, local utility, climate protection fund, climate protection agency and the owners of the buildings (housing associations and private persons)

### Funding

all retrofitting measures subsidised by the EU, climate protection fund and a national fund

### Accompanying measures

training for architects, engineers, technicians and builders

## **Climate protection policy is a 'win-win' policy!**

for the private, public and industrial sectors  
*saving money while realising economical measures*

for the local utility  
*increased customer loyalty*

for business  
*advantages through future know-how and technologies*

for the city  
*job creation, especially in the construction trades –  
26 Mio. € proKlima funding has stimulated  
209 Mio. € private and public investment*

