



The Updated Hamburg Climate Action Plan

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“DESD meeting the WFC”
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Realize climate protection in practice

Climate protection becomes reality: Some 115 of about 280 projects and measures have been realized or are underway.

Reorganize energy supply sustainbaly

Energy supply in Hamburg shifts towards combined heat and power, renewable energy and improved energy efficiency.

Provide economic stimuli

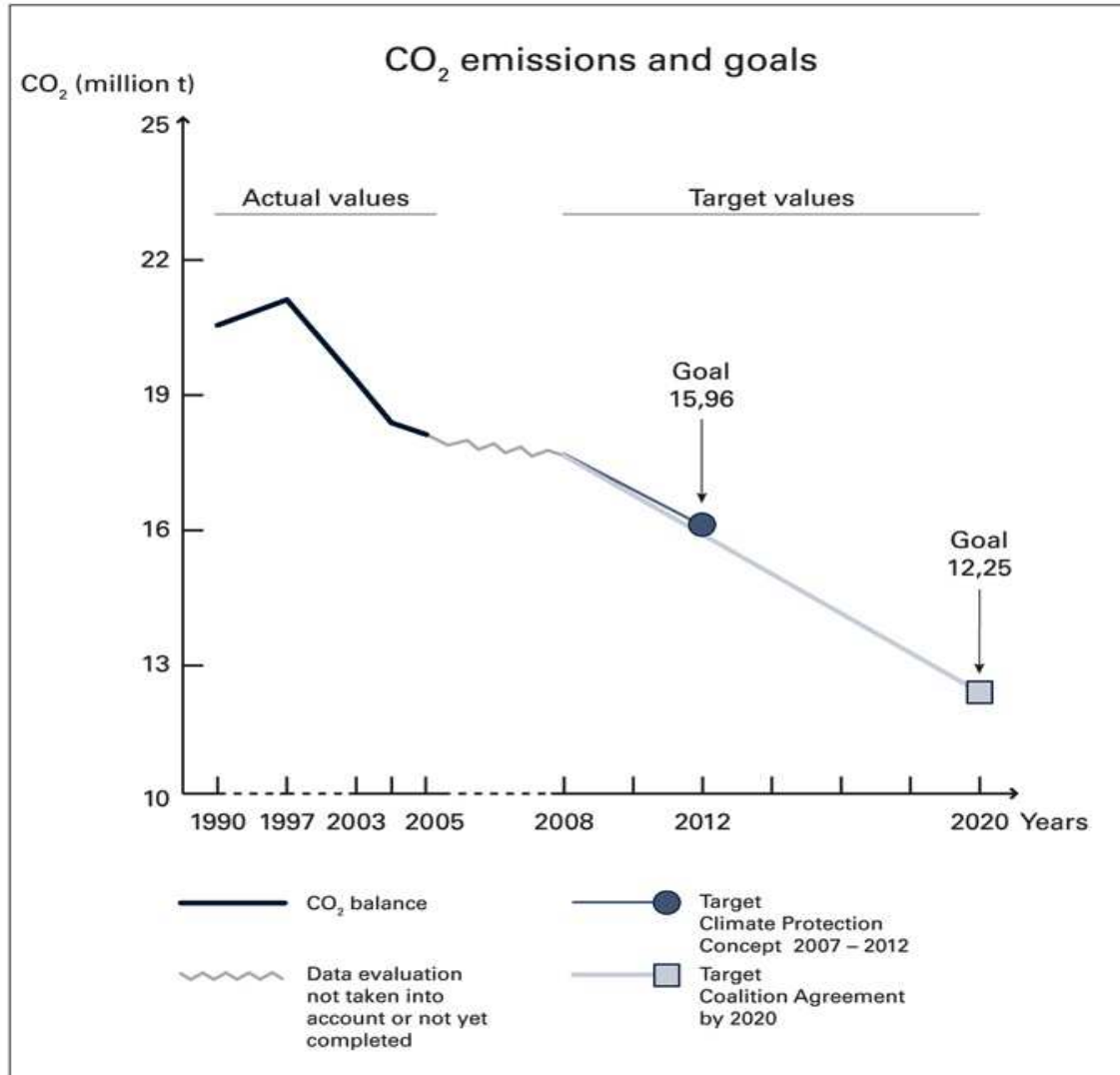
The city expands its collaboration with Hamburg businesses through joint projects.

Our criteria of success for “Good Governance”

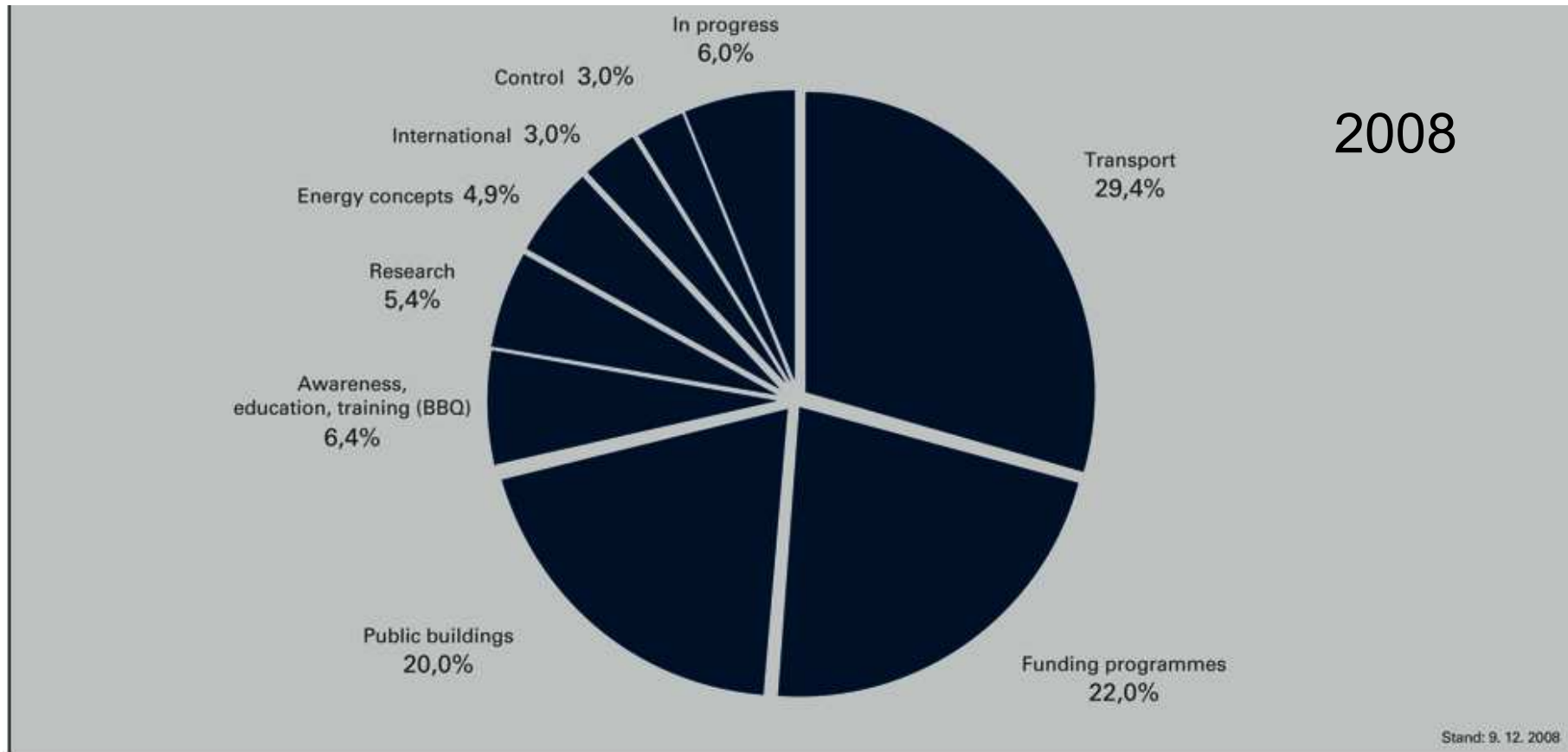


- **annual CO₂-emissions will decrease by 2 M tons by 2012 and by 40 % by 2020**
- **extra annual funding of 25 M Euro (100 M Euro up to 2012)**
- **well-balanced centralized / decentralized decision-making (metropolitan region)**
- **turning climate action into job generation in engineering and manufacturing businesses,**
- **two-folded strategy of subsidies and regulation.**

Reduction of CO₂ emissions



2008 Budget Broken Down



	Transport	Funding programmes	Public buildings	BBQ	Research	Energy concepts	International	Control	In progress	Total
%	29,4%	22,0%	20,0%	6,4%	5,4%	4,9%	3,0%	3,0%	6,0%	100,0%
EUR	7.350.000	5.500.000	4.991.232	1.596.876	1.351.394	1.213.000	750.000	739.225	1.508.273	25.000.000

Retrofitting of public buildings



Example Roof renovation and photovoltaic array at Kampnagel

Step 1 Retrofitting roof of former warehouse

→ 90 % less heat loss

Step 2 Installing photovoltaic array on 14,500 feet² roofage

Example Police and fire stations

Comprehensive program for 30 locations

→ already realized in 5 locations

Aim: Synergies with other construction projects





Example Enterprises for Resource Protection

Extension of existing program: From the start of 2007 until the summer of 2008 74 projects were funded
= Investment of 34 Mio. Euro

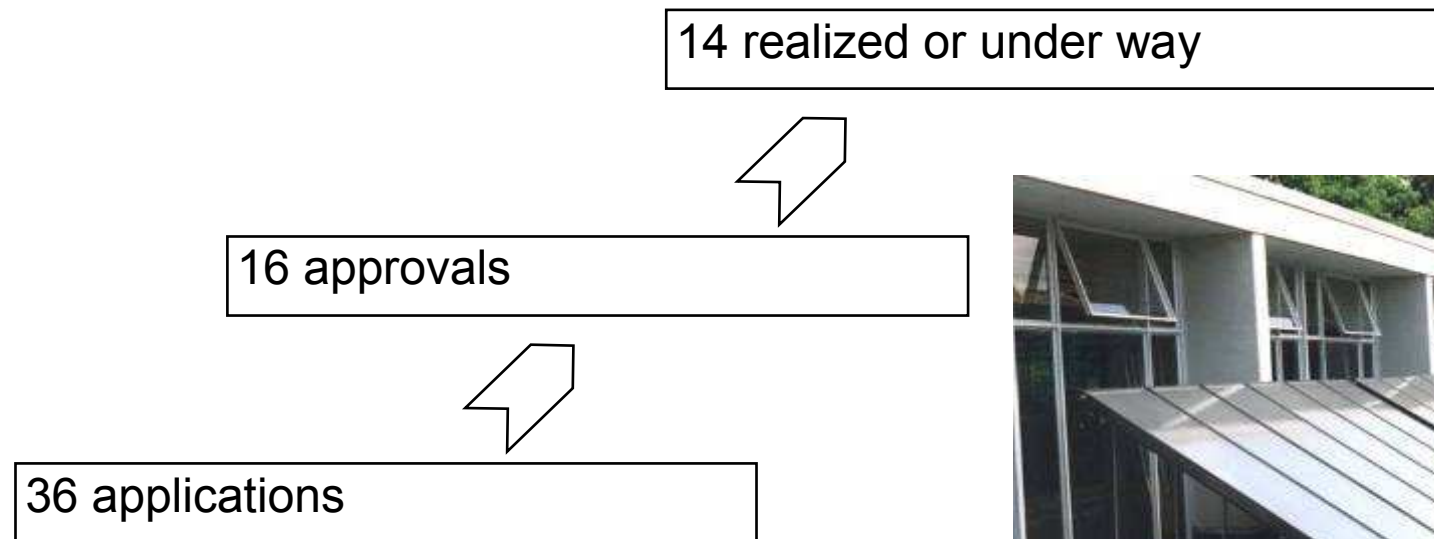


New since 2008: Network efficient cooling

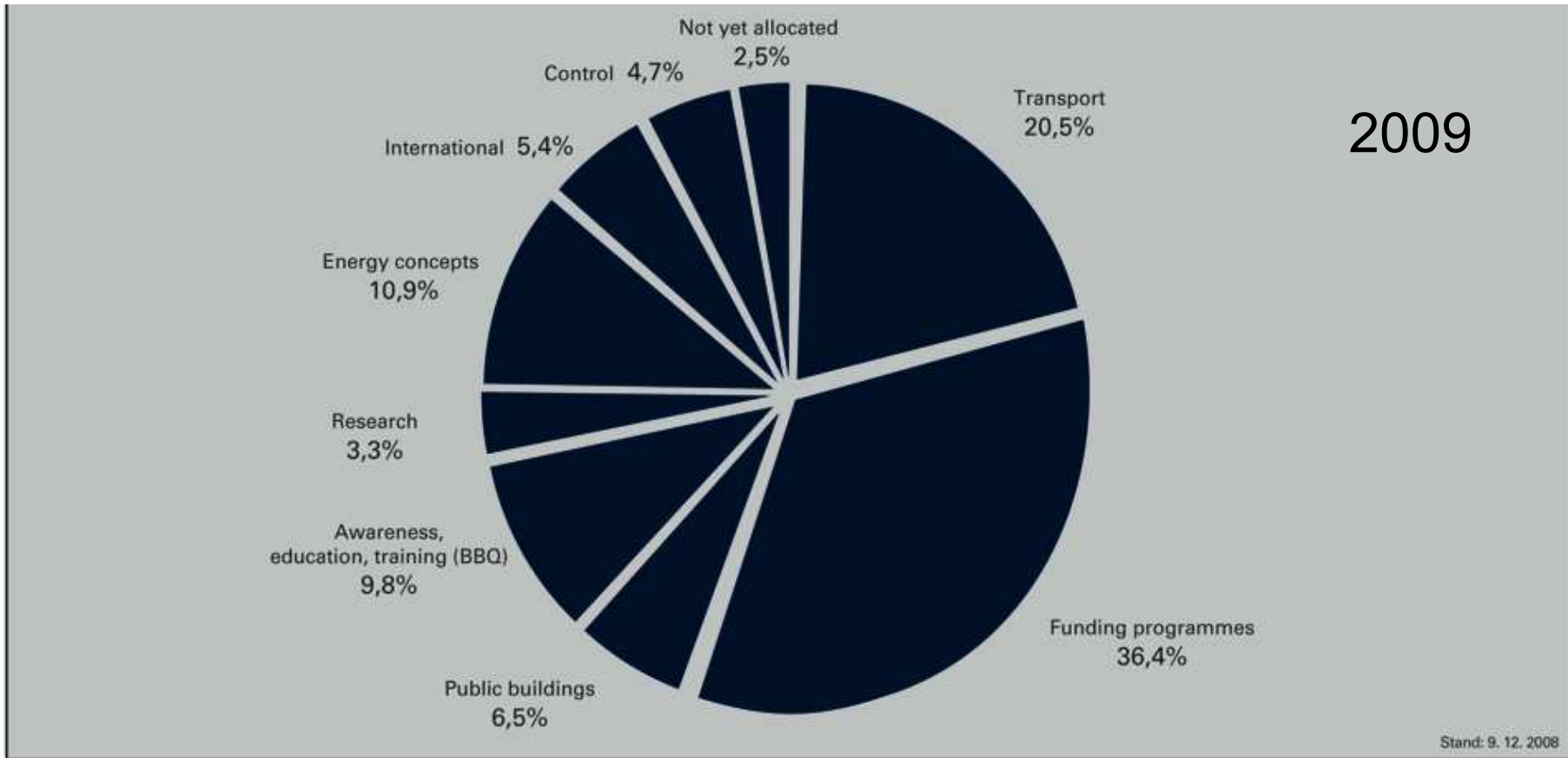
Aim: reduce energy consumption in refrigerating plants
By October 2008 six projects had already been realized.

Example „Klimaschutz macht Schule“

= Funding for the installation of photovoltaics on school roofs



2009 Budget Broken Down (Projection)



	Funding programmes	Transport	Energy concepts	BBQ	Public buildings	International	Control	Research	Not yet allocated	Total
%	36,4%	20,5%	10,9%	9,8%	6,5%	5,4%	4,7%	3,3%	2,5%	100,0%
EUR	9.100.000	5.118.000	2.721.900	2.448.681	1.623.000	1.360.000	1.179.750	836.000	612.669	25.000.000

Example Bicycle Mobility Strategy



Individual measures:

- Signage of bike routes
- Overhauling bicycle infrastructure
- Repairing and broadening bikeways



The Hamburg Transport Association – facts & figures



	Bus/Ferry	Rail	Total
Routes/lines	655	27	682
Stops/stations	9.396	281	9.677
Network length (km)	12.241	881	13.122
Vehicles	1.920	1.636	3.556
Passenger kilometres (m)	1.431	3.935	5.367
Passengers on lines/routes (m)	373	469	842
HVV total passengers (m)			609

Advanced energy concepts in Hamburg's Public Transport

Automatic driving
recommendations for energy-
efficient train operation

Return of braking energy into the
electricity network

Energy storage systems

New lightweight construction
vehicle concept



Fuel-cell powered hydrogen
buses are 100% environmentally
compatible and operate at low
noise emission rates

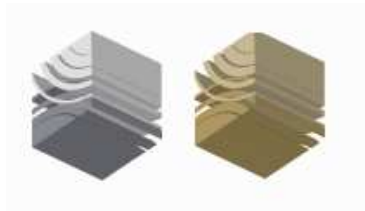
HOCHBAHN operates nine fuel
cell powered buses in the regular
daily inner-city traffic thus
constituting the largest hydrogen
powered bus fleet in Europe

HafenCity Hamburg: Ecological Sustainability Strategies in a Large-Scale Urban Development Project



Stimulation of competition and market processes by

- ✓ awarding an eco-label and conferring an environmental award
- ✓ certification of buildings
- ✓ promotion of energy efficiency as part of the sale of plots



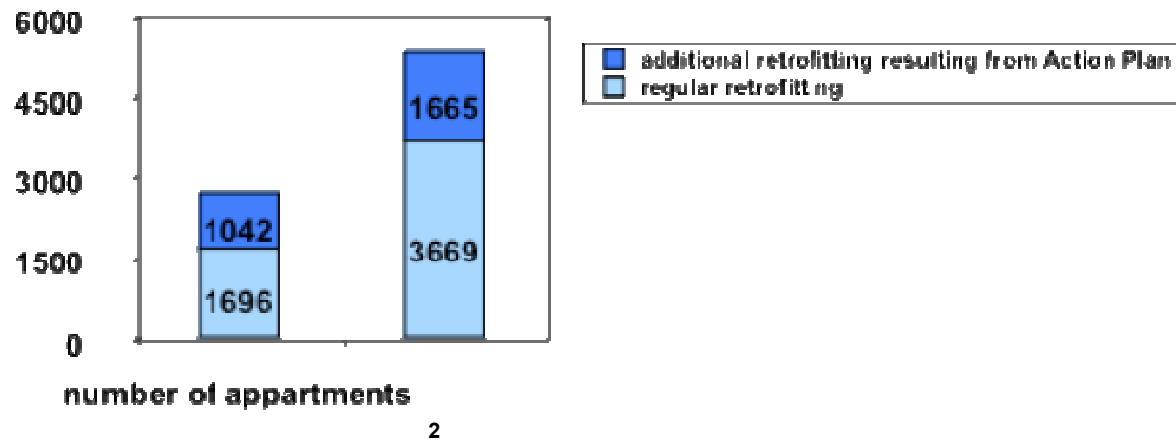
residential buildings < 60 kWh/a m² or < 40 kWh/a m²

commercial buildings < 190 kWh/a m² or < 100 kWh/a m²

Example Funding program by WK

- High building standards for subsidies
- No longer cap on apartment leases
- All housing can benefit

Subsidized retrofitting in 2008



Hamburgische **WK**
Wohnungsbaukreditanstalt

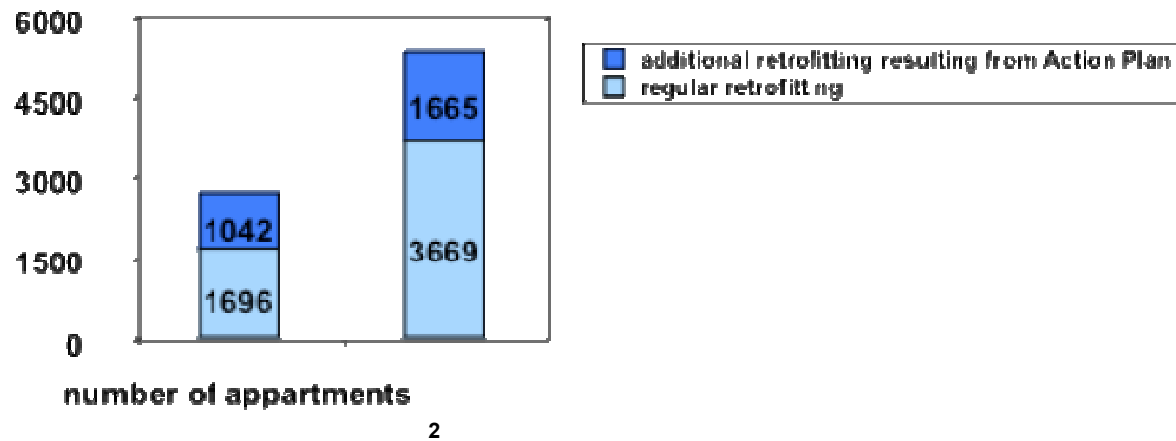


Quelle: WK-Jahresbericht 2007

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Quelle: WK-Jahresbericht 2007

Example Potential energy saving for historic buildings



Compatibility of conservation with National Energy Saving Regulation (EnEV)

- Aim of report: Produce results for a strategy to retrofit historic buildings
- Status quo: series of measurements from 11/2008 until 03/2009 at five exemplary buildings

Example
CHP Program



Principle: No heat without power, no power without heat

Realization of the results from the report on potentials of CHP (heat capacities of 1-20 MW and >20 MW)

Example
Funding program
Innovation 2009-2012



Areas are

- energy production and conversion
- development of resource friendly products, processes and services

Managed by Innovation Endowment Hamburg

Example

Comprehensive strategy for adaptation to climate change



Comprehensive strategy to avoid zur Vermeidung von antagonisms and conflicts of interest

Workshops and commissioning of an external contractor in preparation

Example

Modelling of city climate



Basis:

reliable predictions
→ adaptation of urban planning and architecture to the effect of climate change

feasability study for modelling the city climate