

# Berlin's Climate Action and Adaptation Planning

CLIMATE METROPOLE+ Initiative

Workshop „Climate Change Adaptation – Strategies, Actions and  
Challenges“

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# Berlin – Facts and Figures



Marvin Siefke / pixelio.de



Jens Havelberg / pixelio.de

- Growing city
- Global warming
- Economic challenges
- Creative hot-spot



Etienne Rheindahlen / pixelio.de

# Berlin – Facts and Figures

## Administration

- Capital city of Germany

## Population

- Population: about 3.5 million,
- Density: 3809 inhabitants/km<sup>2</sup>
- High population growth, forecast: 3.75 million by 2030
- Refugees: approximately 40.000 in 2015



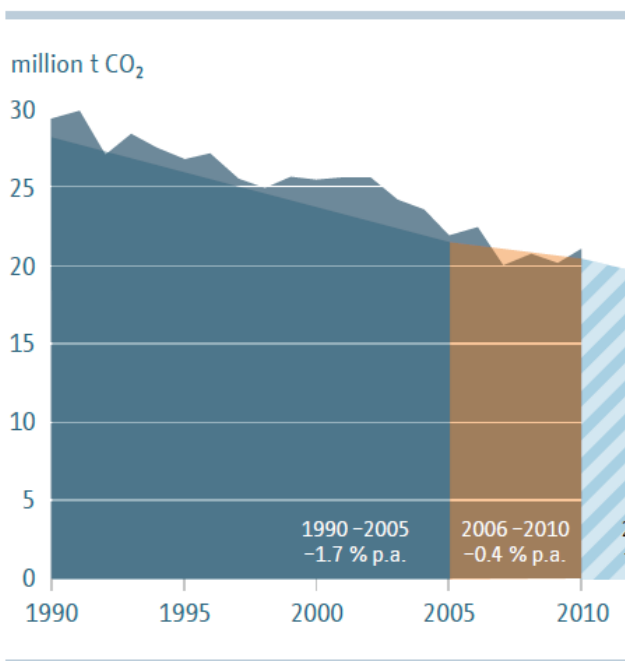
## Economy

- GDP 2012 at 117.3 billion (low), above- (German) average growth rate of 2.2 %
- Unemployment rate at about 11 % in 2014 (German average 6.7 %)
- Mainly service sector, also creative industries, research, media and IT, tourism (about 9 million visitors per year)

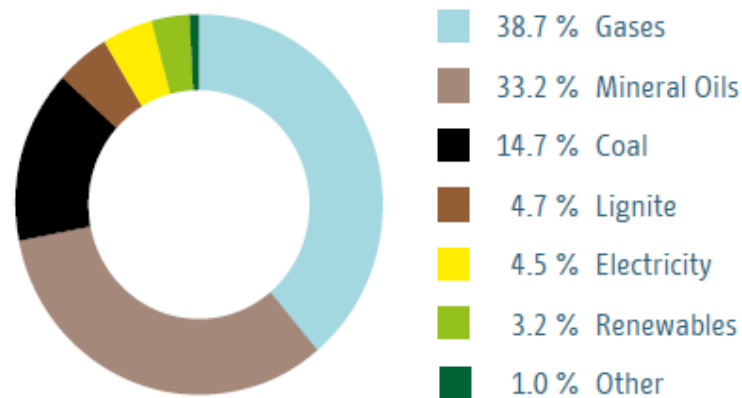
## Infrastructure /Transport

- Green city: around one third of the city's area is composed of forests, parks, gardens, rivers and lakes
- Remarkable public transport system, biggest metro system in Germany
- Motorisation rate: 324 cars/1000 residents in 2014 (German average 538/1000)
- Share of private motorized transport is decreasing despite of growing population (from 38 % in 1998 to 30 % in 2013)

# Berlin's climate and energy policy – status quo



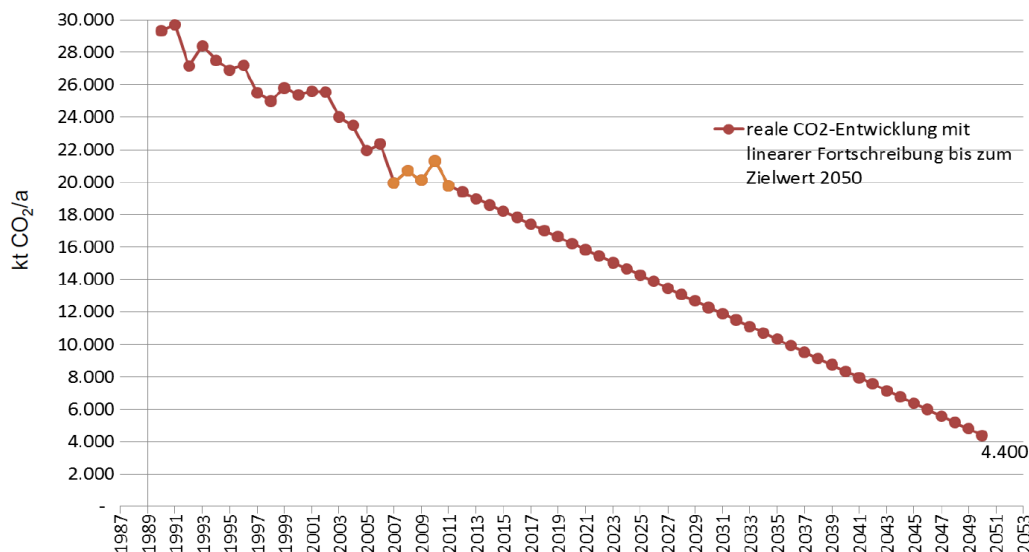
**Reduction of CO<sub>2</sub> emissions in Berlin,  
1990- 2010**



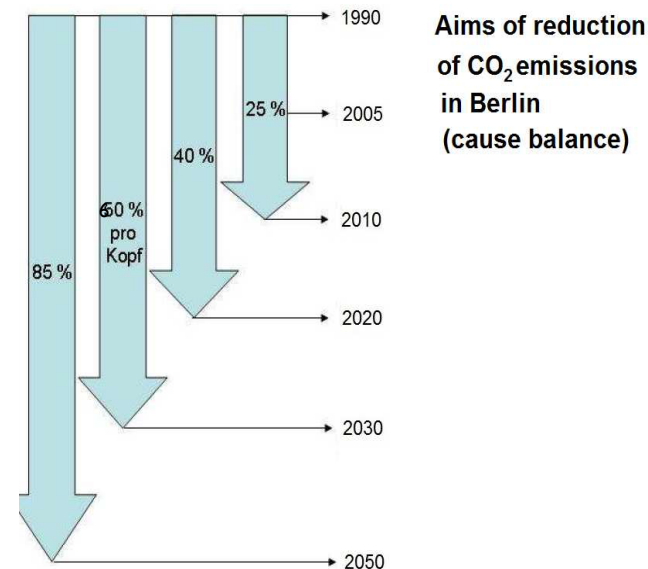
**Composition of Berlin's primary energy  
consumption by energy carriers in 2010**

Source: Machbarkeitsstudie Klimaneutrales Berlin 2050

# New Strategy: Climate-neutral Berlin 2050



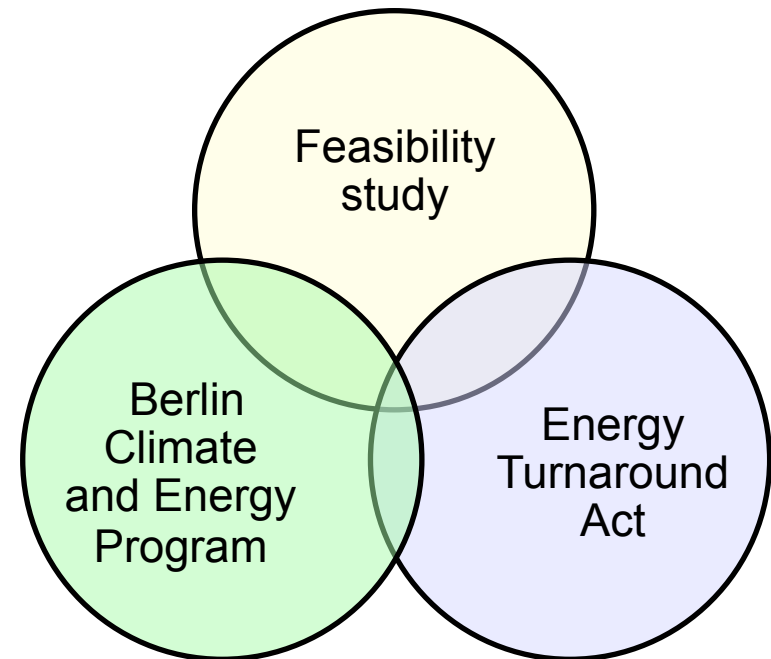
Source: Machbarkeitsstudie Klimaneutrales Berlin 2050



- Reduction of CO<sub>2</sub> emissions per capita below 1.7 tons till 2050
- Reduction of CO<sub>2</sub> emissions by 40 % till 2020, by 60 % till 2030, by 85 % by 2050 (compared to 1990)
- Strengthen role model function of public sector
- Better coordination of climate and energy policy

# New Strategy: Climate-neutral Berlin 2050

<b>2011/2012</b>	Coalition agreement : „Getting Berlin climate neutral by 2050“
<b>2012</b>	Special Unit on Climate Change and Energy
<b>2013/2014</b>	Feasibility Study „Climate Neutral Berlin 2050“
<b>currently</b>	Setting up „Berlin Energy and Climate Program“ Energy Turnaround Law
<b>to come</b>	Implementing Berlin Energy and Climate Program



# Berlin Climate and Energy Program



- Key plan for climate and energy in Berlin
- Measures in different field of actions (energy supply, economy, transport, urban development & buildings, private households & consumption)
- Responsibilities and timeframes for implementation
- Monitoring plan
- Broad participation (online participation, workshops, events)
- To be presented end of 2015, to be strengthened by Senate decision requirement

# Climate Impact Monitoring

- Necessary prerequisite for further climate adaptation planning, is meant to enable policy makers to respond to climate change adequately
- First data was made available in 2014, indicators will now be monitored continuously, data will be made available online

**State-indicators:** illustrate climatic conditions

- Temperature (air temperature, characteristic temperatures)
- Precipitation (areal trends, heavy precipitation)

**Impact-indicators:** illustrate climate impacts on different sectors

- Air, water, soil, nature protection/biodiversity, forestry, human health, urban planning (microclimate)



# Climate Adaptation Planning

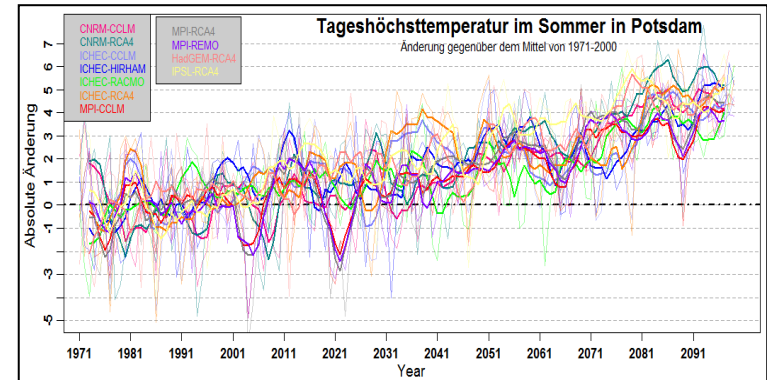
## Status

- will be presented by the beginning of 2016
- action is also required by the Energy Turnaround Act

## Procedure

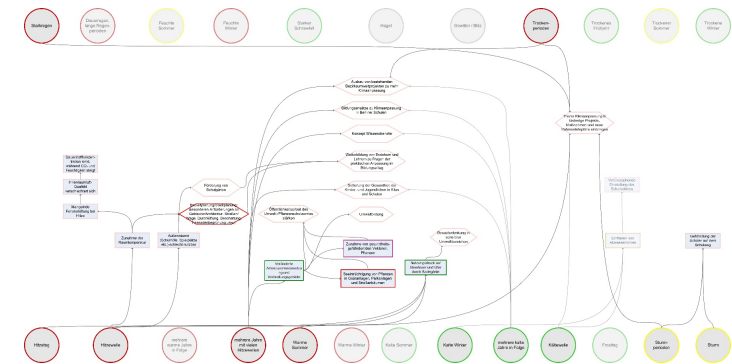
- Identification of current and future climate changes relevant to the system (using the IPCC climate models, down scaled to the region of Berlin)
- Assessment of vulnerabilities, social risks and physical damages
- Development of a comprehensive adaptation strategy covering all relevant fields
- Participation of relevant stakeholders from administration, politics, science and economy (workshops/interviews)
- Development of an outreach concept to facilitate its implementation
- Development of a strategy to monitor and reevaluate implemented adaptation options

## Comparison of different climate models



Source: PIK

## Using path models to identify need for action



Source: PIK

# Climate Adaptation – Further Projects

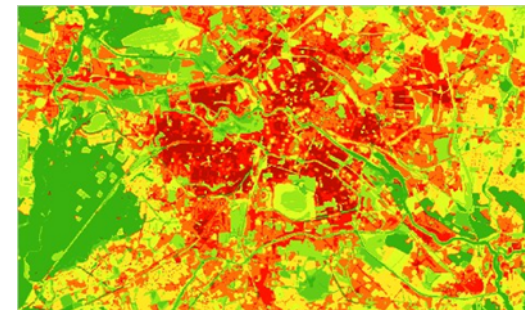
**2011:** The Urban Development Plan (Stadtentwicklungsplan /**SteP Klima**) was adopted as an instrument of regional and spatial planning

- Goals:
- > preserve the quality of life in the city in the face of climate change and to improve it wherever possible
  - > maintain the concepts of »compact city« and the »city of short distances« as they are best suited to ensure an urban environment worth living in under the conditions of climate change



Source: SteP Klima

- Current:**
- > Update of the SteP Klima
  - > Revision of the analysis maps – urban climate (Planungshinweiskarten)



Source: Geoportal

# Thank you for your attention!

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