



The Climate Protection Programme of the City of Vienna

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Michael Sattler

Deputy Head of the Executive Office of the Co-ordination of Climate Protection Measures



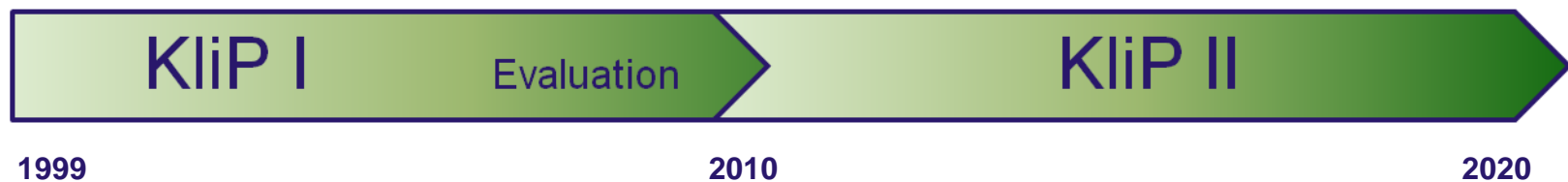
Content

- **Organisation** of Climate Protection in Vienna
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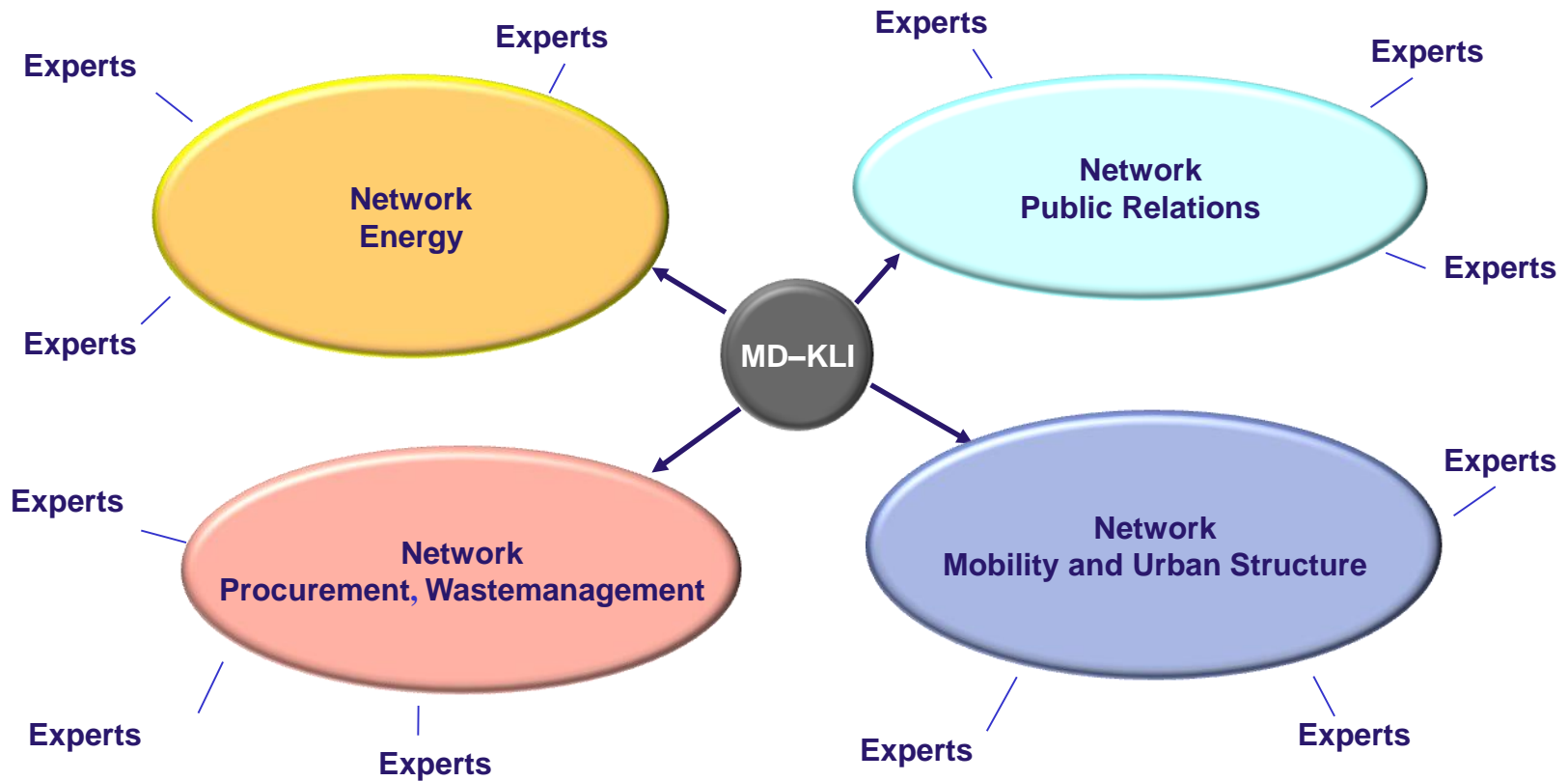
Milestones in the Policy of Climate Protection in Vienna



- 1969 Founding of Fernwärme Wien
- 1991 Accession of the Climate Alliance
- 1996 Commitment of the Aalborg Charter
- **1999 KliP I** was adopted by the Vienna City Council
- 2008/2009 Evaluation of KliP I by the Austrian Energy Agency
- **2009 KliP II** as the update of KliP I, agreed upon by the City Council of Vienna



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The Results of the Evaluation (1/2)

From 1999 to 2009 due to the implementation of the measures of the KliP

- ✓ **3.7 million** tons of CO₂ per year have been **avoided**,
- ✓ **15 billion** euros **investment volume** has been triggered,
- ✓ **14 billion** euros **value added effect** has been achieved,
- ✓ app. **58.000 jobs** were secured.

But: The forecast for the change in energy production and traffic volume was incorrect. The greenhouse gas balance for Vienna (1990 to 2009) shows an increase from 8.1 million tons (1990) to 9.3 million tons (2009). That means an increase of 15 % (Austria 2.4 %)

The Results of the Evaluation (2/2)

Main factors for success:

- ✓ massive expansion of **district heating**
- ✓ **thermal rehabilitation** of residential buildings
- ✓ **strict energy standards** for new buildings
- ✓ forceful promotion of a **combination of public transport, walking and cycling**
- ✓ the constantly increasing use of **renewable energy sources**

Main challenges:

- massive improvement in the **efficiency of final energy use**
- significant **increase in the share of renewable energy sources** within the total final energy mix
- **reduction in traffic emissions** via city and transportation planning and technical measures

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The Goal of KLiP II

Reduction in greenhouse gas emissions by the year 2020

- **minus 21%** greenhouse gas emissions per capita by the year 2020 compared to 1990
- prevention of furthermore **1.4 million** tons of greenhouse gases
- 1990 – 2020: Prevention of **4.5 million tons per year** of greenhouse gas emissions total.

The measures target areas that can be **influenced directly** by the City of Vienna.



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The Most Important Measures (1/2)

- **Increasing the share of district heating to 50%**
 - continuous development plans of „Wien Energie District Heating“
 - expansion of heating network
 - increasing energy efficiency
 - use of renewable energy
- **Further promotion of thermal rehabilitation of residential buildings**
 - adoption of subsidy guidelines (Thewosan)
 - adaptation of the statutory provisions (e.g.: building code)

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The Most Important Measures (2/2)

- **Expansion of public transportation, reduction of passenger car traffic**
 - promotion of public transport, bicycles and walking
 - particular attention paid to bicycle use and walking
 - advances in automotive technology and accompanying measures
- **More than doubling of the amount of final energy produced by renewables compared to 1990**
 - make use of the different kind of renewables within the urban area as well as outside
- **Creation of a plan for the secure supply of energy**
 - energy efficiency and renewables are of utmost importance when compiling this plan

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The 5 Fields of Action

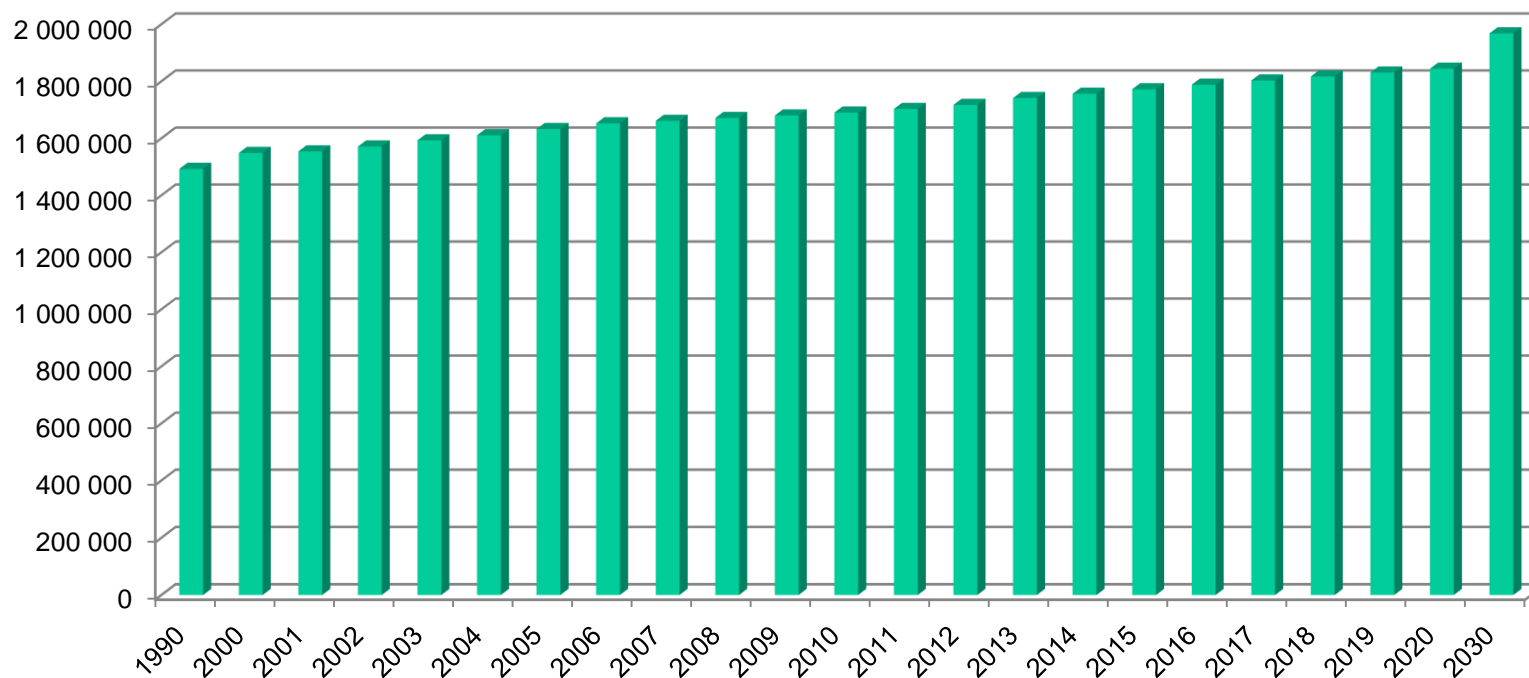
There are five fields of action in KliP II:

- energy production
- use of energy
- mobility and city-structure
- procurement, waste management, agriculture and forestry
- public relations

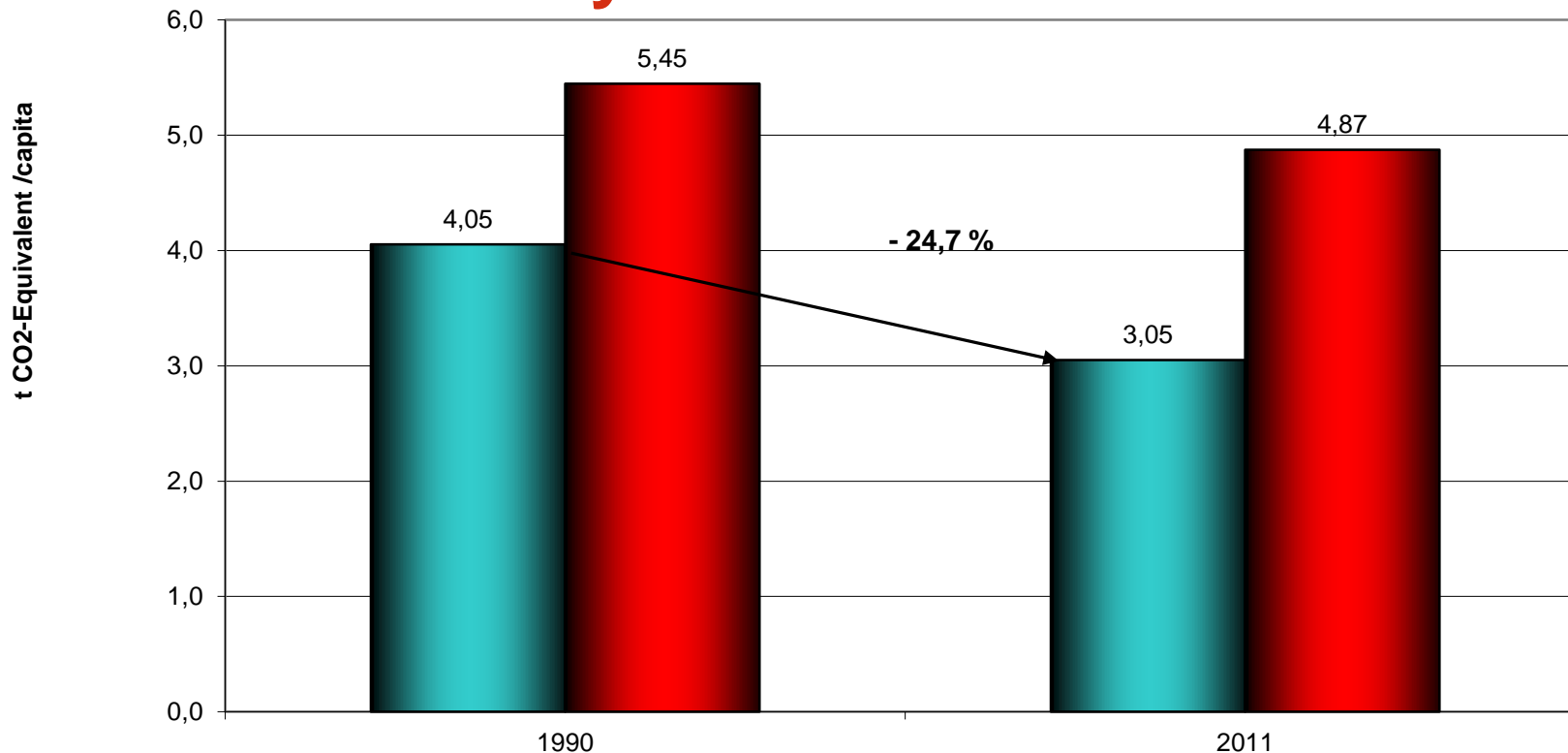
Considerations about Viennese climate
adaption measures



Demographic Development



Vienna and Climate Protection Greenhouse Gases Influenceable by Vienna's Measures

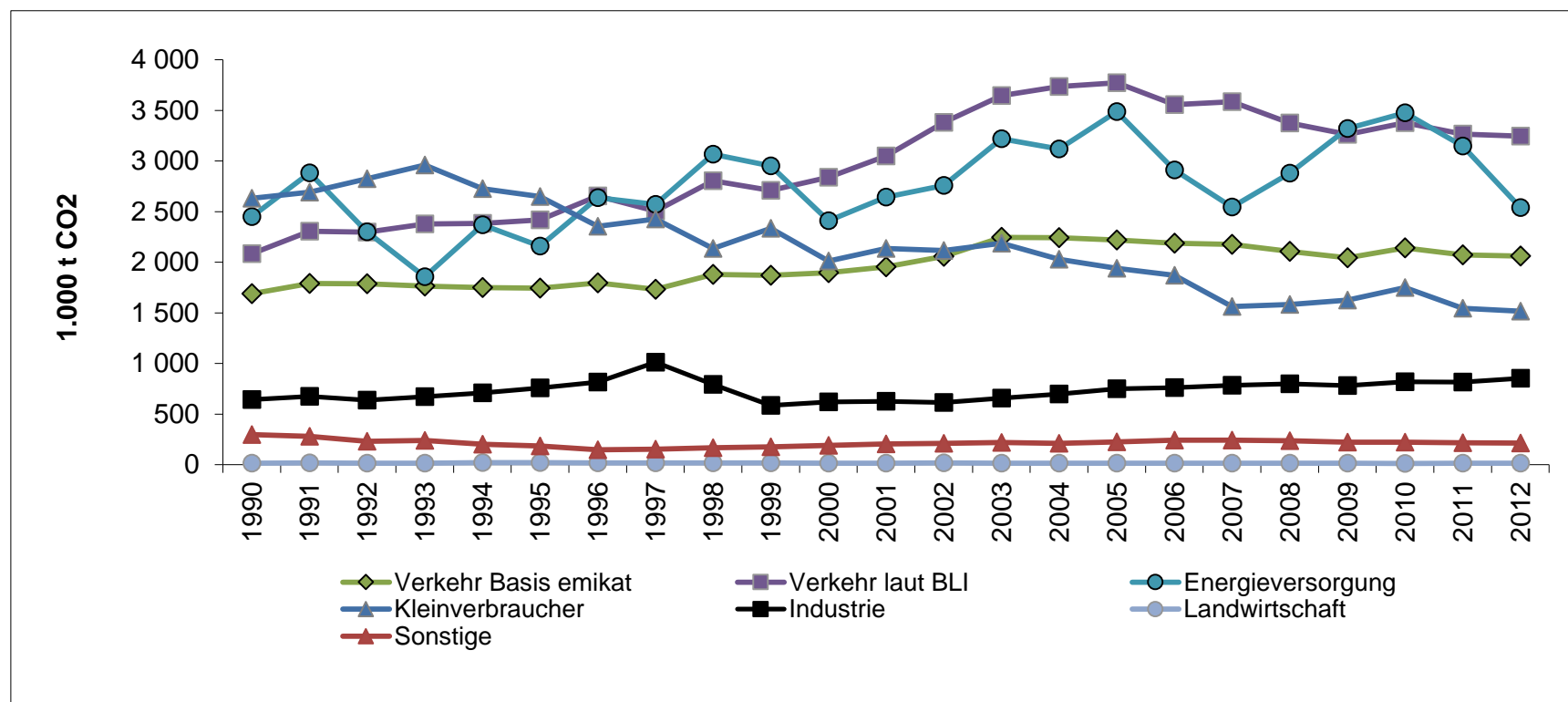


Vienna's Emission Development 1990–2012 per capita, based upon Emikat (without ET-companies) and BLI

Vienna and Climate Protection

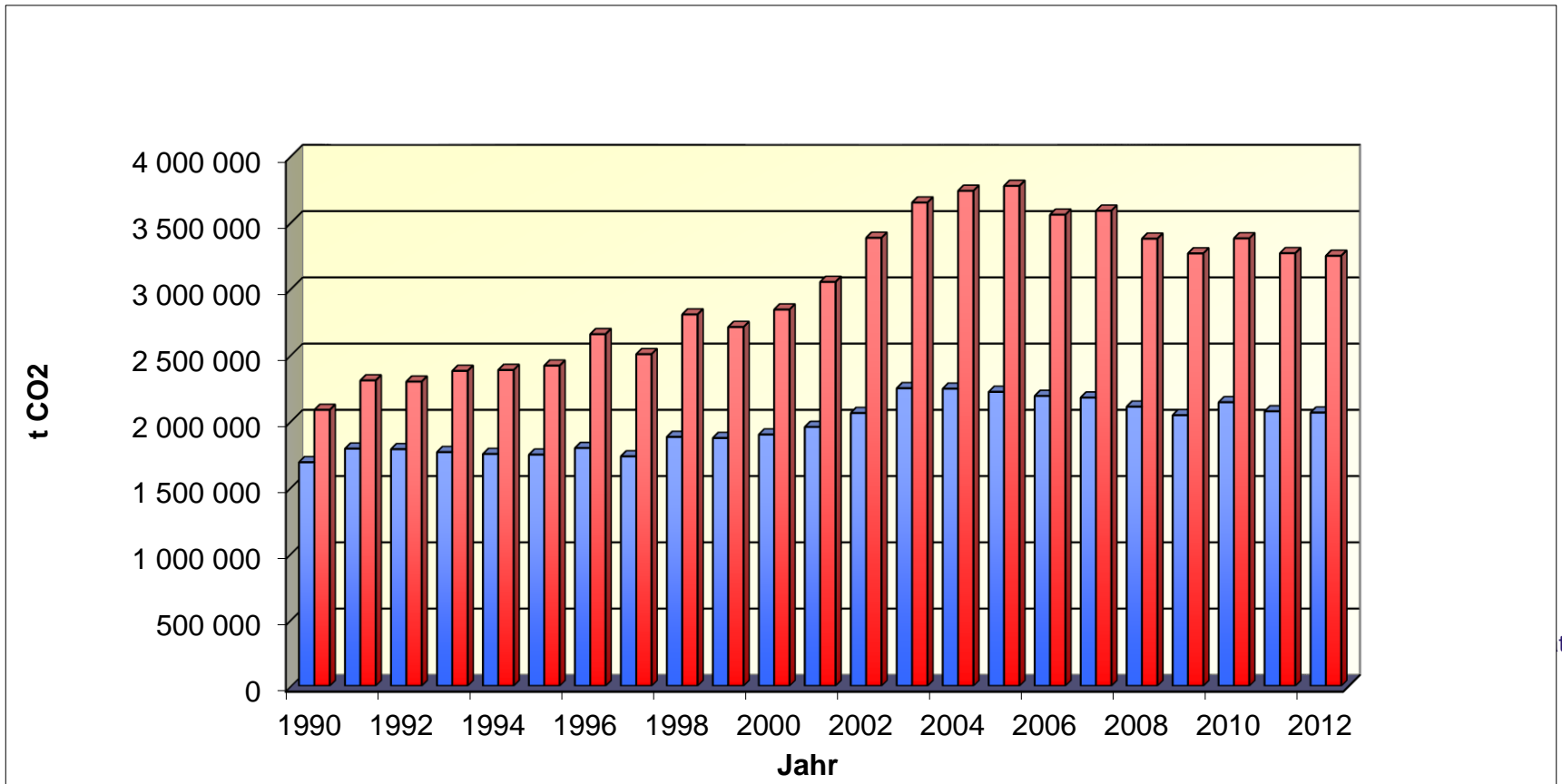
Greenhouse Gas Balance 1990- 2012 of Vienna

(Contributors to Greenhouse Gases)



Vienna and Climate Protection

Greenhouse Gas Balance 1990-2012 of Vienna



Project Vienna Central Station

- **Key Factors:**
 - **2004 Masterplan „Vienna Central Station“ was enacted**
 - **an urban district of 110 ha shall be newly constructed until 2020**
 - **not only an traffic site with interconnection of railway, pedestrians, bikes, public transport**
 - **also use of renewable energy sources, district heating and cooling**
 - **modern social housing, parks, recreation zones and 20.000 workplaces**

District cooling

- **Cooling capacity: 20MW (25MW in final state of expansion)**
 - **This equals the power of 125,000 household refrigerators**
 - **Cooling provided for 400,000 sqm office space**
 - **Rejected heat is used to power absorption chillers**
 - **Reduction of CO2 emissions by 64% compared to conventional air conditioning**
 - **Heating capacity 79 MW**
 - **Approximately 5,000 households**
 - **Heating provided for offices and residential buildings**
- Total investment: approx. €54 million**

Social housing

- Quarter Sonnwendviertel
 - app. 5000 flats
 - influenced by the City of Vienna – app. 2000 flats
 - subsidized “smart appartements”
 - equity capital: € 60,-- /m²
 - rent: € 7,50 gross/m²
 - 2 or 3 rooms
 - Buildings connected to the district heating grid
 - heating demand of subsidized buildings: at least 20-25 kWh/m²a
 - 680 flats built like passiv houses (10 – 15 kWh/m²a)

KliP II in the Internet

- **KliP II:**
<http://www.wien.gv.at/umwelt/klimaschutz/pdf/klip-2.pdf>.
- **Movie „KliP Files“:**
<http://www.wien.gv.at/multimedia/klip/index.html>