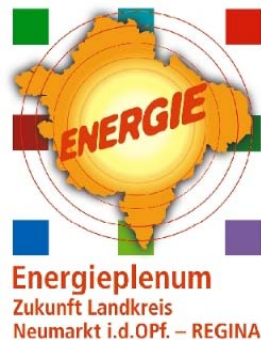
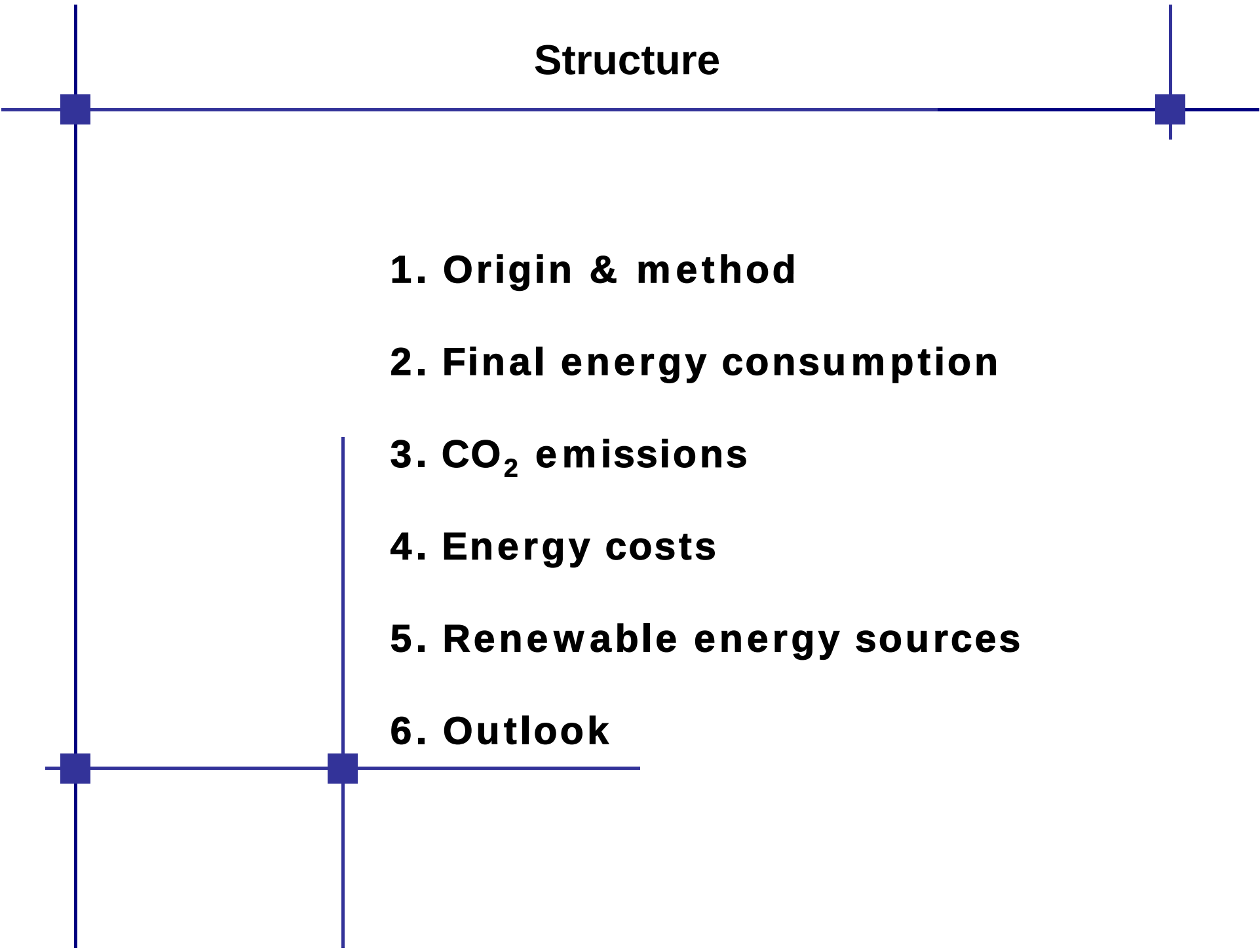


Energy consumption and CO₂ emissions of the county of Neumarkt i. d. OPf. 2004

Results from the analysis of energy consumption data for the
county of Neumarkt i. d. OPf. 2004





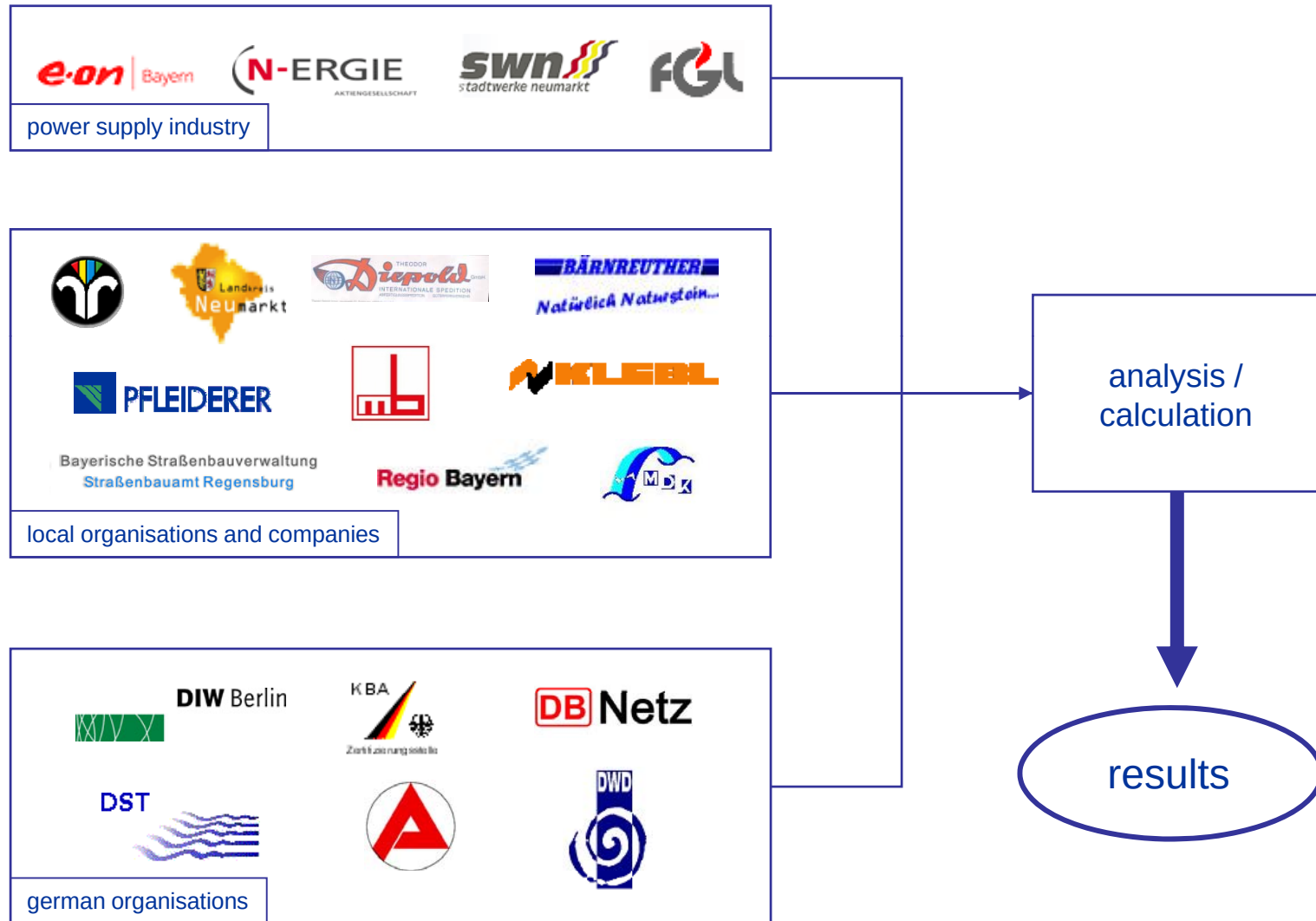
Structure

- 1. Origin & method**
- 2. Final energy consumption**
- 3. CO₂ emissions**
- 4. Energy costs**
- 5. Renewable energy sources**
- 6. Outlook**

1. Method

Origin & Method

1. Method



2. Final energy consumption

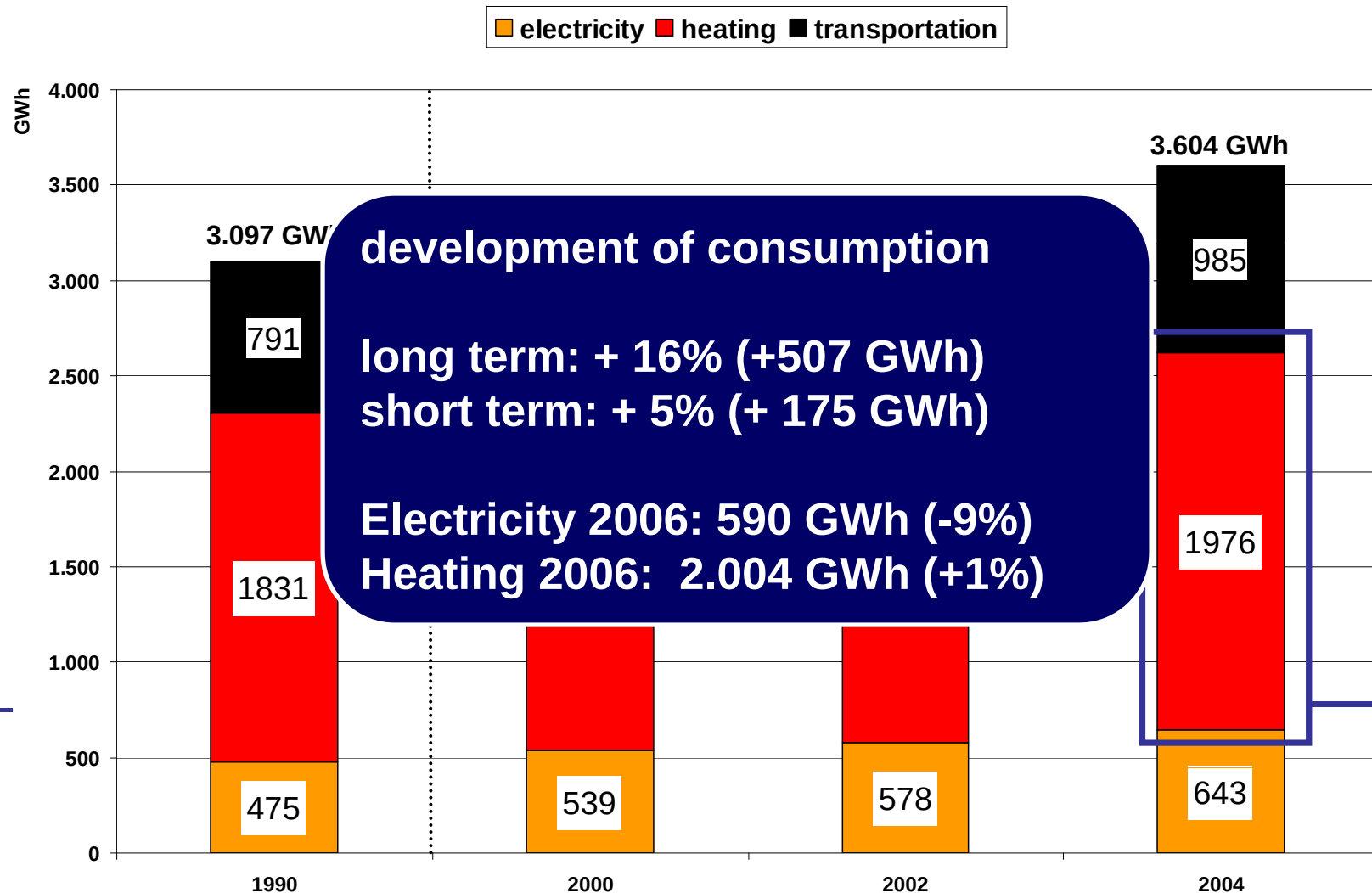
Final energy consumption

development of the county
(1990 – 2004)

population: + 15% (+17.000)
GDP: + 94% (+ 1.400 mio. €)

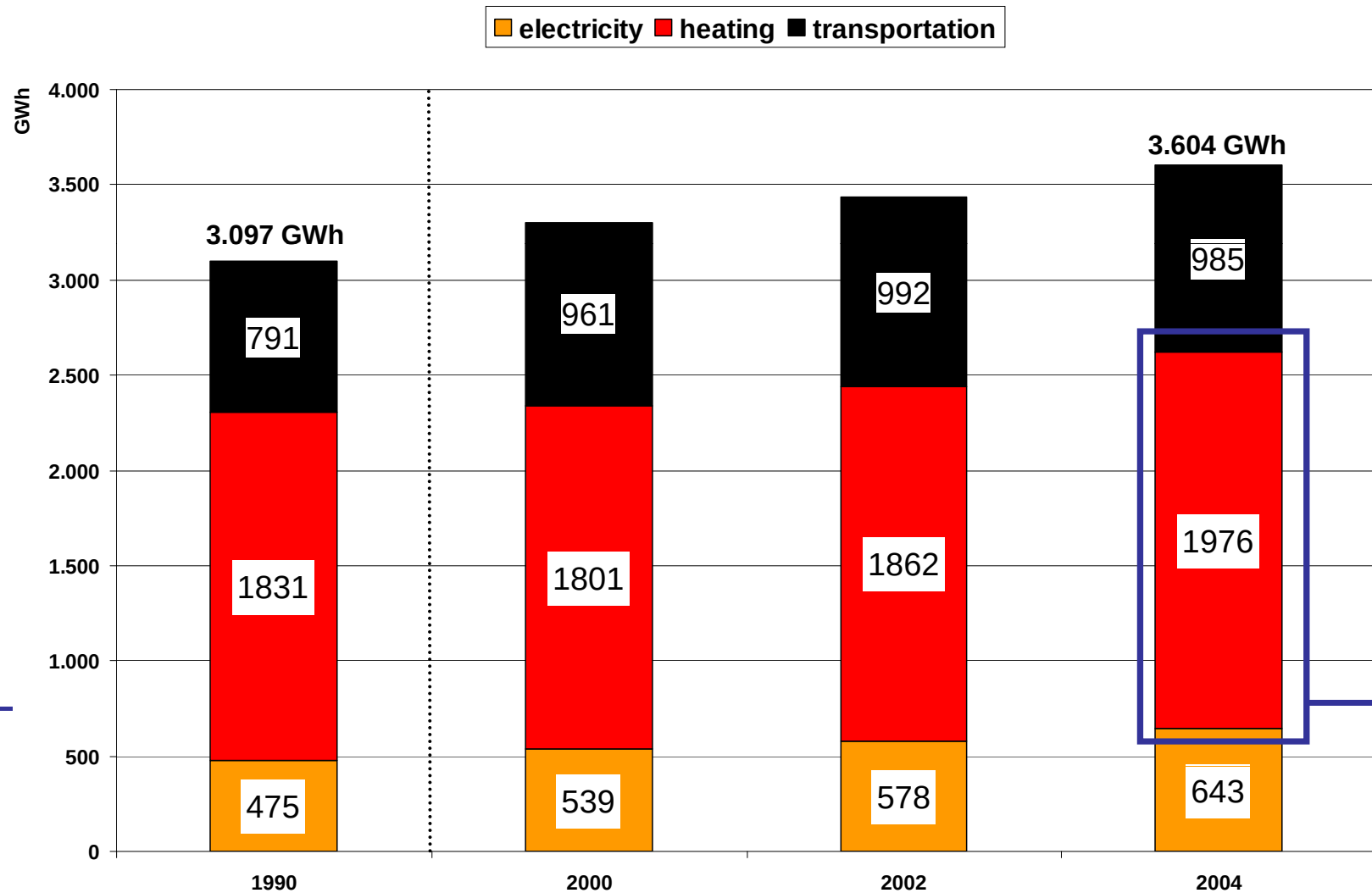
2. Final energy consumption

Chart 1: Final energy consumption by consuming sectors, county of Neumarkt i. d. OPf. 1990 – 2004



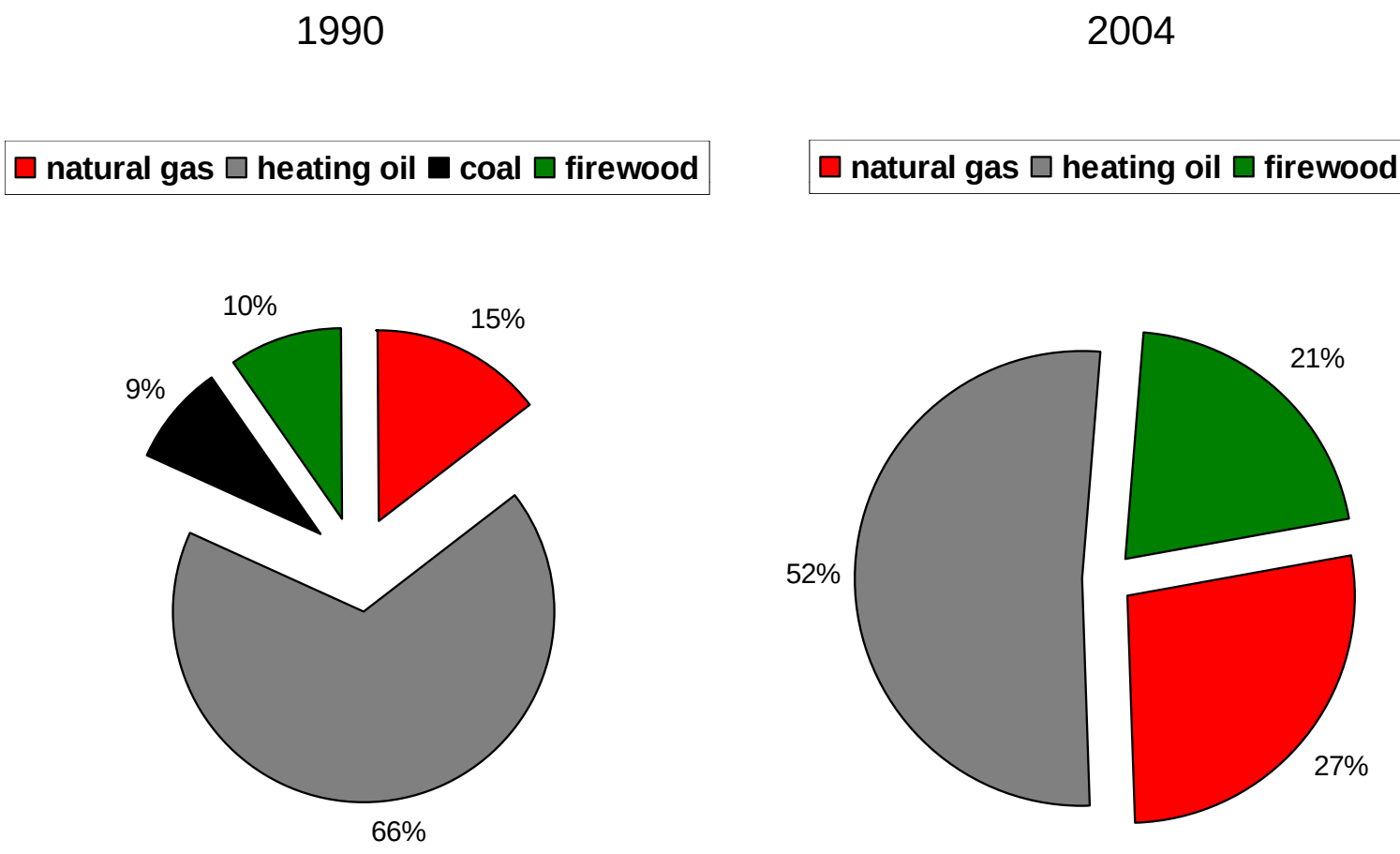
2. Final energy consumption

Chart 1: Final energy consumption by consuming sectors, county of Neumarkt i. d. OPf. 1990 – 2004



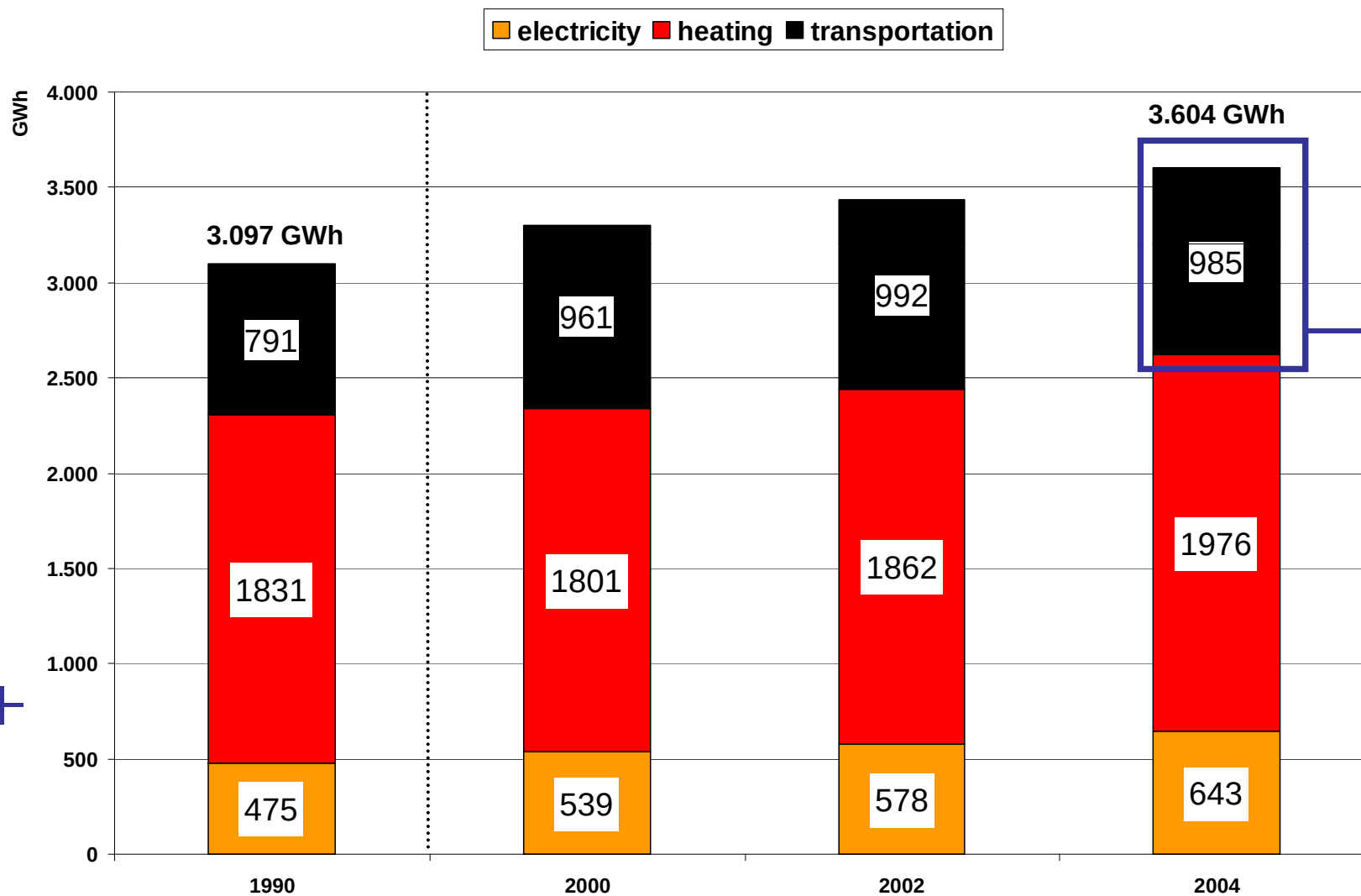
2. Final energy consumption

Chart 2: Heat energy by energy sources, county of Neumarkt i. d. OPf.



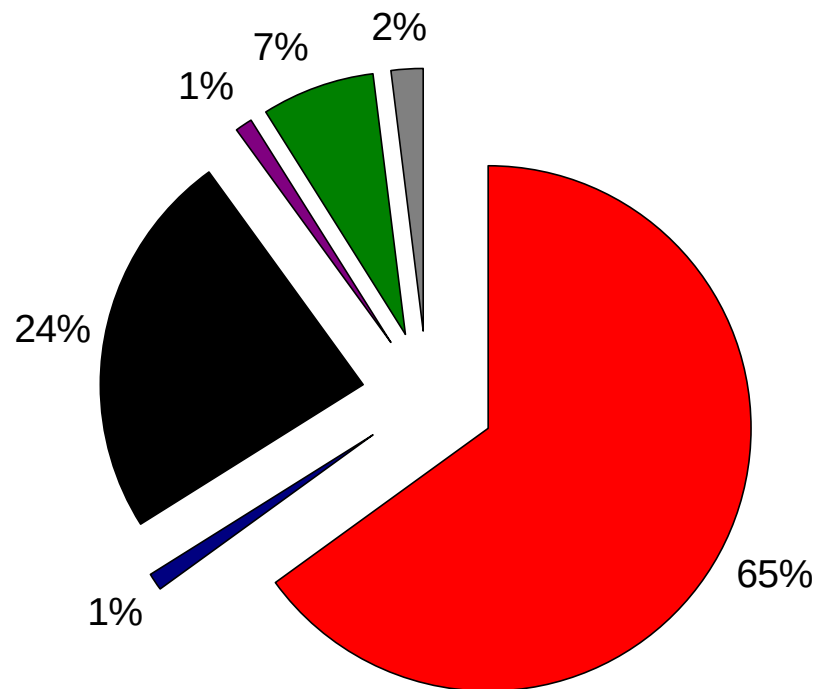
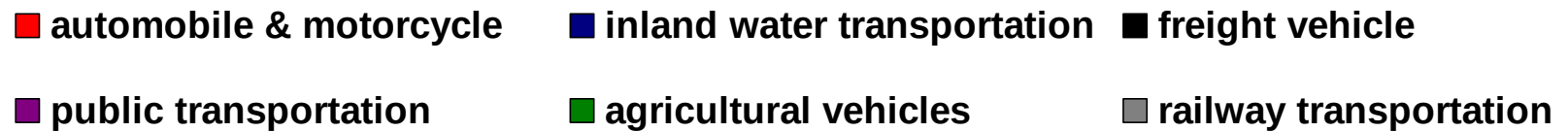
2. Final energy consumption

Chart 1: Final energy consumption by consuming sectors, county of Neumarkt i. d. OPf. 1990 – 2004



2. Final energy consumption

Chart 3: Final energy consumption by means of transportation, county of Neumarkt i. d. OPf. 2004



2. Final energy consumption

Table 1: Final energy consumption of the county, absolute and per capita

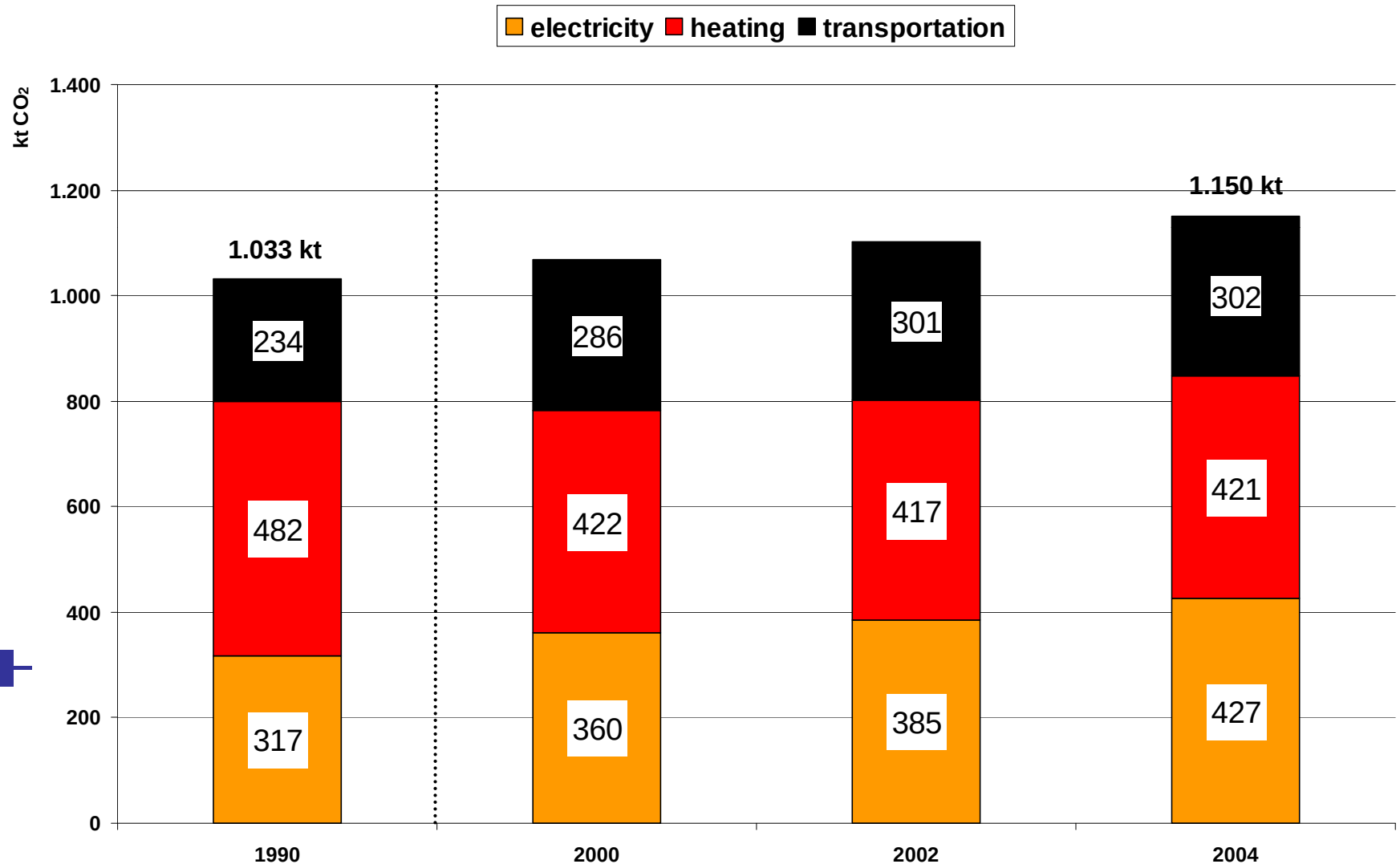
	1990	2002	2004
	TWh		
Neumarkt	3,097	3,432	3,604
Bavaria	352	381	n/a
Germany	2.638	2.559	2.568
	MWh per capita		
Neumarkt	27,7	26,8	28,0
Bavaria	30,8	30,8	n/a
Germany	33,1	31,0	31,1

3. CO₂ emissions

CO₂ emissions

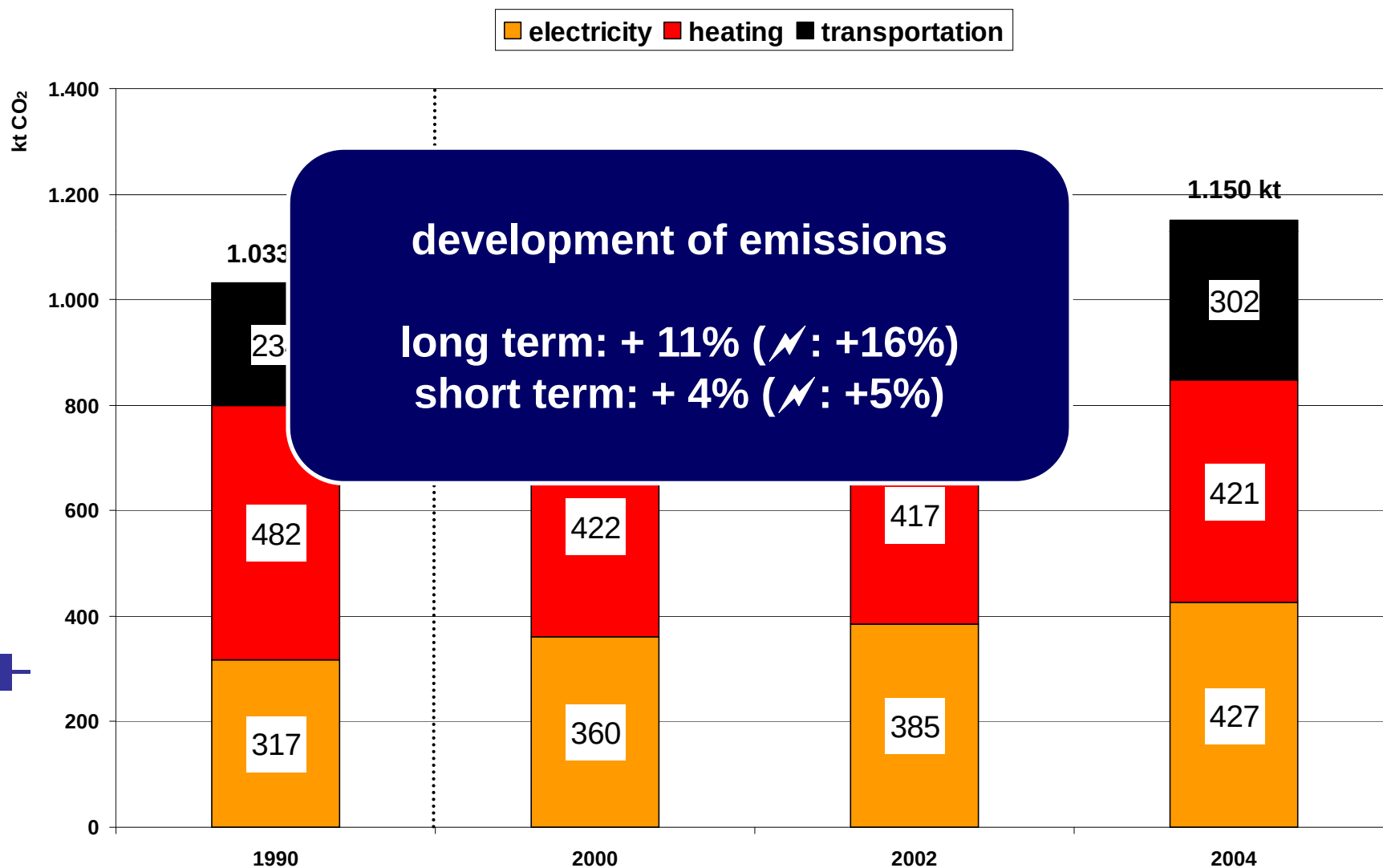
3. CO₂ emissions

Chart 4: CO₂ emissions by emitting sectors, county of Neumarkt i. d. OPf. 1990 – 2004



3. CO₂ emissions

Chart 4: CO₂ emissions by emitting sectors, county of Neumarkt i. d. OPf. 1990 – 2004

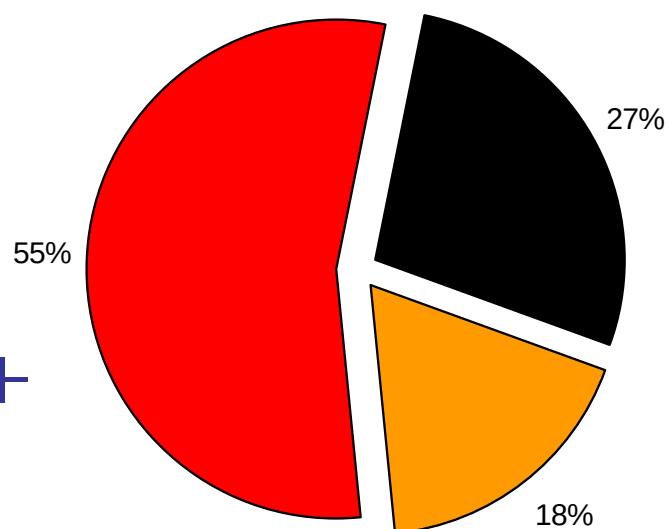


3. CO₂ emissions

Chart 5: CO₂ emissions and final energy consumption by consuming sectors, county of Neumarkt i. d. OPf. 2004

Final energy consumption

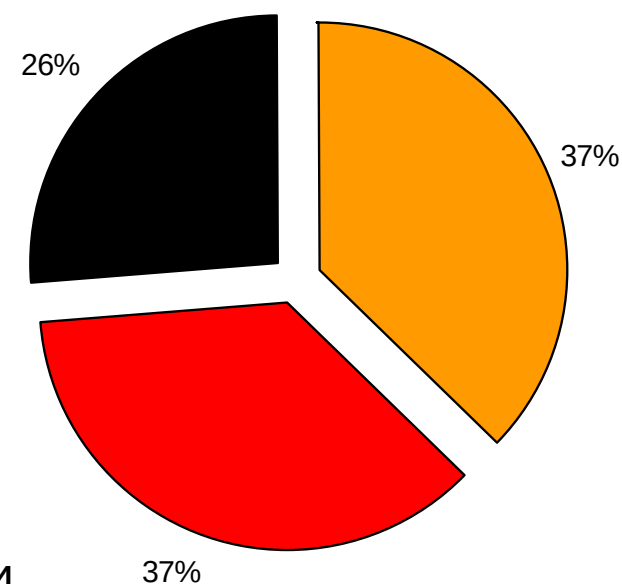
■ electricity ■ heating ■ transportation



1990

CO₂ emissions

■ electricity ■ heating ■ transportation



2004

3. CO₂ emissions

Table 2: CO₂ emissions of the county, absolute and per capita

	1990	2002	2004
	Mt		
Neumarkt	1,032	1,103	1,150
Bavaria	84,1	83,6	n/a
Germany	986,6	833,6	n/a
	kt per capita		
Neumarkt	9,2	8,6	8,9
Bavaria	7,4	6,8	n/a
Germany	12,4	10,1	n/a

4. Energy costs

Energy costs

4. Energy costs

Table 3: Annual costs for buying energy, county of Neumarkt i. d. OPf. 1990 - 2004

	1990	2000	2002	2004	alteration 1990-2004	alteration 2000-2004	alteration 2002-2004
	Mio. €				%		
electricity	62	54	66	86	+39%	+59%	+30%
heating	44	59	57	65	+48%	+10%	+14%
transportation	51	98	104	114	+123%	+16%	+10%
total	157	211	227	265	+69%	+26%	+17%

4. Energy costs

Table 3: Annual costs for buying energy, county of Neumarkt i. d. OPf. 1990 - 2004

	1990	2000	2002	2004	alteration 1990-2004	alteration 2000-2004	alteration 2002-2004
energy costs 2004: 265 mio. € = 9% GDP							
electric							+30%
heating	44	59	57	63	+45%	+10%	+14%
transportation	51	98	104	114	+123%	+16%	+10%
total	157	211	227	265	+69%	+26%	+17%

5. Renewable energy sources

Renewable energy sources

5. Renewable energy sources

Table 4: point balance of renewable energy sources (electric),
county of Neumarkt i. d. OPf. 2000 – 2004

		2000	2002	2004	2006
biomass energy	kWh	100.000	103.706	137.200	155.000
installed capacity	kW(p)	n/a	17.090	17.090	n/a
photovoltaics	kWh	36	2.172	4.432	16.492
installed capacity	kW(p)	n/a	2.925	8.428	n/a
hydropower	kWh	3.258	4.201	3.033	3.583
installed capacity	kW(p)	n/a	890	919	n/a
wind energy	kWh	2.789	8.894	11.082	17.283
installed capacity	kW(p)	n/a	5.306	10.106	n/a
total ammount of generated energy	GWh	106	119	156	192

5. Renewable energy sources

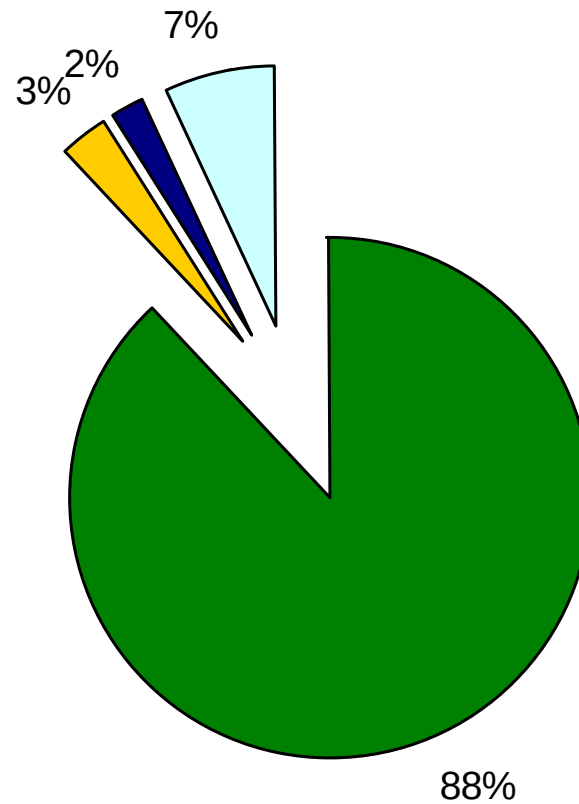
Table 4: point balance of renewable energy sources (electric),
county of Neumarkt i. d. OPf. 2000 – 2004

		2000	2002	2004	2006
renewable energy 15,8% of energy consumption generated by regenerative sources (2004) 106 kt CO₂-emissions diminished 2006: 32% of electricity generated by renewable energy sources 23,6% of heating generated by renewable energy sources					
installed capacity	kW(p)	n/a	5.306	10.106	n/a
total ammount of generated energy	GWh	106	119	156	192

5. Renewable energy sources

Chart 6: Generation of electricity by renewable sources, county of Neumarkt i. d. OPf. 2004

■ biomass energy ■ photovoltaics ■ hydropower ■ wind power

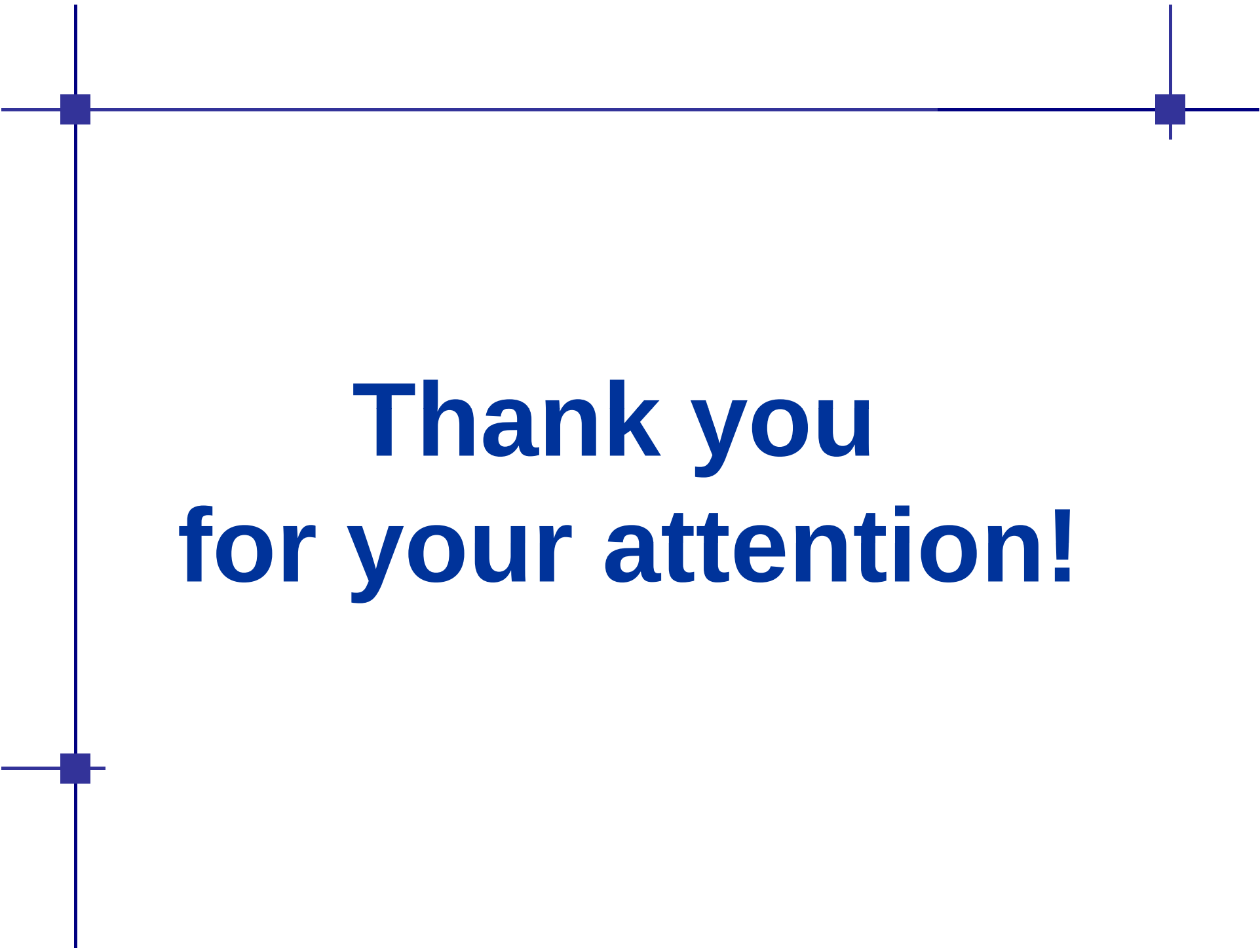


6. Outlook

Outlook

6. Outlook

- organisation of an efficient production and distribution of biogenous energy sources
- improvement in public relations (saving energy = saving money)
- promotion of solar power and wind power
- promotion of combined heat and power generation
- development of an mission statement for the transportation sector
- improvement of public transportation (matching of bus and railway schedules)
- installation of an mobility information service (internet / telephone)
- furtherance of the modification of diesel powered vehicles to rape seed oil
- activation of buiseness circles at regional level
- securing of the access to primary goods in the vicinity of the place of residence, restritction of urban sprawl



**Thank you
for your attention!**