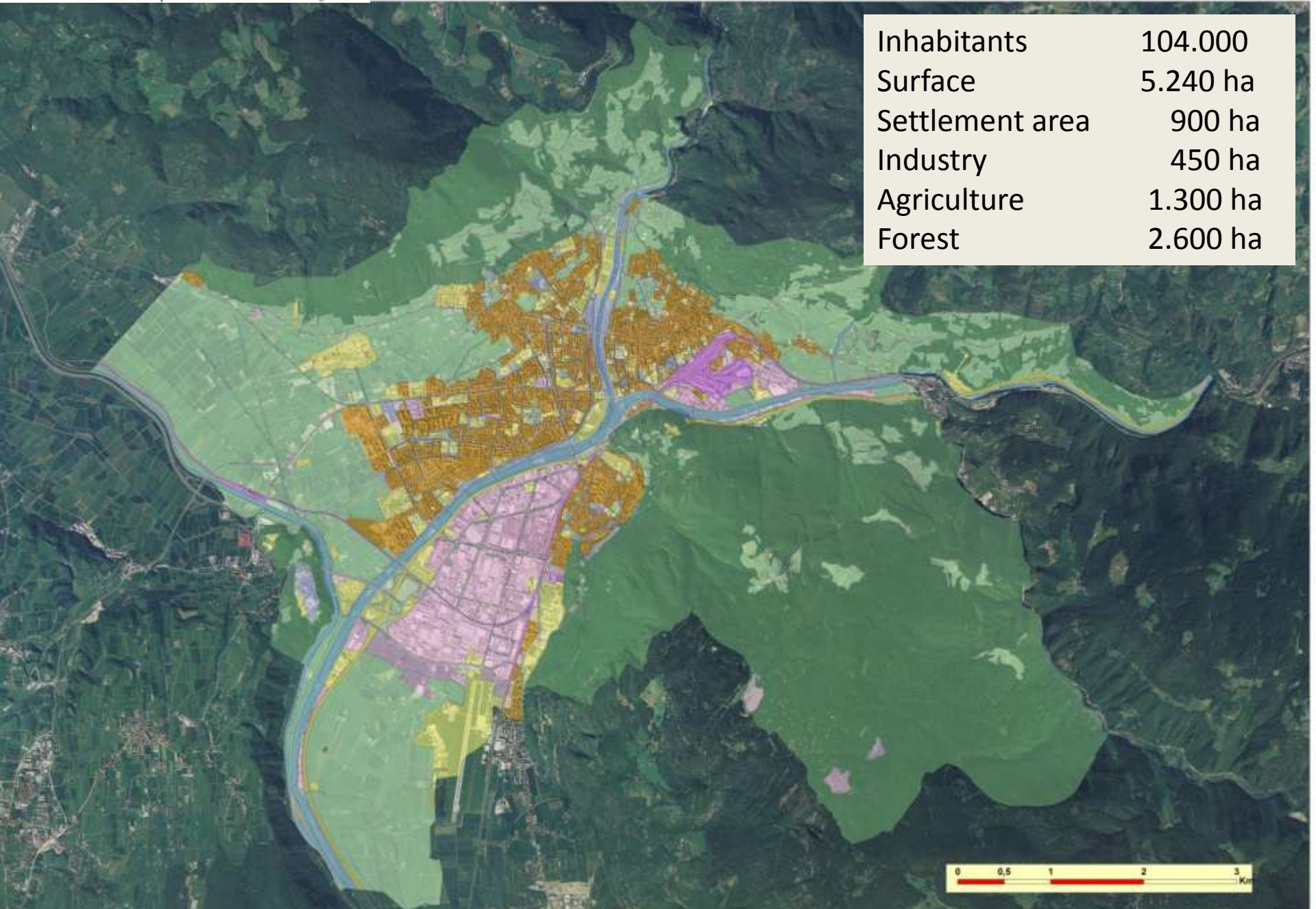




**The strategies for climate protection in Bolzano
How to act in order to reach a CO2 neutral balance**

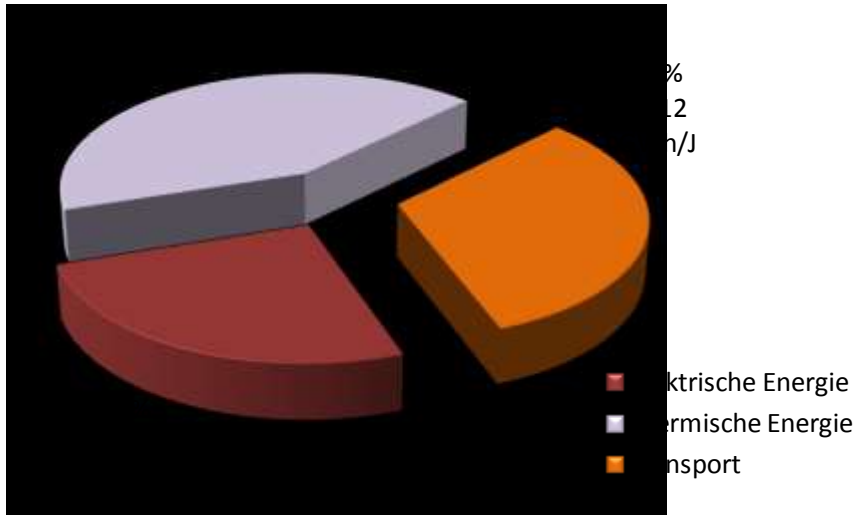
Bolzano



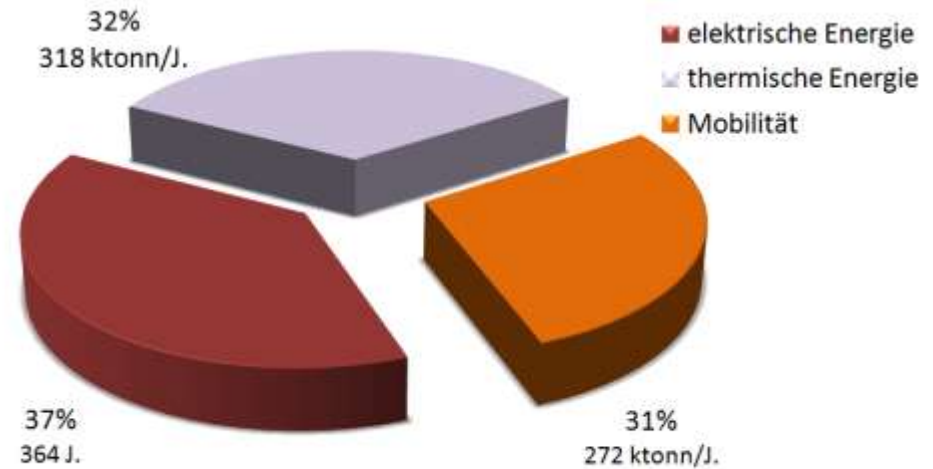
Inhabitants	104.000
Surface	5.240 ha
Settlement area	900 ha
Industry	450 ha
Agriculture	1.300 ha
Forest	2.600 ha



Total energy consumption 2007

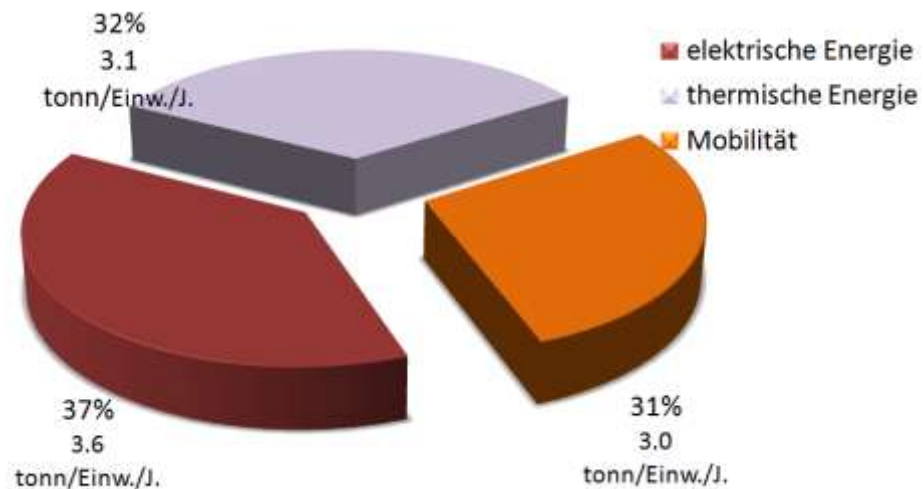
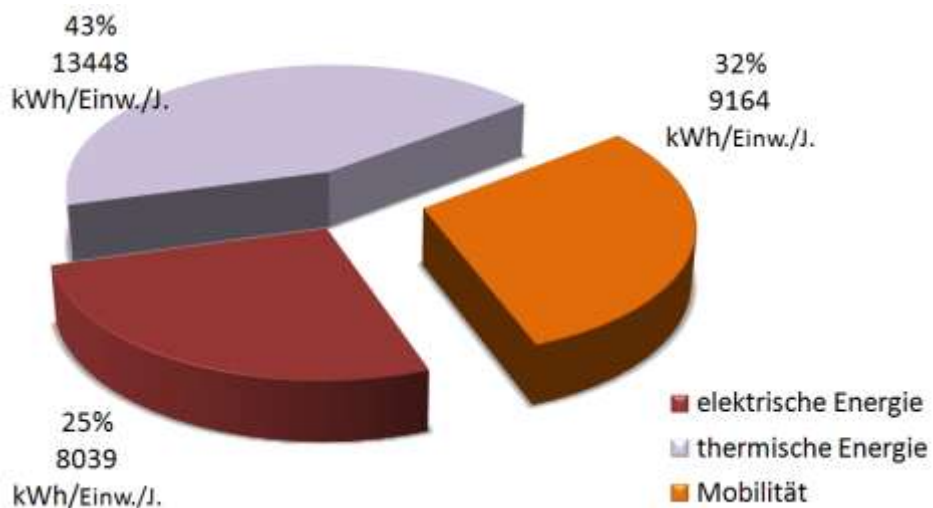


Total CO2 emissions 2007



Energy consumption per capita 2007

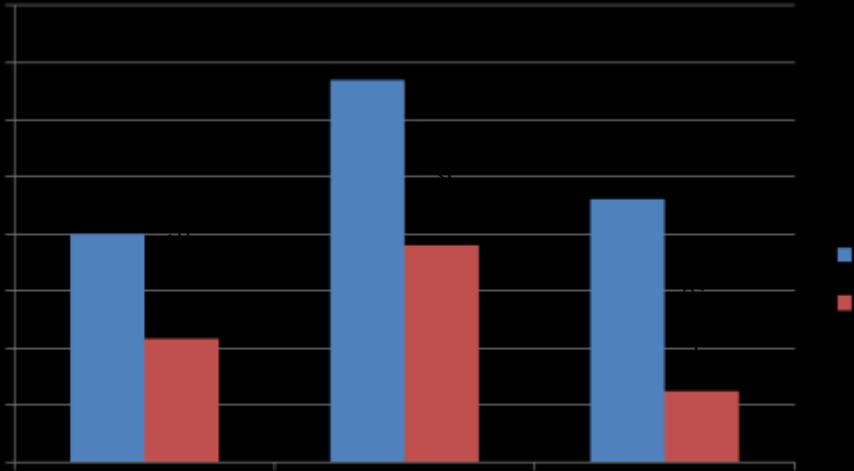
CO2 emissions per capita



This is the challenge

Energy consumption per capita

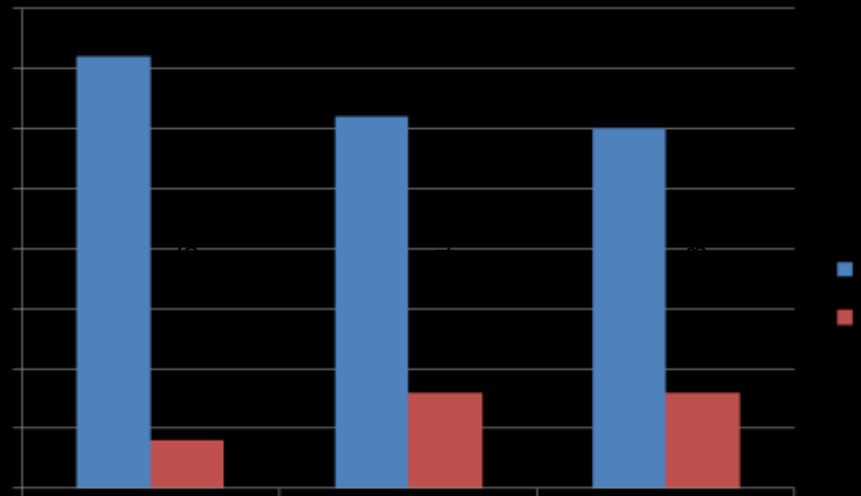
MWh



Reduction energy consumption 54%
Reduction CO2 emissions: 80%

CO2 emissions per capita

t CO2



Mobility

Scenario 2030 passenger transport

- the number of registered cars in Bolzano will decrease from 53.000 to 40.000
- the average km traveled per car will decrease to the half
- the average petrol consumption will decrease to the half for 66% of the cars
- 33% of the car fleet will run with electricity (consumption 0,2 KWh/km)
- the number of motorcicle will decrease to the half (this thank the e-bikes)

Bolzano modalsplit



New tramway Bolzano – Caldaro



New urban tramway





Today 29% of the movements in the city are done by bike → objective 2030: 40%



Carsharing Like Switzerland

100 cars with carsharing can substitute
2000 private cars

Switzerland: carsharing places
Tot. 2.300 cars



Displacement of the motoway

Today



Tomorrow

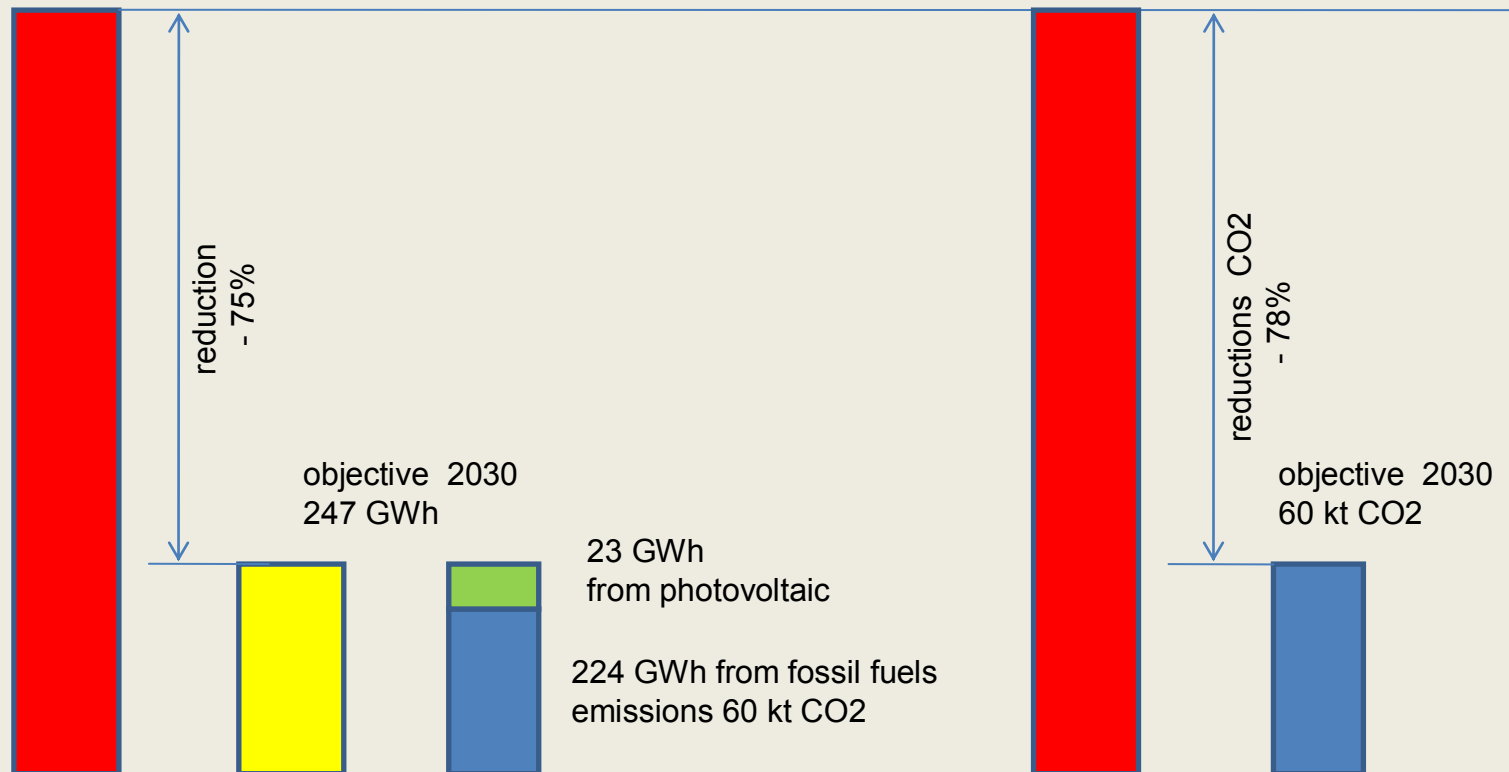


Transport - objective 2030

consumption and emissions

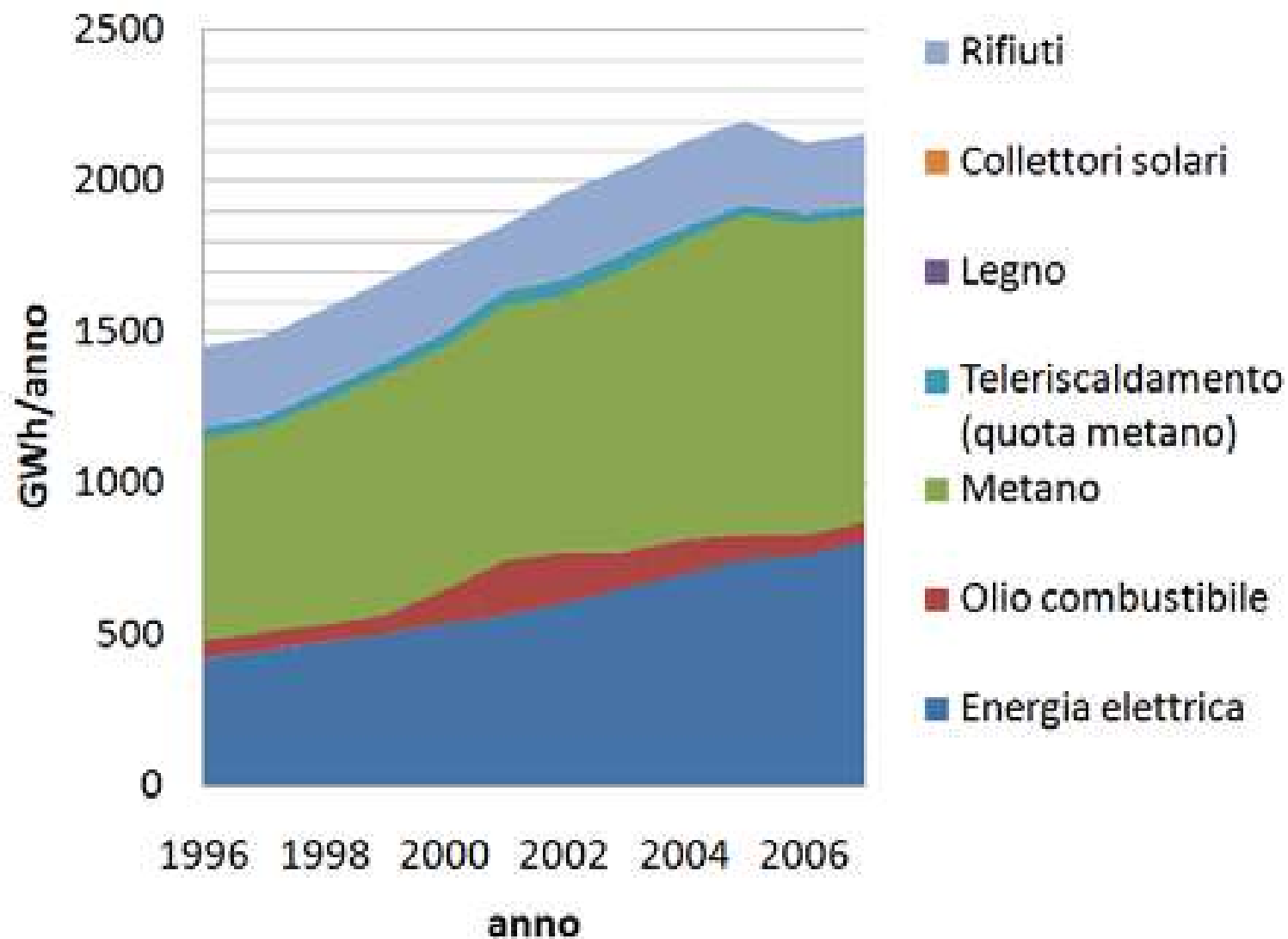
consumption 2007
1012 GWh

emissions 2007
272 kt CO₂

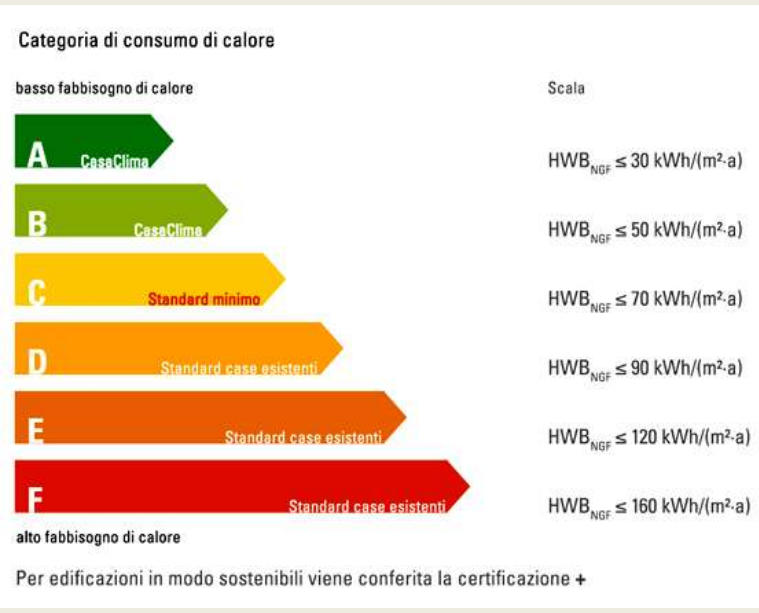


Heat for space heating and process heat

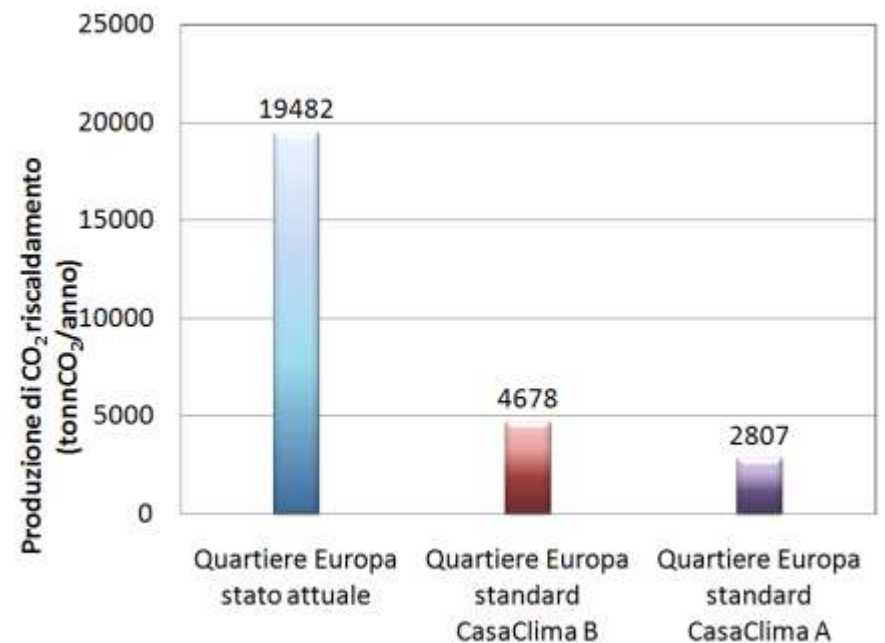
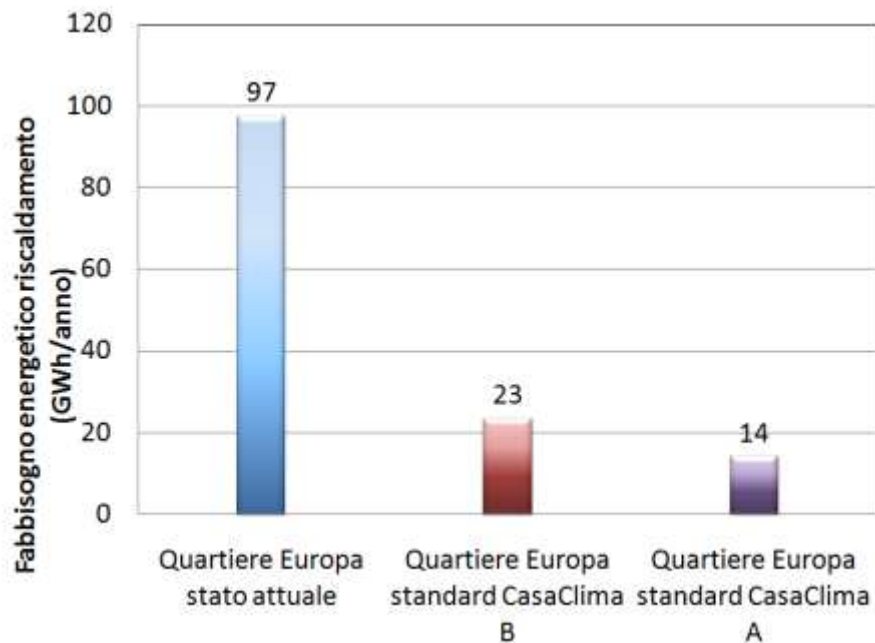
Bolzano 2007 – Consumption for heating and infrastructure



Bolzano – new district with standard Climahouse A 950 apartments



Reduction potential of the consumption of energy for heating



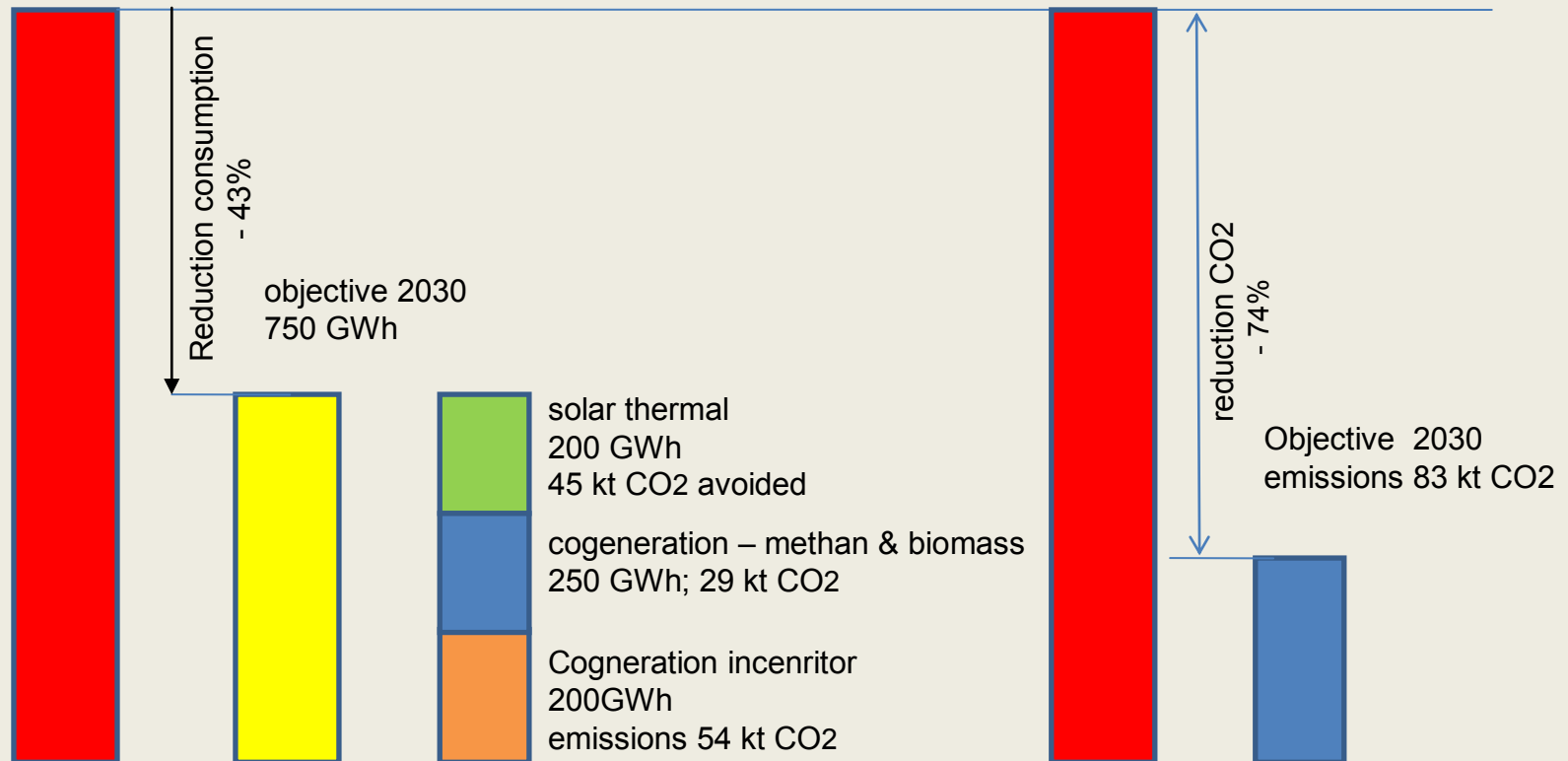
Simulation of energetic retrofitting with a cubage bonus of 20%



Heat for space heating and process heat – objective 2030 consumption and emissions

consumption 2007
1.350 GWh

emissions 2007
318 kt CO₂



Electricity production

Hydropower

Production 117 GWh



Photovoltaic 100 GWh = surface of 70 ha || 5% of the settlement area



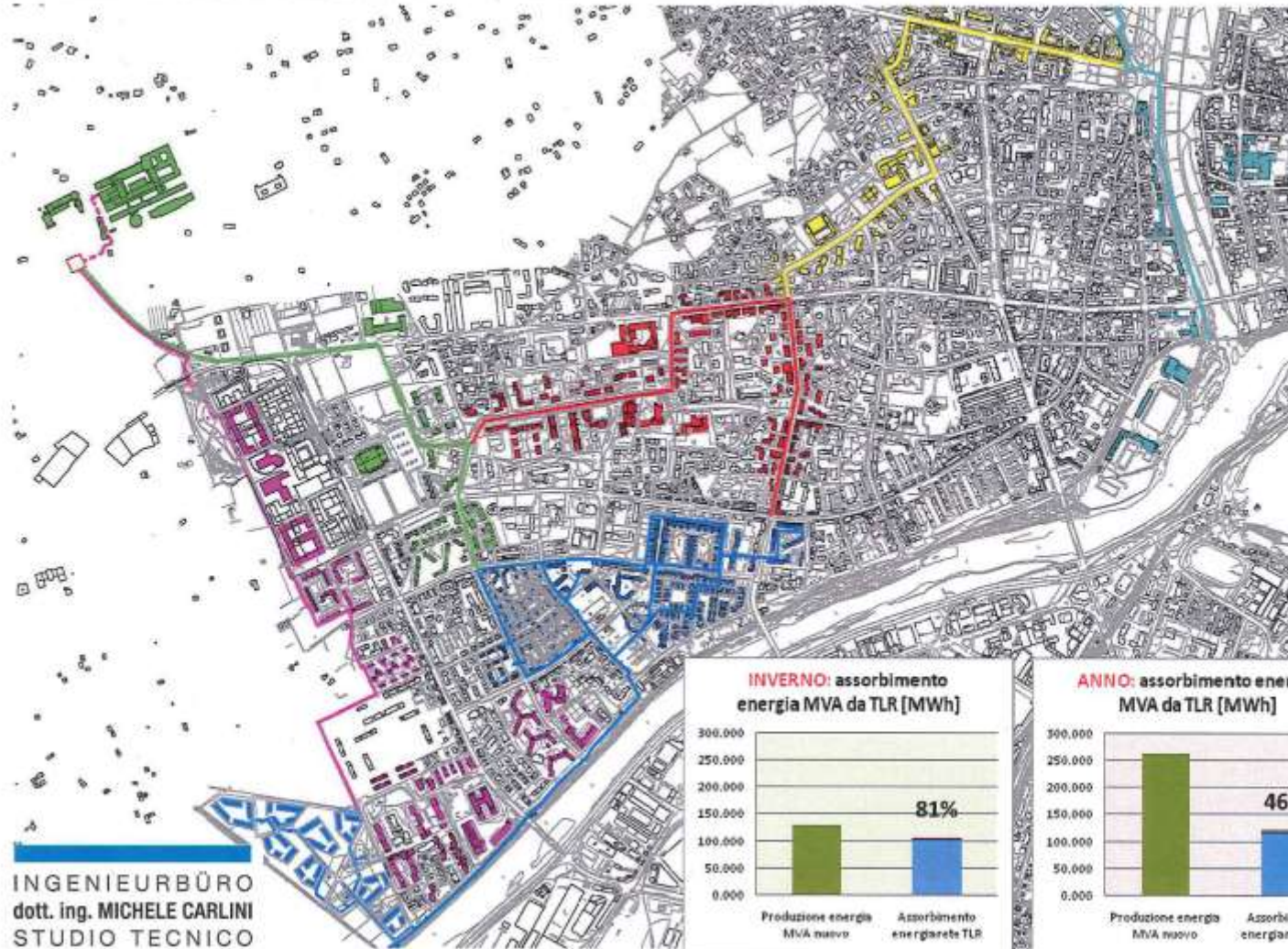
Cogeneration incinerator

Production: 200 GWh thermal and 90 GWh electric



District heating and cooling net

Sviluppo ipotizzato e potenziali utenze 2016 TLR

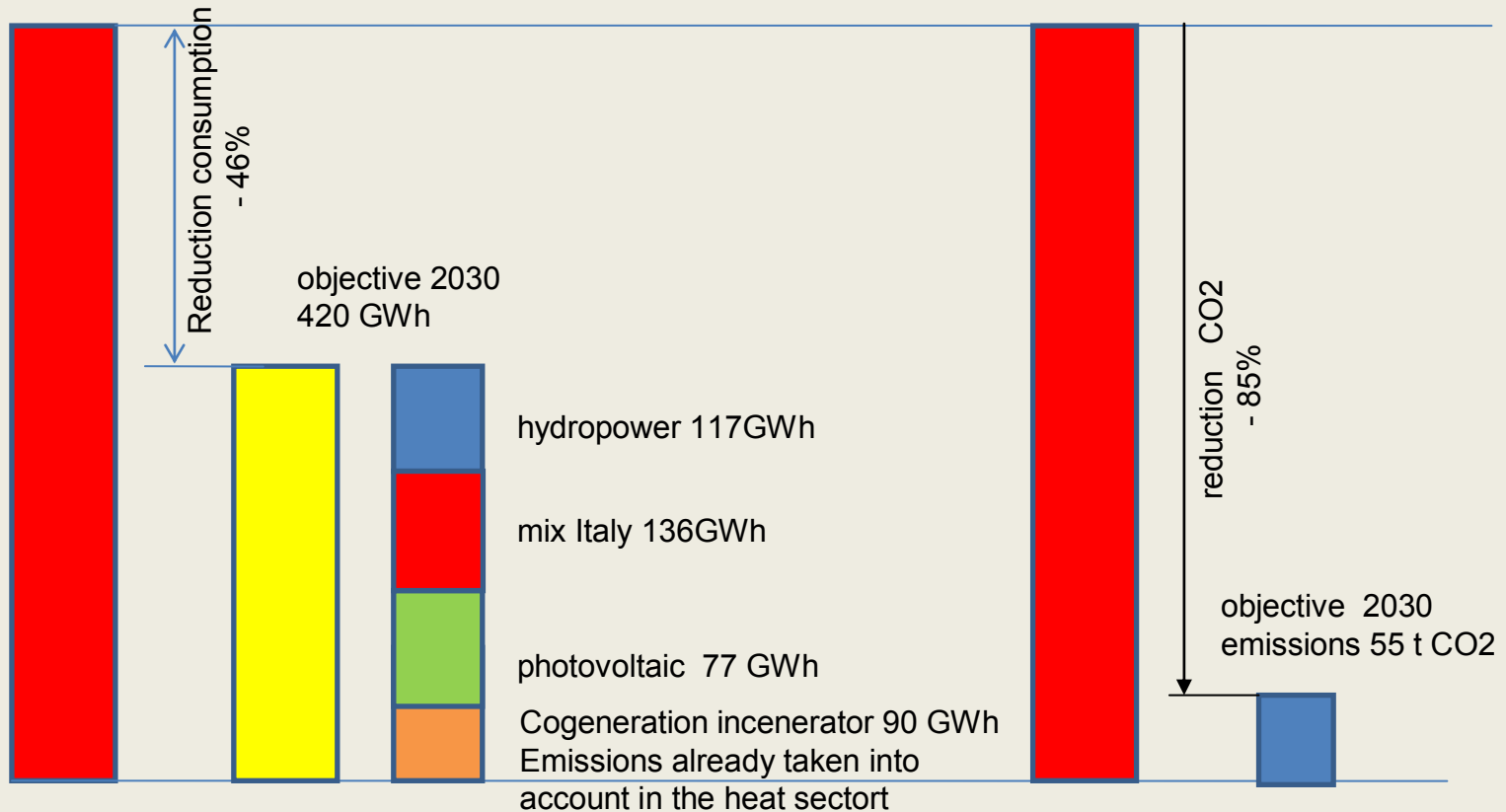


Electricity – objective 2030

Consumption and emissions

consumption 2007
809 GWh

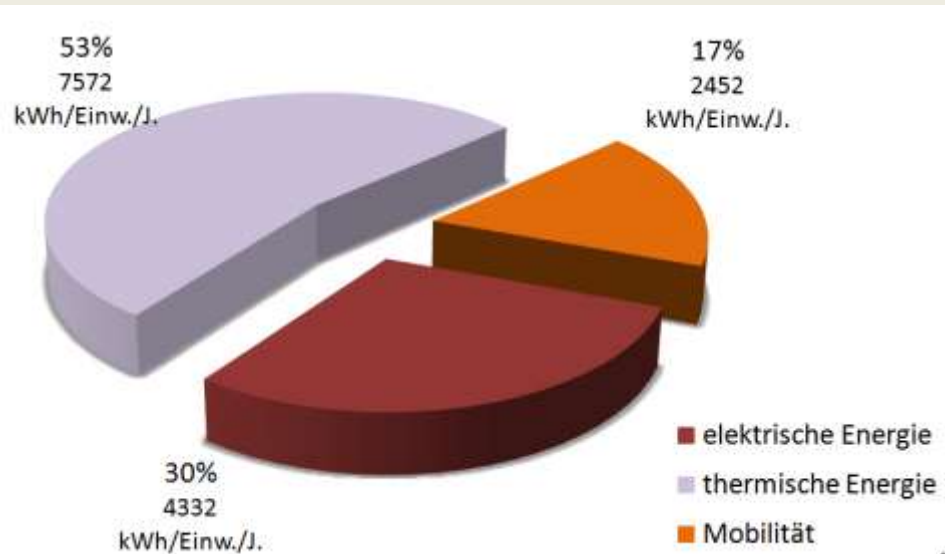
emissions 2007
364 kt CO₂



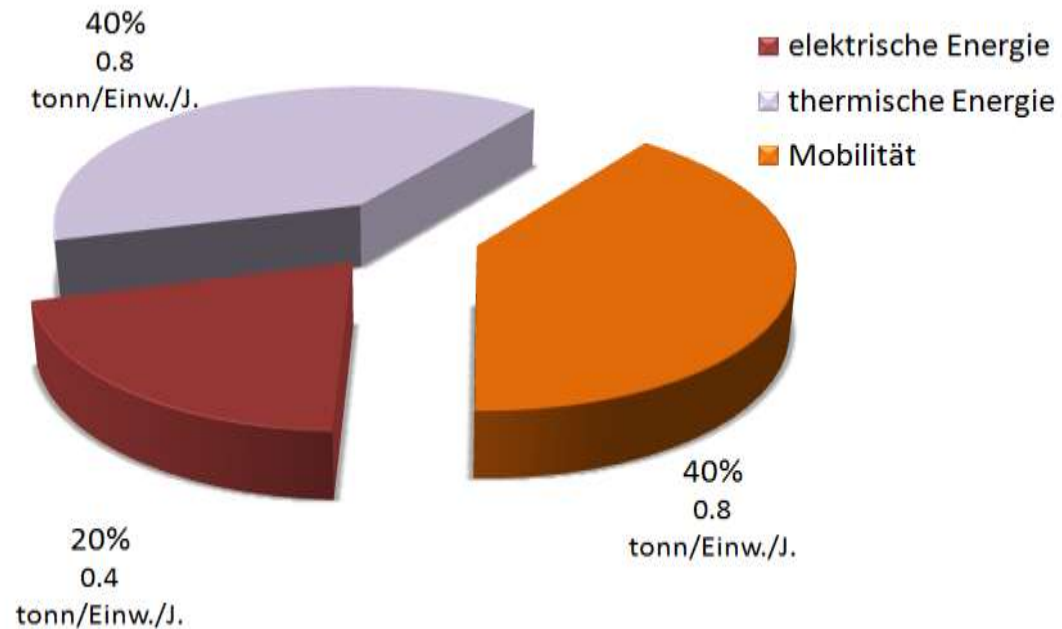
Overall result

Bolzano 2030

Total energy consumption and CO2 emissions per capita



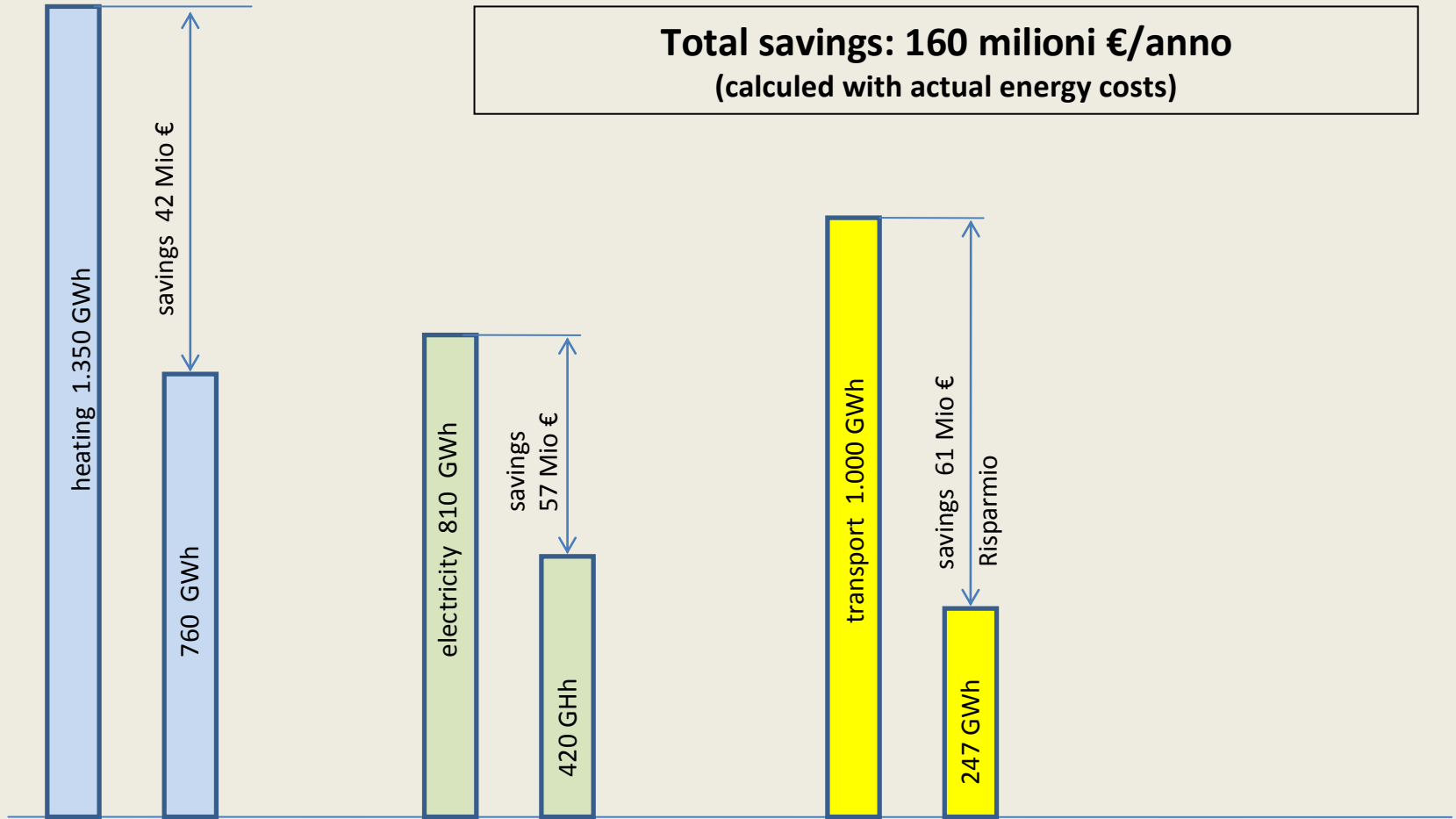
Total CO2 emissions 2,0 t



Bolzano objective 2030

Economic savings

Total savings: 160 milioni €/anno
(calculated with actual energy costs)



Conclusions

It is not necessary to believe in climate change as the reduction of CO2 emissions entails formidable economic savings.

The question to pose is not: how much will the reduction of CO2 emissions cost.

The correct question is the following: How much longer do we want to squander money for financing the greenhouse effect?

Every economists should suggest us to act immediately.



Thank You