Energy Efficiency And CO2 Emissions At Swisscom Up To 2010

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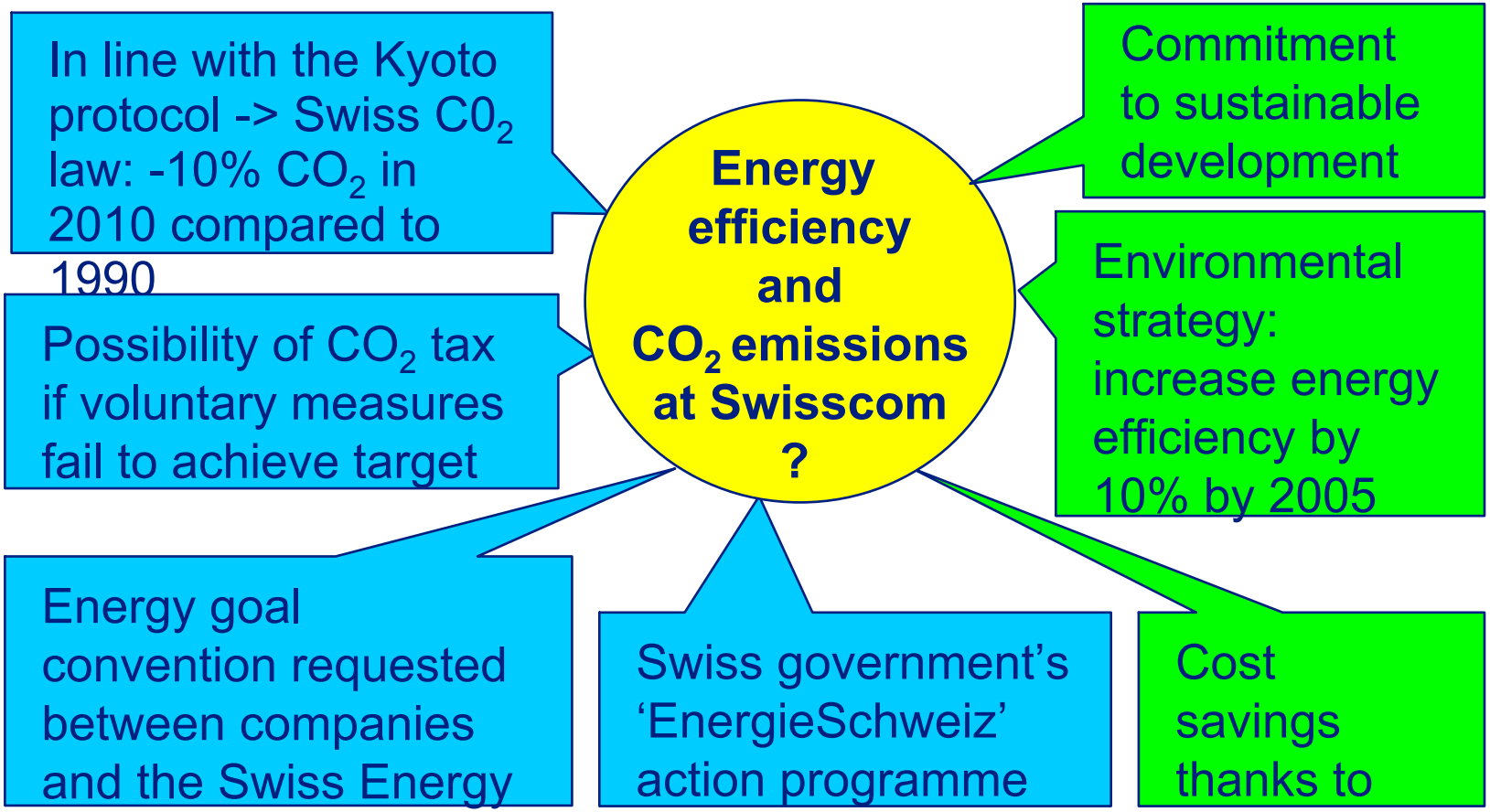
Starting Point

EXTERNAL:

SWISSCOM INTERNAL:



Procedure

- Determine energy consumption and CO_2 emissions at Swisscom since 1990
- Break down energy consumption by application
- Identify and evaluate the remaining potential for energy saving up to 2010
- Determine the energy trend and CO_2 emissions at Swisscom up to 2010

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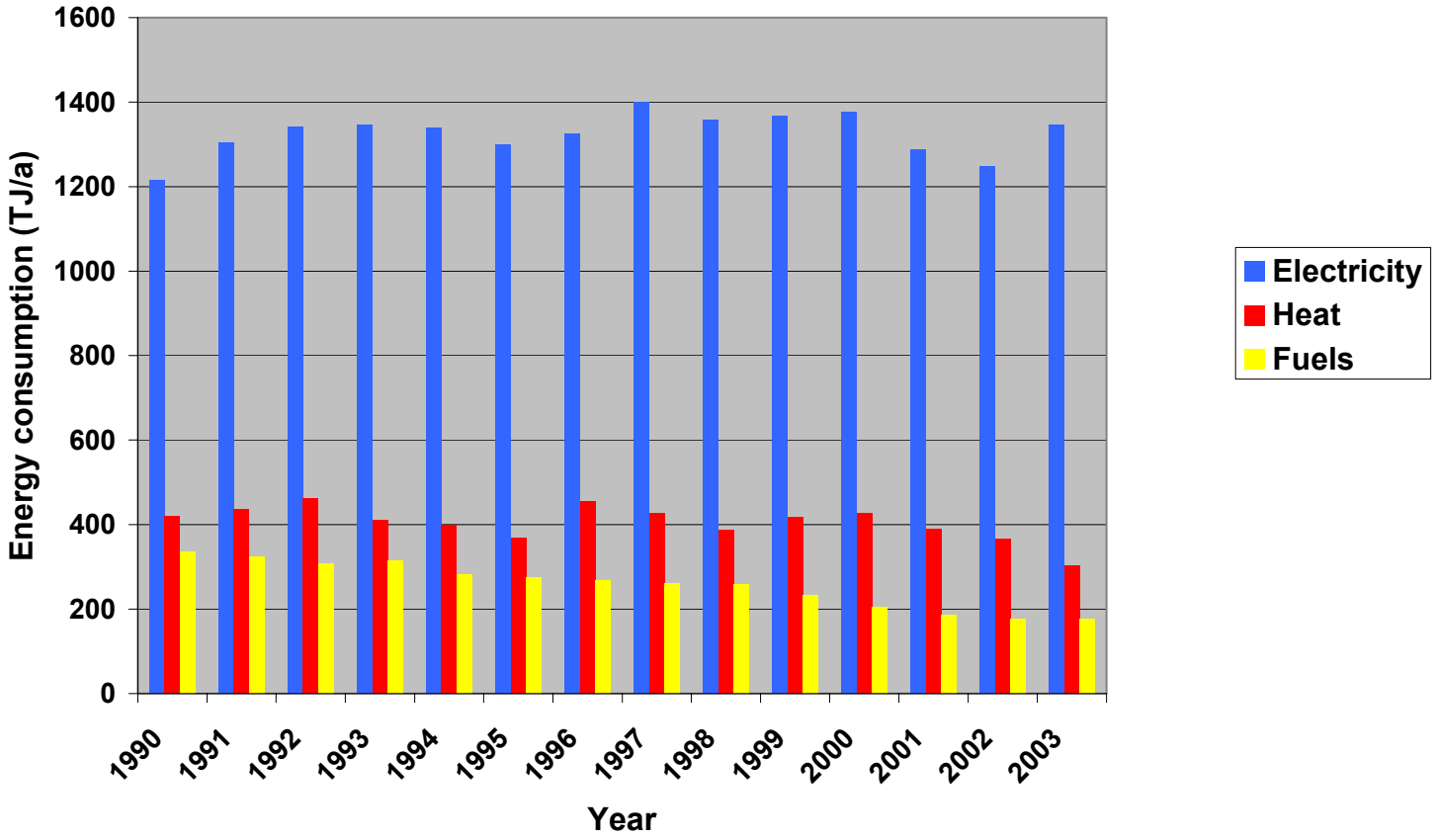
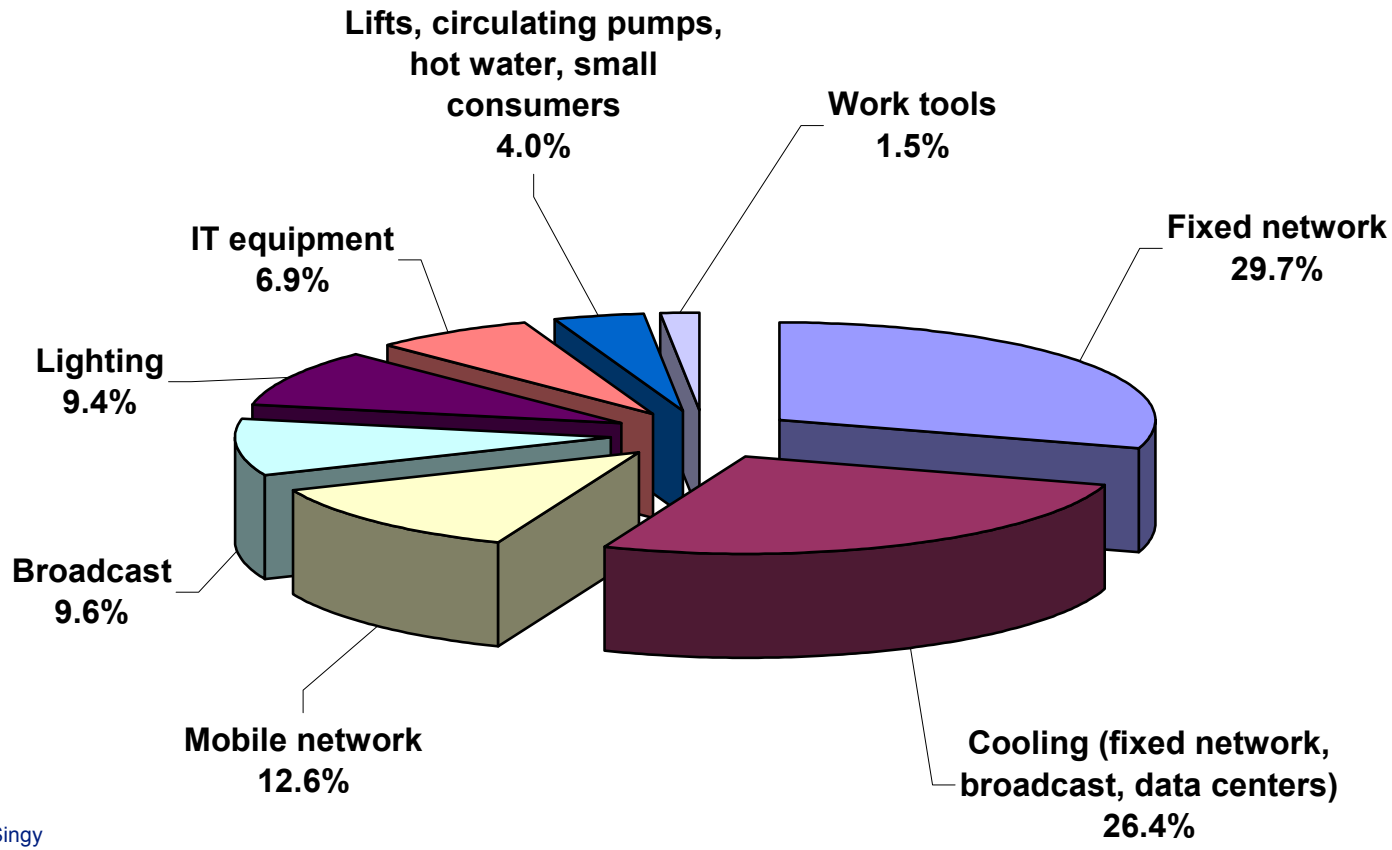
Energy Consumption At Swisscom Since 1990



Electricity Consumption At Swisscom In 2002 By Application



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Measures To Improve Efficiency Up To 2010

Electricity:

- Select the best alternative by replacing old facilities (ventilation/cooling and lighting systems, UPS)
- Optimise the telephone network operating conditions
- Upgrade with new, more energy-efficient technology
- Purchase low-energy ICT devices
- Purchase green electricity (Swiss ‚*naturemade star*' label)

Heating:

- Improve thermal insulation by renovating old buildings
- Install heat recovery facilities
- Reduce working surfaces

Fuels:

- Optimise and renew the vehicle fleet

Energy Scenarios At Swisscom Up To 2010

- Relevant influencing factors:
  - *Active factors*: Legislation, economic situation
  - *Critical factors*: Technology, regulation, investment potential, energy management, market share, workforce
- Formulate 3 scenarios (MIN, MIDDLE, MAX) based on the projection of individual factors
- Determine for each scenario the trend in energy consumption, CO_2 emissions and energy efficiency up to 2010, taking into account energy savings

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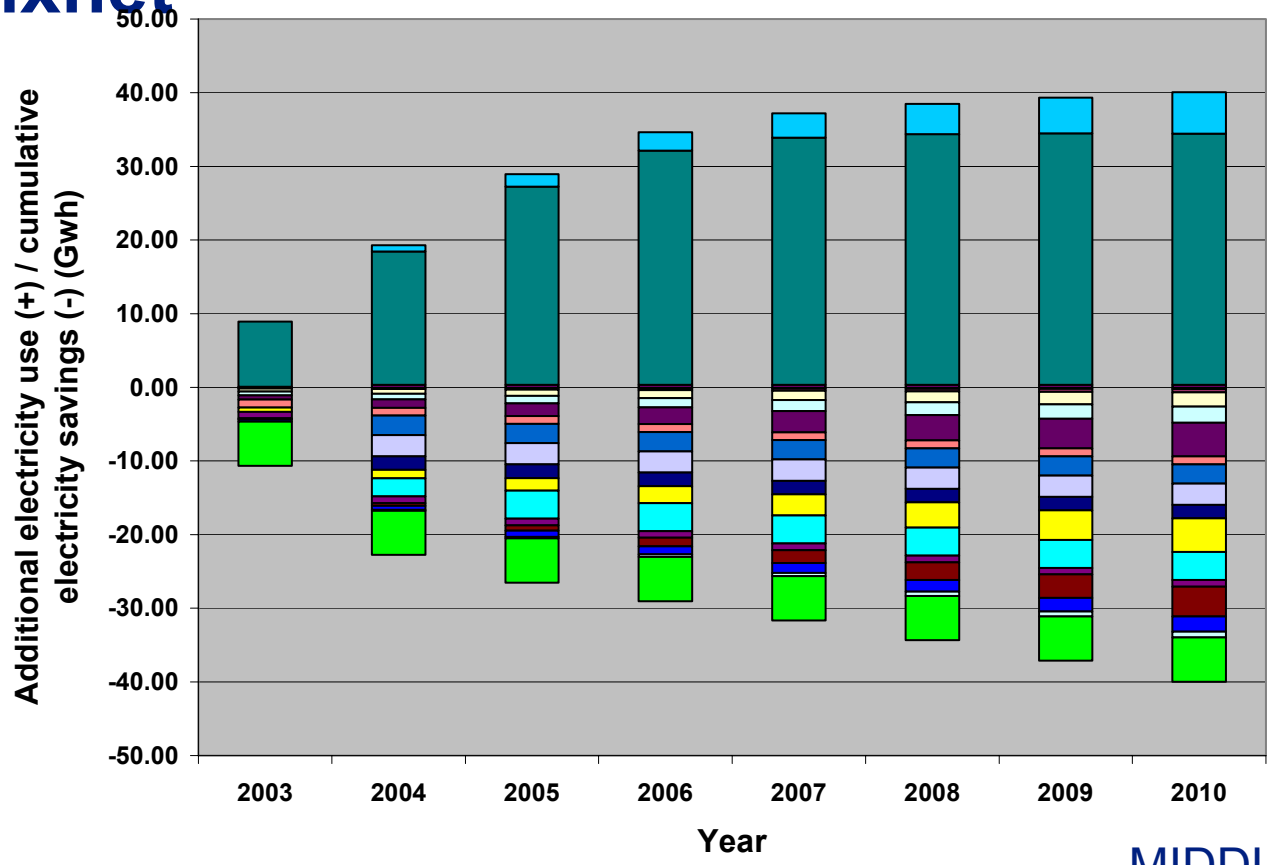
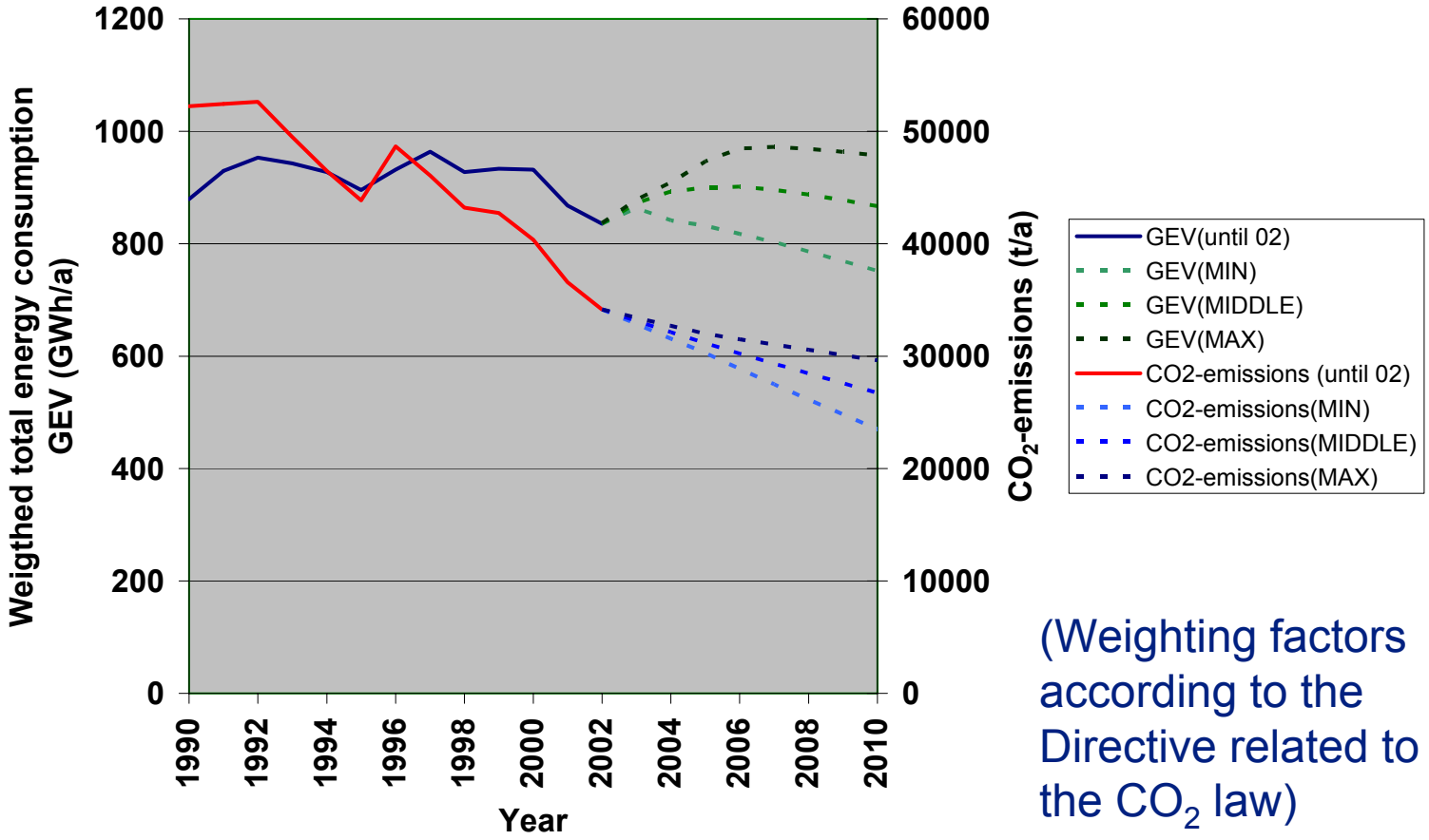
Additional Electricity Consumption/ Cumulative Energy Savings At Swisscom Fixnet



MIDDLE Scenario

Weighted Total Energy Consumption GEV And CO2 Emissions At Swisscom



(Weighting factors according to the Directive related to the CO_2 law)

Definition Of Energy Efficiency

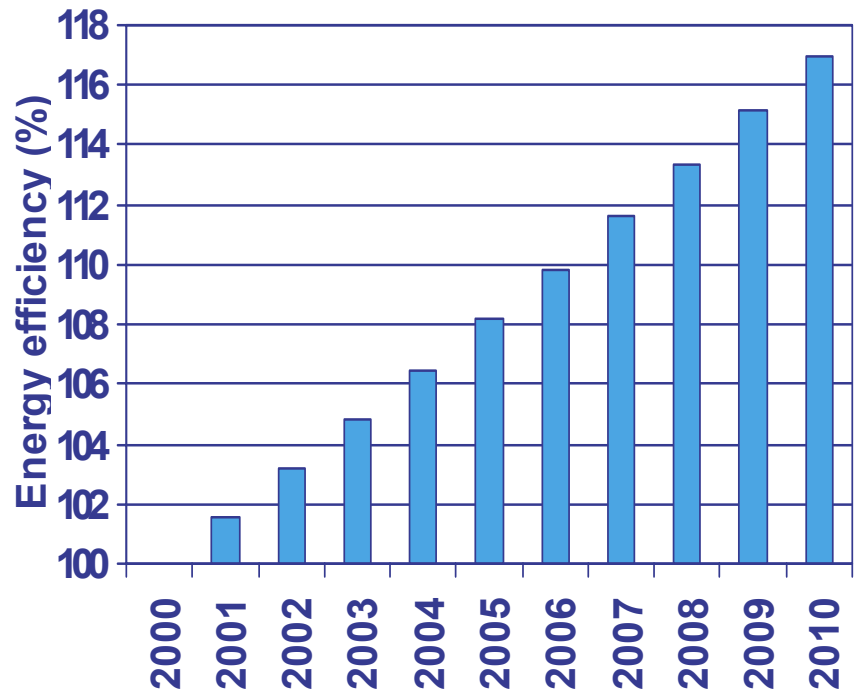
According to the Directive related to the Swiss CO_2 law:

E_{eff}= 100*(GEV+ESP) / GEV

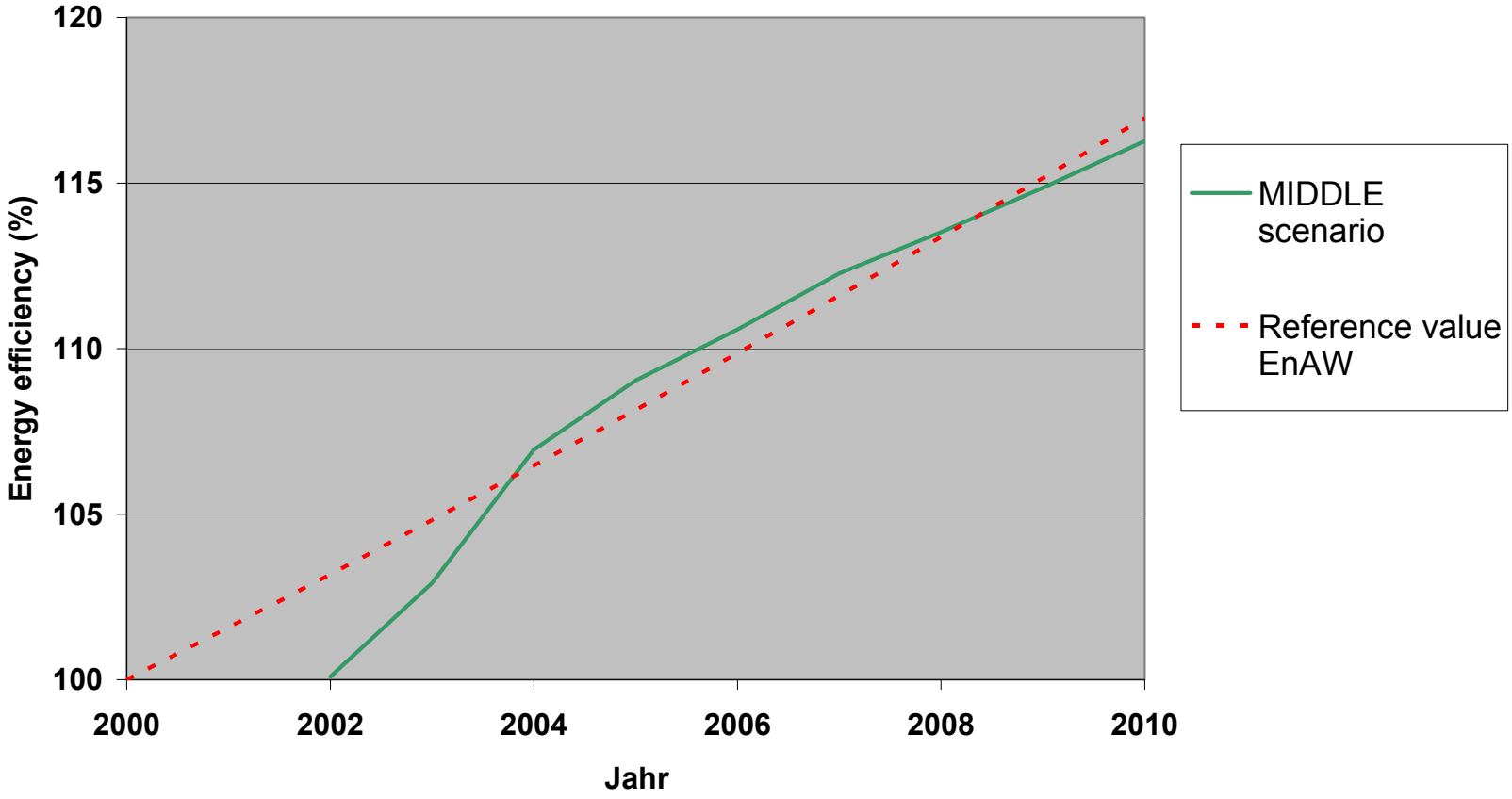
where:

E_{eff}: (%)	Energy efficiency
GEV:	Weighted total energy use
ESP:	Accumulated energy savings

Reference value for E_{eff} from the Swiss Energy Agency:



Energy efficiency At Swisscom Up To 2010



Conclusions

- Stabilisation of electricity consumption at Swisscom over the past 10 years despite sharp rise in data traffic and expansion of the mobile phone network
- According to the MIDDLE energy scenario, voluntary measures are expected to result in a 17% drop in CO_2 emissions and a 16% rise in energy efficiency by 2010
- Slight increase of 4% in weighted total energy consumption by 2010
- Compliance of the expected increase in energy efficiency with the reference value of 17% defined by the Swiss Energy Agency

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Further Action

- Define a goals convention related to energy efficiency and CO_2 emissions up to 2010, in conjunction with the Swiss Energy Agency
- Implement the energy-saving measures identified, and evaluate their impact
- Monitor goal achievement and take corrective steps if necessary
- Energy monitoring and annual reporting