



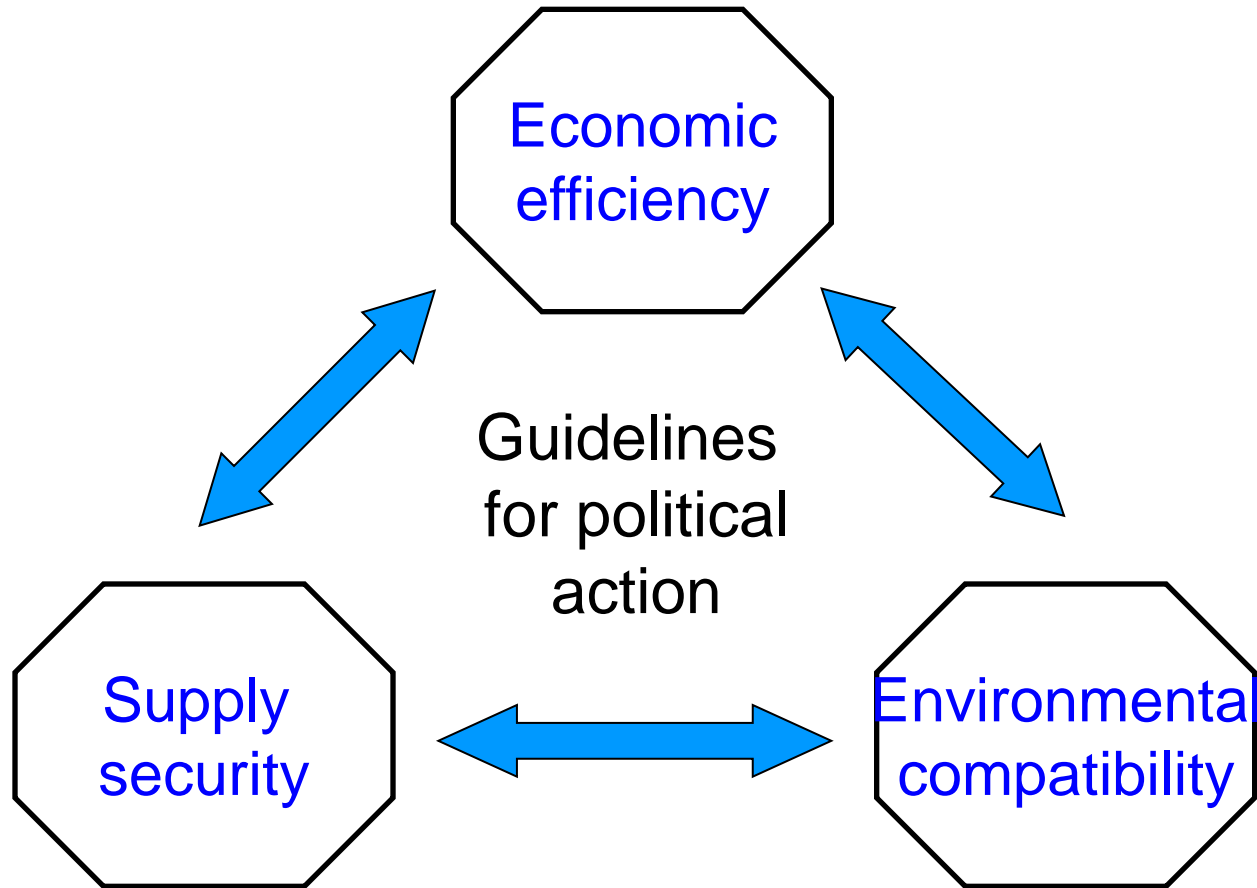
# Energy Efficiency and climate protection in Germany: Roadmap for a sustainable energy future

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Climate protection potential of energy efficiency  
International Workshop, 9 November 2011

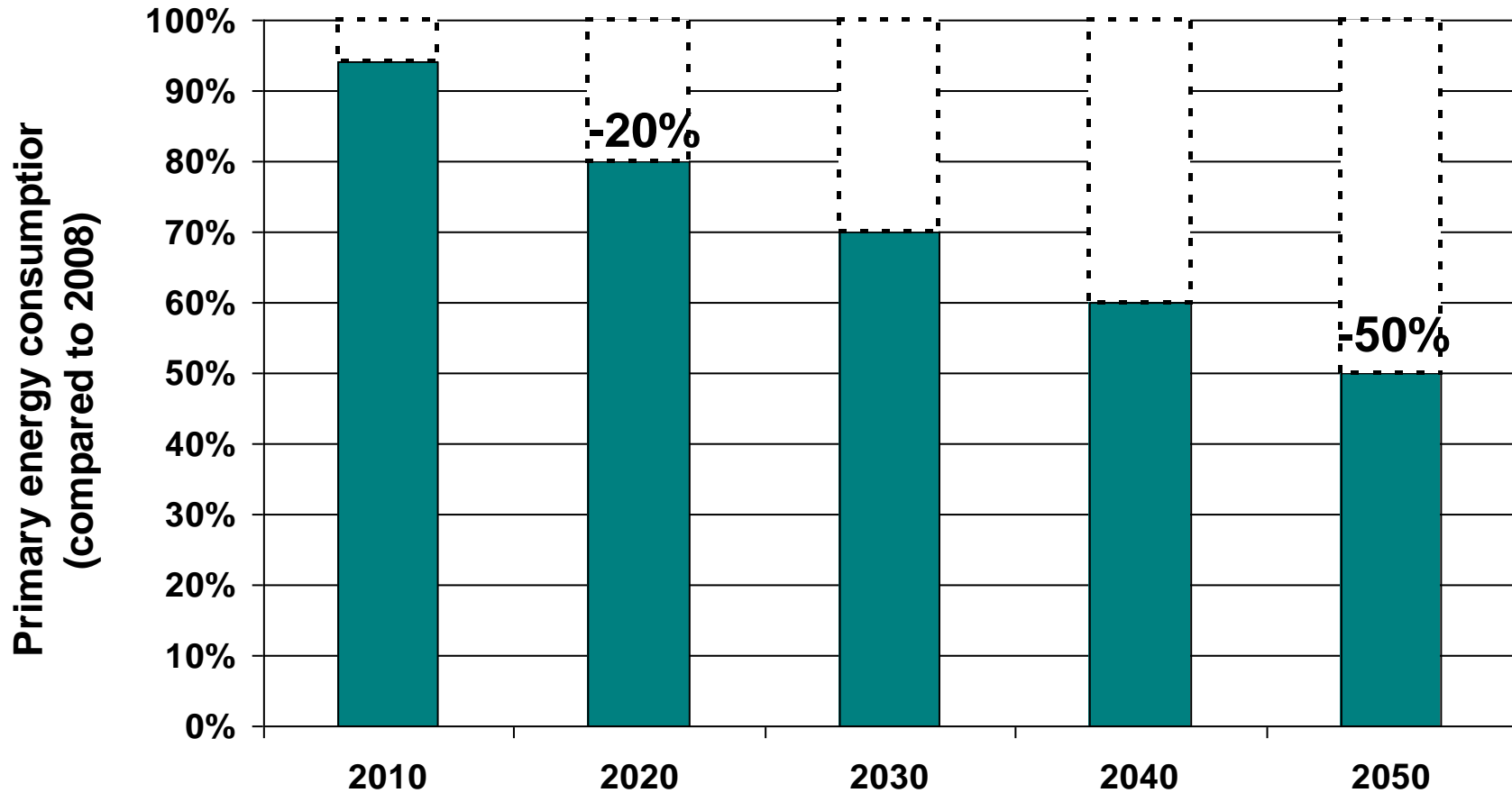
# A set of three energy policy goals



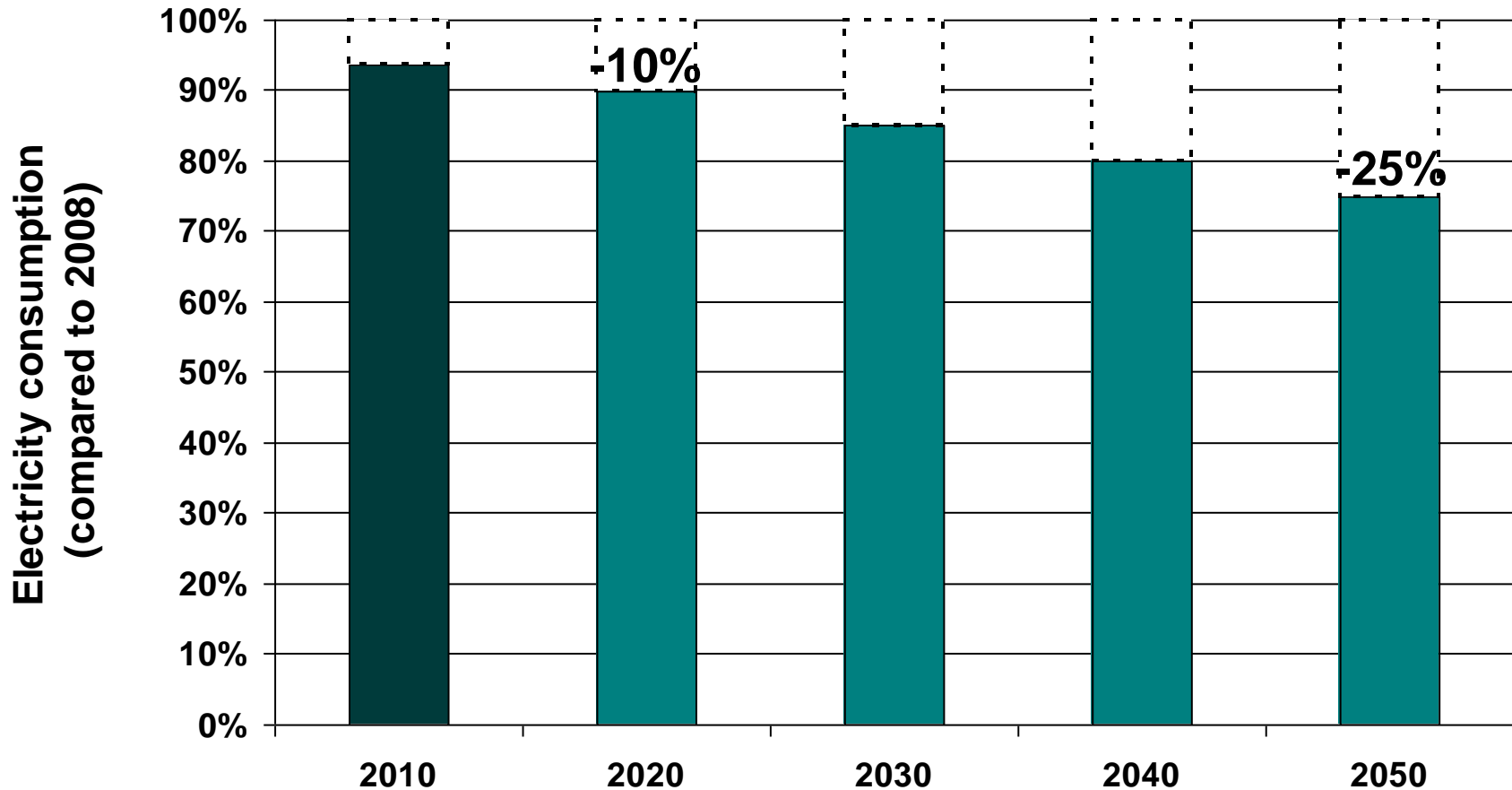
# Aims of the energy concept

	Climate	Renewable energies		Efficiency			
	Greenhouse gases (vs. 1990)	Share of electr.	Overall share	Primary energy consumption	Electricity consumption	Energy consumption in buildings	Transport
2020	- 40%	35%	18%	- 20%	- 10%	-20 % heat demand	-10%
2030	- 55%	50%	30%	⋮	⋮		
2040	- 70%	65%	45%	▼	▼		
2050	- 80-95%	80%	60%	- 50%	-25%	-80% primary energy	-40 % final energy

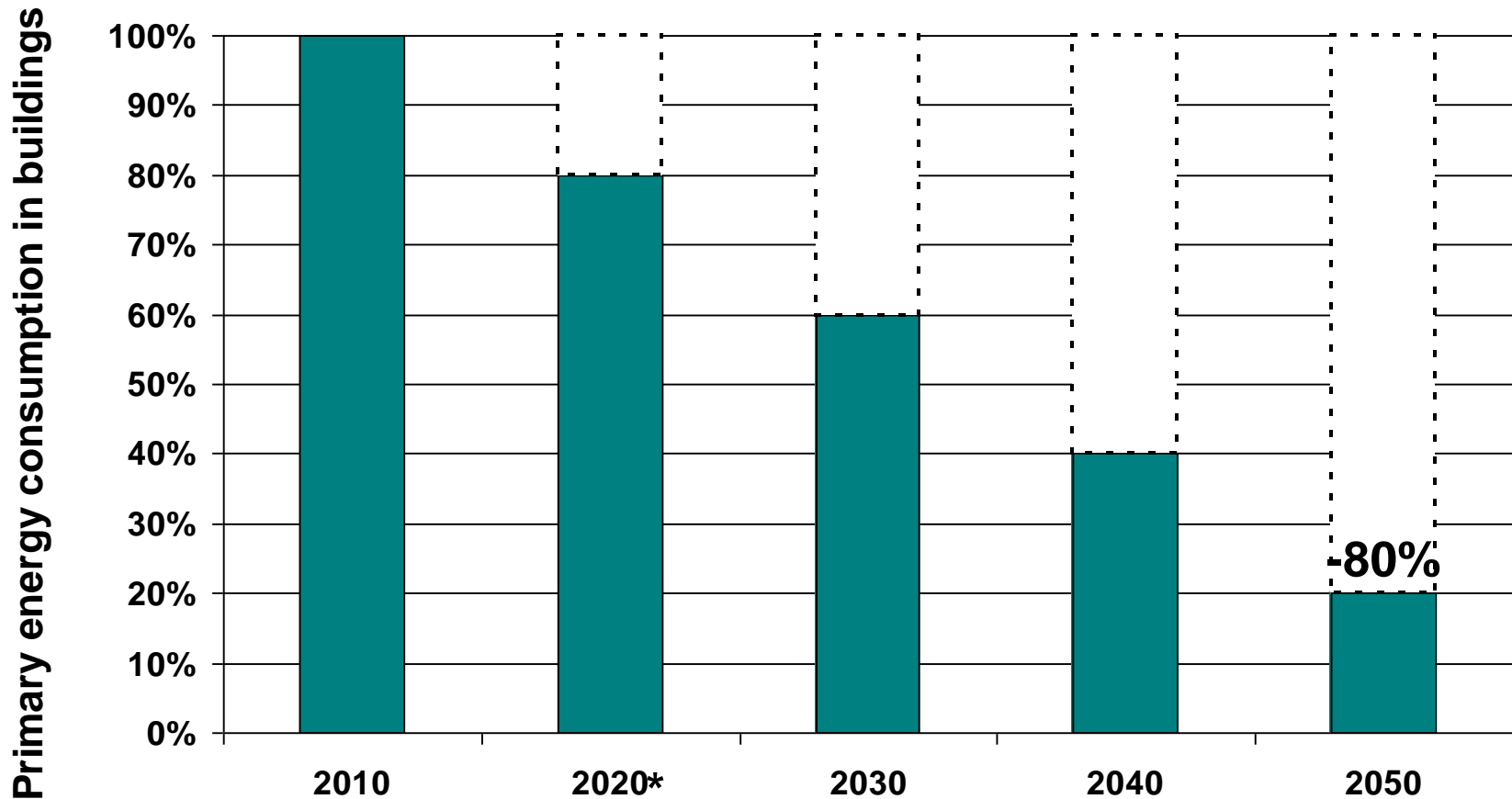
# Reduction targets for primary energy consumption



# Reduction targets for electricity consumption



# Reduction targets for primary energy consumption in buildings



\* by 2020: Reduction target for heating requirement by 20 %

# Energy Concept: A three-pronged approach

## 1. Renewable energy sources:

- Rapid, continuous expansion
- Cost-efficient and environmentally friendly



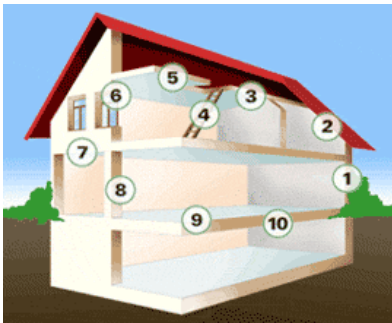
## 3. Efficiency:

- Reduce energy consumption
- Ensure efficiency



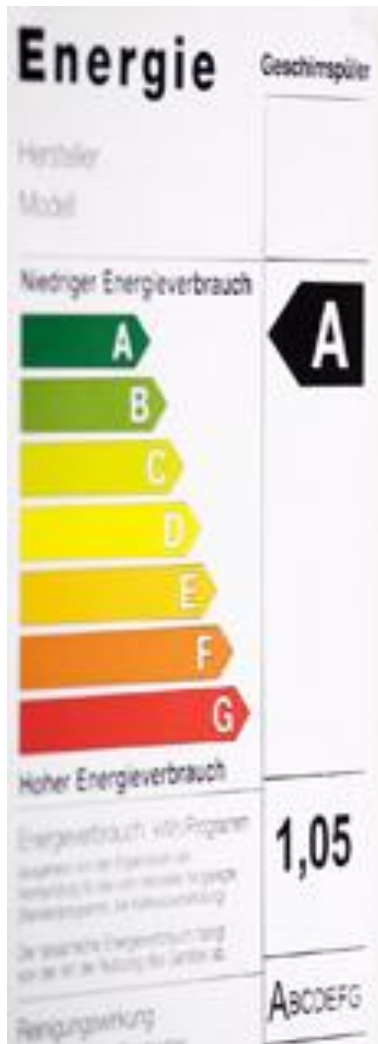
## 2. Future grids:

- Flexible and powerful
- Integration of electricity from renewable sources



Source: BMU

# Energy efficiency is the key



- Energy- efficient buildings
- Energy services
- Expanding energy management
- Energy efficiency fund
- National Climate Initiative
- Tap potential – Reduce energy costs – Relieve pressure on the environment



# Energy-efficient buildings

- ❖ **New buildings:** Virtually climate-neutral by around 2020
- ❖ **Existing buildings:**
  - Virtually climate-neutral by 2050
  - Double the modernisation rate to 2%
  - Cut primary energy demand by 80% by 2050
- ❖ **Extensive funding programmes:**
  - Building modernisation programme: 1.5 billion Euros per annum
  - Market incentive programme for the use of renewable energies in the heat sector: approx. 400 million Euros p.a.

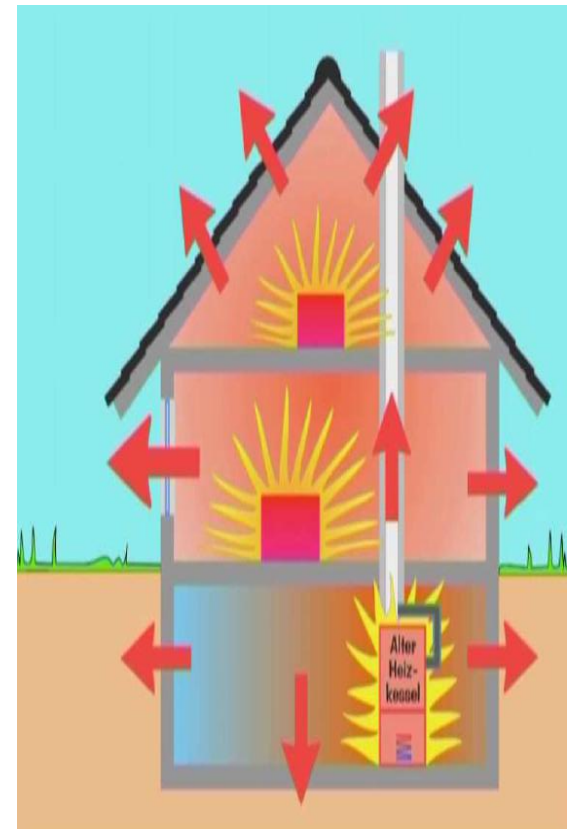
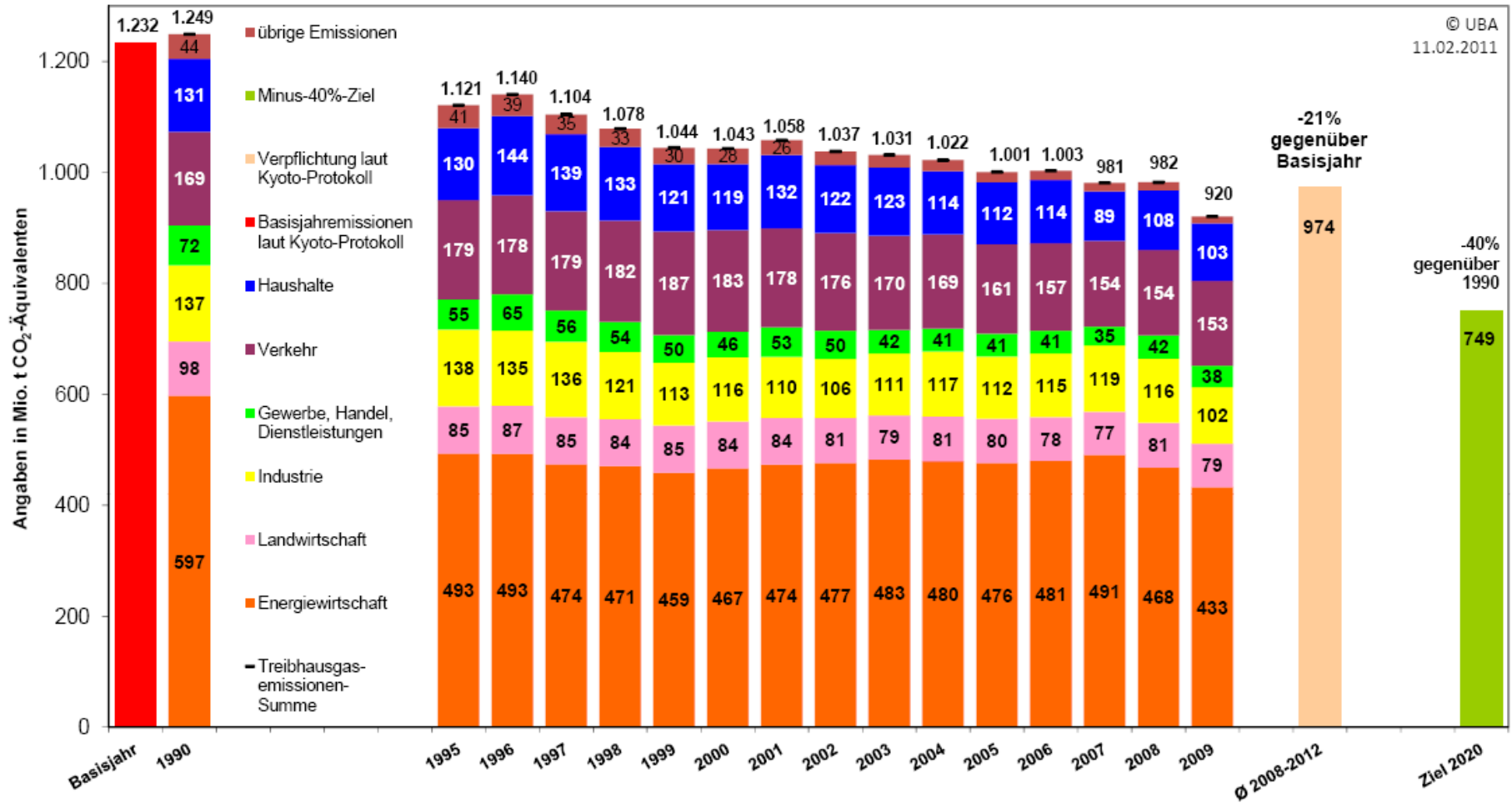


Chart:  
Dipl.Ing. Frank Lischka "Abenteuer Energiesparen"

# Need for energy efficiency improvements

- EU is importing **more than half of its energy!**
  - Large reduction potential in **energy/building sector!**
  - Need to tap this potential and **save energy costs:**
    - Germany: by appr. € 22 bn p.a. (-40% target in 2020)
    - EU: by appr. € 200 bn p.a. in 2020 (20% in 2020)
  - Need to drastically **reduce energy consumption** through higher EE standards:
    - in building sector
    - for public procurement
    - for products/services
  - Expanding energy management
- **We need ambitious EU standards!**

# Germany's GHG-Balance 1990-2020



# Key messages

- ❖ Germany adopted a **long term climate and energy policy** until 2050 by fundamentally restructuring its energy supply now.
- ❖ **Central pillars** of such a policy are:
  - climate targets
  - renewable energy sources
  - energy efficiency.
- ❖ Such policy offers **strong economic opportunities** by creating growth and jobs
- ❖ EU needs an **ambitious and binding** energy efficiency policy to create a **level-playing-field**.

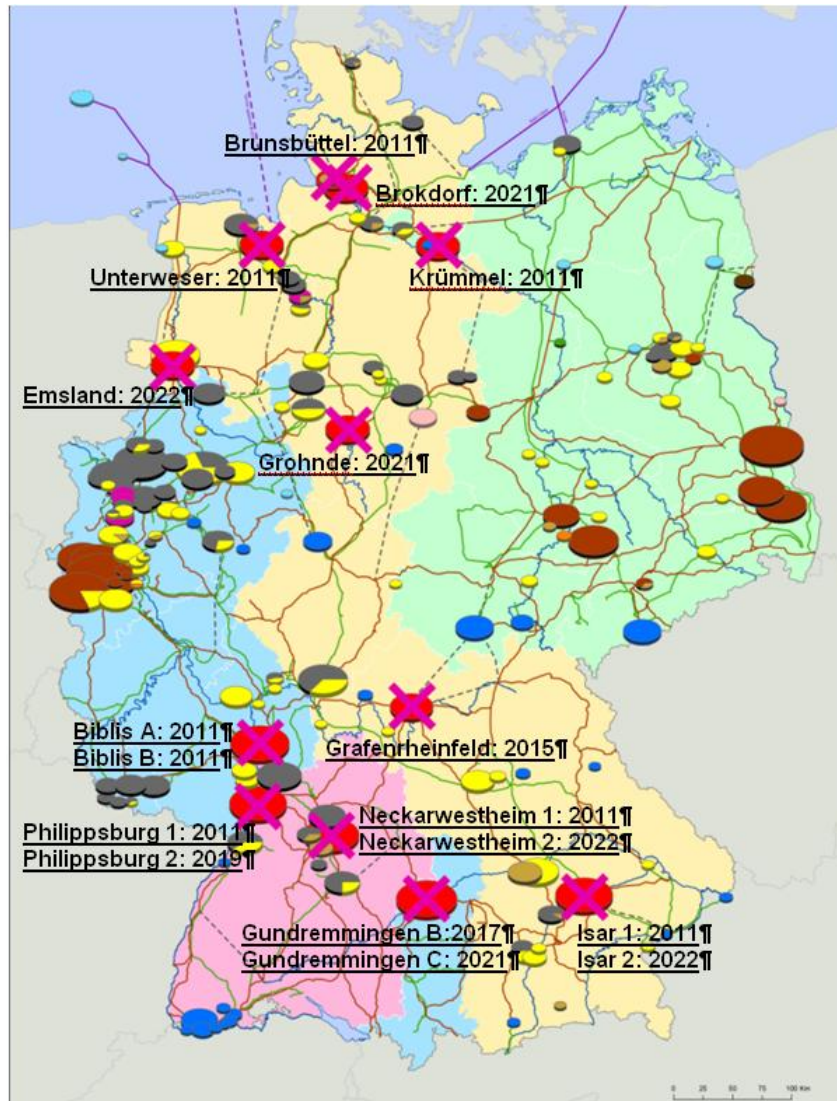
# Thank you for your attention.



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# Gradual phasing out of nuclear power



# Electricity scenario

