## Renewable Energy in Long-Term Scenarios for Germany

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## Renewables in Germany

- 2005: avoided emissions of 84 Mt
- Electricity from 1990 to 2005:
  - = 18.4 TWh to 62.1 TWh (+242%)
  - = 3.4% to 10.2% of supply
- Main sources: wind and biomass
- Targets 2020: at least 20% of electricity and
- 2050: 50% of total energy supply

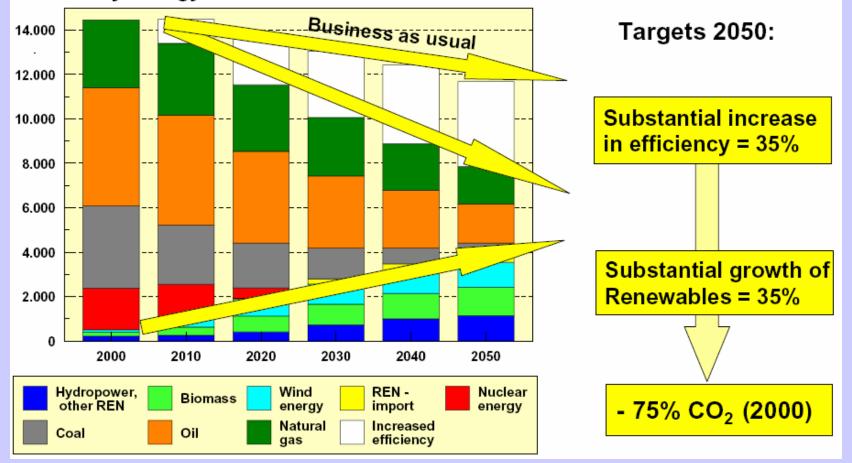
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### Cutting Energy demand by 50% by 2050

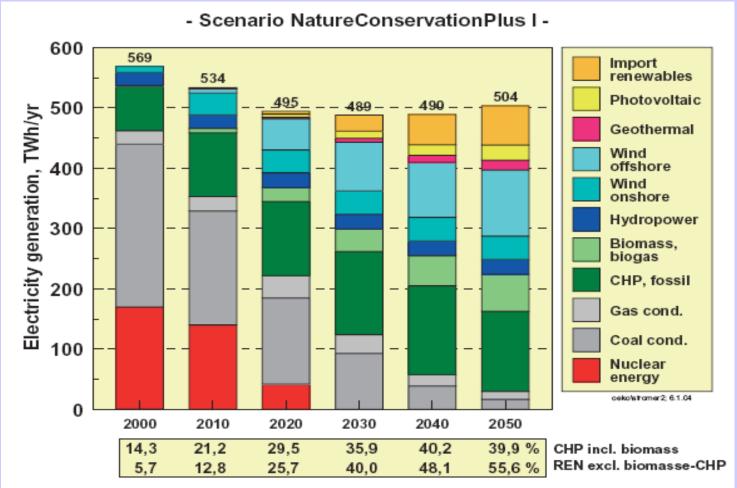
Primary energy demand in PJ







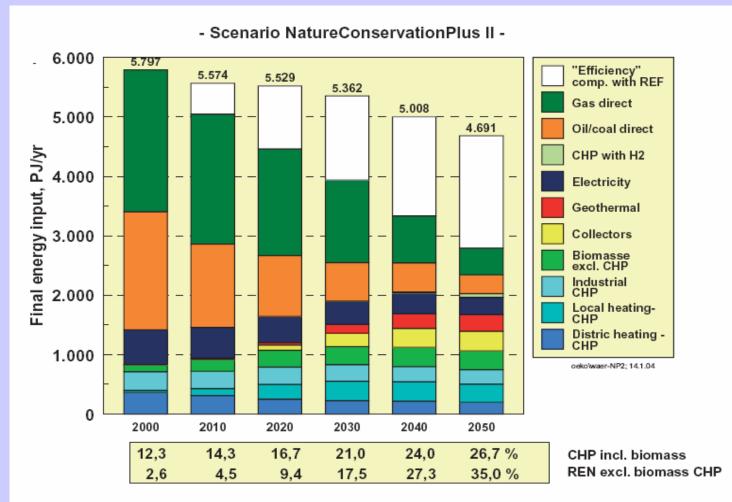
# **Electricity Supply**





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## Heat production







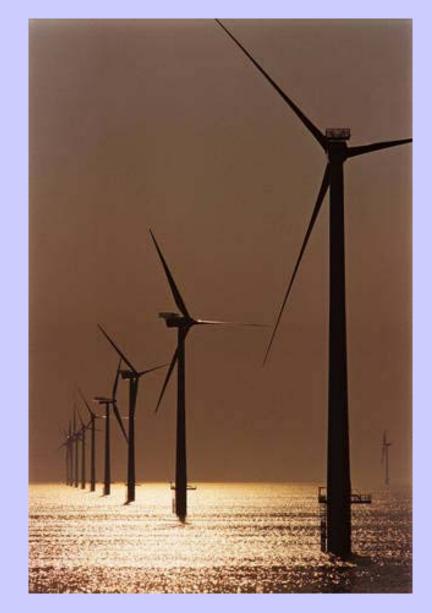
#### Conclusions

- Germany: 40% in 2020 and 80% in 2050 is technically feasible and economically viable
- Reduce energy demand to 50% and increase share of renewables to 50%
- Success stories: EEG and ETR
- New: Emissions trading has to be strengthened to contribute



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#### Thank You!

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