

A large-scale solar power plant, likely a Concentrated Solar Power (CSP) system. The image shows a vast field of blue heliostats (mirrors) arranged in long, parallel rows. In the background, a tall, slender receiver tower is visible, which is part of the power generation system. The sky is clear and blue, and the surrounding landscape appears to be a dry, hilly area. The overall scene is brightly lit, suggesting a sunny day.

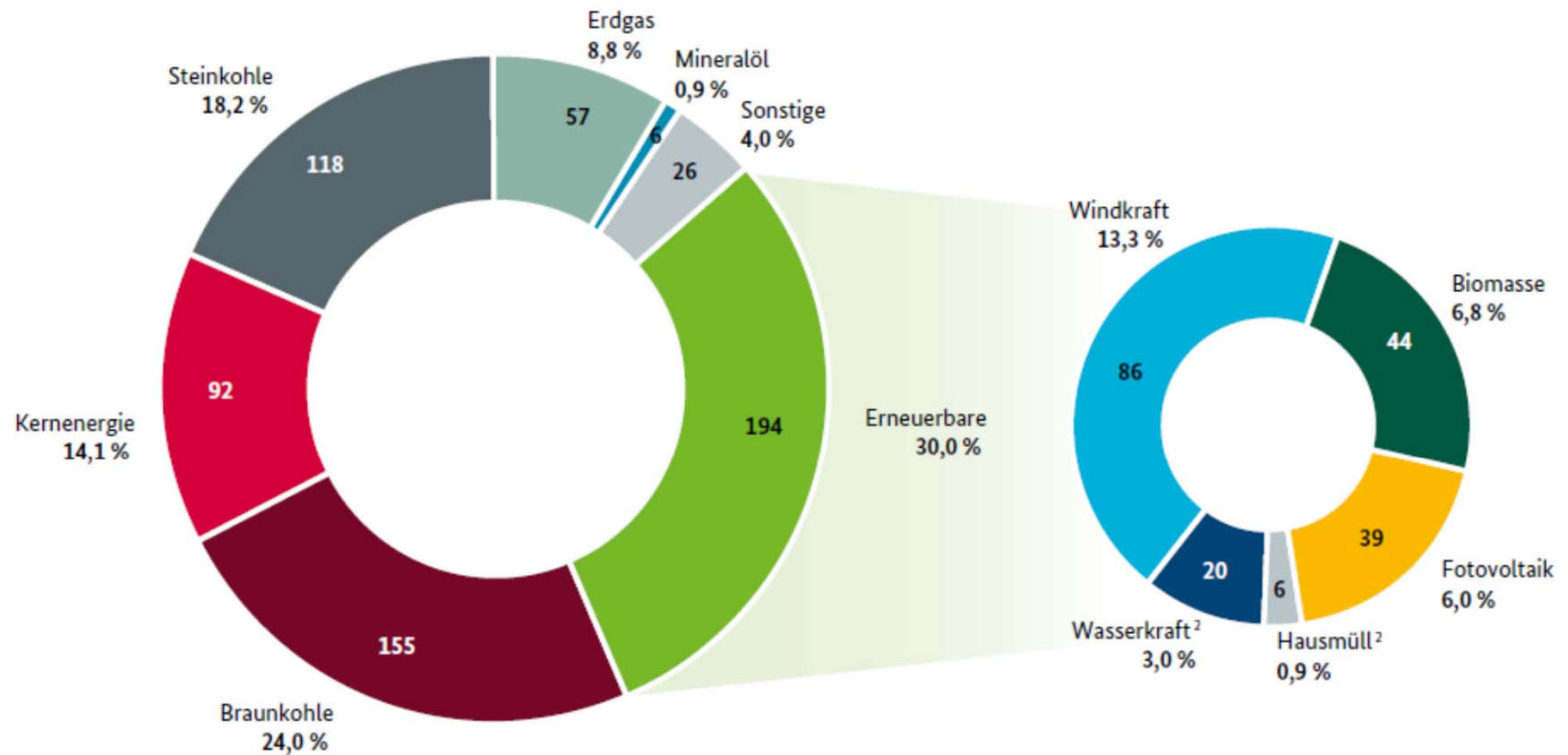
German Research for
ENERGY

Dr. Karl-Friedrich Ziegahn
KIT

Paris-Saclay Oct. 4, 2016

Sources for Electric Power Production Germany 2015

28. Bruttostromerzeugung in Deutschland 2015¹: insgesamt: 647 TWh

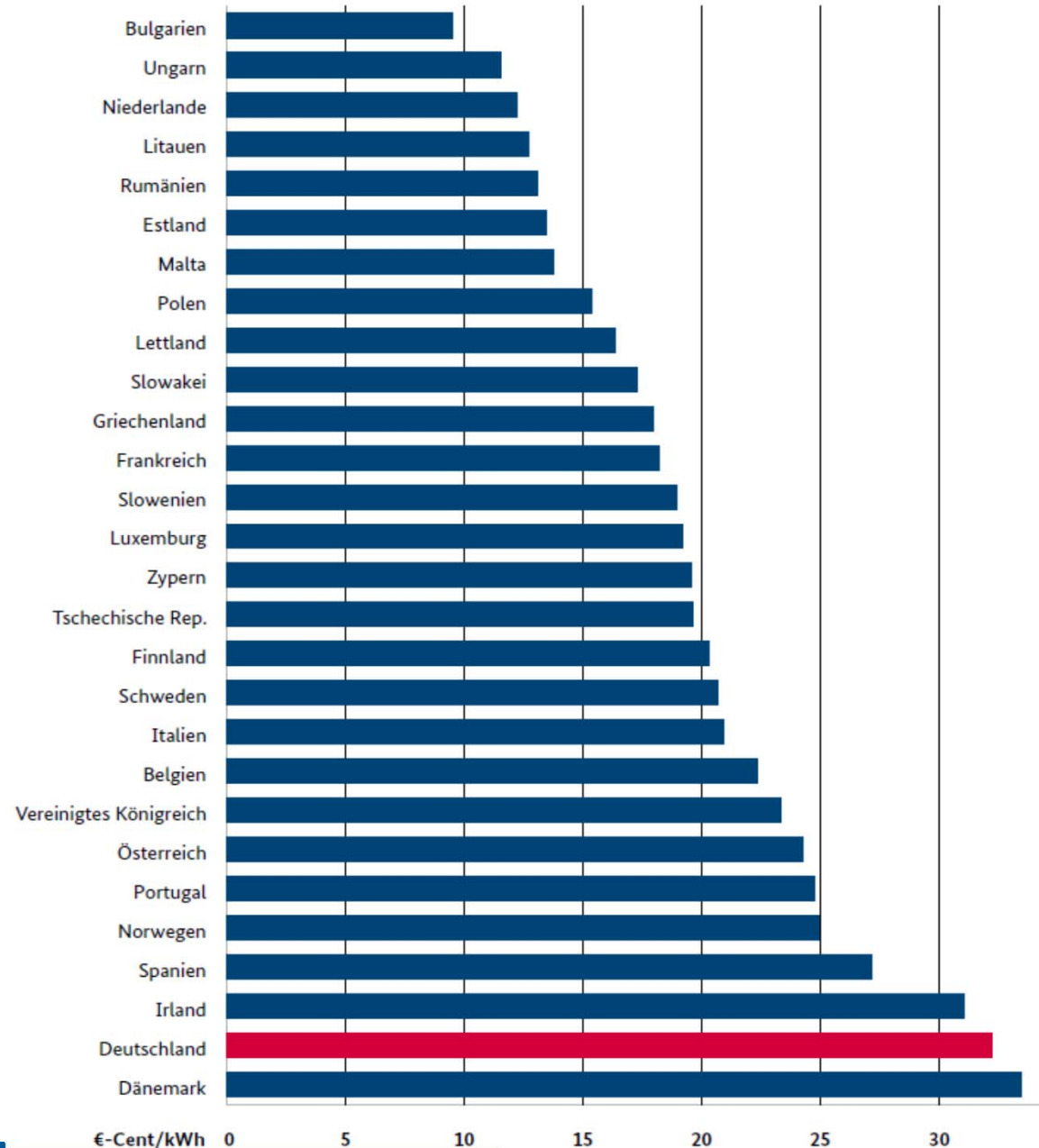


Price for Electric Power 2015

Private Consumer (Cent/kWh)

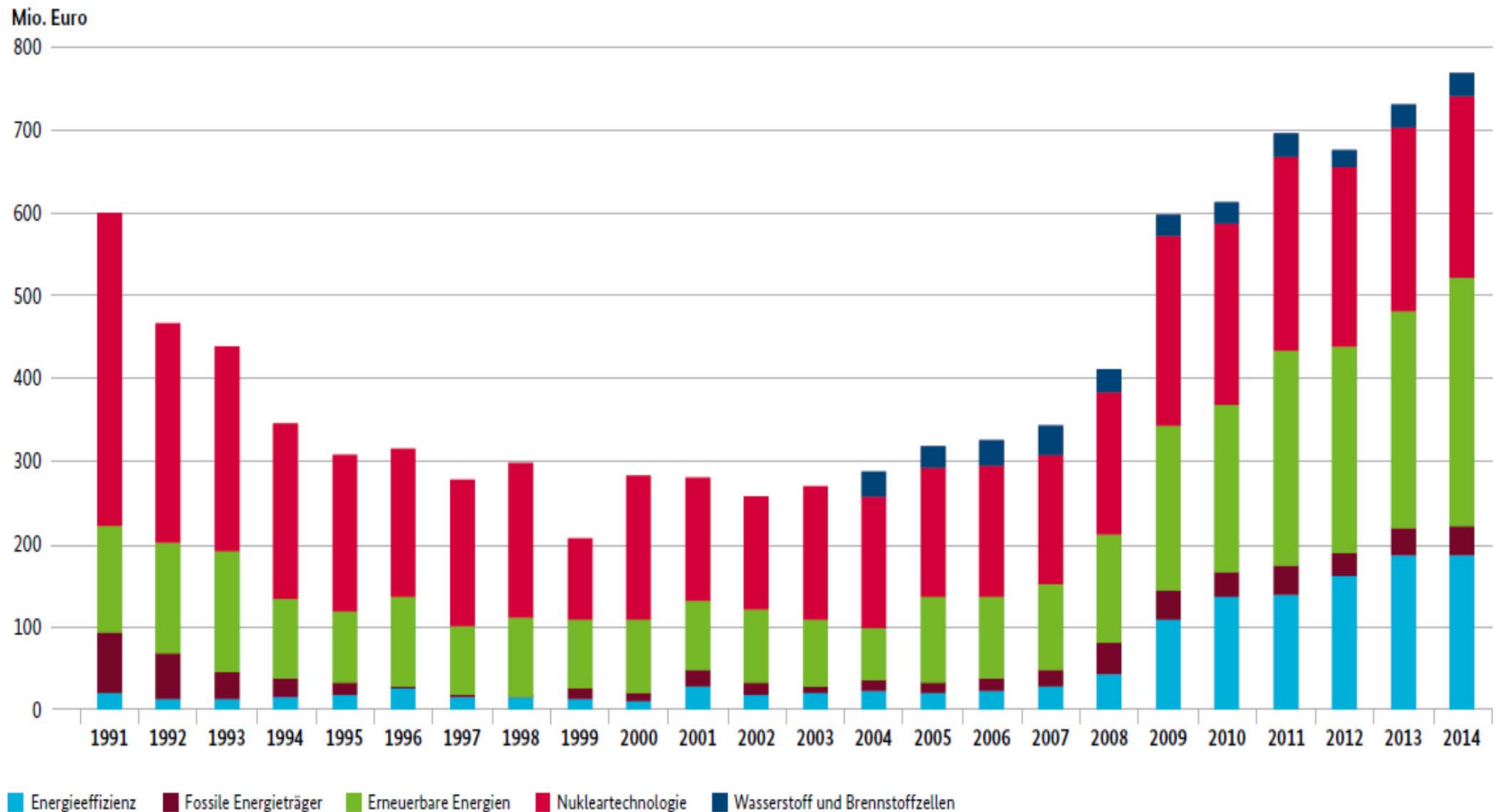
Germany vs. Europe

41. Internationaler Elektrizitätspreisvergleich (private Haushalte) 2015
Jahresverbrauch 1.000 kWh < 2.500 kWh

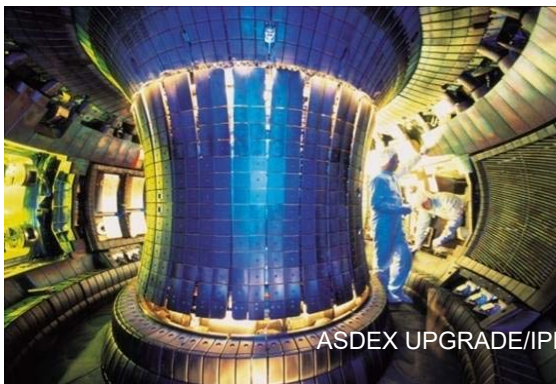
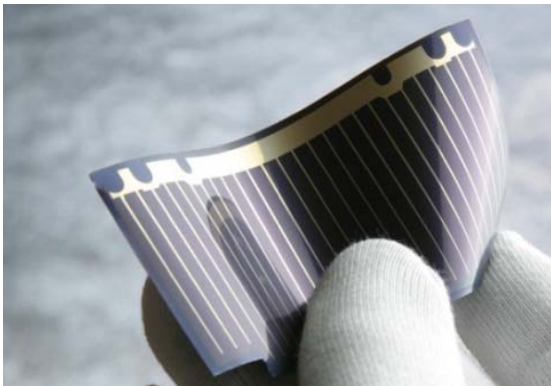


Public Annual Spending for Energy Research (Federal Republic of Germany)

62. Ausgaben (real 2014) für Energieforschung aus Bundesmitteln



Helmholtz Energy Research



R&D from fundamental science to innovation:

- Novel materials and technologies for energy storage and smart grids
- Technologies for sustainable energy supply
- Energy Systems Integration
- Nuclear Waste Management
- Nuclear Fusion

A holistic approach enhancing the transformation of the whole energy system

Helmholtz Energy Research Programs 2015 – 2019, total 5-year budget

Energy Efficiency, Materials and Resources

Renewable Energies

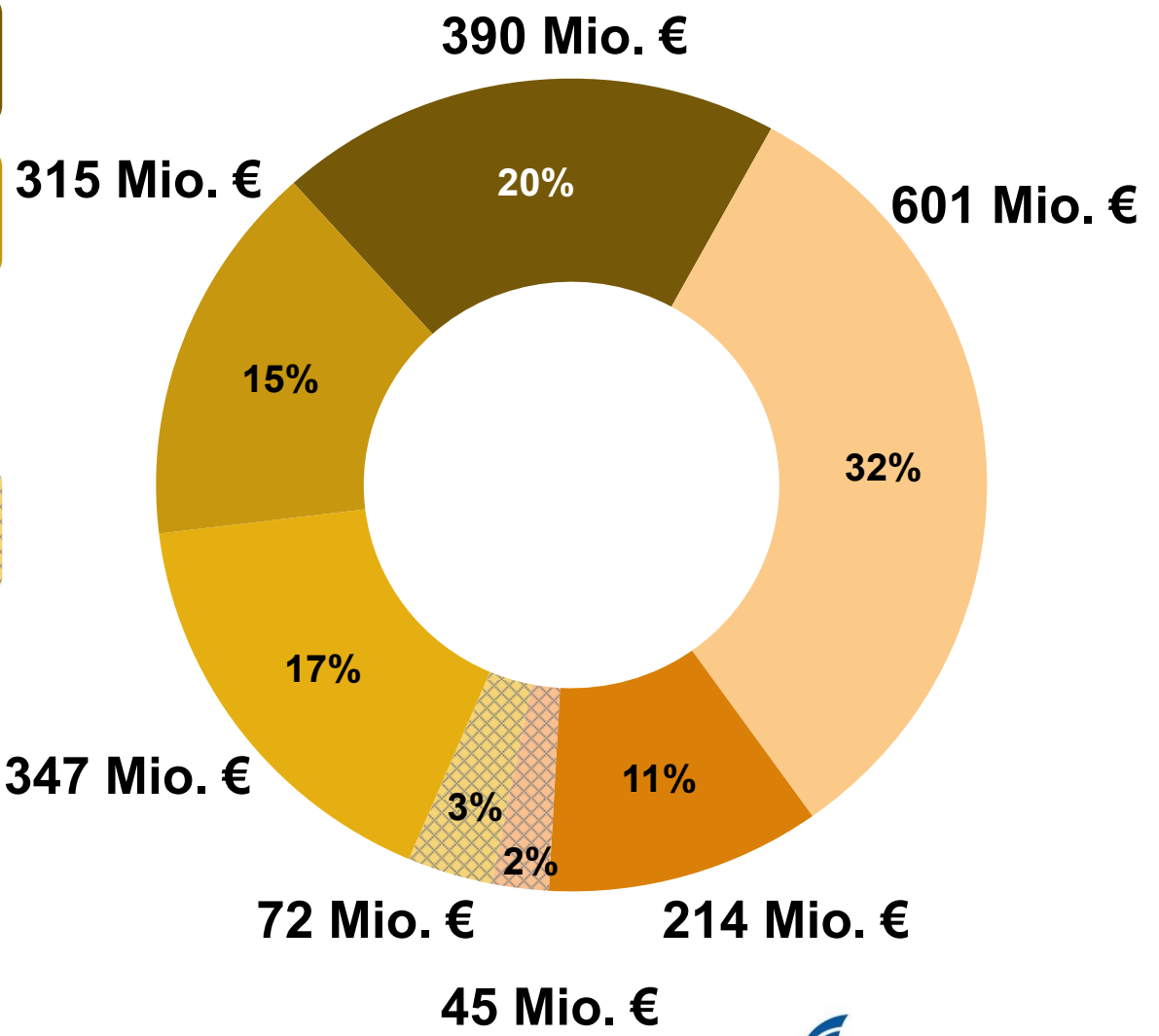
Storage and Cross-linked Infrastructures

Future Information Technology*

Technology, Innovation and Society**

Nuclear Waste Management, Safety and Radiation Research

Nuclear Fusion



* Energy: 70 Mio. € (in total 238 Mio. €)
 ** Energy: 47 Mio. € (in total 67 Mio. €)

Total equals 396 Mio. / year