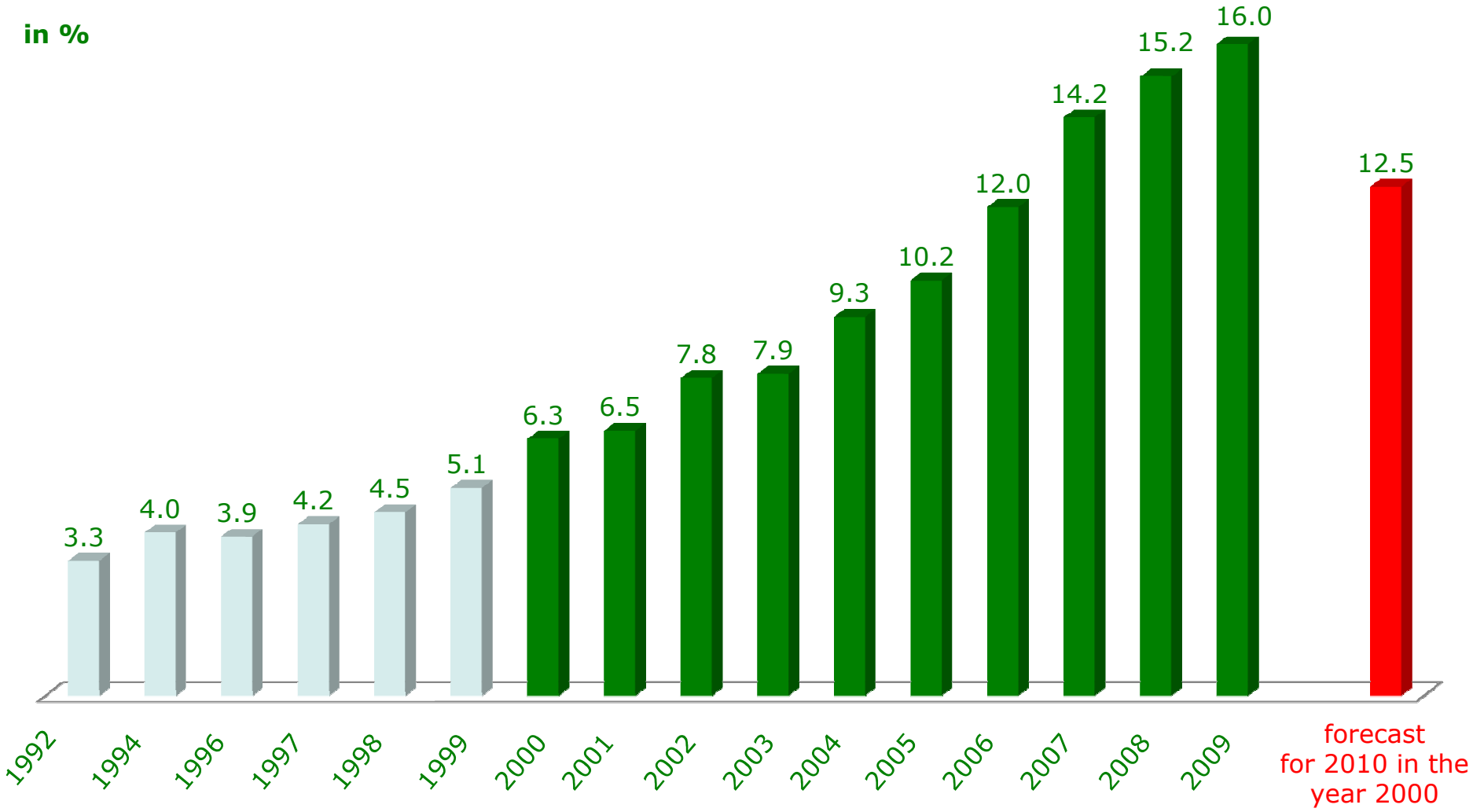
How FIT can revolutionize the PV Market

Intersolar, California, 12th July 2010

Hans-Josef Fell,
Member of the German Parliament

Share of Renewables in the Gross Electricity Consumption in Germany



Source: BDEW

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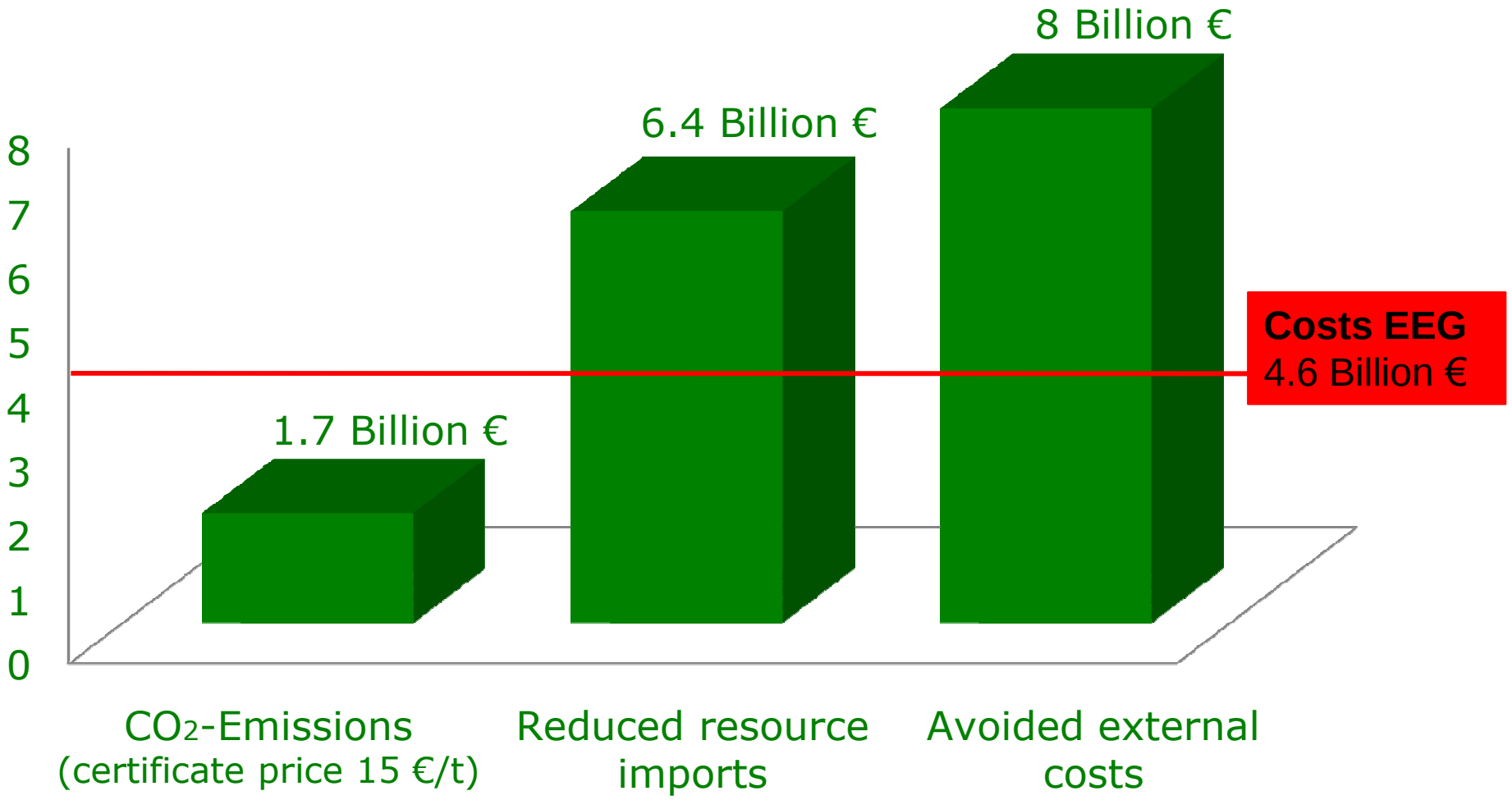
Avoided Costs due to Renewable Energy in 2009



Source: BEE

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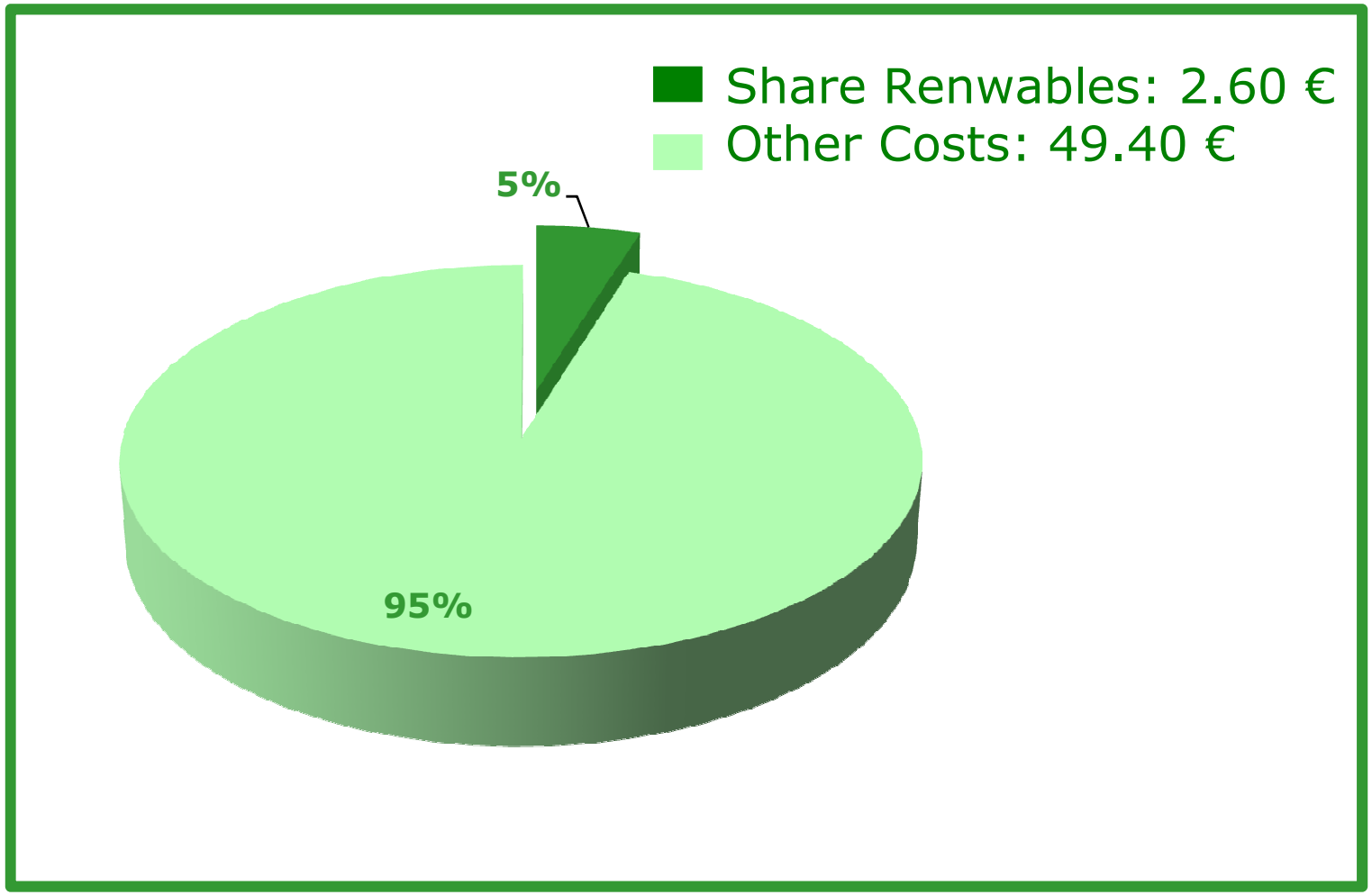
Average electricity costs for a multi-person household in Germany: 52 €



Source: BMU 2009

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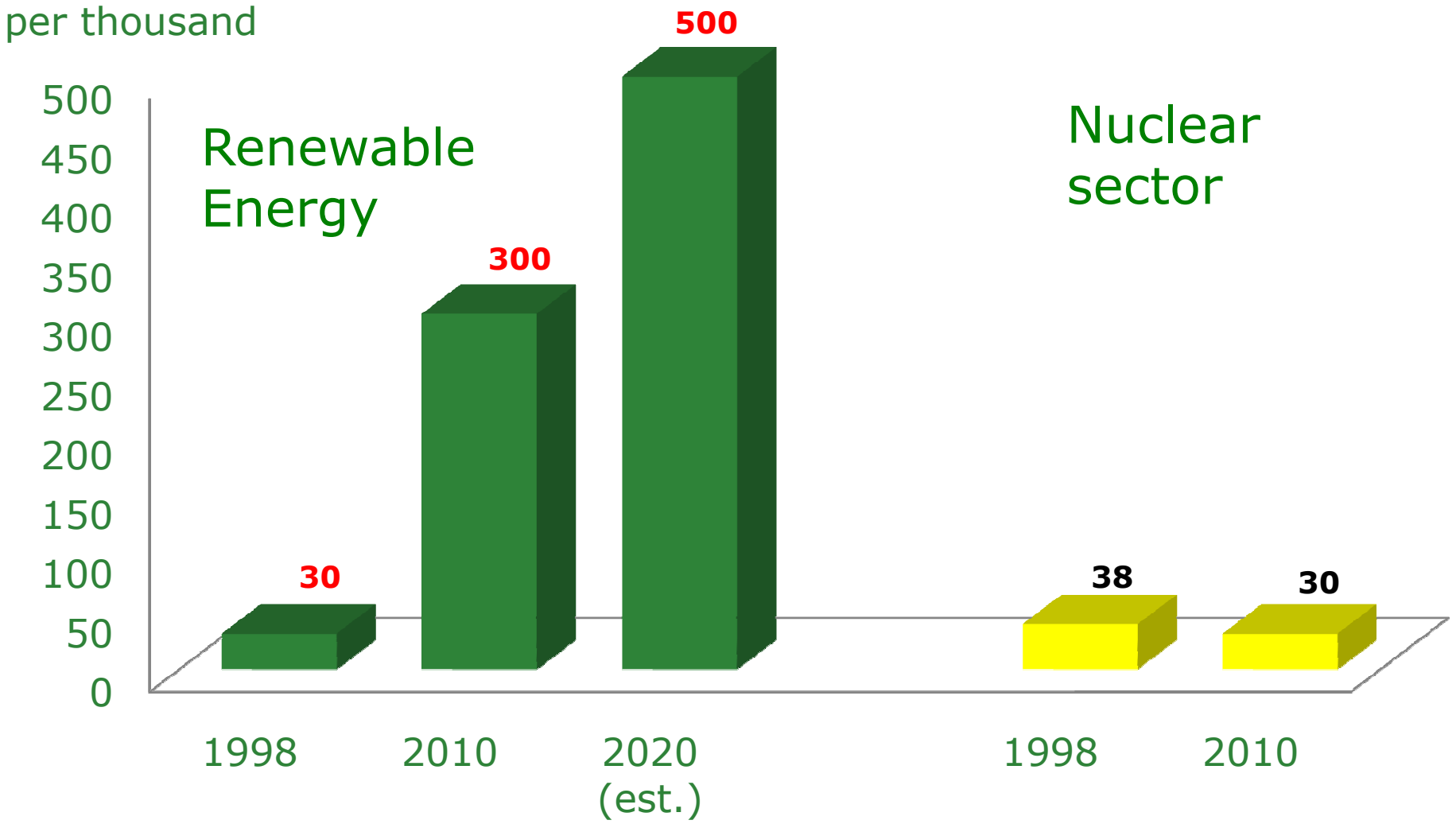
Renewable Energy Job Engine in Germany



Source: BEE /BMU 2009

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A Path to Sustainable Energy by 2030

'Wind, water and solar technologies can provide 100 percent of the world's energy, eliminating all fossil fuels.'

(Mark Z. Jacobson & Mark A. Delucchi)
Universities of Stanford & Davis

Hans-Josef Fell
www.hans-josef-fell.de

Renewable energies are cheaper than global fossil energy bill

Estimated costs fossil, nuclear energies (US $)	
Petroleum	3350-4475 Bil.
Natural Gas	550-830 Bil.
Coal	150-300 Bil.
Electricity	1490-2150 Bil.
Sum per year (without external costs!)	5000–7750 Bil.
Sum 2010-2030 (+ 20% rise)	**200 000 Bil.**
Sum to replace world's energy with 100 % renewables by 2030	**100 000 Bil.**

Sources:
Mark Z. Jacobson/ Mark DeLucchi 2009, A plan for a sustainable future, in: Scientific American Nov. 2009
Dr. Werner Zittel 2010, Worldwide Estimated Yearly Energy Costs (EWG 2010)

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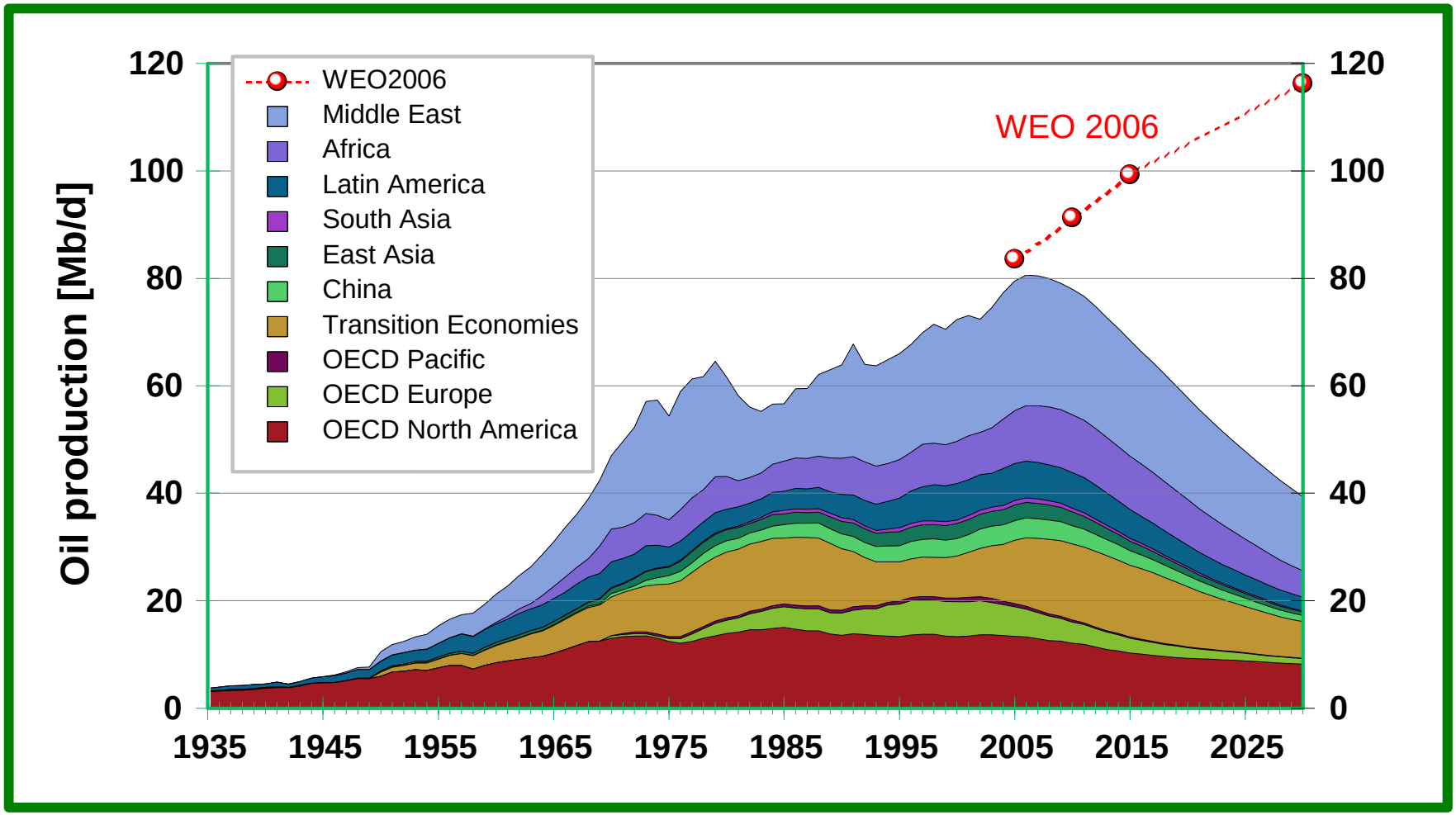
Summary of World Oil Production
Energy Watch Group



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Oil Spill Disaster in the Gulf of Mexico

- Damage caused so far: US $ 100 Bil. (estimated by the State of Louisiana)
- BP is willing to pay US $ 20 Bil.

Source: Flickr, NASA

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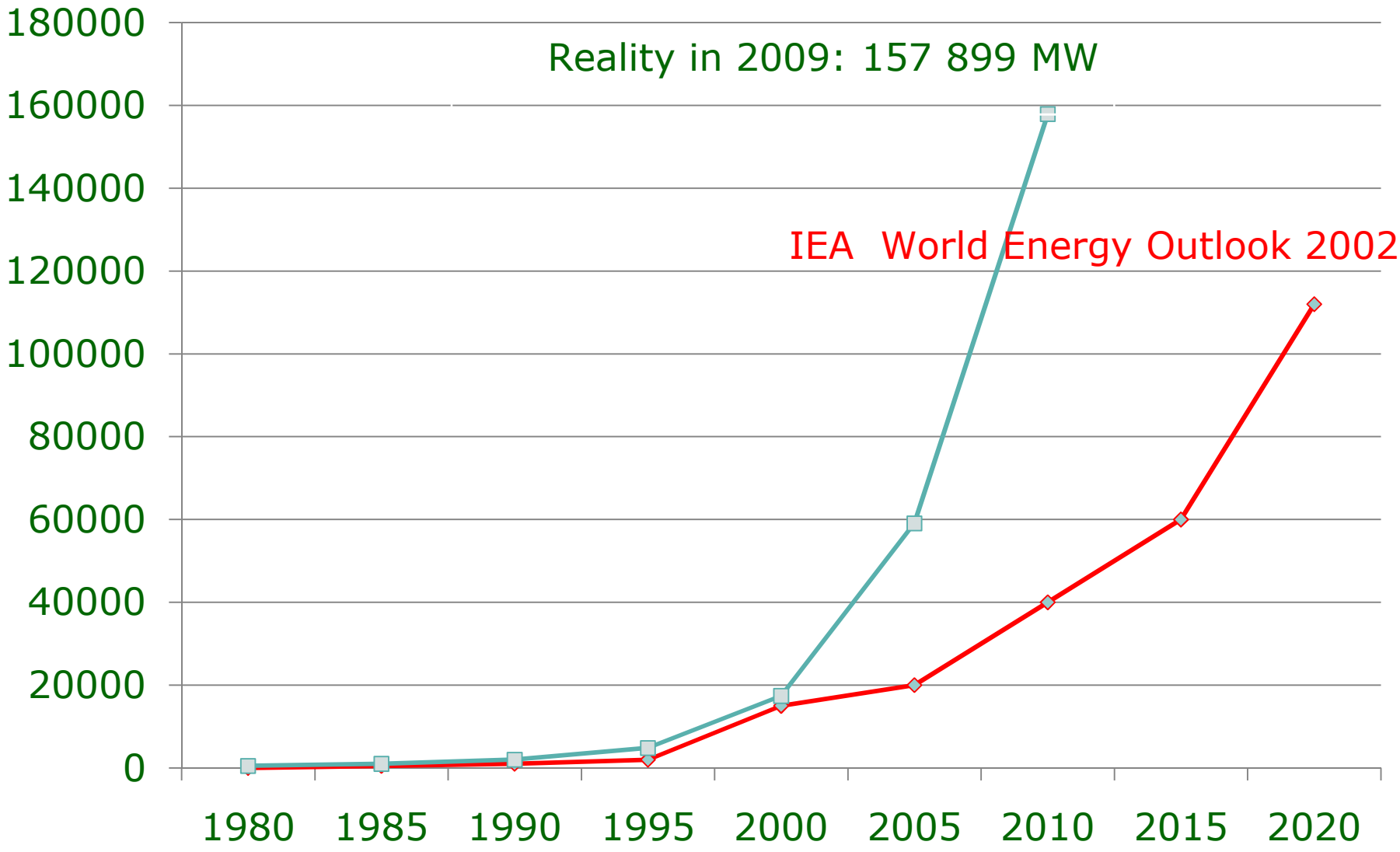
Global Windpower: IEA-outlook and reality



Source: Rechsteiner; IEA;

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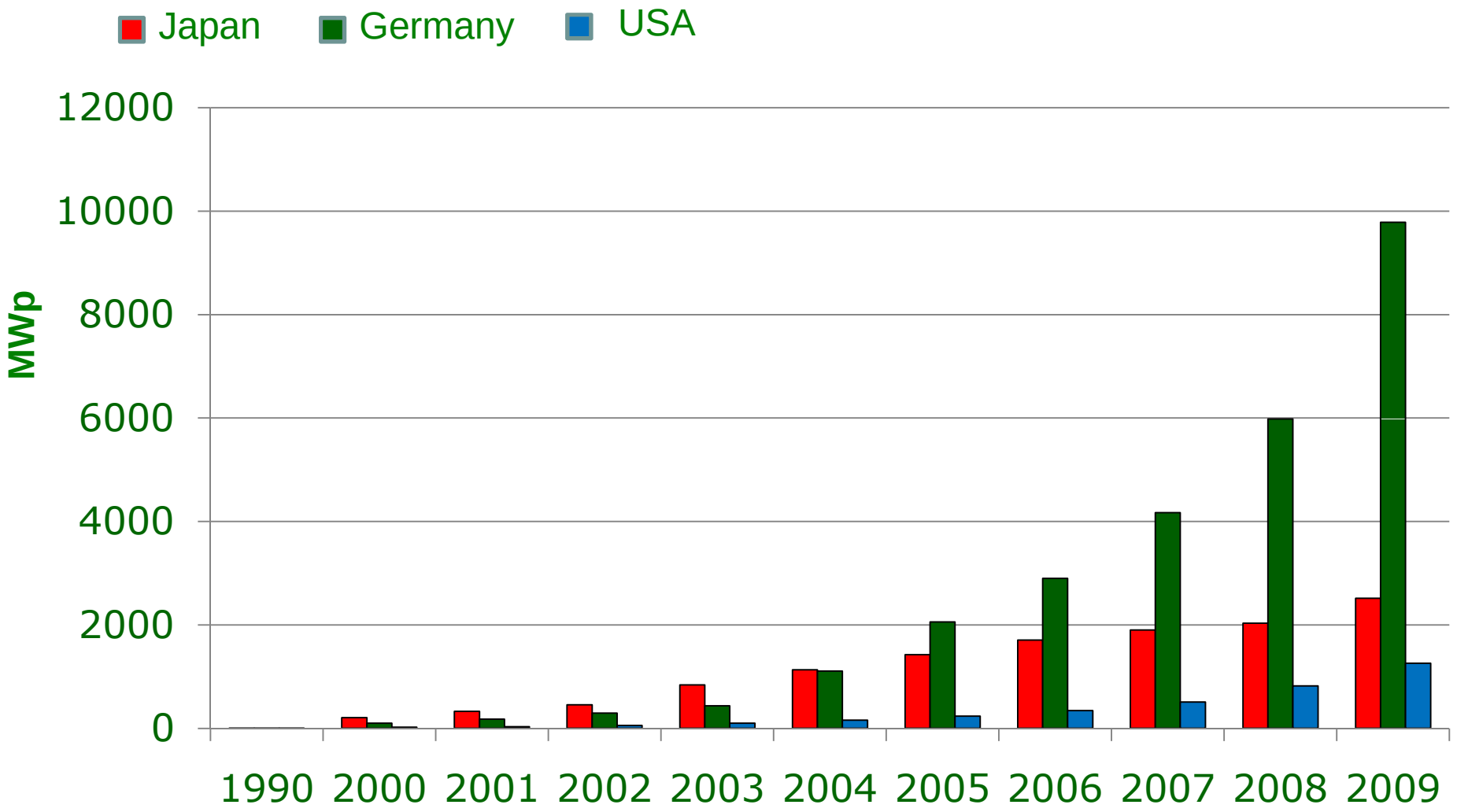
Photovoltaics – Germany, Japan and the USA



www.ferc.gov/oversight, BSW, EPIA, ISES

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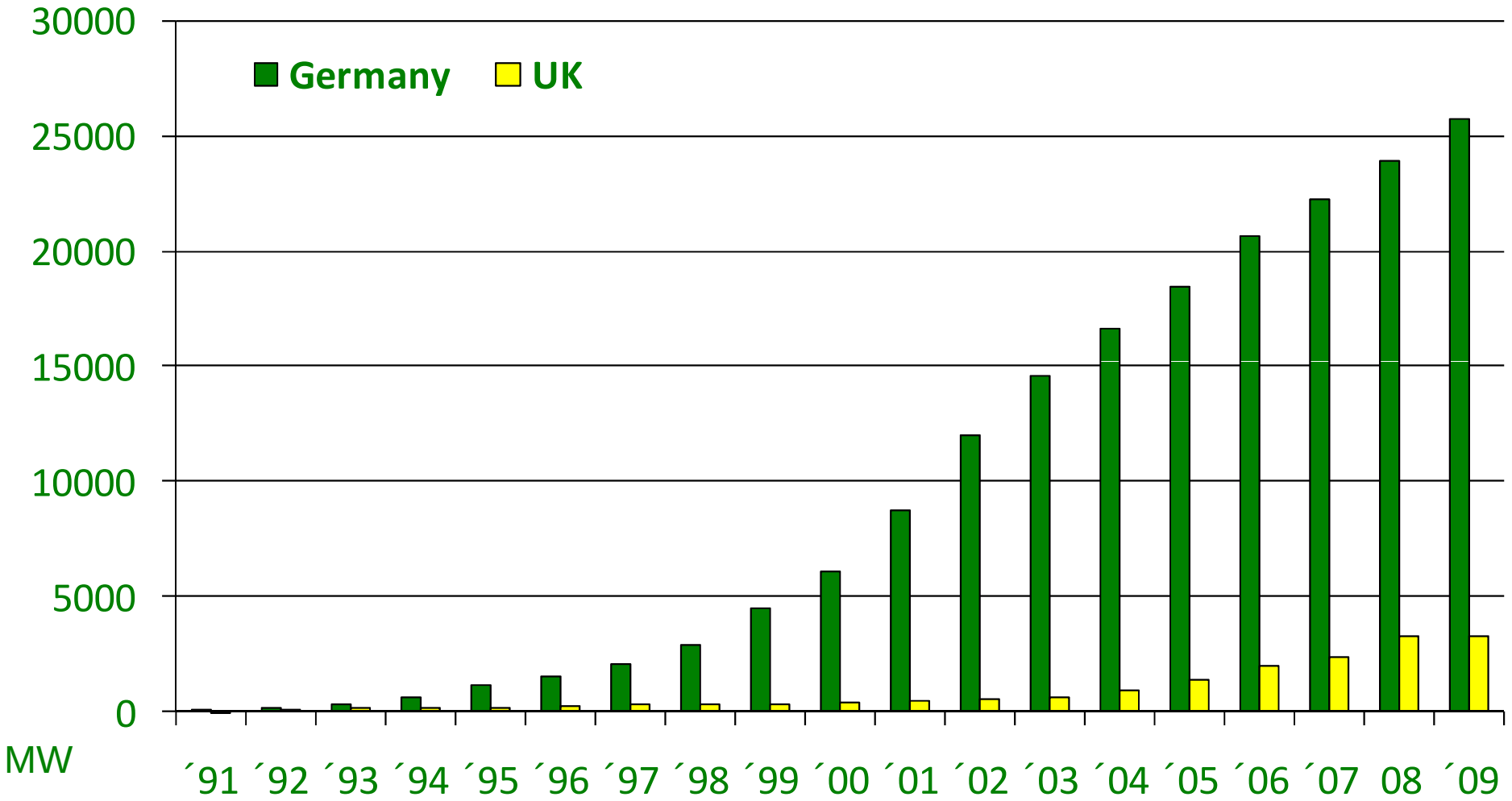
Windpower – Increase & Costs

Costs for wind energy:
~7 Cent/kWh in Germany
~13 Cent/kWh in UK



Source:http://www.ewea.org & Hans-Josef Fell

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Key components of a successfull feed-in law

- Privileged grid access
- Attractive feed-in tariff for each RE technology (must be high enough for cost-effecient RE power production)
- Feed-in cost distributed via electricity price
- No cap on total amount of generated RE power
- Guaranteed feed-in period

- Also important: No obstacles through approval procedures in practice

Solar Tariff, Germany 2009

- Open areas solarpower 31,94 Cent/kWh
- Roofs up to 30 kW 43,01 Cent/kW
- Roofs up to 100 kW 40,91 Cent/kWh
- Roofs up to 1 MW 39,58 Cent/kWh
- Roofs over 1 MW 33,00 Cent/kWh
- Degression: from 8 til 11% yearly

Photovoltaics

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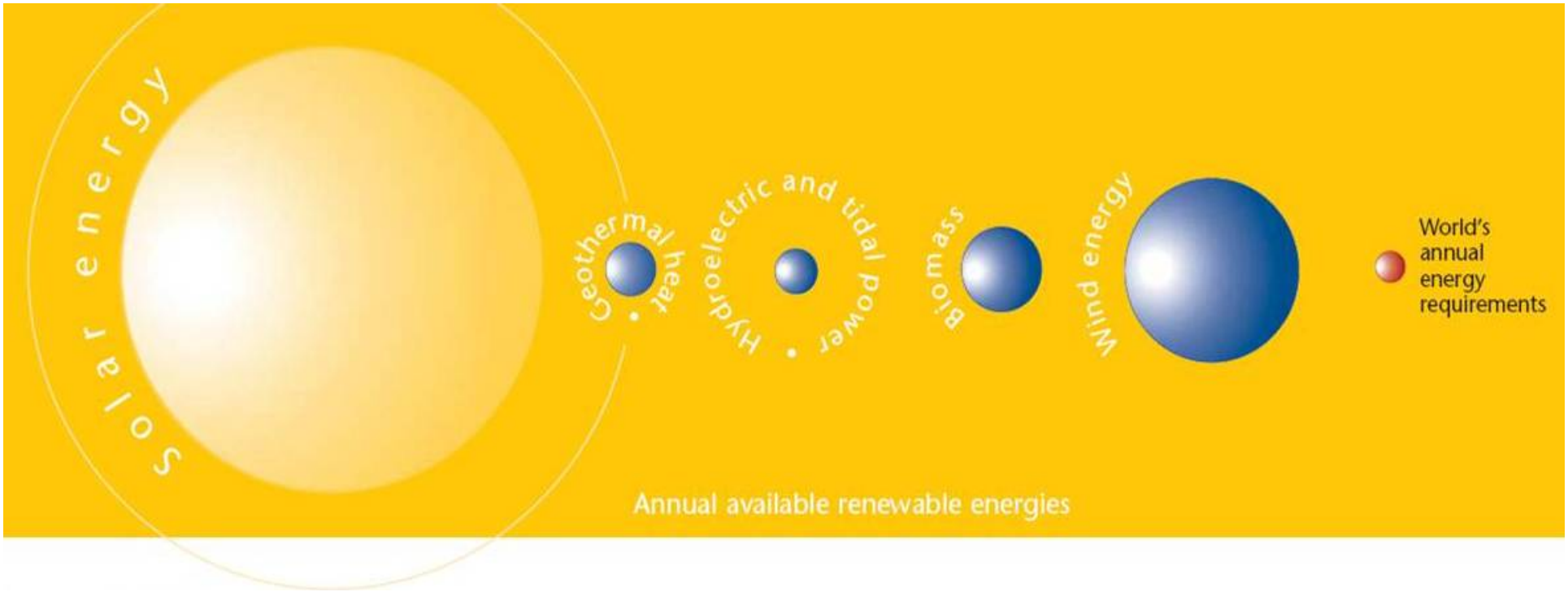
Worldwide Renewable Energy Potential



Source : FVS/DLR

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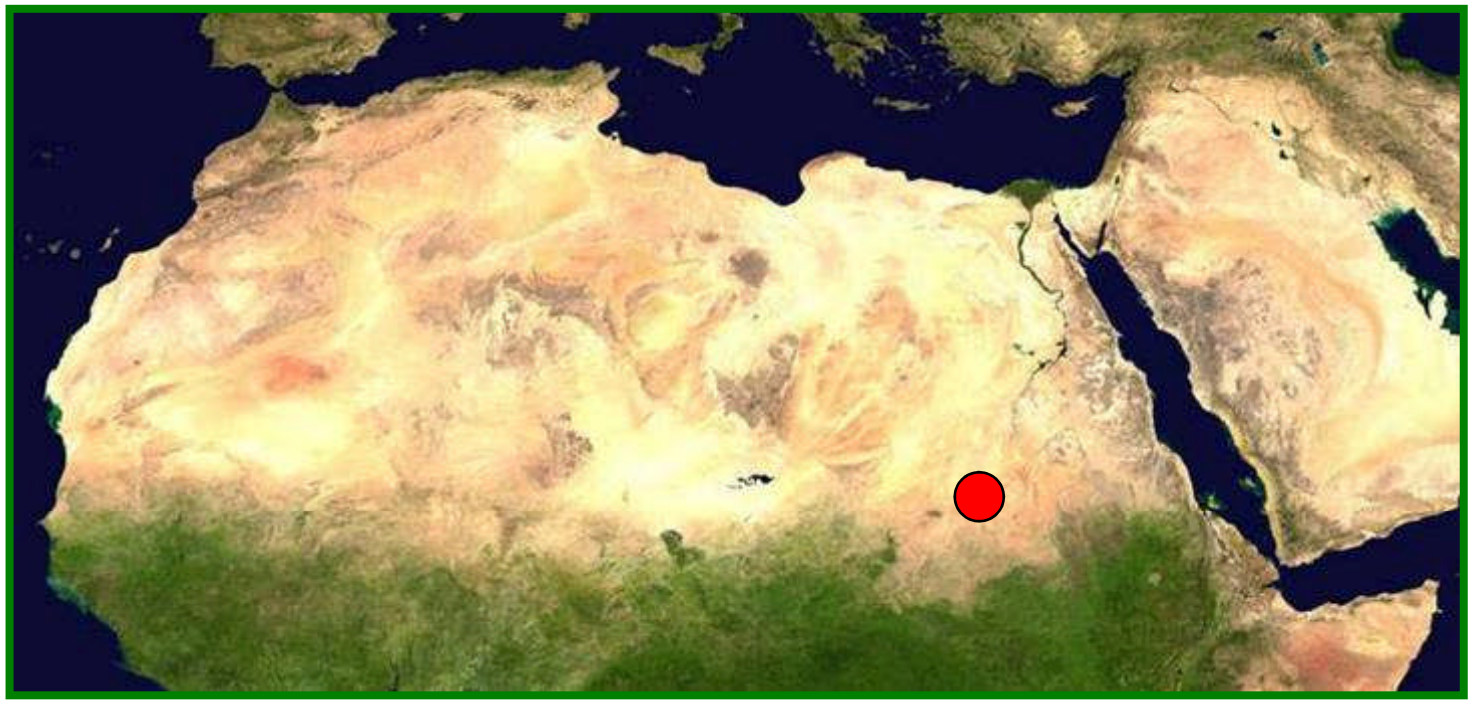
Solar Potential vs. Electricity Demand



One percent (●) of the Sahara's surface is enough to meet the world's entire electricity demand using CSP technologies.

Sources: Prof. Dr. Volker Quaschning

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Solar Car (Twike) in front of Solar Park

Hans-Josef Fell
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Many Thanks
for your Attention!

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