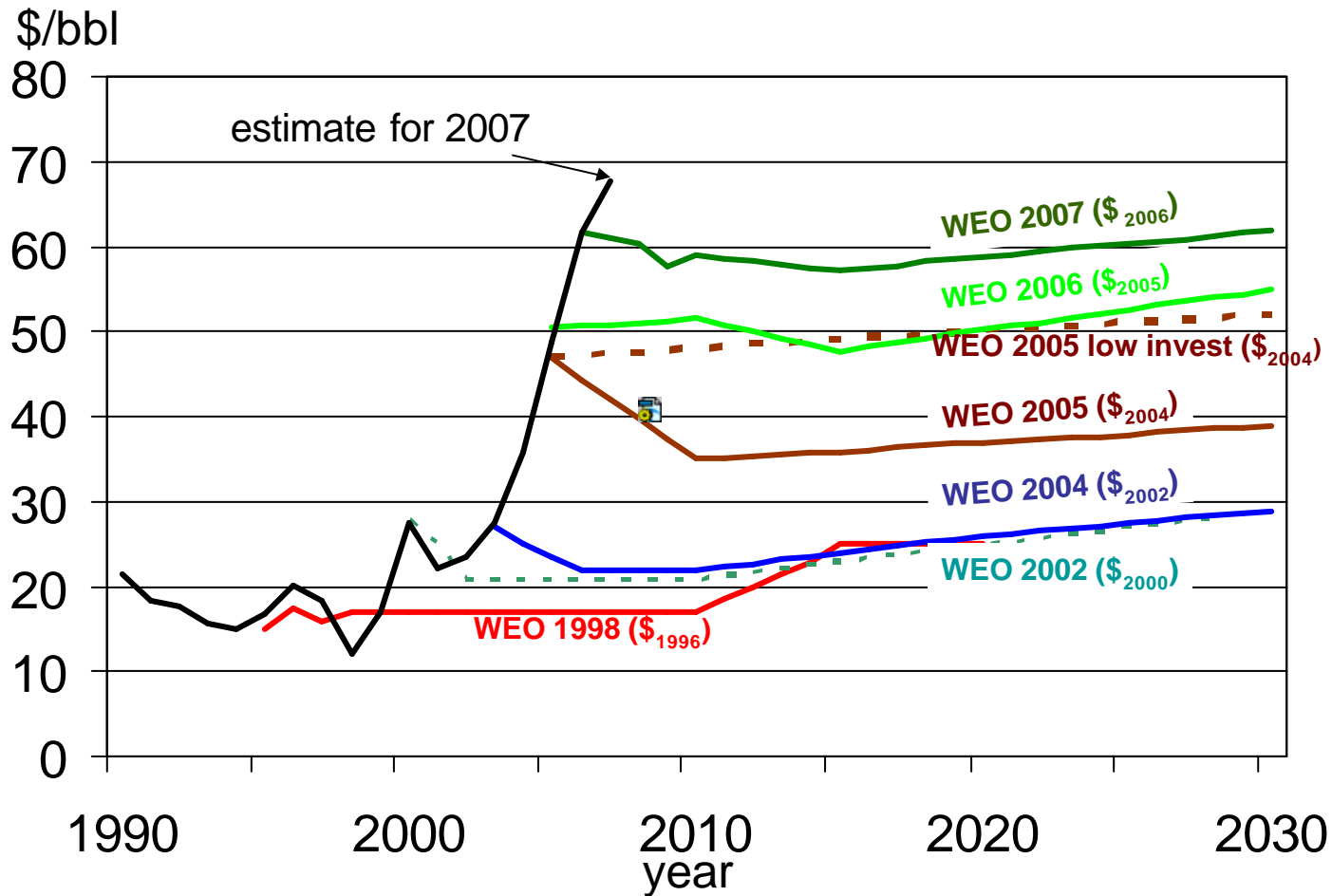


A Political Perspective on CSP

Hans-Josef Fell
Member of German Parliament

The CSP Congress
5. Feb. 2008 Barcelona Spain

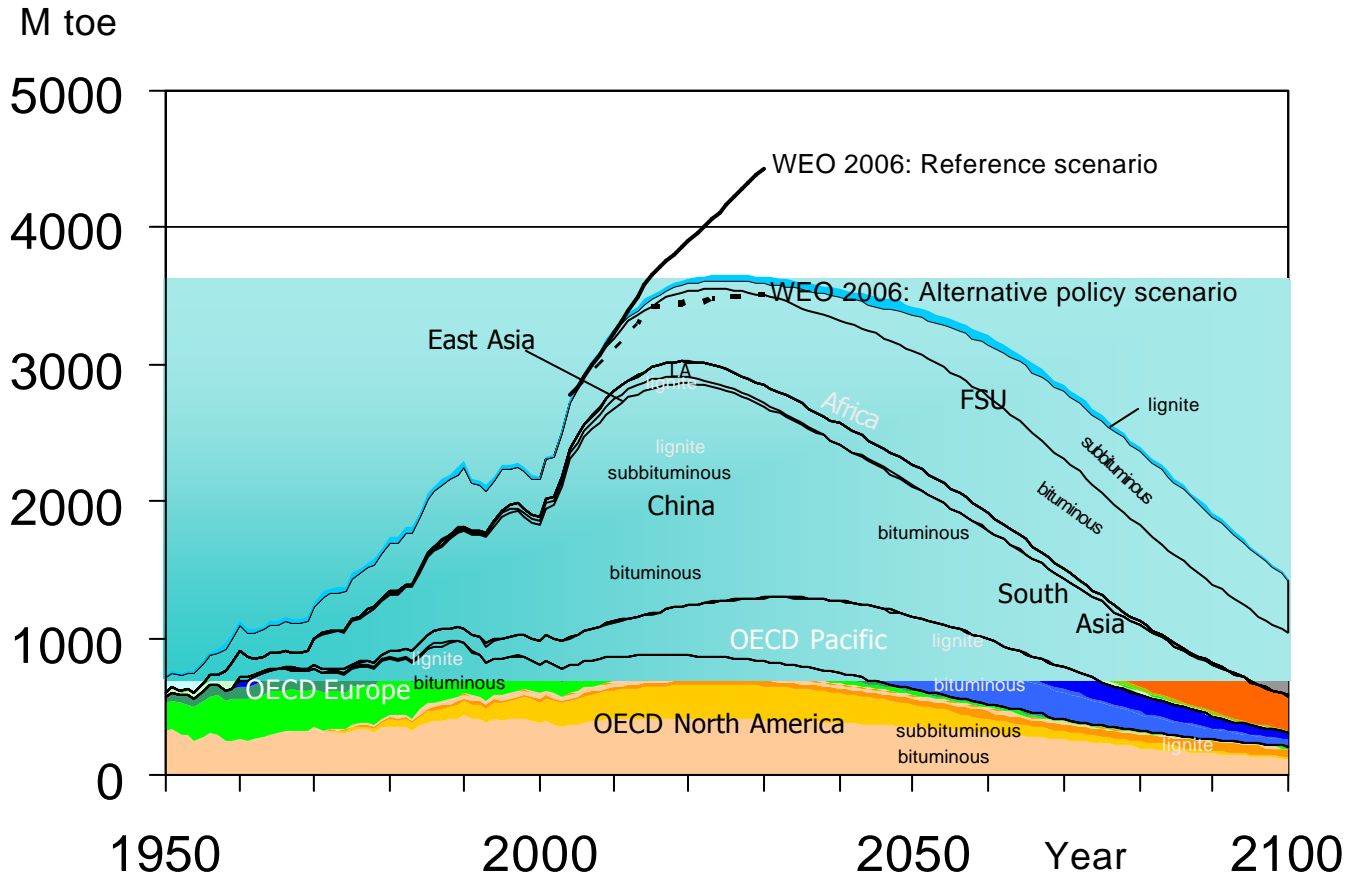
IEA Oil Price Prognosis



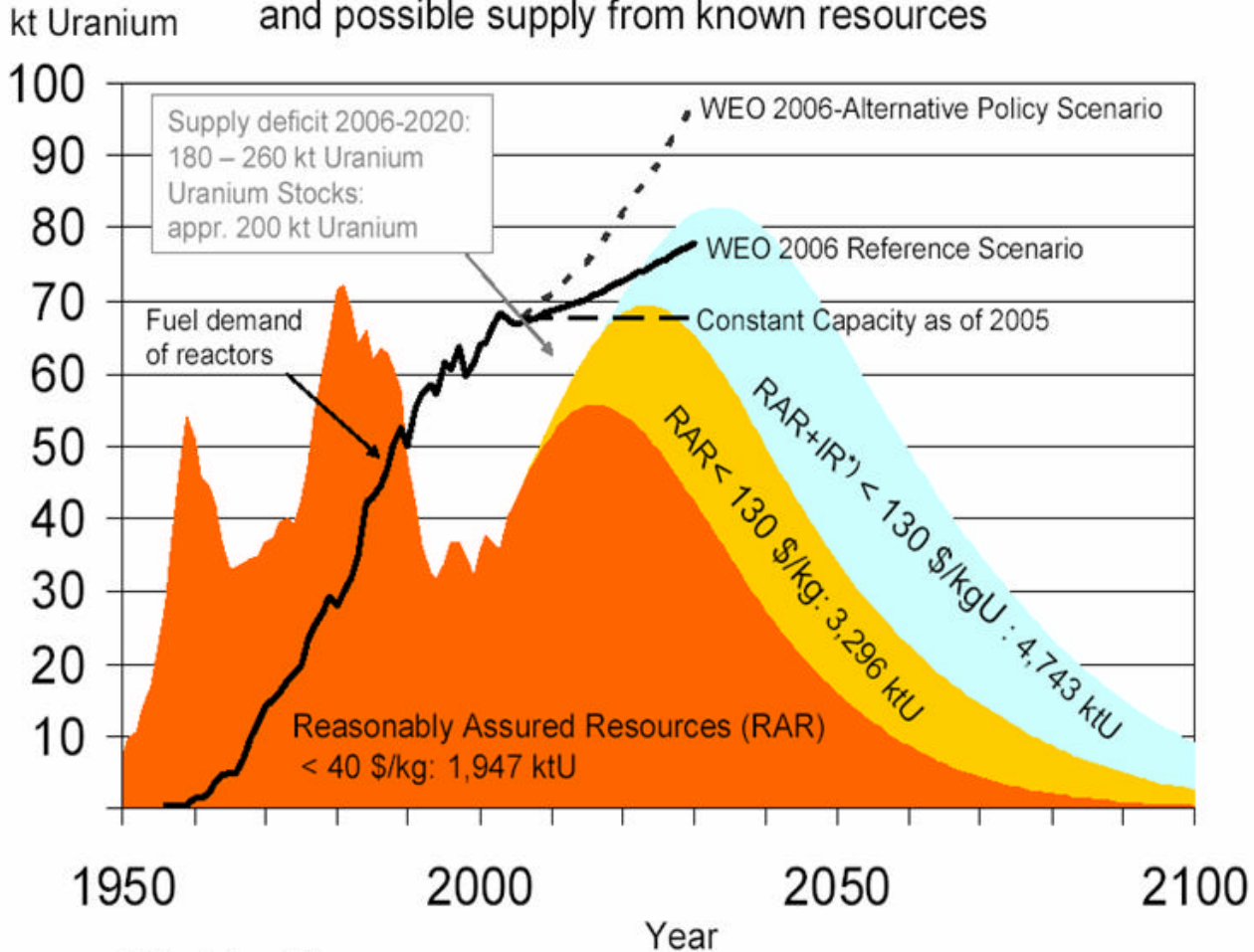
Global coal production: Peak

2000

Worldwide possible coal production



Uranium demand according to IEA scenarios and possible supply from known resources



*) IR = Inferred Resources

Climate problems can be solved
only by two strategies:

1. Stop greenhouse gas emission

(not only to reduce the emission)

- promote zero emission technologies
- completely canceling the use of fossil and nuclear energies

2. Taking out carbon from atmosphere

- convert plants to humus soil
- reforesting big areas

Climate-protection policies

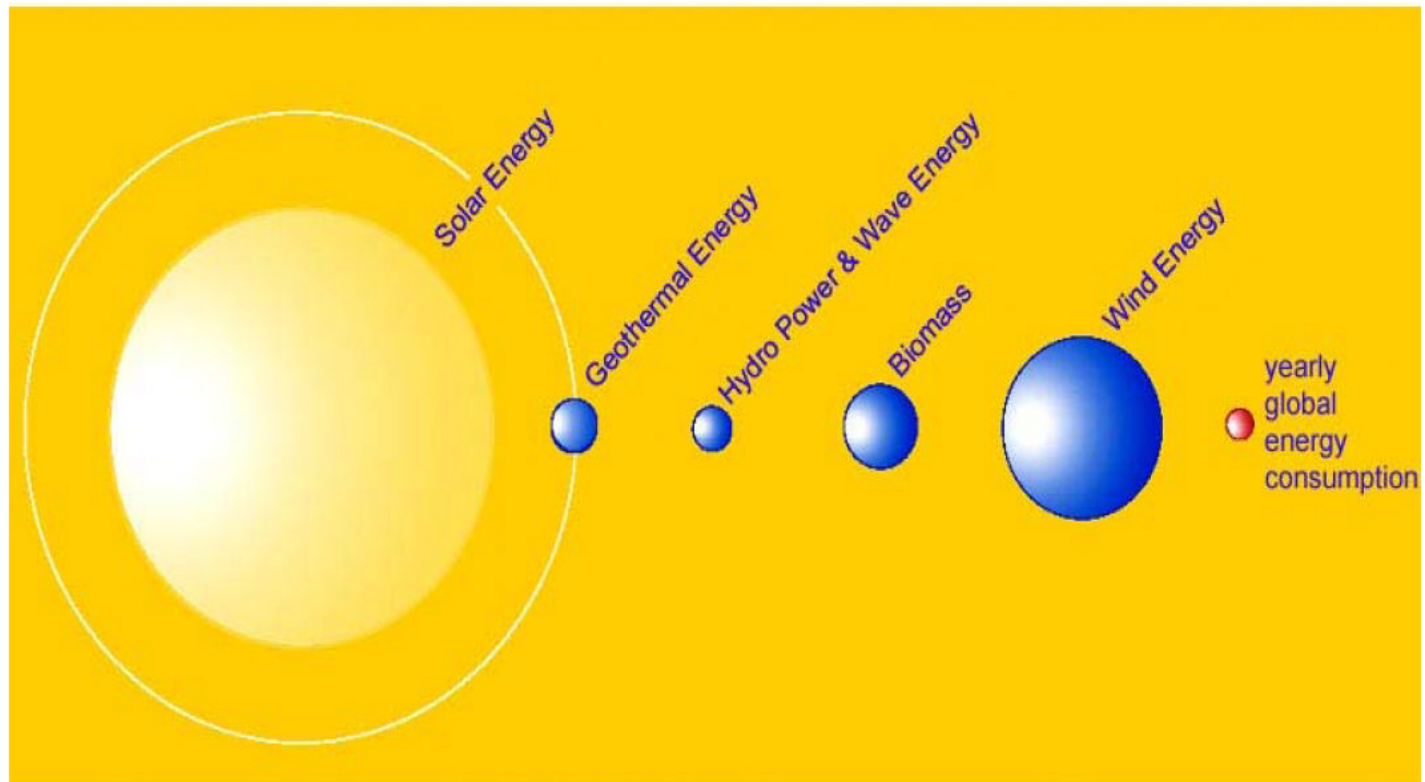
Promoting renewable energy and chemistry:

- Laws for feed-in tariffs
- tax exemption for renewables
- canceling subsidies for fossil and nuclear
- research offensive for renewables
- reduce the approval obstacles

No: quota or certificate systems

both are unable to promote the renewables fast

Worldwide Potential Renewable Energy



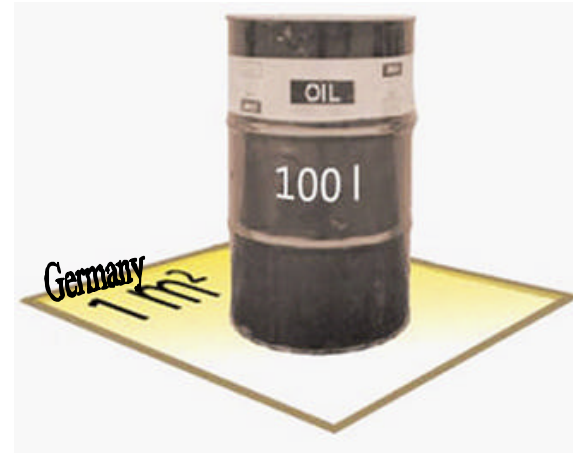
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www.hans-josef-fell.de

Solar energy vs. CO₂ savings

Annual solar irradiance

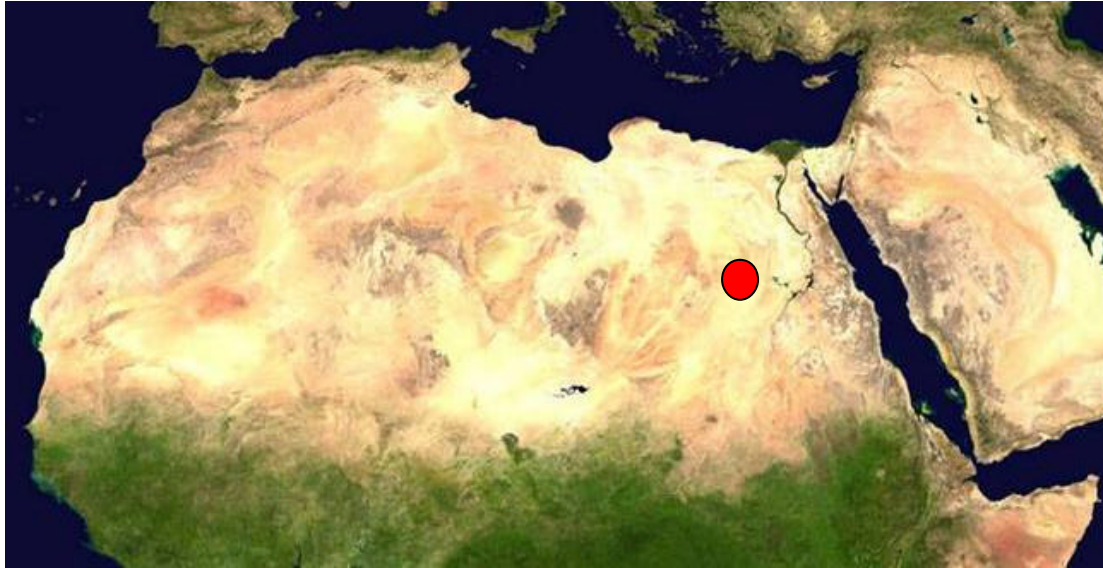
- Germany
~ 1000 kWh/m²a
- Southern Spain
~ 1700 kWh/m²a
- Sahara
= 2100 kWh/m²a



1000 kWh ? 100 l
oil

The primary energy received by each square metre of land in the southern EU-MENA region equals 1-2 barrels of oil per year.

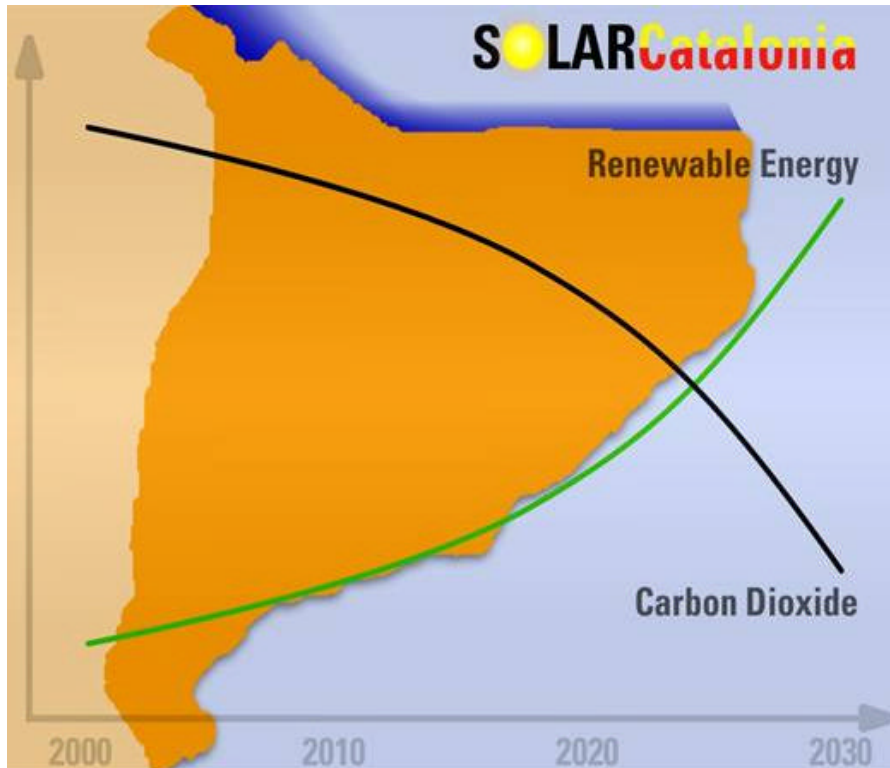
CSP potential vs. electricity demand



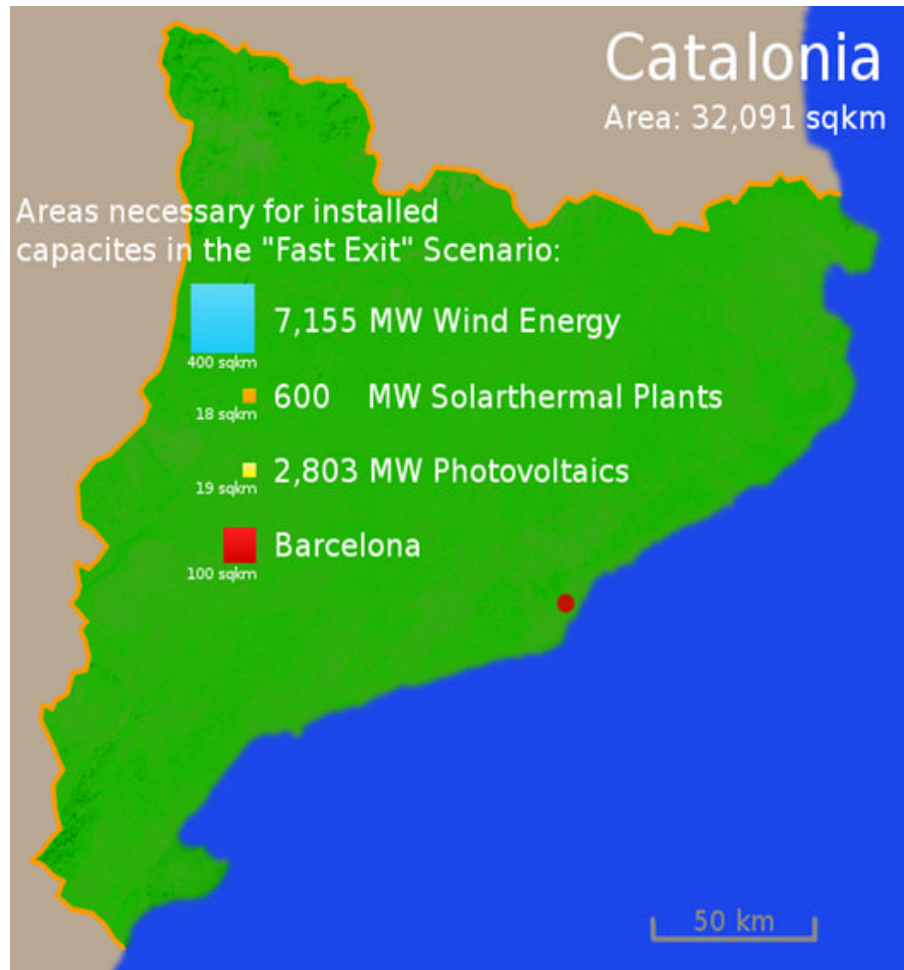
One percent (●) of the Sahara's surface is enough to meet the world's entire electricity demand using CSP technologies.

Prof. Dr. Volker Quaschnig [5]

Solar Catalonia

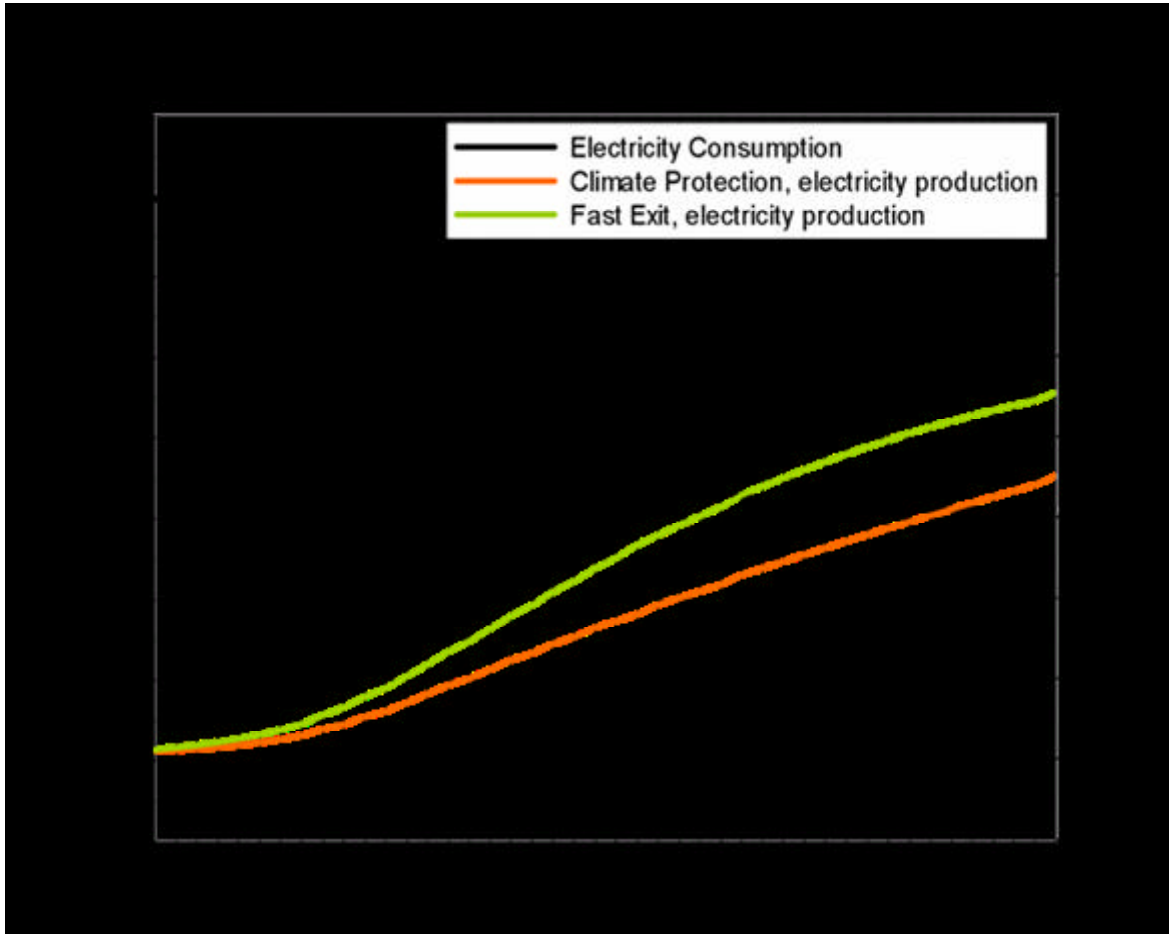


- S. Peter (ISuSI)
- A. Doleschek (ISuSI)
- H. Lehmann (WCRE)
- J. Miralles (Fundacio Terra)
- J. Puig (Eurosolar)
- J. Corominas (Ecoserveis)
- M. García (Ecoserveis)



S. Peter, A. Doleschek, H. Lehmann, J. Miralles,
J. Puig, J. Corominas, M. García

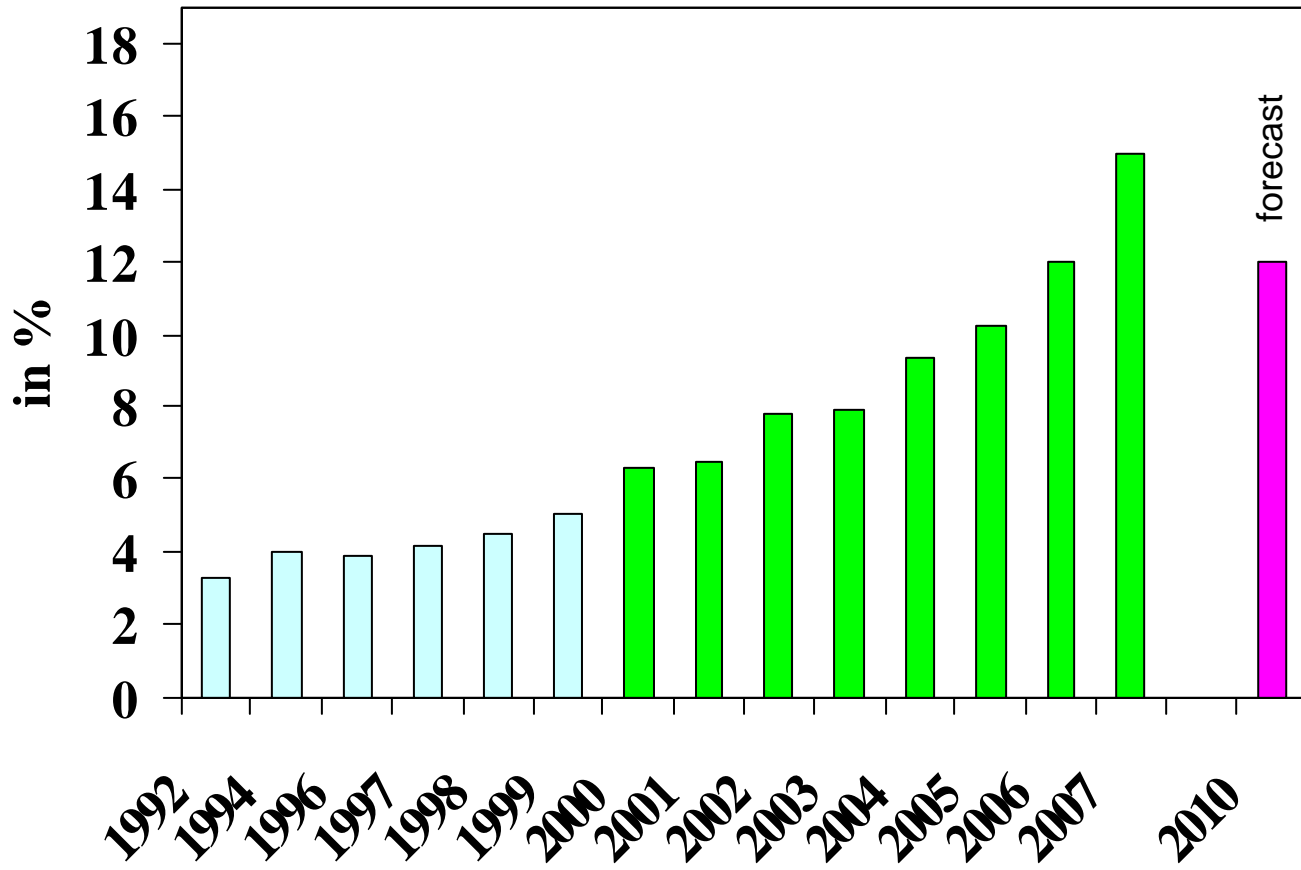




S. Peter, A. Doleschek, H. Lehmann, J. Miralles,
 J. Puig, J. Corominas, M. García



Share of Renewables in the German Gross Electricity Consumption

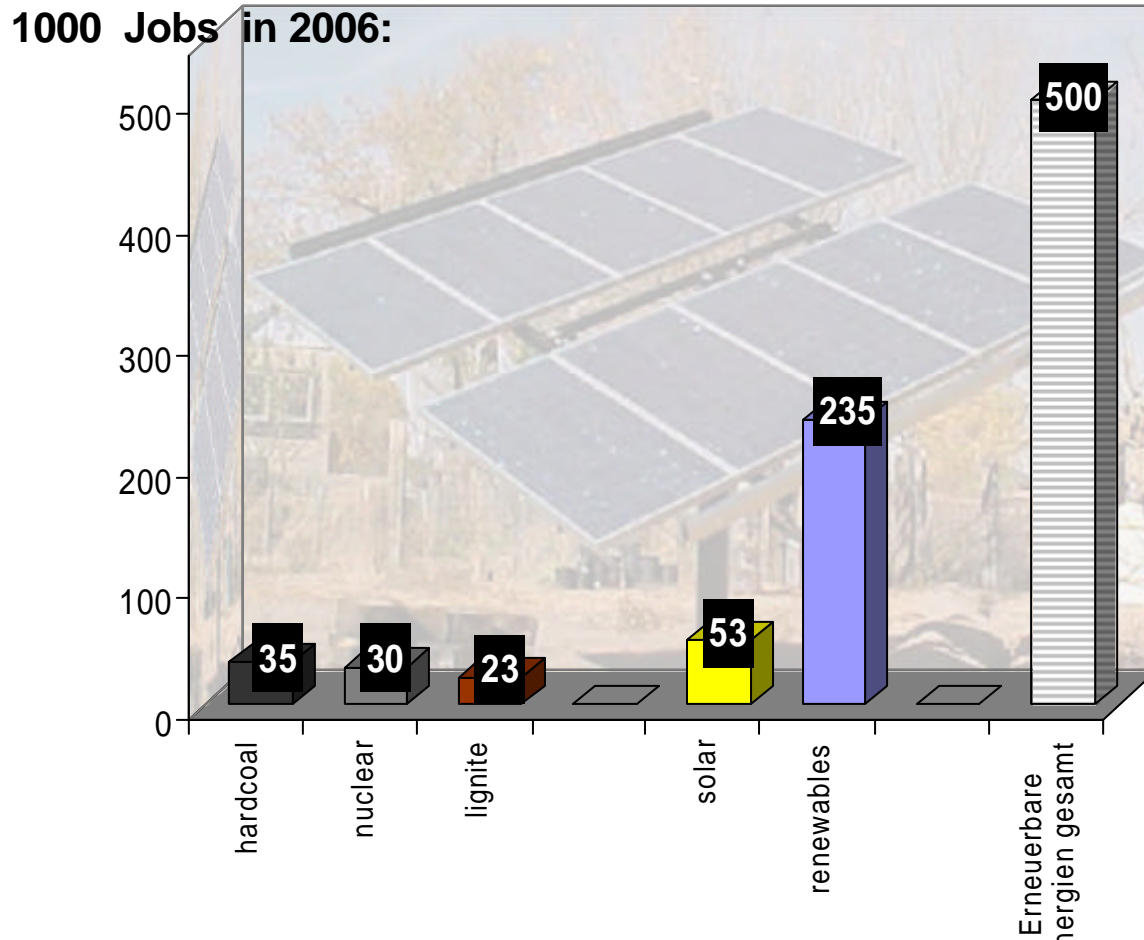


Reference: BEE

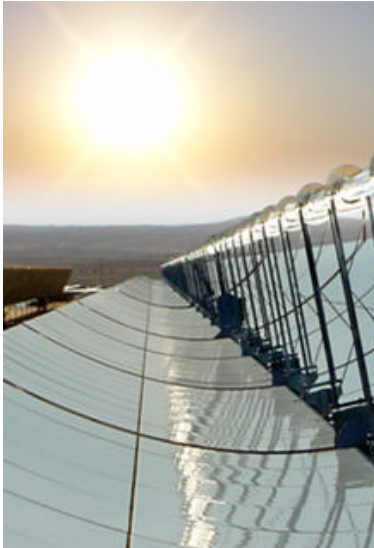
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Job engine renewable energies

Prognosis 2020



Concentrating Solar Power (CSP)



Parabolic Trough
System

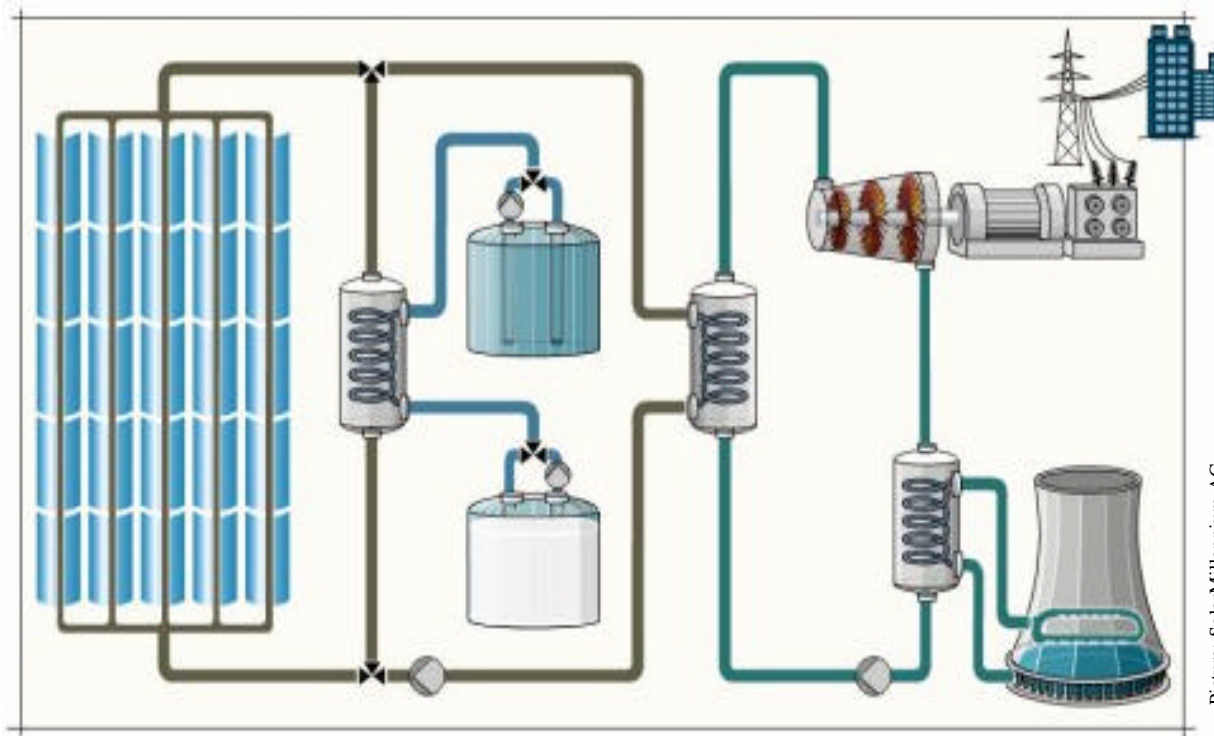


Parabolic Dish
System



Solar Tower /
Central Receiver

CSP plant with thermal storage



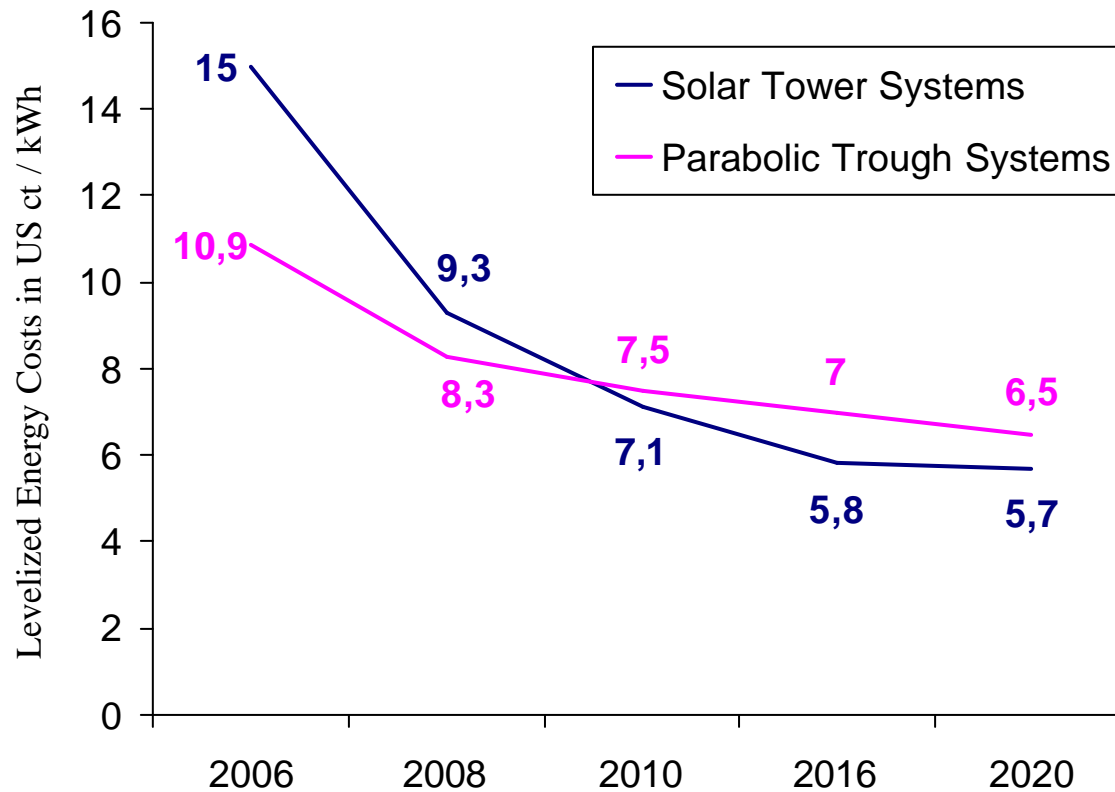
Picture: SolarMillennium AG

Solar Cooling

with Parabol Channel
Collectors



CSP cost forecast

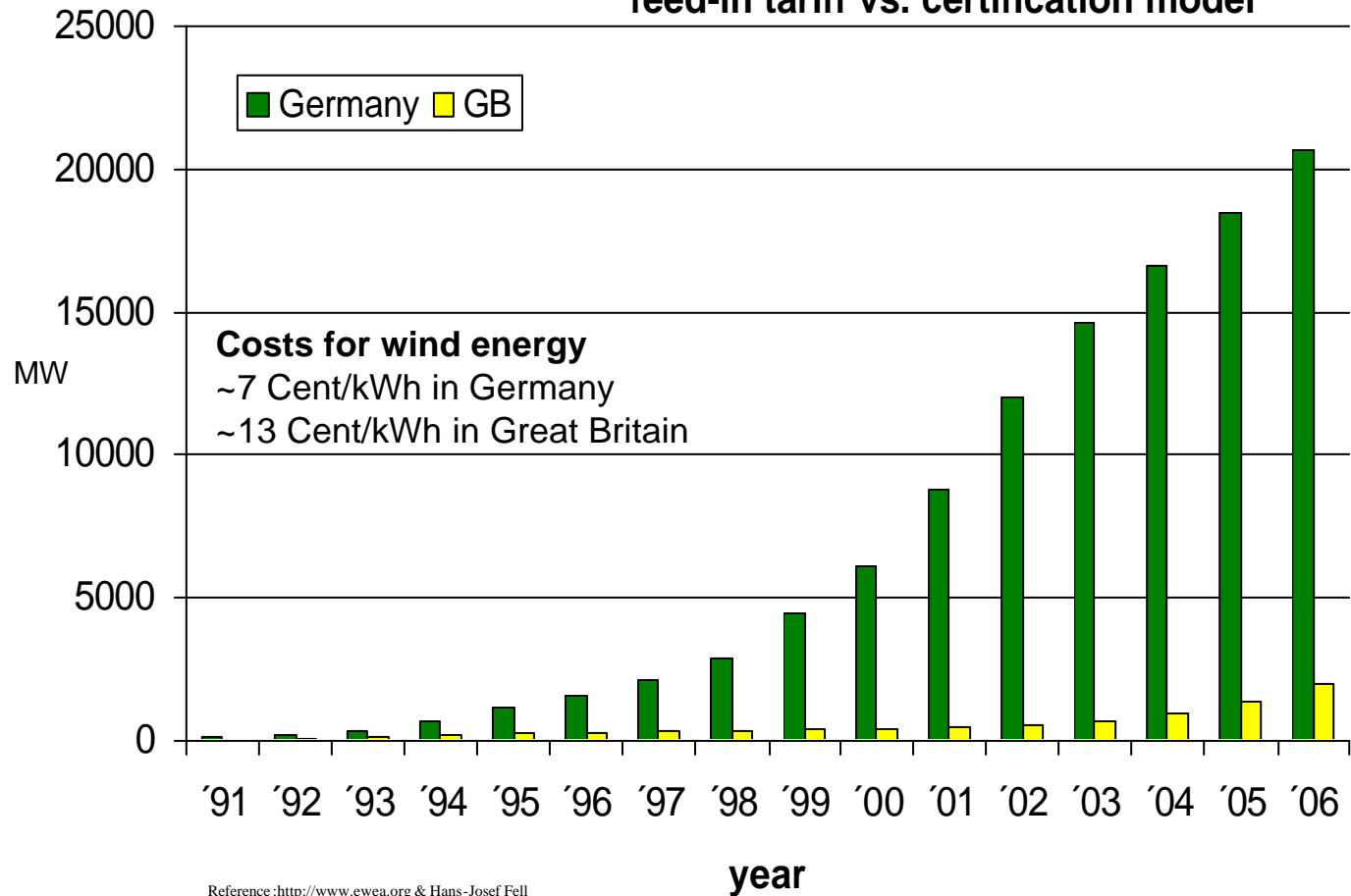


Reference: Sargent & Lundy LLC [6]

Wind power – Increase & Costs

Germany - Great Britain

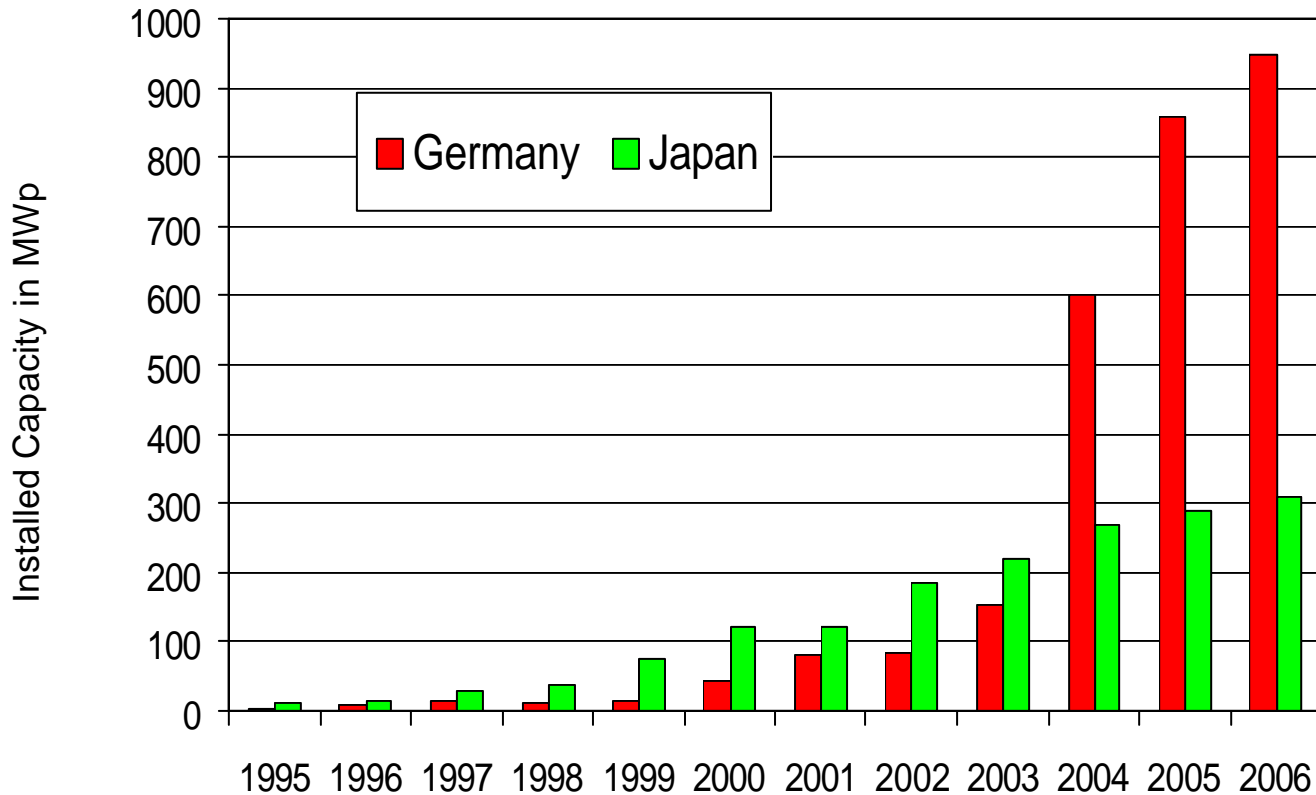
feed-in tariff vs. certification model



Reference: <http://www.ewea.org> & Hans-Josef Fell

increase of photovoltaics

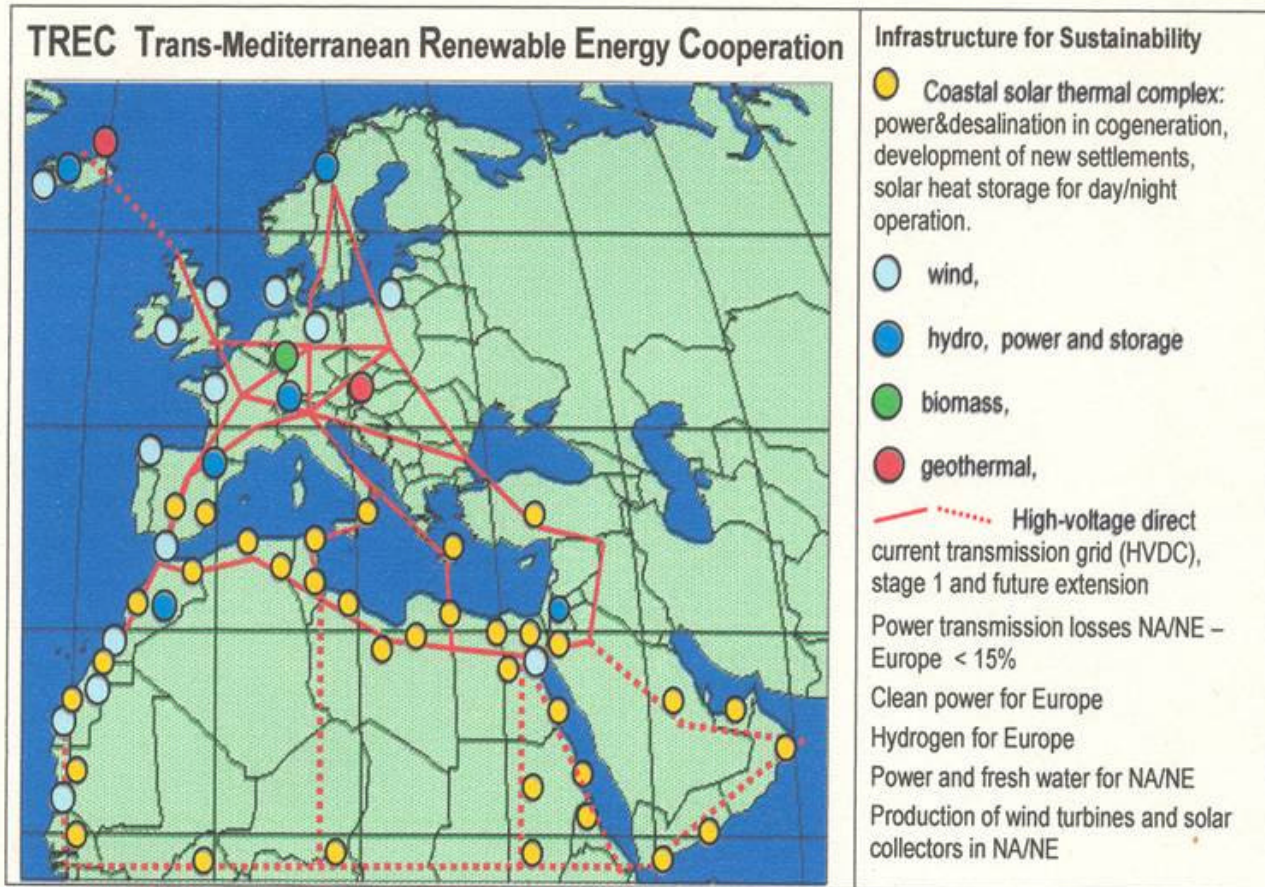
Germany - Japan



Key components of a successful feed-in law

- Privileged grid access
 - Attractive feed-in tariff for each RE technology (must be high enough for cost-effective 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

Linking the Mediterranean energy sources to a big renewables system grid



Solar Car (Twike) in front of Solar Park





Service:

www.solarpraxis.de

**Many thanks for your
Attention!**

<http://www.hans-josef-fell.de>