

Stories of success: Renewable energies in Europe



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July 22, 2008



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in the European Parliament

Renewables – a global success story

- Renewable electricity generation capacity reached an estimated 240 gigawatts (GW) worldwide in 2007, an increase of 50% over 2004.
- In 2007, more than \$100 billion was invested in new renewable energy capacity, manufacturing plants, and research and development
- The largest component of renewables generation capacity is wind power, which grew by 28 percent worldwide in 2007 to reach an estimated 95 GW.
- The fastest growing energy technology in the world is grid-connected solar photovoltaics (PV), with 50% annual increases in both 2006 and 2007, to an estimated 7.7 GW. This translates into 1.5 million homes with rooftop solar PV feeding into the grid worldwide.



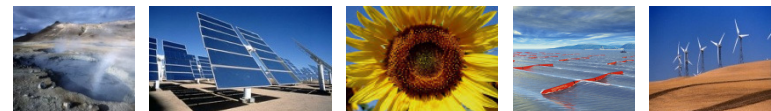
Wind power capacity

Table R2. Added and Existing Wind Power, Top 10 Countries, 2005 and 2006

Country	Added in 2005	Existing in 2005	Added in 2006	Existing in 2006
	megawatts			
Germany	1,810	18,420	2,230	20,620
Spain	1,760	10,030	1,590	11,620
United States	2,430	9,150	2,450	11,600
India	1,430	4,430	1,840	6,270
Denmark	20	3,120	10	3,140
China	500	1,260	1,350	2,600
Italy	450	1,720	420	2,120
United Kingdom	450	1,330	630	1,960
Portugal	500	1,020	690	1,720
France	370	760	810	1,570

Note: Global total in 2006 was 15 GW added, 74 GW cumulative. Global estimate for 2007 is 21 GW added, 95 GW cumulative. *Source:* See Endnote 5.

Source: Renewables 2007 – Global Status report



EU climate goals

20 + 20 + 20 for 2020

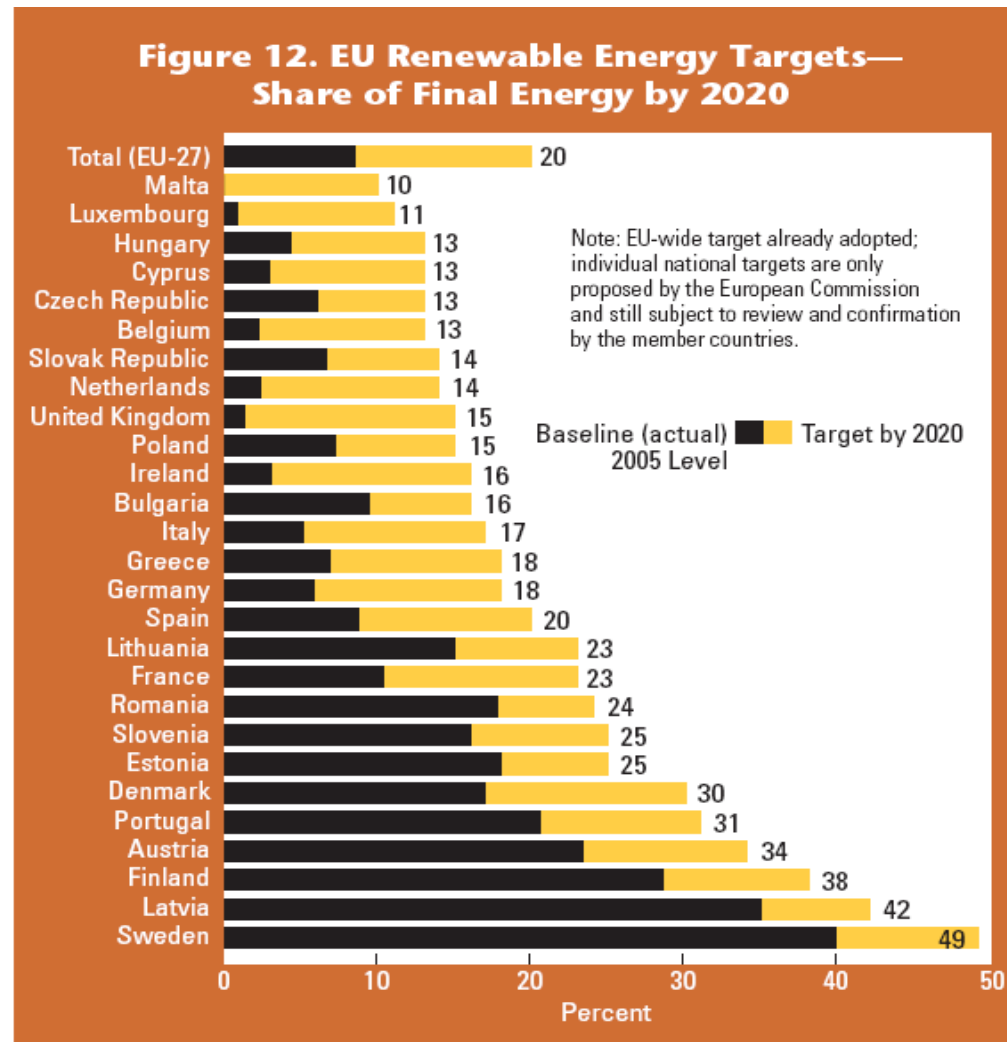
In order to reach the goal of limiting global warming to 2°C the EU decided in 2007

- To cut CO2 emissions by 20% (compared to 1990 emissions) – 30% if other industrialized countries commit to similar reductions in an international agreement
- To increase the share of renewables to 20% (electricity production, heating and cooling, transport)
- To increase energy efficiency by 20% (non binding target)

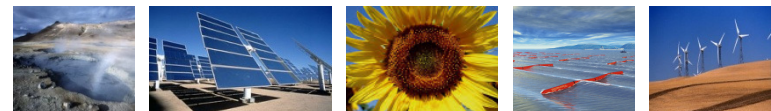
until 2020.



Targets for the EU member states



Source: Renewables 2007 – Global Status report



The feed in tariffs the German example

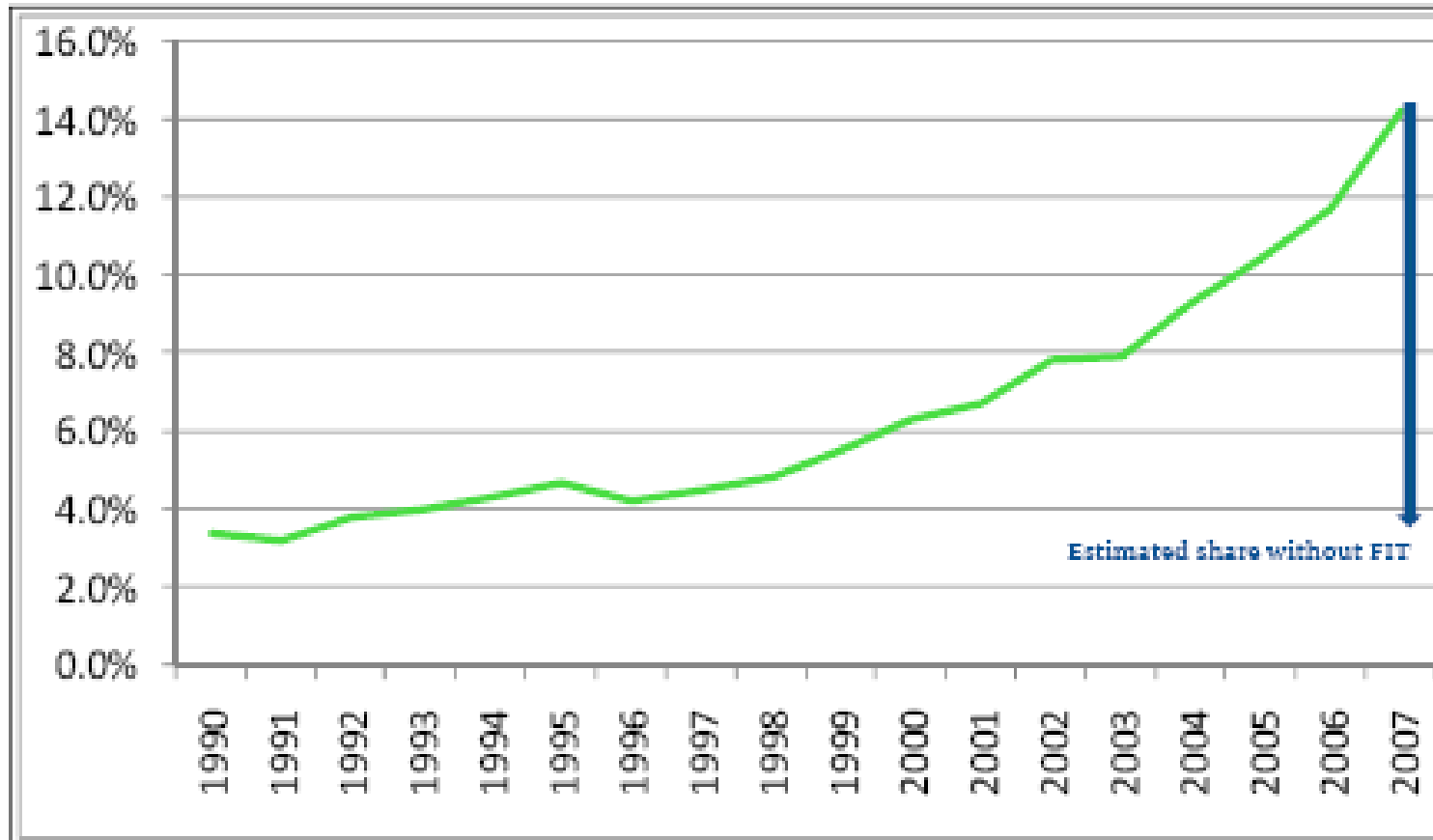
Out of the 27 European member states, 20 have a feed in law

Main features of the German system:

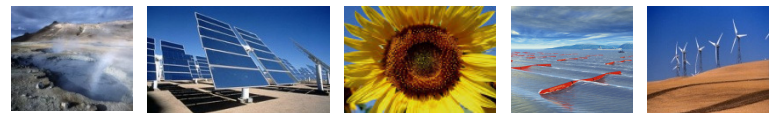
- Priority access to the grid
- Priority transmission and distribution
- Guaranteed payments (differ by technology and plant size)
- Costs are equalized among all grid users and passed on to the consumer
- Annual decrease in payments (-1,5 to 6,5%)



Share of Renewable electricity production in Germany

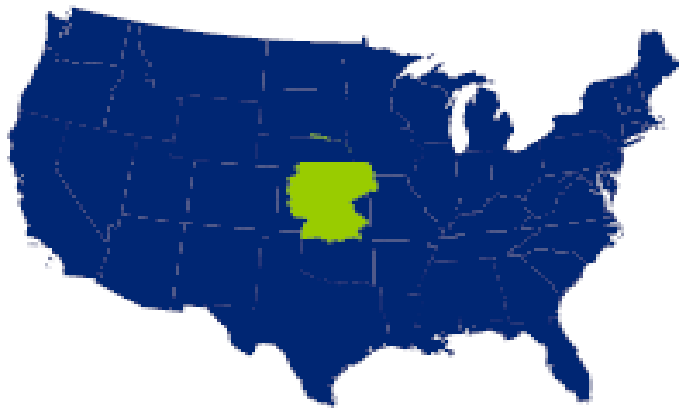


Source: BMU, 2007 and 2008.



Wind Capacity vs Land Mass

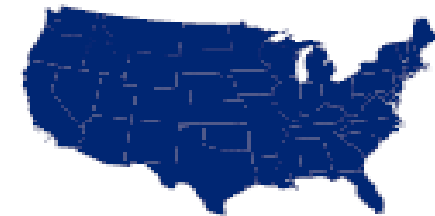
Germany and Continental US



Area

Germany: 357,030 km²
US*: 8,154,157 km²

*23 times larger, without Alaska



Installed Capacity

Germany*: 22,247 MW
US: 16,818 MW

*1.3 times larger

Map credit: Ryan Perroy, University of California, Santa Barbara



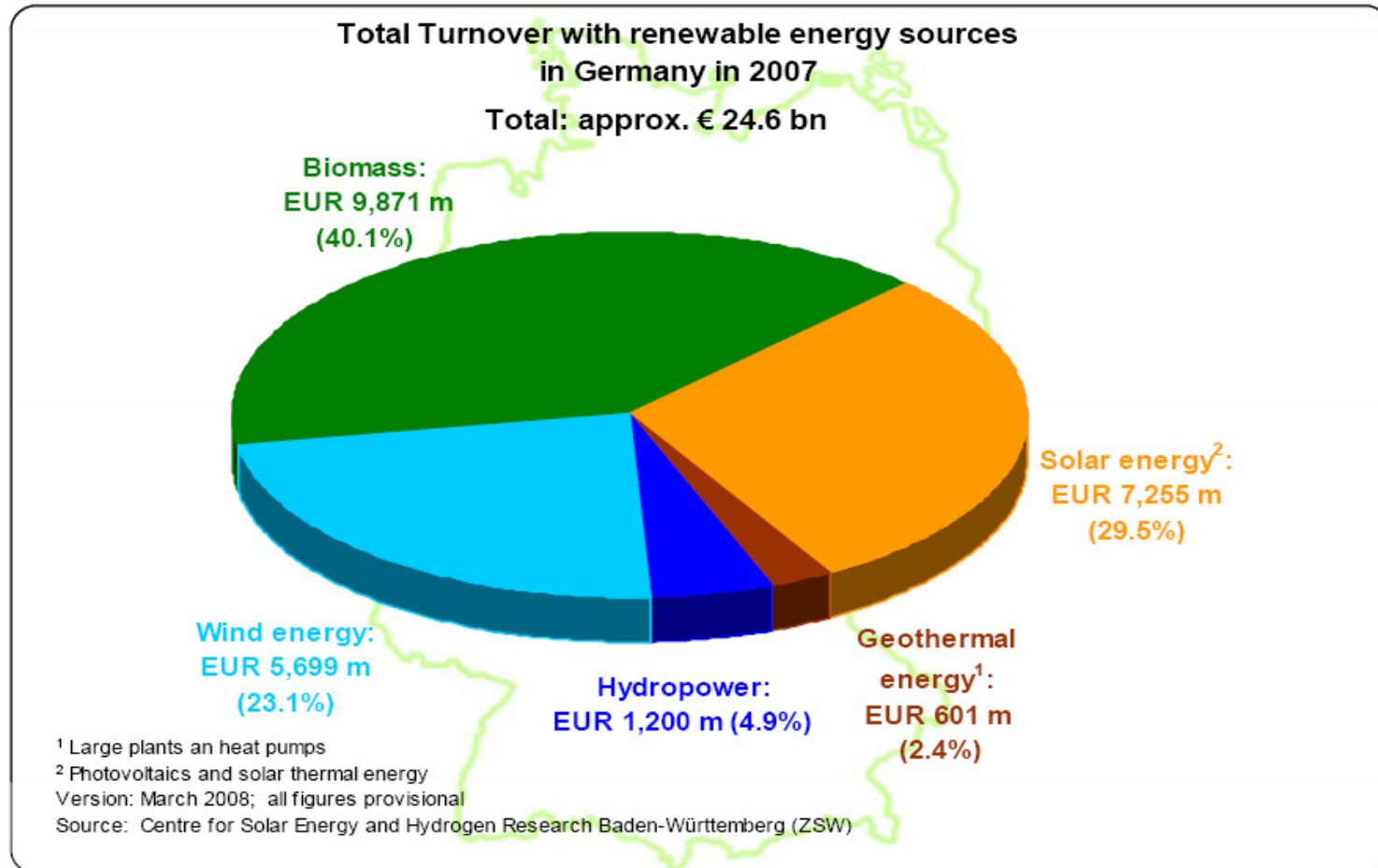
Win-win-win situation

Renewables have a positive impact

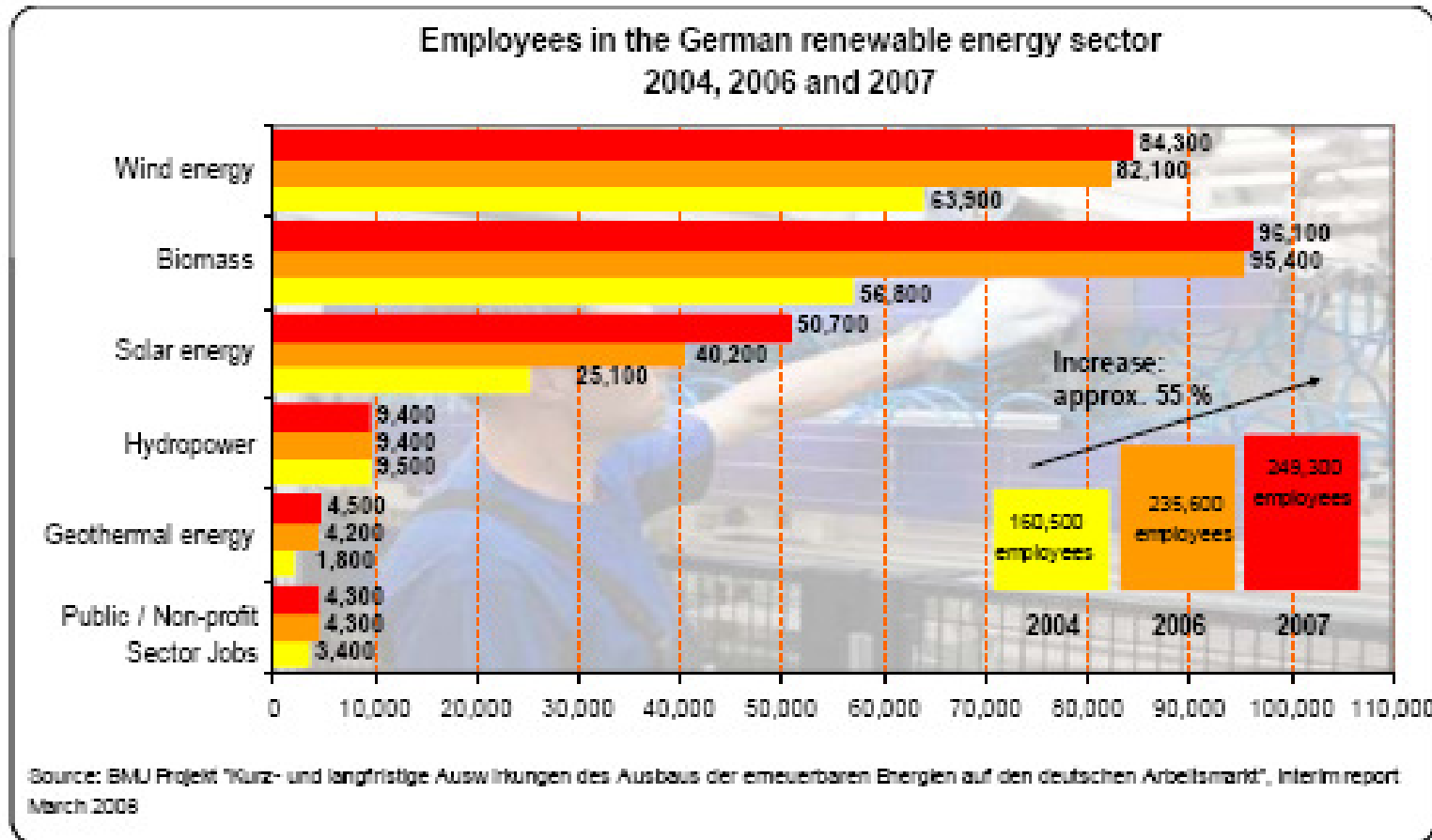
- On the environment - approximately 114 mio t CO2 emissions have been avoided through the use of renewables sources in 2007
- On the economy – more than 240.000 people are employed in the renewables sector and the total turnover from renewable sources was 24,6 bn Euros in 2007
- On energy security – the increasing share of renewable sources makes Germany less dependant on oil and gas imports



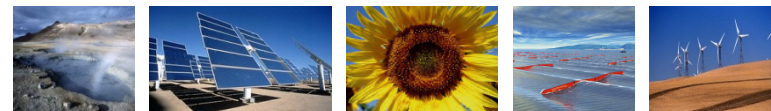
Economic impact New Industries in Germany 2007



Job creation



Source: BMU, March 2008.





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Thank you!

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