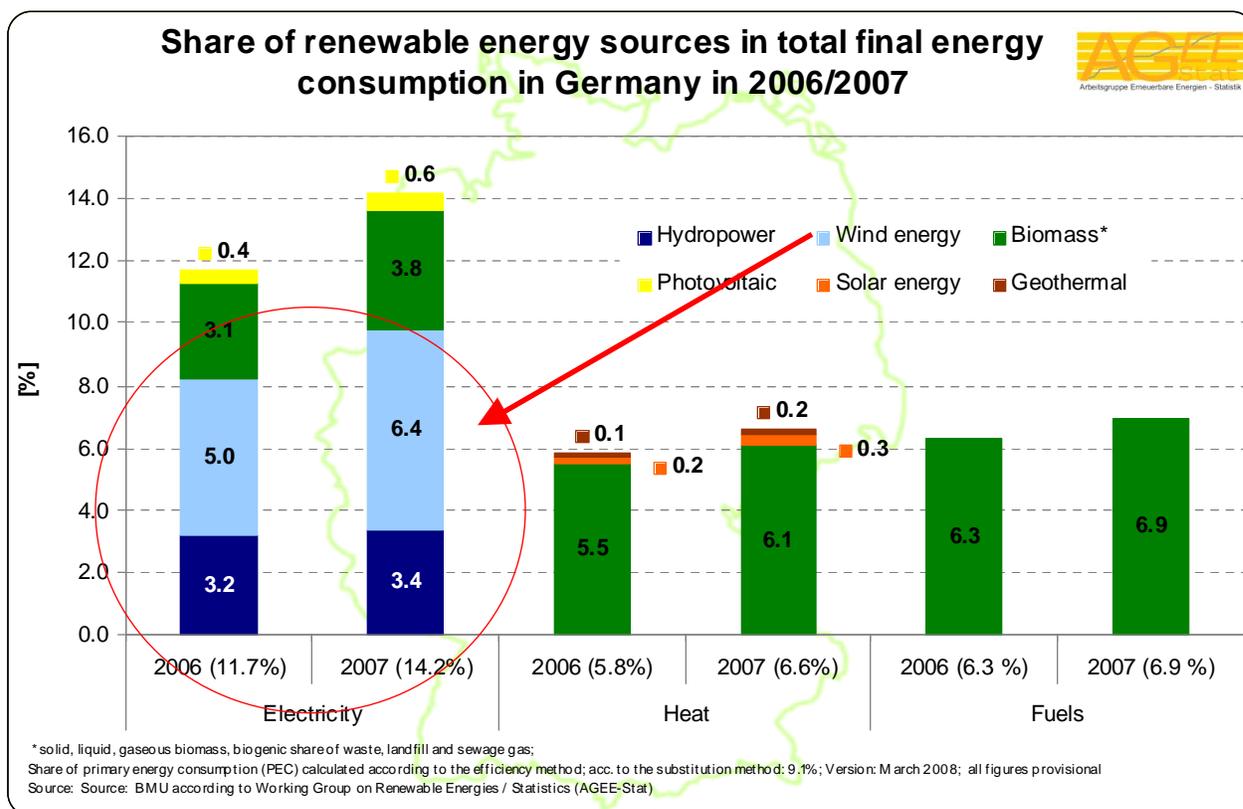


Summary

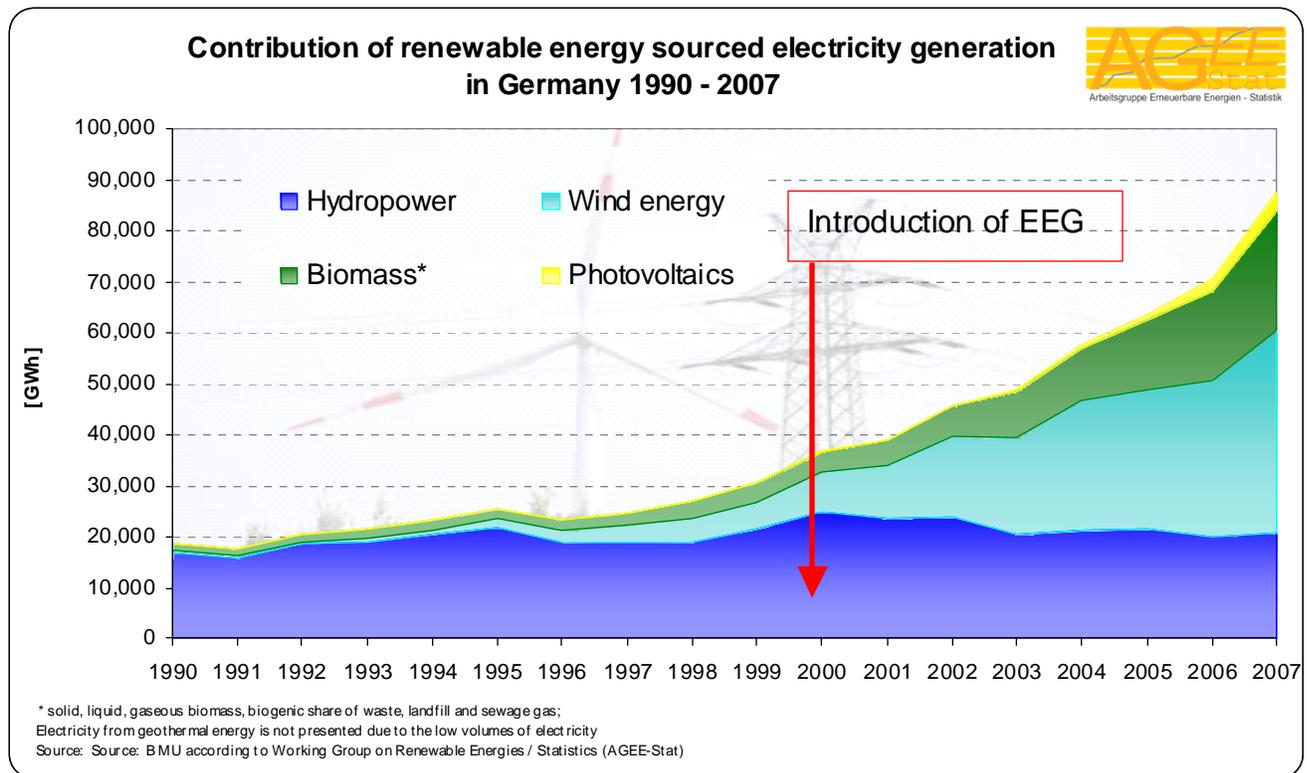
19,460 wind turbines with a total capacity of 22,247 MW were installed in Germany by the end of 2007. The installed power represented 24% of the worldwide installed wind energy capacity. The turbines installed in Germany generated 39.5 TWh of wind electricity equaling over 6.4 % of Germany's total electricity consumption.



In 2007, the wind energy industry in Germany accounts for EUR 11.8 billion in sales, of which EUR 5.8 billions were sales within Germany, and EUR 6 billion were in export sales. German manufacturers of turbines and components hold a world market share of 36 % (world sales is estimated at EUR 21.1 Billion). In Germany, the sector currently employs more than 100,000 people.

The renewed Renewable Energy Sources Act (Erneuerbare-Energien-Gesetz / EEG), which guarantees fixed feed-in tariffs for the duration of 20 years allowing for an optimal planning base remains the main market driver.

Growth rates are not expected to stay in the double-digit range as they did in the past five years. Yet, a stable moderate growth is anticipated particularly due to many repowering projects and off-shore installations that are presently being built or planned.



Several major trade fairs are relevant for companies active in wind energy in Germany. The U.S Commercial Service strongly suggests that American exporters consider participating in one or more of these fairs because they are regarded as important vehicles to enter the German and other major European markets. The U.S. Commercial Service often partners with fair organizers to be able to offer attractive packages for U.S. exhibitors at featured events. See details below.

The Renewable Energy Act (EEG) – Success story for the entire renewables' industry

The renewed Renewable Energy Sources Act (Erneuerbare-Energien-Gesetz / EEG), which guarantees fixed feed-in tariffs for the duration of 20 years allowing for an optimal planning base, remains the main market driver.

Under EEG regulations, electricity produced from renewable energy sources enjoys priority for grid connection, grid access in either distribution and transmission grid, and power dispatch. These renewable energies include hydropower, wind, solar, and biomass energy, geothermal energy as well as landfill, pit and sewage gas. Grid operators are obliged to feed in electricity produced from renewable energy and buy it at minimum price within their supply area.

Feed-in Tariffs for Wind Energy in Germany at a glance:	
Onshore:	<ul style="list-style-type: none"> • 9.2 EUR Cent/kWh (initial tariff for a minimum of 5 years) • 5.02 EUR Cent/kWh (basic tariff) • annual digression rate: 1 percent as of 2010
Onshore Repowering:	<ul style="list-style-type: none"> • 9.2 EUR Cent/kWh plus 0.5 Cent/kWh (<i>repowering bonus – see details below</i>) (initial tariff for a minimum of 5 years) • 5.02 EUR Cent/kWh (basic tariff); • annual digression rate: 1 percent as of 2010
Offshore:	<ul style="list-style-type: none"> • 13 EUR Cent/kWh (initial tariff for a minimum of 12 years), • “Early Bird” Bonus: 2.0 EUR Cent/kWh if installation will be in operation prior to December 31, 2015; • annual digression rate: 5 percent as of 2015
System Bonus	<ul style="list-style-type: none"> • 0.5 Cent/kWh (for new plants) • 0.7 Cent/kWh (for old plants)

Explanatory Notes:

The above tariffs are generally fixed for 20 years.

Based on where the offshore power plant is located, an extension of this period is possible, depending on factors such as water depth and the distance to the coast. The initial tariff is granted between 5 and 20 years depending on a rather complex catalog of additional rating criteria for wind plants (see www.bmu.de (Federal Environment Ministry) or www.wind-energie.de (German Wind Association) for details).

In order to set incentives for technological progress and continuing cost reduction, the compensation rates (feed in tariffs) are subject to nominal annual *digression*.

The *Repowering Bonus* in the amended EEG reflects the political will to favor repowering over new installations. Repowered installations will receive an increased bonus of 0.5 EurCt per KWh, under the condition that

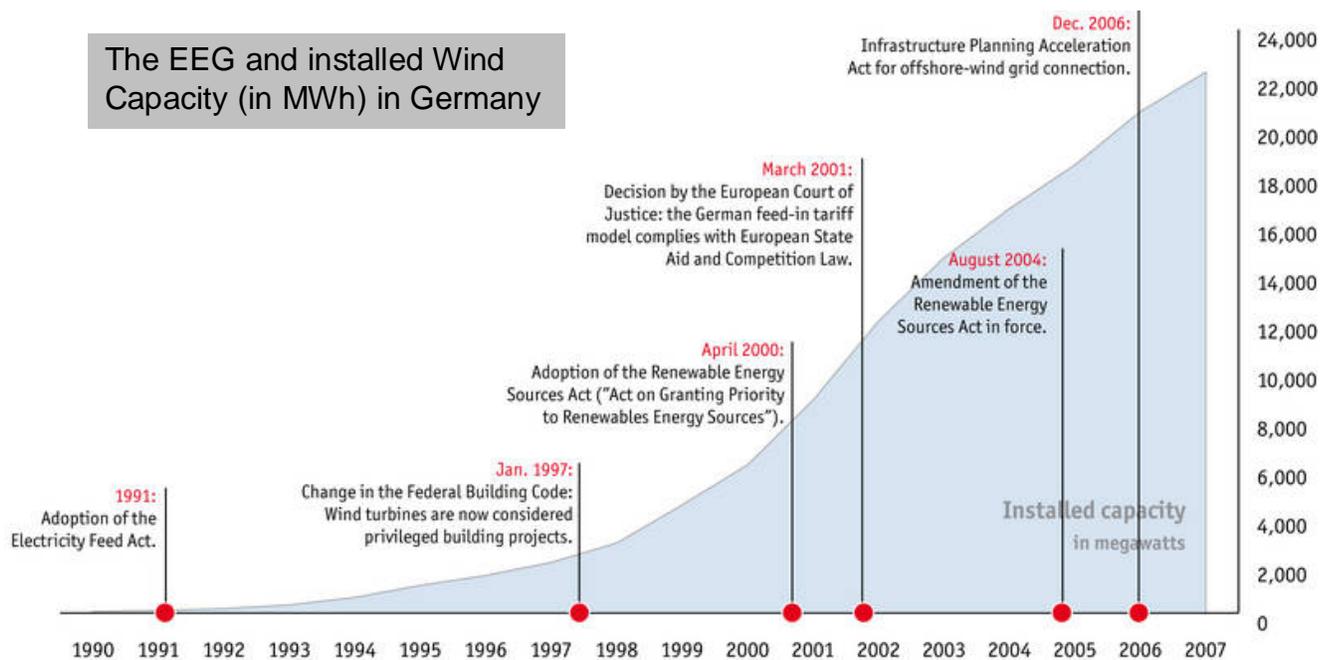
- one or more installation get replaced in the same or neighboring count(y)ies
- the old installation has been in operation for ten years or more
- the performance output is doubled (as a minimum limit) up to quintupled (as the maximum limit)

A *System Bonus* (Systemdienstleistungsbonus) is granted when specific technical measures are applied which either facilitate and ease grid connection or allow for remote or integrated peak control.

Another important regulation is the German Federal Building Code, which treats wind energy plants as so called privileged projects. Local authorities are supposed to designate specific priority- or preferential zones -for wind energy utilization. However, this also means that specific areas (exclusion zones) can be subject to partial or complete construction restrictions.

Since no government payments are made to system operators, German feed-in incentives do not constitute public subsidies. The guaranteed tariffs instead combine regular grid power charges with mandatory utility price supports. This practice is not unique to renewable energies. For example, price fixing is employed for the sale of books, sheet music, maps, cigarettes, taxi services, and prescription medicines to prevent commercial corporations from undercutting small retailers. Regulated prices allow sufficient returns on investment to be achieved.

Earlier federal and state monetary incentives for renewable energies in Germany were often truncated by budgetary limitations. As shown in the graph above, the number of wind turbines, biomass generators, and solar-electric installations has increased significantly since guaranteed feed-in payments were first introduced in the year 2000. Financial constraints have been eliminated by this practice, since all costs are passed on to ratepayers. Grid operators are obligated to accept renewable power on a priority basis, thereby insuring operator income even if conventional generating plants are forced to reduce operation in consequence.



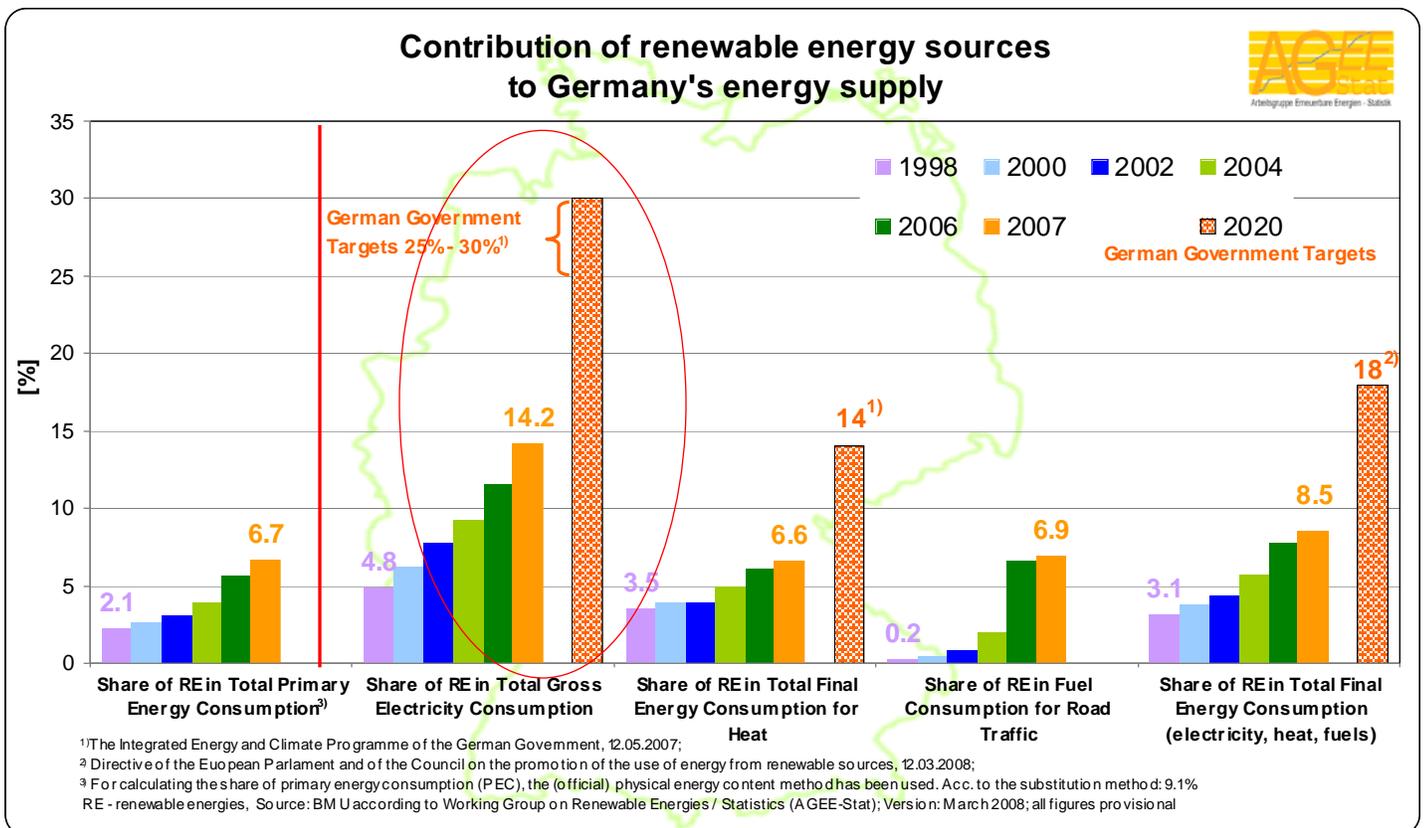
Future Development

According to calculations by the national German Association for Wind Energy (BWE) there is a potential for new turbine capacity of up to 10,000 MW that could be realized on already commissioned sites onshore. Additional capacity will come from repowering.

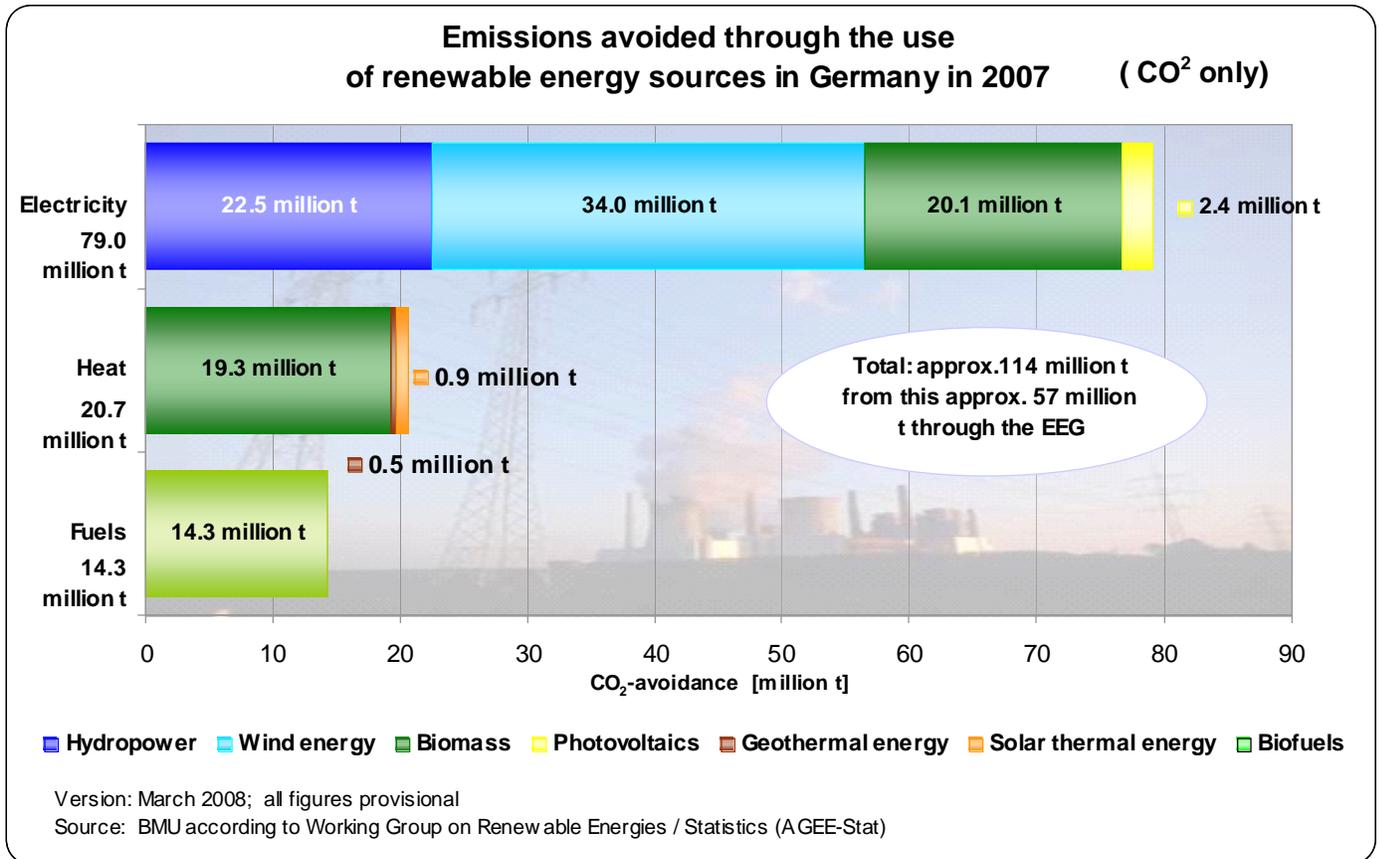
First projects and studies clearly show that repowering has the potential of doubling the amount of onshore wind energy capacity in Germany with significantly fewer turbines able to triple the energy yield. By 2020, the overall German onshore capacity could reach 45,000 MW of installed capacity, with an additional 10,000 MW for offshore wind energy. With a generation of approximately 150 TWh/year, wind energy could then satisfy 25 % of German electricity demand

And the preference by the German government clearly lays in offshore wind plant which is reflected by the offshore feed-in tariffs, which were fixed at 13 EUR cents/kWh for the first twelve years of operation. The discussion about onshore wind, however, is much more difficult. Prices for wind turbines have risen – not only in Germany – by 20-30 % , which is mainly due to higher raw material prices. The price of steel for example (which makes up for 80 % of material of a wind turbine) has doubled since 2004. Higher prices, together with a restrictive planning framework stipulating height limits for turbines, make it much more difficult for operators to implement attractive new projects.

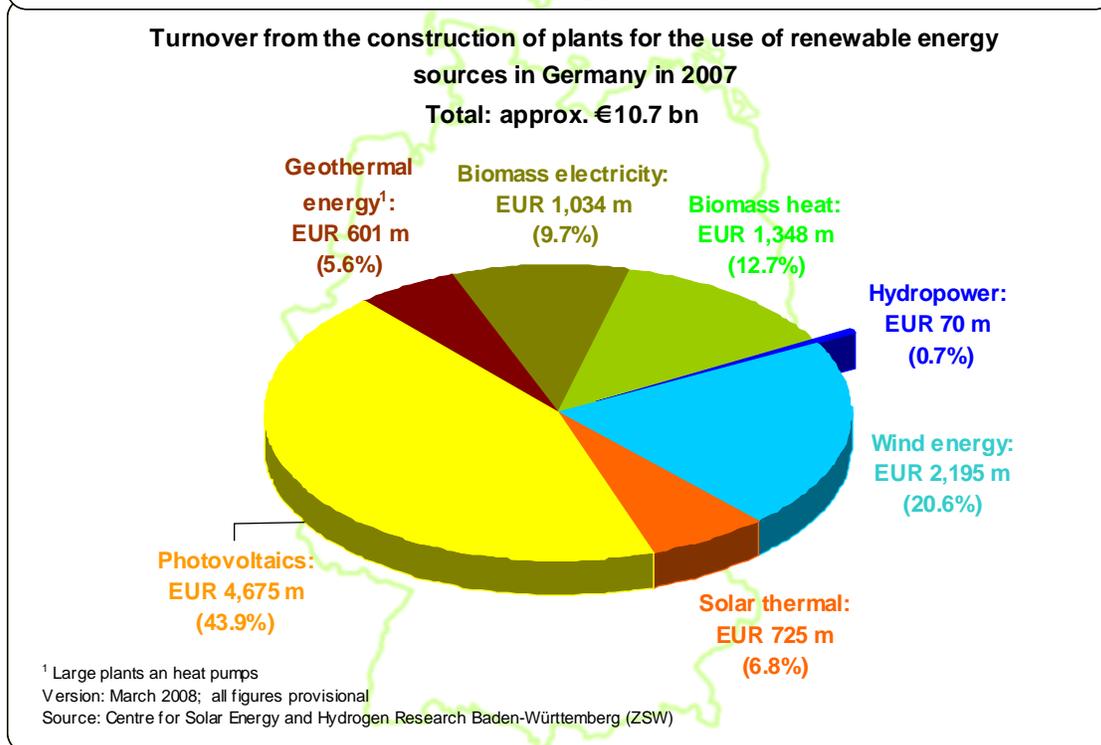
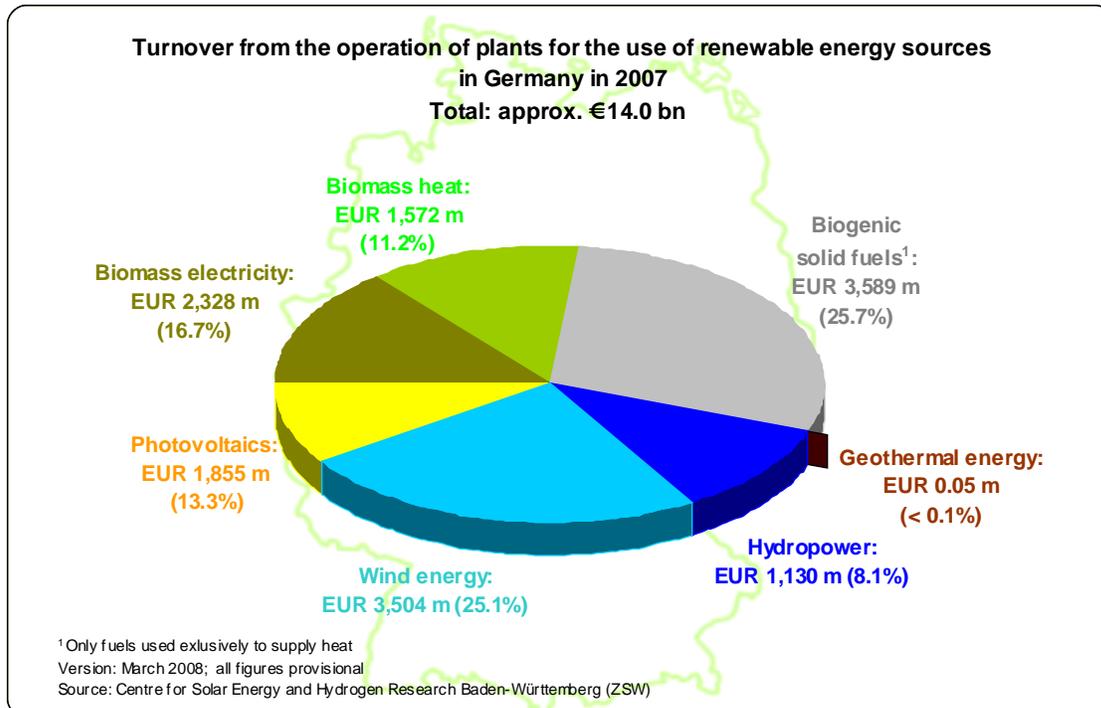
The German Wind Energy Association, BWE, is therefore proposing a dynamic system to compensate for fluctuations in prices of important input factors such as raw material prices. The BWE believes that this will be crucial for the continuation of a successful deployment of wind energy in Germany. Germany has signed off on the EU climate protection goals, which set a minimum 20 percent target for renewable energies within total gross energy consumption, but hope to reach 35-30 percent.



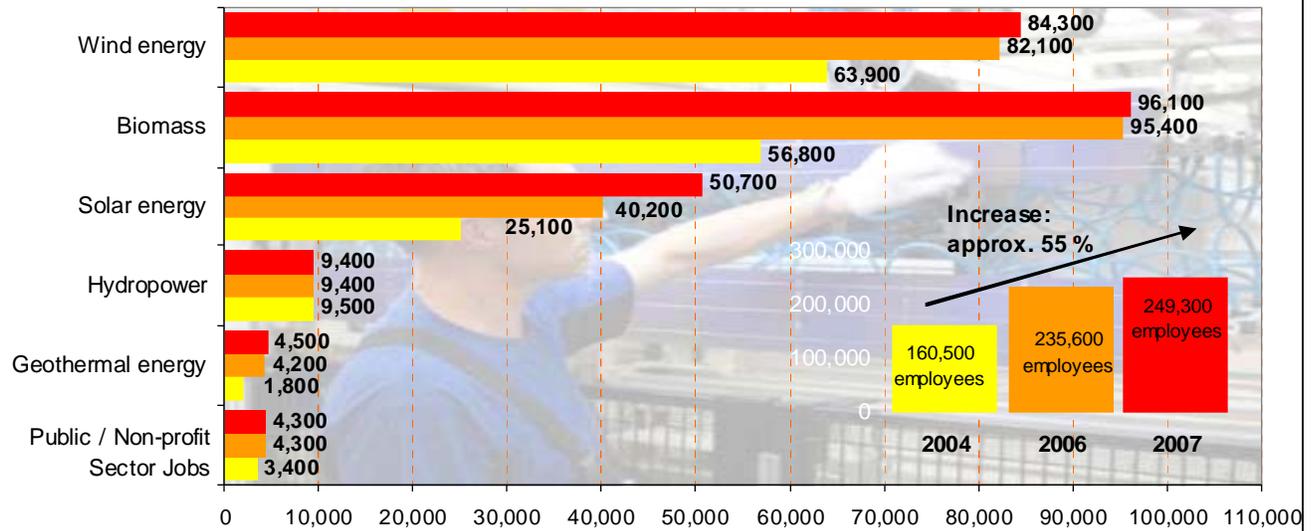
Wind energy in Germany already contributes largely to CO² emission savings. Once wind energy will be used not only for direct use in the electric grids but also for other energy production or storage applications in the near future (e.g. in combination with fuel cell technology, to generate Hydrogen, to help produce BTL or other fuels) the effect will be even more significant.



On an economical level, renewable energies already play an important role. The impressive sales and revenue figures lead economists to stress that the decentralized character of the renewables industry and the in-country value addition (e.g. the installation, maintenance, servicing and operations teams) is a major key to the industry's success and sustainability, which offsets the slight increase in energy prices for end-users.

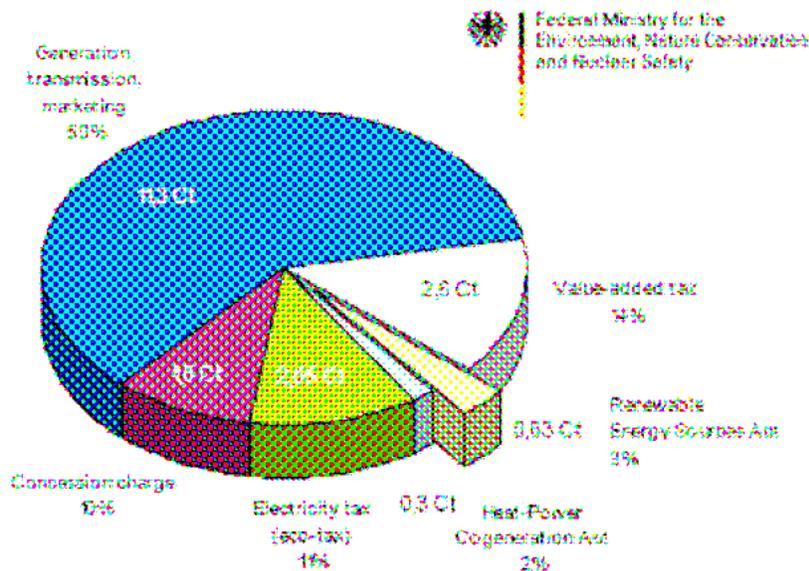


Employees in the German renewable energy sector 2004, 2006 and 2007



Source: BMU Projekt "Kurz- und langfristige Auswirkungen des Ausbaus der erneuerbaren Energien auf den deutschen Arbeitsmarkt", interim report March 2008

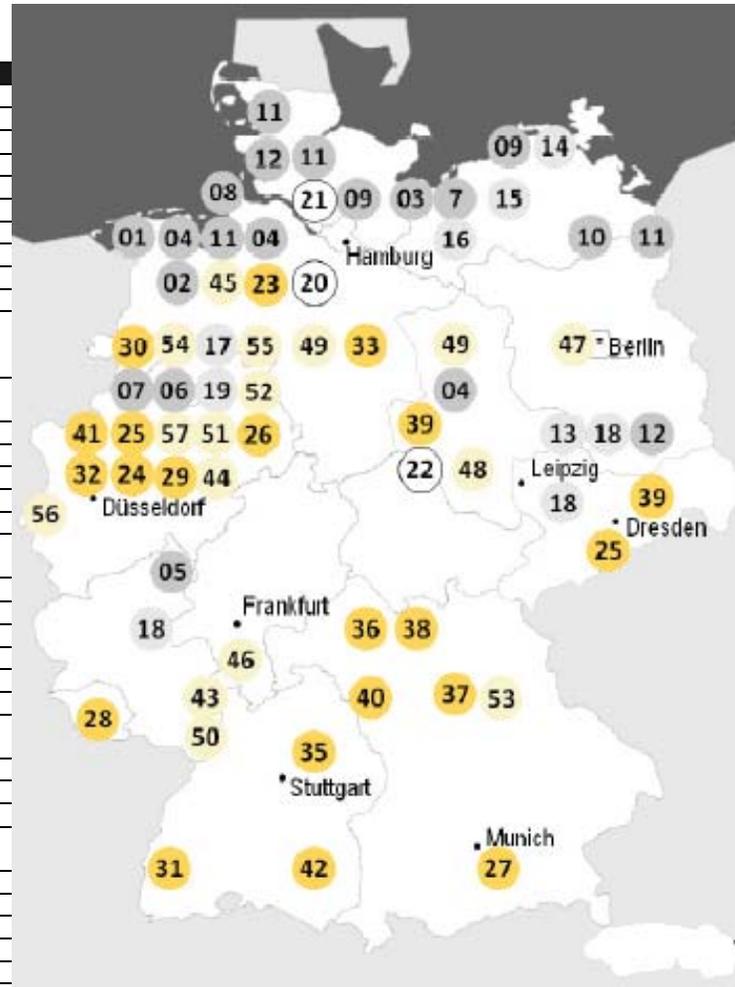
Share of Electricity Costs at 18.6 ct/kWh for Private Households in Germany (2006)



The Renewable Energy Act has only a minor impact on German end-user prices for electricity ranging between EUR Cent 17-23 (in 2007) depending on region, tariff and energy mix. In Germany, almost all utility companies offer various tariff models according to energy sources, a growing number of utility companies (e.g. Greenpeace Energy, Elektrizitätswerke Schönau, Naturstrom AG, Lichtblick, only offer electricity from renewables.

Major Wind Energy Players in Germany

Components		Selected Companies	Locations
Turbines (Wind turbines)	1	Bard Engineering GmbH	Emden
	2	Conergy AG	Bremerhaven1
	3	Dewind Ltd.	Lübeck
	4	Enercon GmbH Aurich	Bremen, Magdeburg
	5	Fuhrländer AG	Waigandshain
	6	GE Energy	Salzbergen
	7	Kernersys GmbH	Münster, Wismar1
	8	Multibrid Entwicklungsgesellschaft	Bremerhaven
	9	Nordex AG	Norderstedt, Rostock
	10	Nordwind Energieanlagen GmbH	Neubrandenburg
	11	Repower Systems AG	Rendsburg1, Bremerhaven1, Husum, Trampe
	12	Vestas Deutschland GmbH	Husum, Lauchhammer
Towers (Towers, tubes, foundations)	13	Ambau GmbH	Gräfenhainichen
	14	E.E.W. Offshore Wind	Rostock
	15	EBW Special Construction GmbH	Rostock1
	16	KGW Schwerin GmbH	Schwerin
	17	SeeBa Energiesysteme GmbH	Stemwede
	18	SIAG Windenergietechnik GmbH	Dernbach, Finsterwalde, Leipzig
	19	Weserwind GmbH	Georgsmarienhütte
Rotors (Rotor blades)	20	Abeking & Rasmussen Rotec GmbH	Lemwerder
	21	Prokon Energiesysteme GmbH	Stade
	22	SINOI GmbH	Nordhausen
Mechanical Components (Hydraulic equipment, generators, gearboxes, bearings, brakes, etc.)	23	AEG LDW GmbH & Co. KG	Bremen
	24	Bosch Rexroth AG	Witten
	25	Eickhoff Maschinenfabrik GmbH	Bochum, Klipphausen1
	26	HANNING & KAHL GmbH & Co. KG	Oerlinghausen
	27	HAWE Hydraulik GmbH & Co. KG	Munic
	28	HYDAC FILTERTECHNIK GmbH	Sulzbach/Saar
	29	Jahnel Kestermann Getriebewerke GmbH	Bochum
	30	KTR Kupplungstechnik GmbH	Rheine
	31	Liebherr-Werk Biberach GmbH	Biberach
	32	NSK Deutschland GmbH	Ratingen
	33	Peiner Umformtechnik GmbH	Peine
	34	Rohte Erde GmbH	Dortmund
	35	Ruck GmbH	Korb
	36	Schaeffler KG	Schweinfurt
	37	Siemens AG	Nürnberg
38	SKF GmbH	Schweinfurt	
39	VEM Sachsenwerk GmbH	Dresden, Wernigerode	
40	Voith Turbo GmbH & Co. KG	Crailsheim	
41	WINERGY AG	Voerde	
42	ZOLLERN GmbH & Co. KG	Herbertingen	
Electronic Components (Automation, controls, power converters, transmissions systems, etc.)	43	ABB AG	Mannheim
	44	AEG SVS Power Supply Systems GmbH	Warstein
	45	AREVA Energietechnik GmbH	Bremen
	46	Brüel & Kjaer Vibro GmbH	Darmstadt
	47	Converteam GmbH	Berlin
	48	Driescher GmbH	Eisleben
	49	GA Energieanlagen GmbH	Hannover, Hohenwarsleben
	50	Intellifast GmbH	Speyer
	51	Lti REEnergy GmbH	Unna
	52	OAT GmbH	Kirchlengern
	53	Siemens AG	Nürnberg
	54	SSB-Antriebstechnik GmbH & Co. KG	Salzbergen
	55	Vensys Elektrotechnik GmbH	Diepholz
	56	Wachendorff GmbH & Co. KG	Geisenheim
	57	Woodward SEG GmbH & Co. KG	Kempen



¹Planned / Under construction.

²Transmission system operators are required to provide grid connections for offshore farms.

Source: Invest in Germany

Trade Events

There are several major trade shows in Germany relevant for wind energy technologies and related services. The U.S. Commercial Service strongly suggests that American exporters consider participating in some of these fairs because they are regarded as important vehicles to enter the German and other major European markets. The U.S. Commercial Service often partners with fair organizers to be able to offer attractive packages for U.S. exhibitors at featured events.

- www.husumwind.de (biannual international trade fair in the northern German town of Husum focusing on wind energy technologies and related services; next fair dates: September 9-13, 2008, September 2010)
- http://www.hannovermesse.de/wind_e (Hanover Fairs features a special wind energy focus every second year in connection with the integrated energy fair (the event takes place in a those years when there is no Husum trade fair; next show dates: April 20-24, 2009, April 2011))

Please visit www.buyusa.gov/germany/en for a detailed list of trade shows and an overview of what the U.S. Commercial Service has to offer to American exporters at featured events.

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