

Policy Background

A European energy policy must pursue the objective of a sustainable, competitive and secure supply of energy. If the EU continues on its present course, this key objective will not be attained. In January 2007, the European Commission adopted an energy policy for Europe. This was supported by several documents on different aspects of energy and included an action plan to meet the major energy challenges Europe faces. Each European citizen must be informed of these challenges and the role they should play in meeting them.

Renewable energies help combat climate change while increasing security of supply.

Key Issues

Germany is an EU leader in wind utilisation, PV, solar thermal installations and biofuel production. Its onshore wind capacity covers approximately 50% of the total installed capacity in the EU. A stable and predictable policy framework has created conditions favourable to RES penetration and growth. Feed-in tariffs for RES-E, market incentives for RES-H, and tax exemptions for biofuels have proven a successful policy mix leading to a very dynamic market for RES.

Current national RES target

Overall, Germany would like to register a 10% RES share of total energy consumption in 2020. The RES-E targets set for Germany are 12.5% of gross electricity consumption in 2010, and 20% in 2020. For biofuels, the targets to be achieved are 2% in 2005 and 5.75% in 2010.

Progress towards meeting national targets

Substantial progress has already been made towards the 2010 RES-E target. Germany's RES-E share in 1997 was 4.5%, which more than doubled in 2004 (9.46%).

Germany is also the only EU country (for which data are available) that exceeded its 2005 target for biofuels. With a share of 3.75%, it more than reached the national indicative target of 2%.

Main supporting policies

With the aim of promoting RES-E, Germany has introduced the following schemes through its Renewable Energy Act of 2004:

- *Feed-in tariffs* for onshore wind, offshore wind, PV, biomass, hydro, landfill gas, sewage gas and geothermal.
- *Large subsidised loans* available through the DtA (Deutsche Ausgleichsbank) Environment and Energy Efficiency Programme.

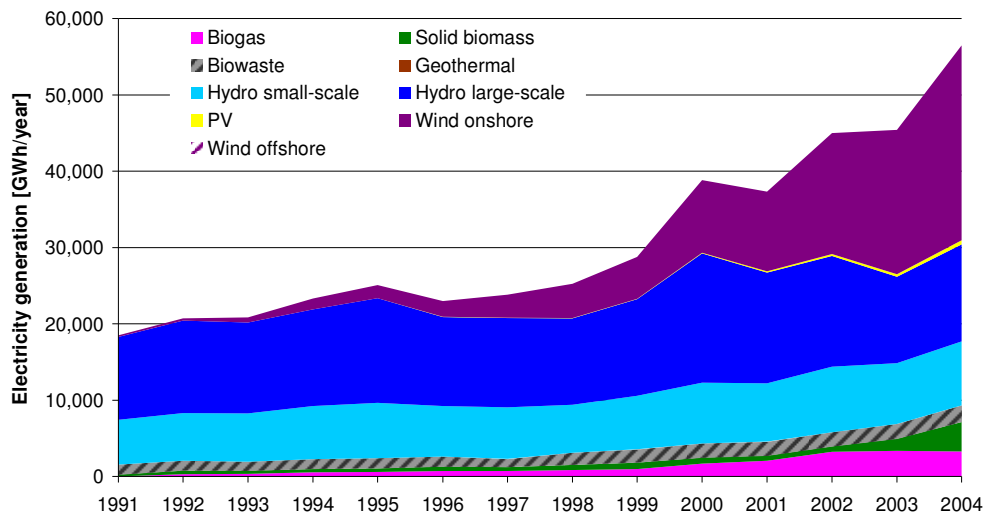
Pure liquid and solid biofuels used for heat and transport benefit from tax exemptions.

A Market Incentive Programme provides subsidies for RES-H, with excellent results in solar thermal and small scale biomass heat generation. A large increase in budget is foreseen for 2007 (from EUR 39 million to EUR 213 million).

Key renewable energy statistics

Electricity from RES: Germany's onshore wind generation in Germany totalled 25 509 GWh in 2004. Together with hydro power (21 076 GWh), it dominates the market. Biomass electricity is also contributing significantly (9 326 GWh), with strong growth in the solid biomass sector (average annual growth of 34% between 1997 and 2004). Onshore wind does a little bit better (36%), but is left behind by PV, which increased on average by 53% per year. In absolute figures, however, the largest growth can be observed in the onshore wind power sector (56 468 GWh in 2004 compared to 23 843 GWh in 1997).

Electricity generation from renewable energy sources by type (GWh)



Source: European Commission

http://ec.europa.eu/energy/res/legislation/share_res_eu_en.htm

Biofuels: Being the EU leader in biofuel production, Germany reported a volume of 1 645 ktoe in 2005, compared to 86 ktoe in 1997. This corresponds to an average annual growth of 45% during that period. 92% of this market is taken up by biodiesel, the remaining 8% by bioethanol.

Heating and cooling: As in most other EU countries, biomass heat is the main source of RES-H (5 142 ktoe in 2005). Solar thermal heat, however, experienced considerable growth with a total collector area of 6.24 million m² at the end of 2004.

	Penetration 1997 (ktoe)	Penetration 2004 (ktoe)	Av. Annual growth [%]
Biomass heat	4 174	5 142	3%
Solar thermal heat	60	221	21%
Geothermal heat incl. heat pumps	115	134	2%

Source: European Commission

http://ec.europa.eu/energy/res/legislation/share_res_eu_en.htm

Good example: Project "PV SOUNDLESS" (NNE5 2000/397)

The project has been successful in implementing the first of its kind photovoltaic sound barrier on the motorway that connects Munich to the F J Strauss Munich airport. The photovoltaic sound barrier is currently feeding solar electricity into the national electricity grid, while protecting the local community from motorway traffic noise. This flagship European project has also been completed due to the strong commitment of the City of Freising, the community benefiting from the sound barrier. The benefits of the project are also promoted as a result of its visibility – one hundred thousand people per year drive to and from the Munich airport.

For further information

To find out more about renewables, go to: http://ec.europa.eu/energy/res/index_en.htm

http://ec.europa.eu/energy/intelligent/index_en.html

To find out more about the current situation of renewables in the Member States, go to

http://ec.europa.eu/energy/res/legislation/electricity_member_states_en.htm

http://ec.europa.eu/energy/res/legislation/share_res_eu_en.htm

To find out more about support measures, go to

http://ec.europa.eu/energy/res/legislation/support_electricity_en.htm

To find out about a project or contact an energy agency in your region, go to <http://www.managenergy.net/emap/maphome.html>

Further fact sheets on Germany and other Member States can be found on: http://ec.europa.eu/energy/energy_policy/facts_en.htm

What is meant by.....?

RES: Renewable energy sources

RES-E: Electricity production from renewable energy sources

RES-H: Production of heat and cold from renewable energy sources

Biofuels: Mainly includes biodiesel and bioethanol

Biomass: Includes solid biomass, biowaste and biogas

CHP: Combined Heat and Power

GWh: gigawatthour

ktoe: Thousand tonnes of oil equivalent

PV: Photo-voltaic – technology for the production of electricity from solar energy

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