



COUNTRY POLICY PROFILE

Germany

August 2015

**LOG FILE OF CHANGES IN SUPPORT
POLICIES AS COMPARED TO LATEST
MEMBER STATE PROGRESS REPORT**

The EurObserv'ER project

The EurObserv'ER Barometers monitor the renewable energy progress in each Member State of the European Union. Every two months a barometer dedicated to one particular renewable energy technology is published. Moreover, once a year an [Overview Barometer](#) collects the main indicators published during the year and completes these with additional renewable sectors which have not been detailed in the individual Barometers. Finally, the Overview Barometer also reports on socio-economic aspects: employment and turnover in the field of renewables, and the renewable energy investment climate. The country policy reports monitor policy developments by providing an overview of policy changes compared to the Member State Progress Reports.

All Barometers are available for download at <http://www.eurobserv-er.org/>. An overview of direct links to Barometers is available in Annex C.

New Barometer releases are announced on Twitter (https://twitter.com/eurobserv_er).



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Abstract

Following the nuclear disaster in Fukushima in 2011, the German Government decided to initiate a long-term transformation of the entire energy system termed *Energiewende*. Besides the gradual phase-out of nuclear energy by 2022, one substantial element is the complete overhaul of the Renewable Energy Sources Act (EEG). On 1 August 2014 the EEG 2014 entered into force, representing a fundamental revision of the existing support scheme for renewable electricity, primarily for PV, wind and biomass. Beyond, Germany decided to phase out nuclear power from its generation mix by 2022 and to increase its share of renewable energy to 40–45% by 2025 and 55–60% by 2035.

Renewable electricity is still supported through feed-in tariffs laid down in the EEG 2014 and low interest loans but from now on complemented by tendering procedures over the coming years.

Renewable heating and cooling is supported by the regulations in the Renewable Energies Heat Act (EEWärmeG), the Market Incentive Programme (MAP) governed by the Federal Office of Economics and Export Control (BAFA) and low-interest loans offered via the KfW. Numerous support schemes are available for renewable heat on state (Länder) level.

Renewable transport fuels are mainly supported by a quota system (Biofuels Quota Act =Biokraftstoffquotengesetz - BiokraftQuG), and through fiscal regulation.

Source: EurObserv'ER, 2015, www.eurobserv-er.org.

Abbreviations

BAFA	Federal Office of Economics and Export Control
BiokraftQuG	Biofuel Quota Act (Biokraftstoffquotengesetz)
BioSt-NachV	Biomass-electricity sustainability ordinance
BCHP	Block-type heating power station
BNA	Federal Network Agency (Bundesnetzagentur)
BMUB (BMU)	Federal Ministry for the Environment, Nature Conservation & Nuclear Safety
BMWI	Federal Ministry for Economic Affairs and Energy
BTL	Biomass-to-Liquids
CHP	Combined heat and power plant
CHP Act	Combined Heat and Power (Cogeneration) Act
EEAG	Environmental and energy aid guidelines (issued 9 April 2014)
EEG	Renewable Energy Sources Act (Erneuerbare-Energien-Gesetz)
EEWärmeG	Act on the Promotion of Renewable Energies in the Heat Sector (Erneuerbare-Energien Wärmegesetz)
EU-27	European Union, 27 Member States (excludes Croatia)
EU-28	European Union, 28 Member States (includes Croatia)
FEC	Final energy consumption
FIT	Feed-in tariff (scheme)
FiP	Feed-in premium (scheme)
GHG	Greenhouse gas(es)
GWh	Gigawatt hour
HP	Heating plant
IEA	International Energy Agency
ktoe	Kiloton oil equivalent
kWh	Kilowatt hour
MAP	Market Incentive Programme (Marktanreizprogramm)
MinöStG	Mineral Oil Tax Act (Mineralölsteuergesetz)
MSW	Municipal solid waste
MWh	Megawatt hour
N/A	Not available
NREAP	National Renewable Energy Action Plan
PEC	Primary energy consumption
PV	Photovoltaic energy
RE	Renewable energy
RED	Renewable Energy Directive
RQS	Renewable quota scheme, typically administered with a certificate scheme
RES	Renewable Energy Sources
RES-E	Electricity from Renewable Energy Sources
RES-H/C	Heating and Cooling from Renewable Energy Sources
RES-T	Transport from Renewable Energy Sources
RMSW	Renewable Municipal solid waste (renewable fraction in MSW)
StromEinspG	Act on the Sale of Electricity to the Grid, (Stromeinspeisungsgesetz)
TSO	Transmission system operator

Renewable energy mix and 2020 target

Germany was the largest producer of renewable energy in the EU in 2012. Solid biomass, wind power and biogas have been the most important renewable energy sources in Germany, both for generating renewable electricity and heat. Renewable electricity, heat and fuels provided 318 TWh in 2013. Source: EurObserv'ER, 2014, www.eurobserv-er.org

The 2012 share of renewable energy in Germany amounted to 12.3%; the target for 2020 has been defined as 18% (source: 'The State of Renewable Energies in Europe', [2013 edition](#)).

Table Renewable energy production in the 27 Member States of the European Union (EU-27) and the corresponding figures for Germany. Data have been expressed in ktoe and refer to the year 2012

[ktoe, 2012]	European Union (27 countries)	Germany	Contribution of Germany to EU-27
Hydro*	29408	1882	6.4%
Wind*	17089	4242	24.8%
Solar PV	5732	2269	39.6%
Solar thermal**	2116	576	27.2%
Solid Biomass***	74804	9798	13.1%
Biogas	6212	3427	55.2%
MSW****	4426	1270	28.7%
Geothermal	7825	644	8.2%
Biofuels	11711	3018	25.8%
Ocean energy	44	0	0.0%

* Normalised electricity generation

** including electricity generation from Concentrated Solar Power

*** including liquid biomass

**** Municipal Solid Waste only regards the renewable fraction in the waste

Source: EurObserv'ER, 2014 (www.eurobserv-er.org)

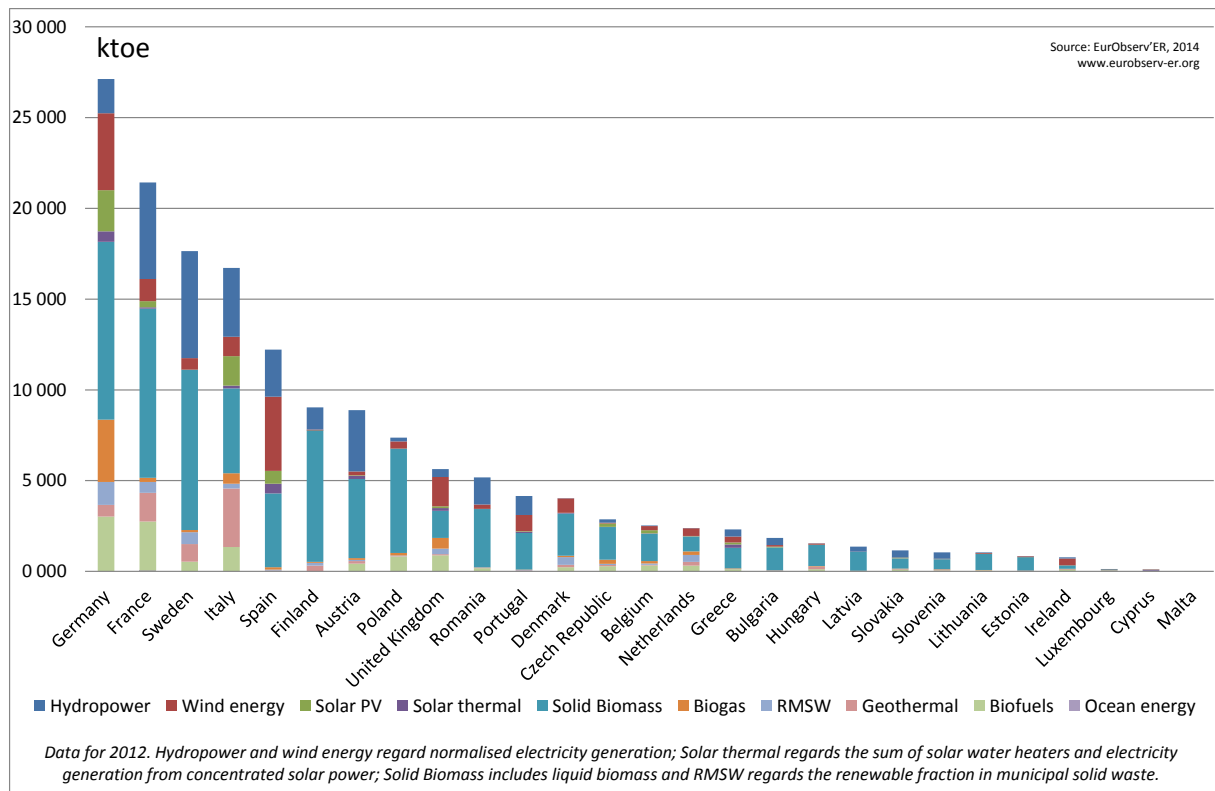


Figure Renewable energy production in the European Union Member States. Data have been expressed in ktOE and refer to the year 2012. Source: EurObserv'ER, 2014 (www.eurobserv-er.org)

Recent RES Policy Developments

The current EurObserv'ER policy profile is listing recent policy changes in the EU Member States. Starting point for this monitoring is the situation as it has been described in the country's Progress Report (which were due end of 2013). All Renewable Energy Progress Reports are available in English language from www.eurobserv-er.org (translated versions).

Date	Technology	Policy change
January 2014	All	Following the general elections (Bundestagswahl) in September 2013 and the forming of the grand coalition, competences for (renewable) energy policy have shifted from the Ministry for the Environment (now BMUB) to the newly shaped Federal Ministry for Economic Affairs and Energy (BMWi).
January 2014	Wind, PV bio energy	On 22 January 2014, the German Cabinet approved a document published by BMWi outlining the key elements of a reform. Key elements of a revised Renewable Energy Sources Act . The paper outlines the intended overhaul of the EEG in a European context and a rapid implementation of the legal process by 1 August 2014.
June 2014	All RES, energy efficiency	BMWi has published a "10-point energy agenda" containing the key projects of the energy transition in the electricity sector, the main projects for energy efficiency and the building sector. The agenda integrates the various fields of action in terms of substance and timing: <ol style="list-style-type: none"> 1. Overhaul of Renewable Energy Sources Act (EEG 2014) 2. European Climate and Energy Framework 2030 3. Reform of European emissions trading 4. Electricity market design 5. Efficiency strategy 6. Buildings strategy 7. Transmission grids 8. Distribution grids 9. Monitoring of energy transition 10. Platforms (electricity market and renewable energies, efficiency; energy grids; buildings; and research and innovation platforms)
June 2014	Renewable electricity	The German Parliament (Bundestag) has passed the EEG 2014. The major ambition of the revision is to better control the expansion of RES and limit the price increases in the electricity tariffs in Germany. Key elements include: <ul style="list-style-type: none"> • The definition of targets and corridors • Integration of renewable energies into the electricity market • Tenders as new funding instrument • Adequate distribution of costs • New regulations on self consumption
July 2014	Renewable electricity	The EEG 2014 has passed the Second Chamber (Bundesrat)
August 2014	PV, wind, biomass, biogas	The newly enacted EEG 2014 entered into effect on 1 August 2014. It defines corridors and targets for the expansion of different RE sources: <ul style="list-style-type: none"> • offshore wind energy : 6,5 GW by 2020 and 15 GW by 2030 • onshore wind energy: up to 2,400 -2,600 MW/year

		<ul style="list-style-type: none"> • PV: increase by up to 2,400-2,600 MW/year • bio: increase of max. 100 MW/year and lower support levels • no quantitative control on geothermal energy and hydropower
September 2014	All RES	In September 2014, the German progress report has been released, see Section 2 (page 20) to Section 4 (page 65).
November 2014	PV	Ordinance on pilot auctions
December 2014	All RES, energy efficiency	The Federal Government has released the National Action Plan Energy Efficiency (NAPE) and the Climate Action Programme 2020 and the Energy Green Paper on the electricity market reform.
January 2015	PV	Cabinet agrees on plan to auction the rights for solar subsidies – to be tested in multiple pilot tenders over 3 years
January 2015	Biofuels	From 2015 onwards, a greenhouse gas reduction quota is introduced. By 2015, emissions have to be reduced by 3%, by 4.5% from 2017 on and by 7% from 2020 onwards.
April 2015	PV	First pilot auction for 400 MW of ground mounted PV plants.
July 2015	All RES / Power	<p>The Federal Ministry for Economic Affairs and Energy (BMWi) has released the Energy White Paper which is specifying concrete measures for power market reform. Based on the Green Paper consultation the White Paper contains 20 measures and cornerstones by which the electricity market 2.0 is implemented, for example:</p> <ul style="list-style-type: none"> • Free pricing guarantee • Monitoring security of supply: • Introduction of a capacity reserve <p>Establishment of balancing power markets The White Paper will likewise be open for public consultation (until September 2015). The White Paper clearly favours the further development of the electricity market towards an electricity market 2.0 and against the introduction of a capacity market.</p>
August 2015	PV	Second auction for ground mounted PV plants. The Federal Network Agency received bids with a volume of 558 MW. 33 bids with a volume of 160 MW were approved.
2015 – 2016	All RES and conventional power plants	Market Design Act and revision of Energy Industry Act

Note to the reader: the above overview had been compiled with care. However, in case you miss recent developments please be invited to inform EurObserv'ER on policy changes in a Member State. For communication use the e-mail: policy@eurobserv-er.org or Twitter (https://twitter.com/eurobserv_er).

Glossary

Auctions for granting renewable energy support	An auction is a process, organised by a governmental renewable energy implementation agency, of granting production or investment support to a specified volume of eligible renewable energy (or renewable energy generation capacity) based on the lowest bids per unit of renewable energy (or renewable energy generation capacity) by eligible renewable project developers.
Degression rate	See under 'Sliding feed-in tariff'
Feed-in tariff (FiT)	A technology-specific support scheme which provides for a technology-specific remuneration per unit of renewable energy payable to eligible renewable energy producers, typically for a period of 10-20 years. The FiT level is set <i>ex ante</i> by the National Regulatory Agency (NRA). It is to cover all future production costs including a <i>normal</i> rate of return to capital invested. In many schemes priority network access is offered to eligible renewable electricity generators, whilst a designated third party - e.g. the transmission or distribution network operator concerned - is being mandated to pay the FiT remuneration due. A proper, periodic review of FiT rates is often undertaken with the aim to prevent both too high FiTs so as to minimise regulatory rents, i.e. supra-normal returns and too low FiTs to preclude below-target market uptake because of FiT levels that are perceived by market participants to be less attractive.
Feed-in premium (FiP)	A technology-specific support scheme which provides for a technology-specific subsidy level per unit of renewable energy to eligible renewable energy producers, typically for a period of 10-20 years, at a pre-set fixed or floating (see under 'Floating FiP') rate, projected by the National Regulatory Agency (NRA) to enable renewable energy generation investments deemed commercially attractive by project developers without yielding supra-normal profits.
Floating FiP	A feed-in premium, which is periodically adjusted to exactly offset the change in the average energy wholesale market price, based on a pre-specified benchmark market price. A floating FiP may move freely or may only be allowed to move within a pre-set interval.
Grants	Grants are non-repayable funds disbursed by one party (grant makers), often a government department, corporation, foundation or trust, to a recipient, often (but not always) a non-profit entity, educational institution, business or an individual. (Source: Wikipedia.org)
Green public procurement	In Green public procurement contracting authorities take environmental issues into account when tendering for goods or services. The goal is to reduce the impact of the procurement on human health and the environment. (Source: Wikipedia.org)

NRA	National Regulatory Agency
Renewable quota scheme (RQS)	A renewable quota scheme mandates certain market actors (typically retail suppliers or large energy end-users) to respect a pre-set minimum share or amount of their total energy procurements from renewable sources of energy. Typically a tradable green certificate (TGC) scheme is operated to enable the obligated parties to prove their compliance with the prevailing renewable quota target by means of TGCs. Typically the renewable quota target is increased gradually over time. Renewable quota systems are also known under terms such as quota (obligation) schemes or renewable portfolio standards.
Request for tenders (RFT)	A request for tenders (RFT) is a formal, structured invitation to suppliers, to bid, to supply products or services. In the public sector an official fee is needed to fortify and secure the tender bid engagement/win documents, such a process may be required and determined in detail by law to ensure that such competition for the use of public is open, fair and free from bribery and nepotism. For example, a government may put a certain level of MW of offshore wind energy at a pre-defined location 'out to tender'; that is, publish an invitation for other parties to make a proposal for the construction of offshore wind farms, on the understanding that any competition for the relevant government contract must be conducted in response to the tender, no parties having the unfair advantage of separate, prior, closed-door negotiations for the contract. An evaluation team will go through the tenders and decide who will get the contract. (source: adapted from Wikipedia.org)
RD&D funding	The funding of research, development and demonstration activities and programmes. For technologies far remote from commercial maturity, government grants or subsidies might be considered. For technologies close to commercial maturity which are not taken up for commercial research anyway, instruments such as fiscal instruments (tax credits, accelerated depreciation, etc.) and public-private partnerships may be considered, based on shared public and private RD&D funding.
Sliding feed-in-tariff	A FIT scheme which pre-sets technology-specific declining feed-in tariffs for certain prospective vintages in line with the technology-specific learning curve, as projected by the National Regulatory Agency (NRA). Often a degression rate is used indicating the %/annum decrease in the rate level.
Soft loans	Loans at concessional (below market-based) terms, for example at sub-market-conform interest rates, made available in several Member States to stimulate certain renewable energy technologies.
Tax credits	These are amounts a tax paying entity is allowed to deduct when declaring payable taxes, for example company tax or income tax, to the tax authorities, for example the producer tax credits (PTCs) used in the United States to stimulate among others wind energy deployment.
Tenders	See 'Request for tenders'

References

Important notice: The legal texts which can be accessed on the internet are official versions. Only the versions published in the Federal Law Gazette (Bundesgesetzblatt, BGBl), are legally binding. No liability can be accepted for the use of the published information, figures and references that may subsequently prove to be incorrect.

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Annex A

Share of renewable energy in final end energy production (in %), AGEE-STAT 2014: [Erneuerbare Energien im Jahr 2014](#), (February 2015).

	1990	2000	2005	2010	2011	2012	2013	2014
Electricity supply (in relation to gross electricity consumption)	3,4	6,2	10,2	17,0	20,4	23,6	25,4	27,8
Heat Supply (in relation to total heat consumption)	2,1	4,0	6,0	8,9	9,5	9,8	9,9	9,9
Biofuel Supply (in relation to total fuel consumption)	0,0	0,4	3,8	5,8	5,5	6,1	5,5	5,4
Share of RES in total final energy consumption) (FEC)	2,0	3,8	6,9	10,7	11,5	12,3	12,3	
Share of renewable energy in total primary energy consumption (PEC)	1,3	2,9	5,3	9,9	10,8	10,3	10,4	11,1

Annex B

This section gives a general overview and information about changes relating to the EEG 2014.

General

The overhaul of the EEG is part of a larger European context. The review of the EEG is happening in parallel with the review of the European rules on State Aid for the support of renewable energies. The new provisions took effect from 1 August 2014.

By 2025, between 40 and 45 per cent of the electricity demand is to be covered by renewable energies. By 2035, these are to account for between 55 and 60 per cent of German energy consumption. These intermediate targets are laid down in the new EEG 2014.

- The German support scheme is technology specific, i.e. different tariffs are assumed for the different technologies, reflecting their market prices ranging from only 3.5 ct/kWh for large hydropower plants up to 19.4 ct/kWh for Wind energy offshore
- Installed capacity per year is steered, but not fixed, only PV is limited in support up to 52 GW
- Ground-mounted PV will be tendered from 2015, all other technologies to be followed with EEG 2017.

Objectives of the EEG 2014

- Better integration of renewable energies into the electricity market (market premium)
- Bidding procedures as new funding instrument (by 2017 at the latest, the level of support for renewable energies is planned to be determined by means of competitive bidding)
- Integration of renewable energies into the grid

- Cost-effective deployment of individual technologies
- Adequate distribution of costs (special equalisation scheme and self consumption)

Annual extension and target corridors

- Solar energy: annual gross increase of 2,4 -2,6 GW (previously 2,5 -3,5 GW)
- Wind onshore: annual net increase of 2,4 -2,6 GW
- Wind offshore: 6,5 GW by 2020 and 15 GW by 2030
- Biomass: annual gross increase of 100 MW.

Investor security

- To ensure that investors' legitimate expectations are protected, the EEG of 2012 will continue to apply for installations that start operating up until 31 December 2014, provided that the approval of these dates back to before 22 January 2014.

Direct sales of electricity

- The sliding market premium (so far voluntarily) will become mandatory. The premium will be introduced gradually in order to allow market players to adapt. Therefore, a de-minimis threshold will be introduced, which will be lowered annually. The following installations will have to directly sell their electricity:
 - as of 1 August 2014: all new installations with a capacity of at least 500 kW,
 - as of 1 January 2016: all installations with a capacity of at least 250 kW,
 - as of 1 January 2017: all installations with a capacity of at least 100 kW.

Own consumption

- For own consumption of electricity from RES systems larger than 10 kWp, the owner has to pay 30% of the EEG surcharge (EEG-Umlage) until 2015, 35% by 2016 and 40% by 2017. Systems up to 10kW or up to an energy output of 10 MWh for own consumption are exempt from the EEG levy.

Market premium

- With the reform of the EEG 2014 Market Premium has become the main support scheme for electricity from renewable energy sources. The plant operator has to sell his electricity directly, i.e. to a third party by a supply agreement or at the stock market, and claim the so-called market premium from the grid operator. Nevertheless, the grid operator is still obliged to physically take the produced electricity. In general, all technologies used to generate electricity from renewable sources are eligible for the market premium.

Renewable Electricity

	Corridor	Remuneration in ct/kWh	Degression
Hydropower	-	3,50 – 12,52	-0.5 %/a from 2016

Landfill, sewage and mine gas	-	3.80 – 8.42	-1.5 %/a from 2016
Biomass	100 MW (gross)	5.85 – 23.73 (dependent on fuel and size)	-0.5 % every three months from 2016
Geothermal		25.20	- 5.0 %/a from 2018
Wind energy onshore	2,400 – 2,600 MW (net)	Standard tariff: 8.90, for at least 5 years; Minimum 4.95	-0.4% every three months from
Wind energy offshore	-	Initial tariff: 15.40 for min.12 years; Option: 19.40 for min. 8 years if installed before 2020 Minimum 3.90	Standard tariff: - 0, 5 ct/kWh in 2018, 1 ct/kWh in 2020 - 0,5 ct/kWh/a 2021; Option: - 1 ct/kWh in 2018
Solar energy (PV)	2,400 – 2,600 MW (gross)	8.53 – 12.31 (and tenders for ground-mounted PV)	-0.25 % per month from 09/2014

Photovoltaic Energy

- Once the **cap of 52 GW** is reached, the feed-in tariff is phased out on the first day of the consecutive month. **On 31 March 2015, 38.555 MWp of solar PV were installed** in Germany.
- The FITs are regularly adapted according to market development and are published by the Federal Network Agency.¹
- 8.65 to 12.99 ct/kWh for roof-top PV depending on installed capacity of plant
- Ground-mounted PV has to be tendered by Federal Network Agency
- Monthly degression,
- Degression rate is based on installed capacity
- If installed capacity in corridor 2,4-2,6 GW – degression rate of -0.5 %
- If installed capacity exceeds corridor – degression rate between -1.0 and -2.8 %
- If installed capacity falls below corridor – degression rate between 0.0 and -0.25 %
- If installed capacity is more than 1.400 MW below corridor: one-time increase of FIT of +1.5% at date of degression adaptation

For 2015, the following support applies for solar PV:

Market premium for PV installations put in operation after 1 December 2014 according to EEG 2014					
Degression from	Rooftop PV systems		Ground-mounted		Degression
	Size	Incentive	Size	Incentive	
01. 12. 2014	< 10 kWp	12,99	< MWp	9,12	0,25 %
	< 40 kWp	12,64			
	< 1 MWp	11,35			
01. 01. 2015	< 10 kWp	12,95	< MWp	9,09	0,25 %

¹http://www.bundesnetzagentur.de/cln_1931/DE/Sachgebiete/ElektrizitaetundGas/Unternehmen_Institutionen/ErneuerbareEnergien/Photovoltaik/DatenMeldgn_EEG-VergSaetze/DatenMeldgn_EEG-VergSaetze_node.htm

	< 40 kWp	12,61			
	< 1 MWp	11,32			
01. 02. 2015	< 10 kWp	12,92	< MWp	9,07	0,25 %
	< 40 kWp	12,58			
	< 1 MWp	11,29			
01. 03. 2015	< 10 kWp	12,89	< MWp	9,05	0,25 %
	< 10 kWp	12,55			
	< 40 kWp	11,26			
01. 04. 2015	< 10 kWp	12,86	< MWp	9,02	0,25 %
	< 40 kWp	12,51			
	< 1 MWp	11,23			
01. 05. 2015	< 10 kWp	12,82	< MWp	9,00	0,25 %
	< 40 kWp	12,48			
	< 1 MWp	11,21			
01.06.2015	< 10 kWp	12,79	< MWp	8,98	0,25 %
	< 40 kWp	12,45			
	< 1 MWp	11,18			
01.07.2015	< 10 kWp	12,76	< MWp	8,96	0,25 %
	< 40 kWp	12,42			
	< 1 MWp	11,15			
01.08.2015	< 10 kWp	12,73	< MWp	8,93	0,25 %
	< 40 kWp	12,39			
	< 1 MWp	11,12			
01.09.2015	< 10 kWp	12,70	< MWp	8,91	0,25 %
	< 40 kWp	12,36			
	< 1 MWp	11,09			

Fixed FiT for PV installations (up to 500 kWp)					
	Rooftop PV systems		Ground-mounted		Degression
	Size	Incentive	Size	Incentive	
01. 12. 2014	< 10 kWp	12,59	< MWp	8,72	0,25 %
	< 40 kWp	12,25			
	< 500 kWp	10,95			
01. 01. 2015	< 10 kWp	12,56	< MWp	8,70	0,25 %
	< 40 kWp	12,22			
	< 500 kWp	10,92			
01. 02. 2015	< 10 kWp	12,53	< MWp	8,68	0,25 %
	< 40 kWp	12,18			
	< 500 kWp	10,90			
01. 03. 2015	< 10 kWp	12,50	< MWp	8,65	0,25 %
	< 40 kWp	12,15			
	< 500 kWp	10,87			
01. 04. 2015	< 10 kWp	12,47	< MWp	8,63	0,25 %
	< 40 kWp	12,12			
	< 500 kWp	10,84			
01. 05. 2015	< 10 kWp	12,43	< MWp	8,61	0,25 %
	< 40 kWp	12,09			
	< 500 kWp	10,82			
01. 06. 2015	< 10 kWp	12,40	< MWp	8,59	0,25 %

	< 40 kWp	12,06			
	< 500 kWp	10,79			
01. 07. 2015	< 10 kWp	12,37	< MWp	8,57	0,25 %
	< 40 kWp	12,03			
	< 500 kWp	10,76			
01. 08. 2015	< 10 kWp	12,34	< MWp	8,55	0,25 %
	< 40 kWp	12,00			
	< 500 kWp	10,73			
01. 09. 2015	< 10 kWp	12,31	< MWp	8,53	0,25 %
	< 40 kWp	11,97			
	< 500 kWp	10,71			

Source: BNA 2015: [EEG-Fördersätze Juli bis September 2015](#)

Wind energy Onshore

- If installed capacity in corridor 2,4 -2,6 GW – degression rate of -0.4 %
- If installed capacity exceeds corridor – degression rate between -0.5 and -1.2 %
- If installed capacity falls below corridor – degression rate between +0.4 and -0.3 %

Market premium

- The amount of the market premium is calculated every calendar month and includes the following elements: The reference tariff according which is legally defined for each technology) less the monthly electricity value in (€ct/kWh).

Amount Onshore:

- €ct 4.95 – 8.90 per kWh (according to duration of payment) minus €ct 0.4 per kWh.
- 4.95 ct/kWh as basic tariff for 20 years
- 8.9 ct/kWh as initial tariff for first 5 years
 - Time of initial tariff is increased depending on energy yield vs. reference energy yield

Wind energy Offshore

- 01.01.2018: degression of 0.5 ct/kWh or 1.0 ct/kWh (depending on chosen initial tariff)
- 01.01.2020: degression of 1.0 ct/kWh
- From 01.01.2021: degression of 0.5 ct/kWh per year
- 3.90 ct/kWh as basic tariff for 20 years
- 15.40 ct/kWh as initial tariff for first 12 years
 - Time of initial tariff is increased by
 - 0.5 months per sea mile distance to shore over 12 sea miles
 - And by 1.7 months for each metre of water depths over 20 metres
- Alternative option may be chosen by operator if operational readiness before 01.01.2020
 - Initial tariff of 19.40 ct/kWh for 8 years instead of 15.40 ct/kWh for 12 years
 - But increase of time of initial tariff like first version, but reduced to 15.40 ct/kWh after the first 8 years

Biomass electricity and CHP (incl. biogas)

- Feed-in tariffs will continue to be fixed for 20 years. From 2016 on a quarterly degression of 0,5% will take effect.
- Degression at 01.01., 01.04., 01.07 and 01.10. each year from 2016,
- Maximum cap of 100 MW per year. If this limit is reached a quarterly reduction of the remuneration of 1.27% applies until the target corridor is reached again.
- If installed capacity <= 100MW – degression rate = -0.5%
- If installed capacity > 100MW – degression rate = -1.27%
- Right to receive Feed-in Tariff if
 - Installed capacity <= 500kW if initial operation before 01.01.2016
 - Installed capacity <= 100kW if initial operation after 31.12.2015
 - Otherwise option to receive market premium
 - *Installations with higher installed capacity: Only right to receive Feed-in Premium.*
- Remuneration according to substance classes (NAWARO bonus for maize, or wood residues) is abolished. The intention is to shift the investor focus to cheaper biomass sources such as biogenic waste and agricultural residues.
- FiT depending on installed capacity of plant, 5.85 to 13.66 ct/kWh
- § 45 for biogas from specific biological waste: 13.38 to 15.26 ct/kWh
- § 46 for biogas from liquid manure (<=75 kW installed capacity): 23.73 ct/kWh
- The digestion of bio wastes up to 500 kW is remunerated with 15.26 Cent/kWh and with 13,38 Cent/kWh for plants up to 20 MW. Electricity from manure (up to 75 kW) receives 23,73 Cent/kWh.
- Electricity from Biomass (as defined in biomass ordinance) receive the following incentives:
 - Up to 150 kW: 13,66 Cent/kWh,
 - Up to 500 kW: 11,78 Cent/kWh,
 - Up to 5 MW: 10,55 Cent/kWh
 - Up to 20 MW: 5,85 Cent/kWh
- Electricity from digestion of bio wastes:
 - up to 500 kW: 15,26 Cent Cent/kWh,
 - up to 20 MW: 13,38 Cent/kWh
- Electricity from manure plants
 - maximum capacity 75 kW: 23,73 Cent/kWh

Landfill, sewage and mine gas:

- FiT depending on installed capacity of plant
 - Landfill gas: 5.83 to 8.42 ct/kWh
 - Sewage gas: 5.83 to 6.69 ct/kWh
 - Mine gas: 3.80 to 6.74 ct/kWh

Hydropower

- €ct 3.50 – 12.52 per kWh (depending on plant size and date of commissioning)

- Annual degression rate: 0,5 %
- Duration of tariff payment 20 years + year of installation
- FiT depending on installed capacity of plant
- If installed capacity \leq 500 kW: 12,52 ct/kWh
- If installed capacity $>$ 500 kW: 3.5 to 8.25 ct/kWh

Deep geothermal electricity and CHP

- Degression: 0% until 2017 / 5.0 % from 2018
- Duration of tariff payment: 20 years
- Bonuses: An additional bonus for geothermal energy of 5€ ct /kWh is granted for electricity generated using petro-thermal technology.

Renewable Heat

Solar thermal

Measure		Basic support	Innovation support		Additional support				
Installation of solar thermal system		existing building	existing building	new building	Combination bonus			Building efficiency bonus	Optimization measure
					Biomass heating system or heat pump	District heating	Replacement of boiler		
only hot water	3 to 10 m ² collector area	€ 500	-	-	€ 500	€ 500	€ 500	additional bonus : 0,5 x basic or innovation bonus	10% of net investment costs ----- after 3-7 years: € 100 up to € 200 max.
	11 to 40 m ² collector area	€ 50/ m ²	-	-					
	20 to 100 m ² collector area	-	€ 100 / m ²	€ 75/ m ²					
combined hot water and heating support, solar cooling	up to 14 m ² collector area	€ 2.000							
	15 to 40 m ² collector area	€ 140 /m ²							
	20 to 100 m ² collector area	-	€ 200 / m ²	€ 150 / m ²					
Solar heat or cooling	20 to 100 m ² collector area	-	€ 0,45 x annual collector yield x number of collectors	€ 0,45 x annual collector yield x number of collectors					
Extension of existing solar collector system		€ 50/ m ²	-	-				-	-

BAFA 2015: Förderübersicht Solar (Basis-, Innovations- und Zusatzförderung)

http://www.bafa.de/bafa/de/energie/erneuerbare_energien/biomasse/publikationen/uebersicht_bm.pdf

Heat Pumps (ambient heat from heat pumps)

Measure		Basic support	Innovation support			Additional support				
Heat pumps up to 100 kW		existing building	existing building	new building	Load management bonus	Combination bonus			Building efficiency bonus	Optimization measure
						Biomass heating system or ST collectors	District heating	PVT collectors		
Gas driven HP SPF: >1,25 residential >1,3 non-residential	=>	€ 100/ kW	€ 150 / kW	€ 100/ kW	€ 500	€ 500	€ 500	€ 500	additional bonus : 0,5 x basic or innovation bonus	10% of net investment costs ----- after 3-7 years: € 100 up to € 200 max. ----- after 1 year: up to € 250
	Minimum support	€ 4500 (up to 45 kW)	€ 6750 (up to 45 kW)	€ 4500 (up to 45 kW)						
Electrical Air/water HP SPF > 3,5	=>	€ 40/ kW	€ 60 / kW	€ 40/ kW						
	minimum support: monovalent HP	€ 1500 (up to 37,5 kW)	€ 2250 (up to 37,5 kW)	€ 1500 (up to 37,5 kW)						
	minimum support: other HP	€ 1300 (up to 32,5 kW)	€ 1950 (up to 32,5 kW)	€ 1300 (up to 32,5 kW)						
Electrical Water/water or Ground Source HP SFP > 3,8 (residential) >4,0 (non-residential)	=>	€ 100 / kW	€ 150 / kW	€ 100/ kW						
	minimum support: sole HP	€ 4500 (up to 45 kW)	€ 6750 (up to 45 kW)	€ 4500 (up to 40 kW)						
	minimum support other HP	€ 4000 (up to 40 kW)	€ 6000 (up to 40 kW)	€ 4000 (up to 40 kW)						

BAFA 2015: Förderübersicht Wärmepumpe (Basis-, Innovations- und Zusatzförderung)

http://www.bafa.de/bafa/de/energie/erneuerbare_energien/waermepumpen/publikationen/wp_foerd_uebersicht.pdf

Biomass heat

Measure		Basic support	Innovation support				Additional support				
Biomass systems 5-100 kW		existing building	Condensing technology		Particle separation		Retrofitting	Combination bonus		Building efficiency bonus	Optimization measure
			existing building	new building	existing building	new building		Solar thermal system or heat pump	District heating		
Pellet stove	5-25 kW	€ 2.000	-	-	€ 3.000	€ 2.000	€ 750	€ 500	€ 500	additional bonus : 0,5 x basic or innovation bonus	10% of net investment costs ----- after 3-7 years: € 100 up to € 200 max.
	25,1 - max. 100 kW	€ 80 / kW									
Pellet boiler	5 - 37,5 kW	€ 3.000	€ 4.500	€ 3.000	€ 4.500	€ 3.000	€ 750	€ 500	€ 500	additional bonus : 0,5 x basic or innovation bonus	10% of net investment costs ----- after 3-7 years: € 100 up to € 200 max.
	37,6 - max 100 kW	€ 80 / kW									
Pellet boiler (with buffer storage of min 30 l/kW)	5 - 43,7 kW	€ 3.500	€ 5.250	€ 3.500	€ 5.250	€ 3.500	€ 750	€ 500	€ 500	additional bonus : 0,5 x basic or innovation bonus	10% of net investment costs ----- after 3-7 years: € 100 up to € 200 max.
	43,8 - max. 100 kW	€ 80 / kW									
Wood chip boiler (with buffer storage of min. 30 l/kW)		€ 3500 per system	€ 5.250	€ 3.500	€ 5.250	€ 3.500	€ 750	€ 500	€ 500	additional bonus : 0,5 x basic or innovation bonus	10% of net investment costs ----- after 3-7 years: € 100 up to € 200 max.
			€ 4.500	€ 3.000							
Wood gasification boiler (with buffer storage of min. 55 l/kW)		€ 2000 per system	€ 4500-5250	€ 3000-3500	€ 3.000	€ 2.000	€ 750	€ 500	€ 500	additional bonus : 0,5 x basic or innovation bonus	10% of net investment costs ----- after 3-7 years: € 100 up to € 200 max.

BAFA 2015: Förderübersicht Biomasse (Basis-, Innovations- und Zusatzförderung)

http://www.bafa.de/bafa/de/energie/erneuerbare_energien/biomasse/publikationen/uebersicht_bm.pdf

Renewable Transport

The main support scheme for renewable energy sources used in transport (fuel for road transport) is a quota system. This scheme obliges companies importing or producing petrol, gas or diesel fuels to ensure that biofuels make up a defined percentage of the company's total annual sale of fuel. Furthermore, biofuels are supported through fiscal regulation. From 2015, a greenhouse gas reduction quota is introduced. By 2015, emissions have to be reduced by 3%, by 4.5% from 2017 on and by 7% from 2020 onwards.

Annex C

The EurObserv'ER Barometers are all available for download.

Links to all EurObserv'ER publications:

'The State of Renewable Energies in Europe' (PDF, multiple languages)

<http://www.eurobserv-er.org/category/all-annual-overview-barometers>

Wind Energy Barometer (PDF, multiple languages)

<http://www.eurobserv-er.org/category/all-wind-energy-barometers>

Photovoltaic Barometer (PDF, multiple languages)

<http://www.eurobserv-er.org/category/all-photovoltaic-barometers>

Solar Thermal Barometer (PDF, multiple languages)

<http://www.eurobserv-er.org/category/all-solar-thermal-and-concentrated-solar-power-barometers>

Biofuels Barometer (PDF, multiple languages)

<http://www.eurobserv-er.org/category/all-biofuels-barometers>

Biogas Barometer (PDF, multiple languages)

<http://www.eurobserv-er.org/category/all-biogas-barometers>

Renewable Municipal Waste Barometer (PDF, multiple languages)

<http://www.eurobserv-er.org/category/all-renewable-municipal-waste-barometers>

Solid Biomass Barometer (PDF, multiple languages)

<http://www.eurobserv-er.org/category/all-solid-biomass-barometers>

Heat Pump Barometer (PDF, multiple languages)

<http://www.eurobserv-er.org/category/all-heat-pumps-barometers>