COUNTRY POLICY PROFILE

Germany

November 2014

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

EurObserv'ER

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 a EurObserv’ER Overview Barometer[1] 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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[1] Free download at http://www.eurobserv-er.org/pdf/bilan13-gb.asp, latest edition is 2013.

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*. 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 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 and through fiscal regulation.

Renewable energy policy in Germany on the national level is primarily governed by the Renewable Energy Sources Act (Erneuerbare Energien Gesetz – EEG 2014), the Renewable Energies Heat Act (EEWärmeG), and the Biofuels Quota Act (Biokraftstoffquotengesetz - BiokraftQuG), amongst other ordinances.

The expansion of renewable sources of energy was fast and steady over the last decade. The main technologies used were wind energy, photovoltaic power and biomass.

- Share of RES in final energy consumption increased from 2,9 % in 2000 to 12,3% in 2013.
- Share of renewable electricity increased from 6,2 % in 2000 to 25,4% in 2013 (23,6 % in 2012).
- Share of renewable heat increased from 4,0 % in 2000 to 9% in 2013 (10% in 2012)
- Share of renewable transport fuels increased from 0,4 % in 2000 to 5,3% in 2013 (5,8 % in 2012).[2]

In the year 2012 the major share of renewable electricity generation is accounted for by wind energy with 4242 ktoe, followed by biogas (3427 ktoe) and PV (2269 ktoe). As for renewable heating, solid biomass makes the largest contribution with 9798 ktoe, followed by solar thermal (576 ktoe). Biofuels used in renewable transport amount to 125 ktoe.

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

[2] BMWi 2014. *For a historic time series see Annex B and HERE.*

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: EurObserv'ER report 'The State of Renewable Energies in Europe'[3]).

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)

[3] Free download at http://www.eurobserv-er.org/pdf/bilan13-gb.asp, latest edition is 2013.

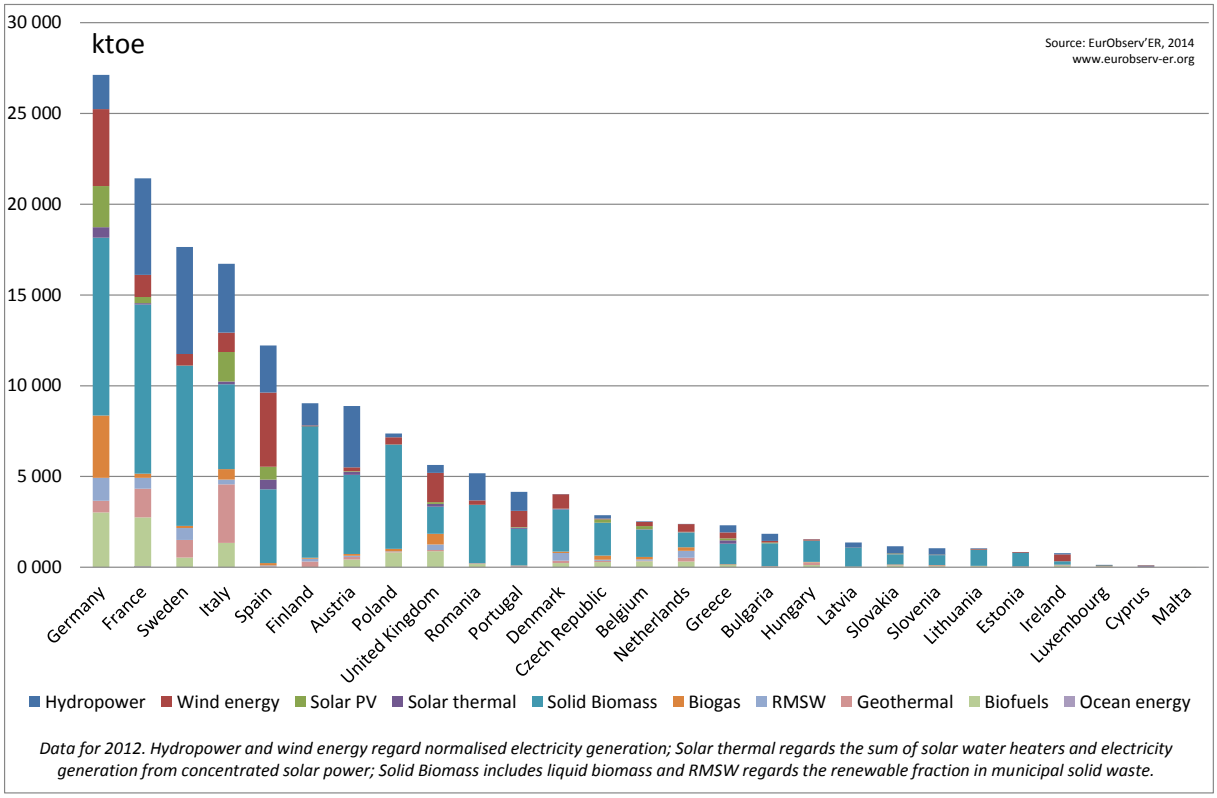

Figure *Renewable energy production in the European Union Member States. Data have been expressed in ktoe and refer to the year 2012. Source: EurObserv'ER, 2014 (www.eurobserv-er.org)*

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[4]. 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'[5] 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: 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 elctricity tariffs in Germany. Key elements include: • 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

[4] Key elements of a revised Renewable Energy Sources Act, http://www.bmwi.de/English/Redaktion/Pdf/eeg-reform-eckpunkte-english,property=pdf,bereich=bmwi2012,sprache=en,rwb=true.pdf

[5] 10-point energy agenda, http://www.bmwi.de/English/Redaktion/Pdf/10-punkte-energie-agenda,property=pdf,bereich=bmwi2012,sprache=en,rwb=true.pdf

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: • offshore wind energy : 6,5 GW by 2020 and 15 GW by 2030 • onshore wind energy: up to 2,400 -2,600 MW/year • 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	RES electricity	The BMWi released a discussion paper (Green Book) on the future electricity market. At the same time a public consultation process was launched until March 2015. Expected Ordinance on pilot auctions
December 2014		<yet to come>
2015	PV, wind, biomass	First pilot auctions and constructions planned to take place and reporting on its effects
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 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 *ex ante* by the National Regulatory Agency (NRA). It is to cover all future production costs including a *normal* 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 any way, 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 NOT 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.

AGEE-STAT 2014: Bruttobeschäftigung durch erneuerbare Energien in Deutschland im Jahr 2013 - eine erste Abschätzung, May 2014, (sourced July 2014).

BAFA 2012a: Basic, Bonus and Innovation support **Solarthermal**, Bundesamt für Wirtschaft und Ausfuhrkontrolle (BAFA), overview of rates as of 15 August 2012 (sourced February 2013).

BAFA 2012b: Basic, Bonus and Innovation support **Biomass**, Bundesamt für Wirtschaft und Ausfuhrkontrolle (BAFA), overview of rates as of 15 August 2012 (sourced February 2013).

BAFA 2012c: Basic, Bonus and Innovation support **Heat Pumps**, Bundesamt für Wirtschaft und Ausfuhrkontrolle (BAFA), overview of rates as of 15 August 2012 (sourced February 2013).

BMU 2012: EEG 2012: Tariffs and sample degression rates pursuant to the new Renewable Energy Sources Act (Erneuerbare-Energien-Gesetz - EEG) as of 25 October 2008, Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (BMU), (sourced August 2013).

BMWI 2014a: Erneuerbare Energien im Jahr 2013, Arbeitsgruppe Erneuerbare Energien-Statistik (AGEE-Stat), Federal Ministry for Economic Affairs and Energy, February 2014, (sourced March 2014).

BMWI 2014b: Key elements of a revised Renewable Energy Sources Act, Federal Ministry for Economic Affairs and Energy, January 2014, (sourced April 2014).

BMWI 2014c: The energy transition: key projects of the 18th legislative term - 10-point energy agenda of the Federal Ministry for Economic Affairs and Energy, Federal Ministry for Economic Affairs and Energy, June 2014. June 2014, (sourced August 2014). German version.

BMWI 2014d: EEG 2014 - Gesetz für den Ausbau erneuerbarer Energien (Erneuerbare-Energien-Gesetz, non legally binding version as of 1 August 2014, Federal Ministry for Economic Affairs and Energy, (sourced August 2014). German only.

BMWI 2014e: Fact sheets , "Photovoltaik", "Windkraft an Land","Windkraft auf See", "Biomasse", on changes through EEG 2014, Federal Ministry for Economic Affairs and Energy, (sourced August 2014).

BMWI 2014f: EEWärmeG, Gesetz zur Förderung Erneuerbarer Energien im Wärmebereich, Ministry for Economic Affairs and Energy, (sourced July 2014).

BMWI 2014g: Ein Strommarkt für die Energiewende -Diskussionspapier des Bundesministeriums für Wirtschaft und Energie (Grünbuch), November 2014, (sourced November 2014).

BNA 2014: EEG-Vergütungssätze August und September 2014, Federal Network Agency, July 2014, (sourced August 2014).

BWE 2014: EEG Aktuell 2014: Latest changes to the EEG, and download section (in German).

CLEW: Clean Energy Wire, website and information portal on the German energy transition (in English)

DBFZ 2013: Biomass electricity feed-in calculator, German Biomass Research Centre (DBFZ), (sourced, November 2013).

EnergieAgentur NRW 2014: Das neue EEG 2014 – Was ändert sich? 31 July 2014, (accessed September 2014).

EC 2014: Members States' renewable energy progress reports 2013, (sourced February 2014).

IEA official website page for policy and measures in Germany, (accessed February 2014).

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RES Legal 2013: Legal Sources on renewable energy in Germany: Electricity, (August 2014).

RES Legal 2013: Legal Sources on renewable energy in Germany: Heating and Cooling, (August 2014).

RES Legal 2013: Legal Sources on renewable energy in Germany: transport, (August 2014).

Solarserver 2013: Overview of support schemes in German Federal States, Förderprogramme der Länder, (sourced December 2013).

vonBredowValentin 2014: Das EEG im Überblick, vBV Sondernewsletter, June 2014.

Annex A

Share of renewable energy in final end energy production (in %), AGEE-STAT 2014: Erneuerbare Energien im Jahr 2013, (February 2014).

	1990	2000	2005	2010	2011	2012	2013
Electricity supply (in relation to gross electricity consumption)	3,4	6,2	10,2	17,0	20,4	23,6	25,4
Heat Supply (in relation to total heat consumption)	2,1	4,0	6,0	9,4	9,3	9,3	9,0
Biofuel Supply (in relation to total fuel consumption)	0,0	0,4	3,8	5,8	5,5	5,9	5,3
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**	**11,3**	**11,5**

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 will apply to any installations from 1 August 2014. The existing EEG stipulates that the terms and conditions under which funding is provided in line with the EEG should be reviewed in 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.

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 and market premium

- 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 levy (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.

Photovoltaic Energy

- For solar energy, an overall legal cap of 52,000 MW was introduced in 2012 and confirmed in the EEG 2014. Once the cap is reached, the feed-in tariff is phased out on the first day of the consecutive month. By the end of August 2014, **37,837** MWp of solar PV were installed in Germany.
- To ensure that investors' legitimate expectations are protected, the EEG of 2012 will continue to apply for existing installations.
- The generation capacity from solar energy is to increase by up to 2,500 to 2,600 MW per year margin (or annual extension corridor). The "flexible cap" scheme will continue to apply.From 2014 on, the extension corridor will be decreased by 400 MW annually (to 900-1900 MW from 2017 on).
- Four new remuneration classes for roof systems have been defined: up to 10 KWp / up to 40 kWp / up to 1 MWp / up to 10 MWp.
- Feed-in tariffs are generally granted up to 20 years. During the remuneration period, the tariff is constant.
- Feed in tariffs are adapted according to actual market development now on a monthly base. The additional degression depends on the actual installation in the 6 preceding months. The

Federal Network Agency (Bundesnetzagentur- BNA) regularly updates the amount of newly installed capacity and the revised feed-in tariffs and degression rates.

- The current standard and basic degression for PV stands at 0,5 % per month (previously 1% per month). If the annual extension corridor is higher than the 2,6 GW, the degression increases up to a maximum of 2,8%. In turn, if the extension is below the corridor, the degression is reduced accordingly and up to0%. If the extension is below 1000 MW, the remuneration increases once by 1,5% for the corresponding quarter.
- The market integration model in place since 2012 that compensated only certain shares of electricity PV is abolished.
- For own consumption of electricity from PV systems larger than 10kWp, the owner has to pay 30% of the EEG levy (EEG-Umlage) until 2015, 35% by 2016 and 40% by 2017.
- Compulsory direct sale of PV electricity for systems larger than 500 kW (100 kWp from 2016 onwards). The additional costs of direct marketing are compensated by an additional 0,4 cent/kWh in the market premium.

For August and September 2014, the following FiT apply for solar PV

Support of PV installations put in operation after 1 August 2014 for the calendar months August and September 2014 according to EEG 2014				
Attributable values in Cent/kWh - Market premium model (compulsory for installations < 500 kWp)				
Put in operation	**Rooftop PV systems**			**Installations on non-residential buildings, rooftop plants up to 10 MWp and freestanding installations up to 10 MWp**
	up to 10 KWp	**up to 40 kWp**	**up to 1 MWp**	
from 01.08.2014	**13,15**	**12,80**	**11,49**	**9,23**
from 01.09.2014	**13,08**	**12,74**	**11,43**	**9,18**
from 01.10.2014	**13,05**	**12,70**	**11,40**	**9,16**
from 01.11.2014	**13,02**	**12,67**	**11,38**	**9,14**
from 01.12.2014	**12,99**	**12,64**	**11,35**	**9,12**

Remuneration in Cent/kWh - Fixed feed-in tariff (small PV systems up to 500 kWp)				
Put in operation	**Rooftop PV systems**			**Installations on non-residential buildings, and freestanding installations up to 500 kWp**
	up to 10 KWp	**up to 40 kWp**	**up to 500 kWp**	

from 01.08.2014	**12,75**	**12,4**	**11,09**	**8,83**
from 01.09.2014	**12,69**	**12,34**	**11,03**	**8,79**
from 01.10.2014	**12,65**	**12,31**	**11,01**	**8,76**
from 01.11.2014	**12,62**	**12,28**	**10,98**	**8,74**
from 01.12.2014	**12,59**	**12.25**	**10,95**	**8,72**

Source: BNA 2014: http://www.bundesnetzagentur.de/cln_1931/DE/Sachgebiete/ElektrizitaetundGas/Unternehmen_Institutionen/ErneuerbareEnergien/Photovoltaik/DatenMeldgn_EEG-VergSaetze/DatenMeldgn_EEG-VergSaetze_node.html

Wind energy

- To ensure that investors' legitimate expectations are protected, the EEG of 2012 will continue to apply for existing installations.
- Wind onshore: annual net increase of 2,4 -2,6 GW (repowering)
- Wind offshore: 6,5 GW by 2020 and 15 GW by 2030
- Repowering and system services bonus are abolished
- For new installations: operators have to either directly sale wind electricity (instead by the grid operator) or commission a direct sale company.
- The remuneration for wind power consists of two components: The price of direct sales on the market and an additional market premium (Marktprämie) which is calculated as difference between the corresponding values defined in the EEG and the average monthly spot market price.

Wind Onshore

Two options for operators of new installations:

- **Basic Model:** Initial support (Anfangsförderung): 15,4 Cent/kWh, for 12 years (lowered from 2018 onwards by 0,5 Cent/kWh, by 1,0 Cent/kWh in 2020 and by 0,5 Cent/kWh from 2021 onwards.
- **Acceleration model** ("Stauchungsmodell") extended until end of 2019. Operators receive 19,4 Cent/kWh over the first 8 years. From 2018 on support decreases by 1,0 Cent/kWh.

Wind Offshore

- **Basic Model:** Initial support (Anfangsförderung): 15,4 Cent/kWh, for 12 years. This can be extended for further years if certain thresholds concerning water depth (+20m) and distance from land (12 nautical miles) are reached. Support is lowered on 1 January 2018 by 0,5 Cent/kWh, by 1,0 Cent/kWh in 2020 and by 0,5 Cent/kWh annually from 2021 onwards.
- **Acceleration model** ("Stauchungsmodell") extended until end of 2019. Operators receive a higher 19,4 Cent/kWh but only for the first 8 years. From 2018 on support decreases by 1,0 Cent/kWh.

Biomass electricity and CHP (incl. biogas)

- To ensure that investors' legitimate expectations are protected, the EEG of 2012 will continue to apply for existing installations.
- For new installations only 50% of installed capacity is supported.
- Feed-in tariffs will continue to be fixed for 20 years. From 2016 on a quarterly degression of 0,5% will take effect.
- 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.
- Flexibility premium of 40€ per installed kW per year.
- Continuation of flexibility premium for existing biogas plants but capped at 1350 MW.
- 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.
- The digestion of biowastes 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 biowastes:
    - 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 gas

- Degression rate: 1.5 %
- Duration of tariff payment: 20 years

year of commissioning	up to 500 kWel in ct/kWh	up to 5 MWel in ct/kWh
2012	8,60	5,89
2013	8,47	5,80
2014	**8,34**	**5,71**
2015	8,22	5,63
2016	8,10	5,54
2017	7,97	5,46
2018	7,85	5,38
2019	7,74	5,30
2020	7,62	5,22
2021	7,51	5,14

Sewage gas

- Degression rate: 1.5 %,
- Duration of tariff payment: 20 years

year of commissioning	up to 500 kWel in ct/kWh	up to 5 MWel in ct/kWh
2012	6,79	5,89
2013	6,69	5,80
2014	**6,59**	**5,71**
2015	6,49	5,63
2016	6,39	5,54
2017	6,30	5,46
2018	6,20	5,38
2019	6,11	5,30
2020	6,02	5,22
2021	5,93	5,14

Mine gas

- Degression rate: 1.5 %
- Duration of tariff payment: 20 years

year of commissioning	up to1 MWel in ct/kWh	up to 5 MWel in ct/kWh	over 5 MWel in ct/kWh
2012	6,84	4,93	3,98
2013	6,74	4,86	3,92
2014	**6,64**	**4,78**	**3,86**
2015	6,54	4,71	3,80
2016	6,44	4,64	3,75
2017	6,34	4,57	3,69
2018	6,25	4,50	3,63
2019	6,15	4,44	3,58
2020	6,06	4,37	3,53
2021	5,97	4,30	3,47

Hydropower

- Degression rate: 1.5 %
- Duration of tariff payment 20 years

EEG 2012 Feed-in Tariffs	**Support level 2013 in €ct/kWh**	**Duration of tariff payment**	**Annual degression (in %)**
Hydro > 5 MW*	6,30 to 12,70	20 years + year of commissioning	1,5%

Hydro < 5 MW*	3,40 to 5,50	20 years + year of commissioning	1,5%

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.

Year of commissioning	tariff in ct/kWh	increase in tariff due to utilisation of petrothermal technology
2012	25,00	5,00
2013	25,00	5,00
2014	**25,00**	**5,00**
2015	25,00	5,00
2016	25,00	5,00
2017	25,00	5,00
2018	23,75	4,75
2019	22,56	4,51
2020	21,43	4,29
2021	20,36	4,07

Ambient heat from heat pumps

Overview of selected measures, supported by BAFA for heat pumps:

Heat pumps	Amount of support
Soil/Water and Water/Water heat pumps	€ 2.800 - 11.800
Soil/Water and Water/Water heat pumps with buffer storage	€ 3.300 - 12.300
Air/Water heat pumps	€ 1.300 - 1.600
Air/Water heat pumps with buffer storage	€ 1.800 - 2.100

Annex C

EurObserv'ER Barometers published in several languages and available for free download. Direct links to all EurObserv'ER publications:

Biofuels Barometer 2014
(July 2014, PDF, 14 pages, 7.5 MB)
English: http://www.eurobserv-er.org/pdf/baro222_en.asp

German: http://www.energies-renouvelables.org/observ-er/stat_baro/observ/baro222_de.pdf

Solar Thermal Barometer (CSP and solar water heaters) 2014
(May 2014, PDF, 18 pages, 3.6 MB)
English: http://www.eurobserv-er.org/pdf/baro221_en.asp
German: http://www.energies-renouvelables.org/observ-er/stat_baro/renac/baro221_de.asp

Solar Photovoltaic Barometer 2014
(April 2014, PDF, 16 pages, 2.9 MB)
English: http://www.eurobserv-er.org/pdf/baro-jdp11_en.asp
German: http://www.energies-renouvelables.org/observ-er/stat_baro/renac/baro-jdp11_de.asp

Wind Power Barometer 2014
(February 2014, PDF, 14 pages, 2.8 MB)
English: http://www.eurobserv-er.org/pdf/baro-jde14_en.asp
German: http://www.energies-renouvelables.org/observ-er/stat_baro/observ/baro-jde14_de.pdf

'The State of Renewable Energies in Europe', 2013 edition
(January 2014, PDF, 200 pages, 12 MB)
English: http://www.eurobserv-er.org/pdf/bilan13-gb.asp

Solid Biomass Barometer 2013
(December 2013, PDF, 14 pages, 2.9 MB)
English: http://www.eurobserv-er.org/pdf/baro219_en.asp
German: http://www.energies-renouvelables.org/observ-er/stat_baro/renac/baro219_de.asp

Heat Pump Barometer 2013
(October 2013, PDF, 18 pages, 2.5 MB)
English: http://www.eurobserv-er.org/pdf/baro218.asp
German: http://www.energies-renouvelables.org/observ-er/stat_baro/renac/baro218_de.asp

Biofuels Barometer 2013
(July 2013, PDF, 16 pages, 3.1 MB)
English: http://www.eurobserv-er.org/pdf/baro216_en.asp
German: http://www.energies-renouvelables.org/observ-er/stat_baro/renac/baro216_dt.asp

Solar Thermal Barometer 2013
(June 2013, PDF, 27 pages, English/French, 3.6 MB):
English: http://www.eurobserv-er.org/pdf/baro215.asp

Biogas Barometer 2012
(December 2012, PDF, English/French, 14 pages, 2.0 MB)
English: http://www.eurobserv-er.org/pdf/baro212biogasEu.asp

Renewable Municipal Waste Barometer 2012

(December 2012, PDF, English/French, 12 pages, 1.9 MB)

English: http://www.eurobserv-er.org/pdf/baro212mswEu.asp