

Research RES LEGAL – promotion system

Country: Germany

1. Overview of promotion system

Overview of promotion system	In Germany, the most important legal framework for electricity from renewable sources is the Act on Granting Priority to Renewable Energy Sources (EEG). As laid down in the EEG, operators of plants generating electricity from renewable energy sources are legally entitled to a fixed compensation for electricity fed into the <u>grid</u> to be paid by the <u>grid operator</u> .
Statutory provisions	<ul style="list-style-type: none">• EEG (Renewable Energy Sources Act – general provisions on renewable energy)• BiomasseV (Biomass Ordinance – ordinance defining the concept of biomass)• StromNZV (Stromnetzzugangsverordnung – regulation on electricity feed-in to and consumption from electricity supply grids)
Promotion system	The EEG sets standards for a system of guaranteed feed-in compensations. Operators of plants generating electricity from renewable energy sources are entitled to compensation for electricity fed into the grid to be paid by the <u>grid operator</u> (§ 16 EEG). There are different regulations on the amount of compensation for each energy source.
Promoted technologies	In general, the EEG promotes all technologies aiming at generating electricity from renewable energy. However, capacity, location or materials used may give reason for excluding certain types of plants from promotion (§§ 23-33 EEG).
Area of application	Only energy from renewable sources generated in Germany is eligible for compensation. This results from the scope of the law, which is restricted to Germany. Electricity generated abroad is not promoted.
Funding	A differential equalisation scheme enables the costs of promoting electricity generated from renewable energy to be borne by the consumers (§§ 34–39 EEG).

2. Basic information on legal sources

Name of legal source (original language)	Gesetz für den Vorrang Erneuerbarer Energien (Erneuerbare-Energien-Gesetz – EEG)	Verordnung über die Erzeugung von Strom aus Biomasse (Biomasseverordnung)	Verordnung über den Zugang zu Elektrizitätsversorgungsnetzen (Stromnetzzugangsverordnung)
Name of legal source (full name)			
Name of legal source (English)	Act on Granting Priority to Renewable Energy Sources (Renewable Energy Sources Act - EEG)	Ordinance on Generation of Electricity from Biomass	
Abbreviated form	EEG	BiomasseV	StromNZV
Type of law	Act of parliament	Ordinance	Regulation
Document structure	Sections, paragraphs	Articles, paragraphs	Articles, paragraphs
Entering into force	01/01/2009	28/06/2001	29/07/2005
Latest amendment		09/08/2005	17/10/2008
Future amendments	Supplemental regulations are planned to amend or complement certain parts of the EEG.		
Purpose	To protect the climate, the Act aims to increase the proportion of renewable energy sources in total energy supply to at least 30% by 2020 and to continuously increase this proportion thereafter (§ 1 EEG).	The Ordinance stipulates the substances to be regarded as biomass, the technical procedures used in the generation of electricity from biomass that come under the scope of the EEG, and the environmental standards to be met in the generation of electricity from biomass.	The Regulation sets out the conditions for the use of electricity supply grids for the feed-in and consumption of electricity.
Relation to renewable energy	This Act promotes renewable energy only.	The Ordinance specifies the conditions for the promotion of electricity from biomass.	The Regulation provides rules for the transmission of electricity between the various market participants. These rules are in line with the equalisation scheme as stipulated by the EEG.

Link to full text of legal source (original language)	http://bundesrecht.juris.de/eeg_2009/	http://bundesrecht.juris.de/biomassev/BJNR123400001.html	http://bundesrecht.juris.de/stromnzv/BJNR224300005.html
Link to full text of legal source (English)	http://www.bmu.de/files/pdfs/allgemein/application/pdf/eeg_2009_en.pdf	http://www.erneuerbare-energien.de/files/erneuerbare_energien/downloads/application/pdf/electricity_biomass.pdf The English translation does not provide information on the latest amendment of the Ordinance.	

3. Further information

Institution (name)	Website	Name of contact person (optional)	Telephone number (head office)	E-mail (optional)
Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (BMU) - Federal Ministry for the Environment	BMU website		+49 301 830 50	
Federal Network Agency	Federal Network Agency website		+49 228 140	
Bundeskartellamt- federal antitrust authority	Bundeskartellamt website		+49 228 949 90	
German Energy Agency (dena)	dena website		+49 307 261 656 00	
Bundesverband Erneuerbare Energie e.V. (BEE) – Renewable Energy Federation	BEE website		+49 327 581 700	

4. **Means of promotion**

4.1. **Subsidy (name of means of promotion)**

Abbreviated form of legal source(s)		
Country-specific promotion system		
Promoted technologies		
Wind energy		
Solar energy		
Geothermal energy		
Biogas		
Biomass		
Hydro-electricity		
Area of application	National	
	International	
Legal basis for a claim/addressees	() statutory basis () contractual basis	
	Entitled party	

	Obligated party	
Amount		
Procedure		
Funding	The state as cost bearer	
	The consumer as cost bearer	
	The system operator as cost bearer	
	The grid operator as cost bearer	
	Distribution mechanism	
Control mechanisms		

4.2. Loan (name of means of promotion)

Abbreviated form of legal source(s)		
Country-specific promotion system		
Promoted technologies		
Wind energy		
Solar energy		
Geothermal energy		
Biogas		
Biomass		
Hydro-electricity		
Area of application	National	
	International	
Legal basis for a claim/addressees	() statutory basis () contractual basis	
	Entitled party	
	Obligated party	

Amount		
Procedure		
Funding	The state as cost bearer	
	The consumer as cost bearer	
	The grid operator as cost bearer	
	The system operator as cost bearer	
	Distribution mechanism	
Control mechanisms		

4.3. Price regulation (EEG)

Abbreviated form of legal source(s)	<ul style="list-style-type: none"> • EEG • BiomasseV • StromNZV
Country-specific promotion system	<p>In Germany, the generation of electricity from renewable sources is mainly promoted through a <u>price-regulation</u> in terms of a <u>guaranteed feed-in tariff</u>.</p>
Promoted technologies	<p>In general, all technologies used in the generation of electricity from renewable sources are eligible for promotion (§§ 16 par. 1; 3 nr. 3 EEG). The following conditions shall be met:</p> <ul style="list-style-type: none"> • Register of Installations. After the establishment of the Register of Installations, the obligation to pay tariffs shall only apply where the system operator has applied for the system to be entered in the register (§ 16 par. 2 EEG). The date of the establishment of the Register has not been set yet. Systems generating electricity from solar radiation are exempt from the obligation to register with the Register of Installations, as they are already obliged to register with the Federal Network Agency. • Systems generating more than 100 KW. System operators are eligible for the tariff only if their systems are equipped with a technical or operational facility to reduce output by remote means in the event of grid overload and to call up the current electricity feed-in (§§ 16 par. 6; 6 EEG). • Direct selling. System operators that sell their electricity directly are not entitled to the tariff. System operators may sell their electricity directly if they report this to the grid operator before the start of the previous calendar month (§ 17 EEG).
Wind energy	<p>Both onshore and offshore generation are eligible with the following exceptions (§§ 29; 31 EEG):</p> <ul style="list-style-type: none"> • Inefficient onshore generation. Electricity from wind energy is not eligible if generated by systems whose output exceeds 50 KW and for which the system operator provided no proof prior to commissioning that they are able to achieve at least 60 per cent of the reference yield at the planned location (§ 29 par. 3; 4 EEG). The reference yield refers to the yield capacity of the plant, which is calculated through a specific procedure (§ 29 par. 2 sentence 3 EEG). • Offshore generation in protected areas. Electricity is not eligible if generated by systems located in an area of environmental importance, such as systems constructed in a protected area or at a site of Community importance (§ 31 par. 3 EEG).
Solar energy	<p>Eligible unless one of the following circumstances is present (§§ 32; 33 EEG):</p> <ul style="list-style-type: none"> • Future production sites. Electricity from systems not attached to or on top of a building structure used for the generation of electricity is not eligible if the systems were commissioned on 1st January 2015 or later and do not meet certain urban building requirements (§ 32 par. 2 EEG). • Existing production sites. Electricity from systems not attached to or on top of a building structure used

	<p>for the generation of electricity is not eligible if the system was erected in an area that is part of a development plan passed after 1st September 2003 (§ 32 par. 3 EEG).</p> <ul style="list-style-type: none"> • Installations not reported to the Federal Network Agency. Electricity from systems not attached to or on top of a building structure used for the generation of electricity is eligible only if the system operator has reported the location and capacity of the system to the Federal Network Agency (§ 16 par. 2 EEG). 	
Geothermal energy	Eligible (§ 28 EEG).	
Biogas	<p>Eligible under the following conditions (§§ 24, 25, 27 EEG):</p> <ul style="list-style-type: none"> • CHP obligation for biogas installations. Electricity generated from biogas withdrawn from a gas network is eligible only if it is from combined heat and power generation (§ 27 par. 3 nr. 3 EEG). 	
Biomass	<p>Eligible under the following conditions (§§ 27 EEG):</p> <ul style="list-style-type: none"> • CHP obligation for large systems. Electricity generated by systems whose output exceeds 5 MW is eligible only if it is from combined heat and power generation (§ 27 par. 3 nr. 1 EEG). • Record of substances. Electricity from systems using biomass that does not come under the BiomasseV is eligible only if the system operator provides proof of which type of biomass is being used by keeping a record of the substances used (§ 27 par. 3 nr. 2 EEG). 	
Hydro-electricity	<p>Eligible under the following conditions (§§ 23 EEG):</p> <ul style="list-style-type: none"> • Storage power stations. Electricity from hydro-electric power stations is not eligible if generated by a storage power station (§ 23 par. 5 nr. 1 EEG). • Ecological status. Electricity from hydro-electric power stations is eligible only if after commissioning or modernisation of the installation a good ecological status or a substantial improvement of the previous status has been brought about (§ 23 par. 5 nr. 2 EEG). • Building requirements. Electricity from newly constructed and modernised existing hydro-electric power systems whose output does not exceed 5 MW and electricity from newly constructed hydro-electric power systems whose capacity does exceed 5 MW is eligible only if the system was erected in the spatial context of a barrage weir or dam which already existed before or was newly built primarily for purposes other than the generation of electricity from hydropower, or without complete weir coverage (§ 23 par. 6 EEG). 	
Area of application	National	The EEG exclusively promotes electricity generated by plants within the territory of the Federal Republic of Germany or within Germany's <u>exclusive economic zone</u> (§ 2 nr. 1, 2 EEG).

	International	Electricity generated outside Germany is not eligible for promotion.
Legal basis for a claim/addressees	(x) statutory basis () contractual basis	The plant operator is entitled to compensation payments by the <u>grid operator</u> (§ 16 par. 1 EEG). Entitlement to compensation shall not be conditional upon the conclusion of a contract (§ 4 par. 1 EEG).
	Entitled party	The persons entitled are the plant operators (§ 16 par. 1 EEG). A plant operator is one who, notwithstanding the issue of ownership, uses the plant for the purpose of power generation from renewable energy sources or mine gas (§ 3 nr. 2 EEG).
	Obligated party	The person obligated is the <u>grid operator</u> (§ 16 par. 1 EEG). <u>Grid operators</u> are the operators of grid systems of all <u>voltage levels</u> for general electricity supply (§ 3 nr. 8 EEG).
Payment structure	Bonus	
	Guaranteed payment	The payment specified by the EEG is a guaranteed payment in terms of minimum payment rates (§§ 23 – 33 EEG).
	Criteria for amount of payment	The amount of the compensation payment is based on the costs of constructing and operating a certain type of plant, i.e. especially investment costs, operational costs, the costs of measurement and the cost of capital. Costs and efficiency are not audited in a given case. The calculation of the fees is based on the costs expected. This aims at <u>guaranteeing the cost-effective operation of plants in general</u> .
	Adjustment mechanisms	Fees will be gradually reduced: As regards new plants, fees shall be reduced by a legally prescribed percentage according to the year of commissioning with respect to the energy source (§ 20 EEG). This percentage is fixed for all technologies except for photovoltaic energy. The amount of tariff for photovoltaic energy is reduced degressively according to market developments (§ 20 par. 2a EEG). This degression is meant to provide an incentive to reduce costs through technological progress. The amount of the compensation payment valid in the year the plant is put in operation is applicable during its whole lifetime. A progress report shall be filed on a regular basis to evaluate the payment rates and recommend adjustments (§ 65 EEG).
	Limitations/deadlines	<ul style="list-style-type: none"> • Duration of payment. Entitlement to tariff payment as guaranteed by the EEG is limited in time and is usually 20 years as well as the year of commissioning of the installation (§ 21 par. 2 sentence 1 EEG). Hydro-electric power stations are subject to a different payment period. The tariffs for hydro-electricity from large installations is 15 years as well as the year of commissioning of the installation (§ 21 par. 2 sentence 1 EEG). • Credit for direct selling. The period in which the electricity is sold directly is credited against the duration of the payment of the tariffs (§ 17 par. 1 EEG).
	Amount of payment	Differentiation between technologies. The amount of payment differs for every source of energy (§§ 23 – 33 EEG). For some technologies, there are several amounts of tariff, depending on system capacity, system location, technology, and

		<p>energy source used. The more efficient the respective technology is, the more closely the fees will reflect the market prices.</p> <p>Electricity from renewable sources is subject to the following amounts of tariff, with regard to the technology used:</p> <p>Wind energy:</p> <ul style="list-style-type: none"> Onshore 5.02 – 9.2 €ct/kWh (according to duration of payment) + 0.5 €ct/kWh each for a system service bonus and/or a repowering bonus (§ 29 par. 1-2; § 30 EEG). Offshore 3.5 – 13 €ct/kWh (according to duration of payment) + bonus of 2 €ct/kWh for systems commissioned prior to 1st January 2016 (§ 31 par. 1-2 EEG). <p>Solar energy:</p> <ul style="list-style-type: none"> 31.94 – 43.01 €ct/kWh (depending on energy source and system size) (§ 32 par. 1 EEG; § 33 par. 1 EEG). Payment of 25.01 €ct/kWh for electricity the operator uses himself (§ 33 par. 2 EEG). <p>Geothermal energy. 10.5 – 16 €ct/kWh (according to system size) + bonus of 4 €ct/kWh for systems commissioned prior to 1st January 2016 + heat use bonus of 3 €ct/kWh + bonus for use of petrothermal technology of 4 €ct/kWh (§ 28 par. 1-3 EEG).</p> <p>Biogas.</p> <ul style="list-style-type: none"> Biogas from biomass. 7.79 – 11.67 €ct/kWh (according to system size) + air quality bonus of 1 €ct/kWh + technology bonus of 1-2 €ct/kWh + bonus for electricity from energy crops of 7 – 11 €ct/kWh + CHP-bonus of 3 €ct/kWh (§ 27 par. 1 ff. EEG in connection with Annex 1-3 EEG). Landfill gas. 6.16 – 9 €ct/kWh + technology bonus of 1 – 2 €ct/kWh (§ 24 par. 1, 3 EEG in connection with Annex 1 EEG) Sewage gas. 6.16 – 7.11 €ct/kWh + technology bonus of 1 – 2 €ct/kWh (§ 25 par. 1, 3 EEG in connection with Annex 1 EEG) <p>Biomass. 7.79 – 11.67 €ct/kWh (according to system size) + technology bonus of 2 €ct/kWh + bonus for electricity from energy crops of 2.5 – 6 €ct/kWh + CHP-bonus of 3 €ct/kWh (§ 27 par. 1, 4 EEG in connection with Annex 1-3 EEG)</p> <p>Hydro-electricity 3.5 – 12.67 €ct/kWh (depending on system size and date of commissioning) (§ 23 par. 1-4 EEG).</p> <p>Special system classification if tariff is output-based. If the payment is based on system output (e.g. for photovoltaic energy and biomass), several systems shall be classified as one installation, notwithstanding ownership, and solely for the purpose of determining the tariff to be paid, if they are located on the same plot of land or are in direct spatial proximity, generate electricity from the same kind of renewable energy source and were commissioned within a period within twelve consecutive calendar months (§ 19 EEG). This regulation aims to prevent system</p>
--	--	--

		operators from splitting their systems in order to avoid higher output categories. Whether several systems shall be regarded as one will be established on a case-by-case basis.
Funding	The state as cost bearer	
	The consumer as cost bearer	The costs of the compensation are, as a result, born by the final consumers.
	The grid operator as cost bearer	
	The system operator as cost bearer	
	Distribution mechanism	<ul style="list-style-type: none"> • Plant operator – grid operator. On the first level, power is transferred from the plant operator to the <u>grid operator</u> because of the obligation to purchase and pay compensation (§§ 8 par. 1, 16 par. 1 EEG). • Grid operator – transmission system operator. On the second level, the grid operator is obliged to transfer the electricity to the transmission system operator without undue delay (§ 34 EEG). The grid operator is entitled to the purchase and payment of the quantity of electricity he has paid tariff for (§ 35 par. 1 EEG). The transmission of electricity to the transmission system operator (as well as the subsequent levels) are subject to the StromNZV. • Transmission system operator – transmission system operator. On the third level, the transmission system operators divide the power classified under the EEG among themselves according to the quantity of energy and the fees paid (§ 36 par. 1-3 EEG). • Transmission system operator – utility company. The fourth level regulates the utility companies' obligation to purchase and pay compensation to the transmission system operators (§ 36 par. 4 EEG). • Utility companies – final consumers. On the fifth level, which is not explicitly covered by law, the final consumers have to pay their electricity bill, which reflects their share of power consumed. Final consumers that are manufacturing companies or rail operators are exempt from this regulation. Their costs arising from the compensation payments specified by the EEG may be reduced upon request („special equalisation scheme“, §§ 40 ff. EEG).
Control mechanisms	<ul style="list-style-type: none"> • Guarantees of origin. Plant operators can obtain guarantees of origin for electricity from renewable energy sources, having to contain legally prescribed specifications (§ 55 EEG). This regulation aims at protecting consumers from wrong indications on the origin of the electricity they purchase. 	

	<ul style="list-style-type: none">• Prohibition of multiple sale. The electricity covered by the EEG cannot be sold more than once or be ceded otherwise. In addition, the plant operators are not allowed to hand on certificates of origin for electricity from renewable energies once they have had access to the compensation payments according to §§ 23 to 33 EEG (§ 56 EEG).• Others. Various other control mechanisms guarantee transparency. The EEG prescribes, for example, a uniform calculation scheme for grid operators and electric utilities for the determination of the differential costs between the average compensation paid according to the EEG and their average electricity purchase costs per <u>kWh</u>, in case they advise third parties of these differential costs („giving notice of the differential costs“, § 53 par. 1 EEG). Furthermore, the EEG provides for compulsory publication of certain data (§ 45 ff. EEG).
--	--

4.4. Quota system (name of means of promotion)

Abbreviated form of legal source(s)		
Country-specific promotion system		
Promoted technologies		
Wind energy		
Solar energy		
Geothermal energy		
Biogas		
Biomass		
Hydro-electricity		
Area of application	National	
	International	
Legal basis for a claim/addressees	() statutory basis () contractual basis	
	Entitled party	

	Obligated party	
Amount		
Procedure		
Funding	The state as cost bearer	
	The consumer as cost bearer	
	The grid operator as cost bearer	
	The system operator as cost bearer	
	Distribution mechanism	
Control mechanisms		

4.5. Fiscal regulation mechanisms (name of means of promotion)

Abbreviated form of legal source(s)		
Country-specific promotion system		
Promoted technologies		
Wind energy		
Solar energy		
Geothermal energy		
Biogas		
Biomass		
Hydro-electricity		
Area of application	National	
	International	
Legal basis for a claim/addressees	() statutory basis () contractual basis	
	Entitled party	
	Obligated party	
Amount		

Procedure		
Funding	The state as cost bearer	
	The consumer as cost bearer	
	The grid operator as cost bearer	
	The system operator as cost bearer	
	Distribution mechanism	
Control mechanisms		

5. Criticism
(optional)

Criticism RES sector	
Criticism traditional energy sector	
Criticism political level	
Criticism science and research	