

**Act on granting priority to renewable energy sources  
(Renewable Energy Sources Act, EEG)**

**Gesetz für den Vorrang Erneuerbarer Energien  
(*Erneuerbare-Energien-Gesetz, EEG*)**

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## **Part 1**

### **General provisions**

#### Section 1

##### Purpose

(1) The purpose of this Act is to facilitate a sustainable development of energy supply, particularly for the sake of protecting our climate and the environment, to reduce the costs of energy supply to the national economy, also by incorporating external long-term effects, to conserve fossil fuels and to promote the further development of technologies for the generation of electricity from renewable energy sources.

(2) To achieve the purpose set out in subsection (1) above, this Act aims to increase the share of renewable energy sources in electricity supply to at least 30 per cent by the year 2020 and to continuously increase that share thereafter.

## Section 2 Scope of application

This Act regulates

1. priority connection to the grid systems for general electricity supply of installations generating electricity from renewable energy sources and from mine gas within the territory of the Federal Republic of Germany, including its exclusive economic zone (territorial application of this Act),
2. the priority purchase, transmission, distribution of and payment for such electricity by the grid system operators, and
3. the nationwide equalisation scheme for the quantity of electricity purchased and paid for.

## Section 3 Definitions

Within the meaning of this Act

1. "installation" shall mean any facility generating electricity from renewable energy sources or from mine gas. Installations generating electricity from renewable energy sources or from mine gas shall also mean all those facilities which receive energy which has been temporarily stored and originates exclusively from renewable energy sources or from mine gas and convert it into electricity,
2. "installation operator" shall mean anyone, irrespective of the issue of ownership, who uses the installation to generate electricity from renewable energy sources or from mine gas,
3. "renewable energy sources" shall mean hydropower, including wave power, tidal power, salt gradient and flow energy, wind energy, solar radiation, geothermal energy, energy from biomass, including biogas, landfill gas and sewage treatment gas, as well as the biodegradable fraction of municipal waste and industrial waste,
4. "generator" shall mean any technical facility converting mechanical, chemical, thermal or electromagnetic energy directly into electricity
5. "commissioning" shall mean the first time an installation is put into operation, following the establishment of operational readiness, irrespective of whether the generator in the

installation was put into operation using renewable energy sources, mine gas or other energy sources,

6. "capacity of an installation" shall mean the effective electrical capacity which the installation may technically produce during regular operation without time restrictions, irrespective of short-term deviations,
7. "grid system" shall mean all the interconnected technical facilities used for the purchase, transmission and distribution of electricity for general supply,
8. "grid system operators" shall mean the operators of grid systems of all voltages for general electricity supply,
9. "offshore installation" shall mean any wind-powered installation which has been erected at least three nautical miles seawards from the shoreline. This shoreline shall be the shoreline as represented on map no. 2920, "*Deutsche Nordseeküste und angrenzende Gewässer*", 1994 edition, XII, as well as map no. 2921 "*Deutsche Ostseeküste und angrenzende Gewässer*", 1994 edition, XII, issued by the Federal Maritime and Hydrography Agency on a scale of 1:375,000 <sup>1</sup>,
10. "electricity from combined heat and power generation" within the meaning of section 3(4) of the Combined Heat and Power Act of 19 March 2002 (Federal Law Gazette I p. 1092), as last amended by Article 170 of the Ordinance of 31 October 2006 (Federal Law Gazette I p. 2407), shall mean electricity generated in installations within the meaning of section 5 of the Combined Heat and Power Act,
11. "transmission system operator" shall mean the regular grid system operators of high-voltage and extra-high voltage grid systems which are used for the supraregional transmission of electricity to downstream grid systems,
12. "environmental verifier" shall mean any person or organisation entitled to act as an environmental verifier or environmental verification organisation in accordance with the Environmental Audit Act in the version promulgated on 4 September 2002 (Federal Law Gazette I p. 3490), as last amended by Article 11 of the Act of 17 March 2008 (Federal Law Gazette I p. 399), in the version currently in force.

#### Section 4

#### Statutory obligations

(1) Grid system operators shall not make the fulfilment of their obligations arising from this Act conditional upon the conclusion of a contract.

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<sup>1</sup> Official information : This publication can be orderend from the *Bundesamt für Seeschifffahrt und Hydrographie*, D – 20359 Hamburg.

(2) Notwithstanding section 8(3), no deviations from this Act shall be permissible at the expense of the installation operator and the grid system operator.

## **Part 2**

### **Connection, purchase, transmission and distribution**

#### **Chapter 1**

#### **General provisions**

##### Section 5

##### Connection

(1) Grid system operators shall immediately and as a priority connect installations generating electricity from renewable energy sources and from mine gas to that point in their grid system (grid connection point) which is suitable in terms of the voltage and which is at the shortest linear distance from the location of the installation if no other grid system has a technically and economically more favourable grid connection point. In the case of one or several installations with a total maximum capacity of 30 kilowatts located on a plot of land which already has a connection to the grid system, the grid connection point of this plot shall be deemed to be its most suitable connection point.

(2) Installation operators shall be entitled to choose another grid connection point in this grid system or in another grid system which is suitable with regard to the voltage.

(3) In derogation of subsections (1) and (2) above, the grid system operator shall be entitled to assign the installation a different grid connection point. This shall not apply where the purchase of electricity from the installation concerned would not be guaranteed in accordance with section 8(1).

(4) The obligation to connect the installation to the grid system shall also apply where the purchase of the electricity is only made possible by optimising, boosting or expanding the grid system in accordance with section 9.

(5) Insofar as it is necessary for the determination of the grid connection point and for the planning of the grid system operator in accordance with section 9, those interested in feeding in electricity and grid system operators must submit to each other, upon request and within eight weeks, the necessary documentation, in particular the grid system data required to test and verify the grid compatibility.

Section 6  
Technical and operational requirements

Installation operators shall

1. provide installations whose capacity exceeds 100 kilowatts with a technical or operational facility
  1. to reduce output by remote means in the event of grid overload, and
  2. to call up the current electricity feed-in at any given point in time to which the grid system operator may have access, and
2. ensure that a wind-powered installation fulfils the requirements of the Ordinance in accordance with section 64(1) first sentence no. 1 at the grid connection point with the grid system either on its own or in combination with other installations.

Section 7  
Establishment and use of connection

(1) Installation operators shall be entitled to commission the grid system operator or a qualified third party with connecting the installations as well as with establishing and operating the metering devices, including the taking of measurements.

(2) Implementation of this connection and the other installations required for the safety of the grid system shall meet the technical requirements of the grid system operator in a given case as well as section 49 of the Energy Industry Act (*Energiewirtschaftsgesetz*) of 7 July 2005 (Federal Law Gazette I p. 1970, 3621), as last amended by Article 2 of the Act of 18 December 2007 (Federal Law Gazette I p. 2966).

(3) Where electricity from renewable energy sources or from mine gas is fed into the grid system, section 18(2) of the Low-Voltage Connection Ordinance (*Niederspannungsanschlussverordnung*) of 1 November 2006 (Federal Law Gazette I p. 2477) shall apply *mutatis mutandis* in favour of the installation operator.

Section 8  
Purchase, transmission and distribution

(1) Subject to section 11, grid system operators shall immediately and as a priority purchase, transmit and distribute the entire available quantity of electricity from renewable energy sources and from mine gas.

(2) The obligations pursuant to subsection (1) above shall also apply if the installation is connected to the grid system of the installation operator or of a third party who is not a grid sys-

tem operator within the meaning of section 3 no. 8 and the electricity is delivered via this grid system to a grid system within the meaning of section 3 no. 7 for commercial and accounting purposes.

(3) The obligations pursuant to subsection (1) above shall not apply where installation operators and grid system operators, notwithstanding section 12, agree by contract to deviate from this priority purchase in order to better integrate the installation into the grid system.

(4) In the relationship to the purchasing grid system operator who is not the transmission system operator, the obligations in respect of priority purchase, transmission and distribution refer to

- a) the upstream transmission system operator,
- a) the nearest domestic transmission system operator if there is no domestic transmission grid system in the area serviced by the grid operator entitled to sell the electricity, or
- a) particularly in the case of delivery in accordance with subsection (2) above, any other grid system operator.

## **Chapter 2**

### **Capacity expansion and feed-in management**

#### **Section 9**

##### **Grid capacity expansion**

(1) Upon the request of those interested in feeding in electricity, grid system operators shall immediately optimise, boost and expand their grid systems in accordance with the best available technology in order to guarantee the purchase, transmission and distribution of the electricity generated from renewable energy sources or from mine gas. They shall inform the installation operator without delay as soon as the risk arises that technical control will be assumed over their installation in accordance with section 11(1) first sentence; the expected time, extent and duration of the control shall be communicated. The grid system operator shall immediately publish the information required in accordance with the second sentence above on his website and shall thereby describe the affected regions of the grid system and the reasons for the risk.

(2) This obligation shall apply to all technical facilities required for operating the grid system and to all connecting installations which are owned by or passing into the ownership of the grid system operator.

(3) The grid system operator shall not be obliged to optimise, boost or expand his grid system if this is economically unreasonable.

(4) The obligations pursuant to section 4(6) of the Combined Heat and Power Act and pursuant to section 12(3) of the Energy Industry Act shall remain unaffected.

## Section 10 Compensation

(1) In the event that the grid system operator violates his obligations under section 9(1), those interested in feeding in electricity may demand compensation for the damage incurred. The liability to pay compensation shall not apply if the grid system operator was not responsible for the violation of the obligation.

(2) Where there are facts to substantiate the assumption that the grid system operator did not fulfil his obligation under section 9(1), installation operators may require the grid system operator to submit information concerning whether and to what extent the grid system operator did not meet his obligation to optimise, boost and expand his grid system. This information may be withheld if it is not necessary in order to establish whether the entitlement in accordance with subsection (1) above exists.

## Section 11 Feed-in management

(1) Notwithstanding their obligation in accordance with section 9, grid system operators shall be entitled, by way of exception, to take technical control over installations connected to their grid system with a capacity of over 100 kilowatts for the generation of electricity from renewable energy sources, combined heat and power generation or mine gas, if

- b) the grid capacity in the respective grid system area would otherwise be overloaded on account of that electricity,
- b) they have ensured that the largest possible quantity of electricity from renewable energy sources and from combined heat and power generation is being purchased, and
- b) they have called up the data on the current feed-in situation in the relevant region of the grid system.

Taking technical control over installations in accordance with the first sentence above shall only be permitted for a transitional period until measures referred to in section 9 are concluded.

(2) The rights under section 13(1) and section 14(1) of the Energy Industry Act of 7 July 2005 shall continue to apply vis-à-vis the operators of installations for the generation of electricity from renewable energy sources, combined heat and power generation or from mine gas where the measures in accordance with subsection (1) above are not sufficient to guarantee the safety and reliability of the electricity supply system.

(3) Grid system operators shall, upon the request of those installation operators whose installations were affected by measures referred to in subsection (1) above, provide verification, within four weeks, for the need for the measure. The verification must enable a qualified third party to fully understand the need for the measures without any additional information; par-

ticularly the data ascertained in accordance with subsection (1) first sentence no. 3 above shall serve that purpose.

## Section 12 Hardship clause

(1) The grid system operator whose grid system gives rise to the need for the assumption of technical control under section 11(1) shall compensate those installation operators who, on account of the measures under section 11(1), were not able to feed in electricity to the extent agreed upon. Where no agreement has been reached, the lost tariffs and revenues from the use of heat less the expenses saved shall be paid.

(2) The grid system operator may, when determining the charges for use of the grid system, add any charges arising on account of subsection (1) above if the measure was necessary and he bears no responsibility for it. The grid system operator shall, in particular, bear responsibility if he did not exhaust all the options for optimising, boosting and expanding the grid system.

(3) Claims for compensation made by installation operators against the grid system operator shall remain unaffected.

## **Chapter 3 Costs**

### Section 13 Grid connection

(1) The costs associated with connecting installations generating electricity from renewable energy sources or from mine gas to the grid connection point as defined under section 5(1) or (2) and with installing the necessary metering devices for recording the quantity of electricity transmitted and received shall be borne by the installation operator.

(2) If the grid system operator assigns the installations a different grid connection point in accordance with section 5(3), he shall bear the resulting incremental costs.

### Section 14 Capacity expansion

The grid system operator shall bear the costs of optimising, boosting and expanding the grid system.

Section 15  
Contractual agreement

(1) When determining the charges for use of the grid system, grid system operators may take account of any costs incurred in accordance with a contractual agreement pursuant to section 8(3), provided that such costs are substantiated.

(2) These costs shall be subject to an examination of efficiency by the regulatory authority pursuant to the provisions of the Energy Industry Act.

**Part 3  
Tariffs**

**Chapter 1  
General provisions regarding tariffs**

Section 16  
Payment claims

(1) Grid system operators shall pay installation operators tariffs at least pursuant to sections 18 to 33 for electricity generated in installations exclusively utilising renewable energy sources or mine gas.

(2) After the establishment of the Register of Installations, the obligation to pay tariffs for the electricity in accordance with section 64(1) first sentence no. 9 shall only apply where the installation operator has applied for the installation to be entered in the register. In the case of electricity from installations in accordance with sections 32 and 33, the obligation to pay tariffs only applies, in derogation of the first sentence above, where the installation operator has reported the location and capacity of the installation to the Federal Network Agency; section 51(3) first sentence shall apply *mutatis mutandis*.

(3) The obligation pursuant to subsection (1) above shall also apply where the electricity was temporarily stored.

(4) Installation operators who assert the payment claims for electricity from an installation shall, from that time, feed in the entire electricity generated in that installation

- a) for which a payment claim exists on the merits,
- b) which the installation operator himself is not using, and
- c) which is not used by third parties who are directly connected to the grid system of the installation operator which is not a grid system for general supply,

and put this electricity at the disposal of the grid system operator.

(5) The obligation under subsections (1) and (3) above shall only apply towards those installation operators who have directly sold electricity if they have fulfilled their obligation under section 17(2) or (3).

(6) So long as an installation operator does not fulfil the obligations under section 6, no entitlement to payment of a tariff shall exist.

## Section 17 Direct selling

(1) Installation operators may sell the electricity generated in the installation to third parties on a calendar-monthly basis (direct selling) if they have reported this to the grid system operator before the start of the previous calendar month. No entitlement to payment of a tariff in accordance with section 16 shall exist for that entire calendar month and for the entire electricity generated in the installation. The period in which the electricity is sold directly shall then be credited against the duration of payment of the tariffs in accordance with section 21(2).

(2) In derogation of subsection (1) second sentence above, installation operators may directly sell a certain percentage of the electricity generated in the installation on a calendar-monthly basis and claim payment of a tariff for the remaining share in accordance with section 16 if they have

1. reported to the grid system operator before the start of the previous calendar month the percentage to be sold directly, and
2. demonstrably not exceeded or fallen below this percentage at any time.

(3) Installation operators who have directly sold electricity in accordance with subsection (1) above may claim payment of tariffs in accordance with section 16 in the following calendar month if they report this to the obligated grid system operator before the start of the previous calendar month.

## Section 18 Calculation of tariffs

(1) The amount of the tariffs paid for electricity depending on the output of the installation shall be determined according to the share of the output of the installation in relation to the threshold value to be applied in each case.

(2) For the purpose of attribution to the threshold values referred to in sections 23 to 28 and in derogation of section 3 no. 6, output within the meaning of subsection (1) above shall be the ratio of the total kilowatt-hours purchased pursuant to section 8 in the calendar year in

question to the total number of full hours for that calendar year less the number of full hours prior to the generation of the first electricity from renewable energy sources in the installation and after final decommissioning of the installation.

(3) The tariffs shall not include value-added tax.

## Section 19

### Tariffs paid for electricity from several installations

(1) Several installations shall be classified as one installation, notwithstanding ownership, and solely for the purpose of determining the tariff to be paid for the latest generator commissioned where

1. they are located on the same plot of land or are otherwise in direct spatial proximity,
2. they generate electricity from the same kind of renewable energy source,
3. the electricity generated in them is paid for in accordance with the provisions of this Act depending on the capacity of the installation, and
4. they were commissioned within a period of twelve consecutive calendar months.

(2) Installation operators may bill electricity produced by several generators using the same kind of renewable energy source via a shared metering device. In such cases the capacity of each individual installation shall be relevant to the calculation of the tariffs, subject to subsection (1) above.

(3) If electricity from several wind-powered installations to which different tariffs are applicable is billed via a shared metering device, the quantities of electricity shall be attributed to the wind-powered installations in proportion to their reference yields.

## Section 20

### Reduction in tariffs and bonuses

(1) Tariffs and bonuses in accordance with sections 23 to 33 shall apply, notwithstanding section 66, to installations commissioned prior to 1 January 2010. In the case of installations commissioned in subsequent calendar years, the tariffs and bonuses shall be reduced degressively each year pursuant to sections (2), (3) and (5) below. The tariffs and bonuses calculated in accordance with the second sentence above in each calendar year shall apply for the entire period in which tariffs are paid in accordance with section 21.

(2) The annual percentage reduction in tariffs and bonuses (degression) for electricity generated from

1. hydropower in installations with a capacity of over 5 megawatts (section 23(3)) shall be 1.0 per cent,
2. landfill gas (section 24) shall be 1.5 per cent,

3. sewage treatment gas (section 25) shall be 1.5 per cent,
4. mine gas (section 26) shall be 1.5 per cent,
5. biomass (section 27) shall be 1.0 per cent,
6. geothermal energy (section 28) shall be 1.0 per cent,
7. wind energy
  - a) from offshore installations (section 31) shall be 5.0 per cent from the year 2015 onwards, and
  - b) from other installations (section 29) shall be 1.0 per cent,
8. solar radiation
  - a) from installations in accordance with section 32
    - aa) shall be 11.0 per cent in the year 2010,
    - bb) shall be 9.0 per cent from the year 2011 onwards, and
  - b) from installations in accordance with section 33(1)
    - aa) with a maximum capacity of 100 kilowatts
      - aaa) shall be 9.0 per cent in the year 2010,
      - bbb) shall be 9.0 per cent from the year 2011 onwards, and
    - bb) with a capacity of over 100 kilowatts
      - aaa) shall be 11.0 per cent in the year 2010,
      - bbb) shall be 9.0 per cent from the year 2011 onwards.

(3) The percentages under subsection (2), no. 8, letter a), bb), letter b), aa), bbb) and letter b), bb), bbb) above

1. shall increase by the following percentage points in 2011 as soon as the capacity of the installations registered with the Federal Network Agency after 31 May 2010 and before 1 October 2010 in accordance with section 16(2) second sentence multiplied by a factor of 3 exceeds
  - a) 3,500 megawatts: 1.0 percentage point,
  - b) 4,500 megawatts: 2.0 percentage points,
  - c) 5,500 megawatts: 3.0 percentage points or
  - d) 6,500 megawatts: 4.0 percentage points;

2. shall increase by the following percentage points from 2012 onwards as soon as the capacity of the installations registered with the Federal Network Agency within the twelve months before 30 September of the previous year in accordance with section 16(2) second sentence exceeds
  - a) 3,500 megawatts: 3.0 percentage points,
  - b) 4,500 megawatts: 6.0 percentage points,
  - c) 5,500 megawatts: 9.0 percentage points or
  - d) 6,500 megawatts: 12.0 percentage points;
3. shall decrease by the following percentage points in 2011 as soon as the capacity of the installations registered with the Federal Network Agency after 31 May 2010 and before 1 October 2010 in accordance with section 16(2) second sentence multiplied by a factor of 3 falls below
  - a) 2,500 megawatts: 1.0 percentage point,
  - b) 2,000 megawatts: 2.0 percentage points or
  - c) 1,500 megawatts: 3.0 percentage points;
4. shall decrease by the following percentage points from 2012 onwards as soon as the capacity of the installations registered with the Federal Network Agency within the twelve months before 30 September of the previous year in accordance with section 16(2) second sentence falls below
  - a) 2,500 megawatts: 2.5 percentage points,
  - b) 2,000 megawatts: 5.0 percentage points or
  - c) 1,500 megawatts: 7.5 percentage points.

The Federal Network Agency, in agreement with the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety and the Federal Ministry of Economics and Technology, shall publish in the Federal Gazette on 31 October of each year the percentage applicable for the following year in accordance with the first sentence above in conjunction with subsection (2) no. 8 above as well as the resulting tariffs.

(4) After deduction of the degression that is deducted after 31 December 2009 for the year 2010, tariffs shall decrease

1. by 12 per cent as a one-off reduction for electricity from installations pursuant to section 32, with the exception of electricity from installations pursuant to section 32(3) nos. 1 and 2 that were commissioned after 30 June 2010 and, if the installation was commissioned after 30 September 2010, by another 3 per cent,

2. by 8 per cent as a one-off reduction for electricity from installations pursuant to section 32(3) nos. 1 and 2 that were commissioned after 30 June 2010 and, if the installation was commissioned after 30 September 2010, by another 3 per cent and
3. by 13 per cent as a one-off reduction for electricity from installations pursuant to section 33(1) that were commissioned after 30 June 2010 and, if the installation was commissioned after 30 September 2010, by another 3 per cent.

The reduction in tariffs pursuant to the first sentence nos. 1 and 2 shall not apply to electricity from installations pursuant to section 32 if the installation was commissioned before 1 January 2011 and was erected within the territorial application of a local development plan (*Bebauungsplan*) adopted before 25 March 2010.

(5) The annual tariffs and bonuses shall be rounded to two decimal places after being calculated in accordance with subsections (1), (2) and (4) above.

## Section 21

### Commencement and duration of tariff payment

(1) The tariffs shall be paid from the time when the generator first produces electricity exclusively from renewable energy sources or from mine gas and has fed this electricity into the grid system in accordance with section 8(1) or (2) or the electricity was first used in accordance with section 33(2).

(2) The tariffs shall each be paid for a period of 20 calendar years, as well as for the year in which the installation was commissioned. In derogation of the first sentence above, the tariffs for electricity from installations in accordance with section 23(3) shall be paid for a period of 15 years, as well as for the year of commissioning. The period under the first and second sentences above shall commence when the generator is commissioned, irrespective of whether it was commissioned using renewable energy sources, mine gas or other sources.

(3) Replacing the generator or other technical or structural components shall not lead to the recommencement or extension of the period in accordance with subsection (2) first sentence above unless the following provisions provide otherwise.

## Section 22

### Setting off payment claims

(1) The set-off of payment claims by the installation operator in accordance with section 16 against a claim by a grid system operator shall only be permissible where the claim is undisputed or has been legally established.

(2) The prohibition of setting off such claims under section 23(3) of the Low-Voltage Connection Ordinance shall not apply where a set-off against claims arising from this Act takes

place.

## **Chapter 2**

### **Special provisions regarding tariffs**

#### Section 23

#### Hydropower

(1) The tariff paid for electricity generated in hydroelectric power installations with a maximum capacity of 5 megawatts shall amount to

1. 12.67 cents per kilowatt-hour for the first 500 kilowatts of output,
2. 8.65 cents per kilowatt-hour for output between 500 kilowatts and 2 megawatts, and
3. 7.65 cents per kilowatt-hour for output between 2 and 5 megawatts.

(2) The tariff for electricity generated in hydroelectric power installations with a maximum capacity of 5 megawatts commissioned prior to 1 January 2009 and modernised in the period since 31 December 2008 shall amount to

1. 11.67 cents per kilowatt-hour for the first 500 kilowatts of output,
2. 8.65 cents per kilowatt-hour for output between 500 kilowatts and 5 megawatts.

The entitlement to payment of a tariff in accordance with the first sentence above shall apply for a period of 20 years, as well as for the year in which the modernisation was completed.

(3) The tariff for electricity generated in hydroelectric power installations with a capacity of over 5 megawatts shall amount to

1. 7.29 cents per kilowatt-hour for the first 500 kilowatts of output,
2. 6.32 cents per kilowatt-hour for output between 500 kilowatts and 10 megawatts,
3. 5.8 cents per kilowatt-hour for output between 10 and 20 megawatts,
4. 4.34 cents per kilowatt-hour for output between 20 and 50 megawatts, and
5. 3.5 cents per kilowatt-hour for output over 50 megawatts.

(4) For electricity generated in hydroelectric power installations with a capacity of over 5 megawatts commissioned prior to 1 January 2009 and modernised in the period since 31 December 2008 whose maximum capacity has been increased since that modernisation, subsection (2) second sentence and subsection (3) above shall apply mutatis mutandis to the electricity which can be ascribed to the increase in capacity. Where the installation had a

maximum capacity of 5 megawatts prior to 1 January 2009, the entitlement to payment of a tariff in accordance with the previously applicable provision shall continue to apply to the electricity which can be ascribed to that share of the capacity.

(5) Subsections (1) to (4) above shall only apply where

1. notwithstanding section 16(3), the electricity was not generated by storage power installations, and
2. after commissioning or modernisation of the installation a good ecological status or a substantial improvement of the previous status has demonstrably been brought about. A substantial improvement of the ecological status shall generally have been achieved where substantial improvements have been made to the
  - a) storage capacity management,
  - b) biological passability,
  - c) minimum water flow,
  - d) solids management, or
  - e) bank structure,

or shallow water zones have been established or abandoned channels or branches have been connected, insofar as the measures in question are necessary individually or in combination, taking into account the relevant management goals, in order to achieve a good ecological status.

The following shall be deemed to be proof of the conditions under the first sentence no. 2 above in conjunction with the second sentence above:

1. for installations in accordance with subsections (1) and (3) above, the presentation of an authorisation for the use of hydropower, and
2. for installations in accordance with subsections (2) and (4) above, the presentation of certification from the competent water authority or from an environmental verifier who is accredited in the field of electricity generation from hydropower; where the modernisation necessitated a renewed authorisation for the use of hydropower, that authorisation shall be deemed as such proof.

(6) Subsections (1) and (3) above shall, furthermore, only apply where the installation was erected

1. in the spatial context of an existing barrage weir or dam which wholly or partly existed before or was newly built primarily for purposes other than the generation of electricity from hydropower, or
2. without complete weir coverage.

Section 24  
Landfill gas

(1) The tariff paid for electricity from landfill gas shall amount to

1. 9.0 cents per kilowatt-hour for the first 500 kilowatts of output, and
2. 6.16 cents per kilowatt-hour for output between 500 kilowatts and 5 megawatts.

(2) Gas withdrawn from a gas network shall be deemed to be landfill gas where the thermal equivalent of the withdrawn quantity of such gas at the end of a calendar year corresponds to the quantity of landfill gas fed into the gas network elsewhere within the territorial application of this Act.

(3) The tariffs in accordance with subsection (1) above shall increase for electricity generated using innovative technologies pursuant to Annex 1 (technology bonus).

Section 25  
Sewage treatment gas

(1) The tariff paid for electricity from sewage treatment gas shall amount to

1. 7.11 cents per kilowatt-hour for the first 500 kilowatts of output, and
2. 6.16 cents per kilowatt-hour for output between 500 kilowatts and 5 megawatts.

(2) Gas withdrawn from a gas network shall be deemed to be sewage treatment gas where the thermal equivalent of the withdrawn quantity of such gas at the end of a calendar year corresponds to the quantity of sewage treatment gas fed into the gas network elsewhere within the territorial application of this Act.

(3) The tariffs in accordance with subsection (1) above shall increase for electricity generated using innovative technologies pursuant to Annex 1 (technology bonus).

Section 26  
Mine gas

(1) The tariff paid for electricity from mine gas shall amount to

1. 7.16 cents per kilowatt-hour for the first 1 megawatt of output,
2. 5.16 cents per kilowatt-hour for output between 1 and 5 megawatts, and
3. 4.16 cents per kilowatt-hour for output over 5 megawatts.

(2) The obligation to pay a tariff shall only apply where the mine gas derives from active or abandoned mines.

(3) The tariffs in accordance with subsection (1) above shall increase for electricity generated using innovative technologies pursuant to Annex 1 (technology bonus).

## Section 27

### Biomass

(1) The tariff paid for electricity from biomass within the meaning of section 64(1) first sentence no. 2 of the Biomass Ordinance shall amount to

1. 11.67 cents per kilowatt-hour for the first 150 kilowatts of output,
2. 9.18 cents per kilowatt-hour for output between 150 and 500 kilowatts,
3. 8.25 cents per kilowatt-hour for output between 500 kilowatts and 5 megawatts, and
4. 7.79 cents per kilowatt-hour for output between 5 and 20 megawatts.

Those quantities of vegetable oil methyl ester required as start-up, priming and supporting fuel shall be deemed to be biomass.

(2) Gas withdrawn from a gas network shall be deemed to be biomass where the thermal equivalent of the withdrawn quantity of such gas at the end of a calendar year corresponds to the quantity of gas from biomass fed into the gas network elsewhere within the territorial application of this Act.

(3) The entitlement to payment of a tariff shall exist for electricity

1. from installations with a capacity of over 5 megawatts insofar as the electricity is from combined heat and power generation pursuant to Annex 3 to this Act,
2. from installations which, along with biomass within the meaning of section 64(1) first sentence no. 2 of the Biomass Ordinance, also use other biomass, only insofar as the installation operator provides proof of which type of biomass is being used by keeping a record of the substances used with details and documentation of the type, quantity and unit, origin and lower calorific value per unit of the substance used.
3. from installations which use gas withdrawn from a gas network within the meaning of subsection (2) above only insofar as the electricity is from combined heat and power generation pursuant to Annex 3 to this Act.

(4) The tariffs shall increase for electricity in accordance with subsection (1) above which is generated

1. using innovative technologies pursuant to Annex 1 (technology bonus),
2. from energy crops or manure pursuant to Annex 2 to this Act (bonus for electricity from energy crops), and

3. in combined heat and power generation pursuant to Annex 3 to this Act by 3.0 cents per kilowatt-hour (CHP bonus).

(5) For electricity from installations subject to licensing in accordance with the Federal Immission Control Act which utilise gas produced from anaerobic fermentation (biogas), the tariff in accordance with subsection (1) nos. 1 and 2 above shall increase by 1.0 cent per kilowatt-hour if the formaldehyde limits established in line with the requirement to minimise emissions set out in the Technical Instructions on Air Quality of 24 July 2002 (Joint Ministerial Gazette p. 511) are complied with and if proof can be furnished of that fact by presentation of certification from the competent authority. This shall not apply to installations utilising gas withdrawn from the gas network within the meaning of subsection (2) above.

## Section 28 Geothermal energy

(1) The tariff paid for electricity from geothermal energy shall amount to

1. 16.0 cents per kilowatt-hour for the first 10 megawatts of output, and
2. 10.5 cents per kilowatt-hour for output over 10 megawatts.

(1a) The tariffs shall increase by 4.0 cents per kilowatt-hour for electricity in accordance with subsection (1) above from installations commissioned prior to 1 January 2016.

(2) The tariffs shall increase by 3.0 cents per kilowatt-hour for electricity in accordance with subsection (1) no. 1 above generated in combination with the use of heat pursuant to Annex 4 (heat use bonus).

(3) The tariffs shall increase by 4.0 cents per kilowatt-hour for electricity in accordance with subsection (1) no. 1 above which is also generated utilising petrothermal technology.

## Section 29 Wind energy

(1) The tariff paid for electricity from wind-powered installations shall amount to 5.02 cents per kilowatt-hour (basic tariff).

(2) In derogation of subsection (1) above, the tariff paid in the first five years after the installation is commissioned shall amount to 9.2 cent per kilowatt-hour (initial tariff). This period shall be extended by two months for each 0.75 per cent of the reference yield by which the yield of the installation falls short of 150 per cent of the reference yield. The reference yield is the calculated yield for the reference installation pursuant to Annex 5 to this Act. The initial tariff shall increase for electricity from wind-powered installations commissioned prior to 1 January 2014 by 0.5 cents per kilowatt-hour (system services bonus) if it demonstrably fulfils the requirements of the Ordinance in accordance with section 64(1) first sentence no. 1 from the date of commissioning.

(3) In derogation of section 16(1) and (3), the grid system operator shall not be obliged to pay a tariff for electricity from installations with a capacity of over 50 kilowatts for which the installation operator provided no proof to the grid system operator prior to commissioning that they are able to achieve at least 60 per cent of the reference yield at the planned location.

(4) The proof referred to in subsection (3) above shall be furnished by presenting a technical expert opinion to be compiled pursuant to the provisions of Annex 5 to this Act and commissioned in consultation with the grid system operator. Where the grid system operator fails to give his consent within four weeks following the request from the installation operator, the clearing house referred to in section 57 shall appoint the expert after consulting the *Fördergesellschaft Windenergie e. V. (FGW)*. The installation operator and the grid system operator shall each bear 50 per cent of the costs of the technical expert opinion.

### Section 30

#### Wind energy - repowering

The initial tariff paid for electricity from wind-powered installations which are permanent replacements for one or more existing installations within the same or adjoining district (repowering installations)

1. which were commissioned at least ten years after the installations they replace, and
2. whose capacity amounts to at least two times, at most five times that of the installations they replace,

shall increase by 0.5 cents per kilowatt-hour. Moreover, section 29 shall apply *mutatis mutandis*; the obligation to furnish proof under section 29(3) shall not apply to installations which are replacements for installations located on the same site for which the relevant proof has already been furnished. Section 21(2) shall remain unaffected.

### Section 31

#### Wind energy - offshore

(1) The tariff paid for electricity from offshore installations shall amount to 3.5 cents per kilowatt-hour (basic tariff).

(2) During the first twelve years after the commissioning of the installation the tariff shall amount to 13.0 cents per kilowatt-hour (initial tariff). For electricity from installations commissioned prior to 1 January 2016, the initial tariff paid in accordance with the first sentence above shall increase by 2.0 cents per kilowatt-hour. The period in accordance with the first and second sentences above in which the initial tariff is paid shall be extended in the case of electricity from installations located at least twelve nautical miles seawards and in a water depth of at least 20 metres by 0.5 months for each full nautical mile beyond 12 nautical miles and by 1.7 months for each additional full metre of water depth.

(3) Subsections (1) and (2) above shall not apply to electricity from offshore wind-powered installations whose erection was licensed after 31 December 2004 in an area of Germany's exclusive economic zone or coastal waters which has been declared a protected area of nature and landscape in accordance with section 57 in conjunction with section 32(2) of the Federal Nature Conservation Act (*Bundesnaturschutzgesetz*) or in accordance with *Land* legislation. The first sentence above shall also apply to such areas which the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety has notified to the Commission of the European Communities as sites of Community importance or as European protection areas for birds, until they have been declared protected areas.

## Section 32 Solar radiation

(1) The tariff paid for electricity from installations generating electricity from solar radiation shall amount to 31.94 cents per kilowatt-hour.

(2) In cases where the installation is not attached to or on top of a building structure used primarily for purposes other than the generation of electricity from solar radiation, the grid system operator shall only be obliged to pay a tariff if the installation was erected

1. within the territorial application of a local development plan (*Bebauungsplan*) within the meaning of section 30 of the Federal Building Code (*Baugesetzbuch*) in the version promulgated on 23 September 2004 (Federal Law Gazette I p. 2414), as last amended by Article 1 of the Act of 21 December 2006 (Federal Law Gazette I p. 3316), as amended, or
2. on a site for which a procedure in accordance with section 38 first sentence of the Federal Building Code was carried out.

(3) For electricity from an installation in accordance with subsection (2) above erected within the territorial application of a local development plan drawn up or amended at least also for this purpose after 1 September 2003, the grid system operator shall only be obliged to pay a tariff if the installation is located on

1. plots of land which were already sealed when the decision on drawing up or amending the local development plan was adopted,
2. land previously used for economic, transport, housing or military purposes,
3. green areas which were designated for the erection of this installation in a local development plan adopted prior to 25 March 2010 and which had been used as cropland for the three years preceding the point in time when the decision on drawing up or amending the local development plan was adopted provided that the installation was commissioned prior to 1 January 2011, or

4. land along motorways and railway tracks at a distance of up to 110 metres measured from the outside edge of the paved carriageway.

The first sentence above shall not apply if the installation is located on land which had been designated as a business park or an industrial estate within the meaning of section 8 or section 9 of the Federal Land Utilisation Ordinance (*Baunutzungsverordnung*) in the version promulgated on 23 January 1990 (Federal Law Gazette I p. 132) as last amended by Article 3 of the Act of 22 April 1993 (Federal Law Gazette I p. 466) before 1 January 2010. The second sentence above shall apply *mutatis mutandis* where a local development plan for a specific project pursuant to section 12 of the Federal Building Code stipulates allowable land uses in accordance with section 8 or section 9 of the Federal Land Utilisation Ordinance.

### Section 33

#### Solar radiation - installations attached to or on top of buildings

(1) The tariff paid for electricity from installations generating electricity from solar radiation which are exclusively attached to or on top of a building or noise protection wall shall amount to

1. 43.01 cents per kilowatt-hour for the first 30 kilowatts of output,
2. 40.91 cents per kilowatt-hour for output between 30 and 100 kilowatts,
3. 39.58 cents per kilowatt-hour for output between 100 kilowatts and 1 megawatt, and
4. 33.0 cents per kilowatt-hour for output over 1 megawatt.

(2) For electricity from installations pursuant to subsection (1) above with a maximum capacity of 500 kilowatts commissioned before 1 January 2012, the installation operator shall be entitled to payment of a tariff where the installation operator or a third party is using the electricity himself in the immediate vicinity of the installation and can furnish proof of that fact. Tariffs pursuant to subsection (1) above shall be reduced for that electricity

1. by 16.38 cents per kilowatt-hour for the share of the electricity that does not exceed 30 per cent of the electricity generated by the installation in the same year and
2. by 12 cents per kilowatt-hour for the share of the electricity that exceeds 30 per cent of the electricity generated by the installation in the same year.

(3) Buildings shall mean roofed building structures which can be independently used and entered by humans and are primarily designed for the purpose of protecting humans, animals or objects.

**Part 4**  
**Equalisation scheme**

**Chapter 1**  
**Nationwide equalisation scheme**

Section 34  
Delivery to transmission system operator

Grid system operators shall immediately deliver to the upstream transmission system operator the electricity for which tariffs are paid in accordance with section 16.

Section 35  
Tariffs paid by transmission system operator

(1) The upstream transmission system operator shall pay tariffs in accordance with sections 18 to 33 for the quantity of electricity for which the grid system operator has paid tariffs in accordance with section 16.

(2) Any avoided charges for the use of the grid system determined in accordance with section 18(2) and

(3) of the Ordinance on Electricity Grid Access Charges of 25 July 2005 (Federal Law Gazette I p. 2225), as last amended by Article 3a of the Ordinance of 8 April 2008 (Federal Law Gazette I p. 693), as amended, shall be deducted from the tariffs. Section 8(4) no. 2 shall apply *mutatis mutandis*.

Section 36  
Equalisation amongst transmission system operators

(1) The transmission system operators shall record the different quantities and temporal sequence of the quantities of electricity for which tariffs were paid in accordance with section 16, provisionally equalise the quantities of electricity amongst themselves without delay and settle the accounts with regard to the quantity of electricity and tariffs paid pursuant to subsection (2) below.

(2) By 31 July of each year the transmission system operators shall determine the quantity of electricity which they purchased in accordance with section 8 or section 34 and paid for in accordance with section 16 or section 35 in the previous calendar year and which they have provisionally equalised in accordance with subsection (1) above, and shall determine the percentage share of this quantity in relation to the total quantity of electricity which the utility companies delivered to the final consumers in each area served by the individual transmission system operator in the previous calendar year.

(3) Transmission system operators who had to purchase quantities greater than this average share shall be entitled to sell electricity to and receive tariffs from the other transmission system operators in accordance with sections 16 to 33 until these system operators have also purchased a quantity of electricity equal to the average share.

(4) The transmission system operators shall transmit the electricity to downstream utility companies.

### Section 37 Delivery to suppliers

(1) Utility companies which deliver electricity to final consumers shall purchase and pay for that share of the electricity which their regular transmission system operator purchased and paid for pursuant to the provisions of section 35 in accordance with a profile made available in due time and approximated to the actually purchased quantity of electricity pursuant to section 8 in conjunction with section 16. This shall not apply to utility companies which, of the total quantity of electricity supplied by them, supply at least 50 per cent in accordance with the provisions of sections 23 to 33.

(2) The share of the electricity to be purchased by a utility company in accordance with subsection (1) above shall be placed in relation to the quantity of electricity delivered by the utility company concerned and shall be determined in such a way that each utility company receives a relatively equal share. The share shall be calculated as the ratio of the total quantity of electricity paid for in accordance with section 16 to the total quantity of electricity delivered to final consumers.

(3) The tariffs as specified in subsection (1) above shall be calculated as the expected average tariffs per kilowatt-hour paid two quarters earlier in accordance with section 16 by all grid system operators combined, less the charges for use of the grid avoided pursuant to section 35(2).

(4) The transmission system operators shall assert claims held against the utility companies in accordance with subsection (1) above arising from equalisation in accordance with section 36 by 31 August of the year following the feeding-in of electricity. Equalisation for the actual quantities of electricity purchased and the tariffs paid shall take place in monthly instalments before 30 September of the following year.

(5) Electricity purchased in accordance with subsection (1) above may not be sold below the tariffs paid in accordance with subsection (3) above if it is marketed as electricity produced from renewable energy sources or as comparable electricity.

(6) Final consumers who purchase electricity from a third party and not from a utility company shall be placed on an equal footing with utility companies.

Section 38  
Subsequent corrections

Where a valid court decision in the principal proceedings or another enforceable title which was only issued after billing pursuant to section 36(1) or section 37(4) above leads to any changes regarding the quantity of electricity to be billed or the payments of tariffs, such changes shall be taken into account in the next billing statement.

Section 39  
Advance payments

Monthly advance payments of an appropriate amount shall be made for the anticipated equalisation tariffs.

**Chapter 2**  
**Special equalisation scheme for electricity-intensive enterprises and rail operators**

Section 40  
Basic principle

(1) The Federal Office of Economics and Export Control shall upon request limit for a delivery point the share of the quantity of electricity in accordance with section 37 which is delivered by the utility companies to the final consumers which are electricity-intensive manufacturing enterprises with high electricity consumption or rail operators. This limitation aims to reduce the electricity costs for these enterprises and thereby maintain their international and inter-modal competitiveness, insofar as this is compatible with the goals of this Act and the limit imposed is still compatible with the interest of the electricity users as a whole.

(2) To limit the share of the electricity delivered, a certain percentage shall be fixed for the delivery point in question. A standard percentage shall be determined for all applicants in such a way that the product of the percentage and the difference between the anticipated tariffs in accordance with Section 37(3) for the following year and the average expected purchase costs for the following year equals 0.05 cents per kilowatt-hour. The average anticipated purchase costs shall in particular be the average purchase costs on the futures market.

Section 41  
Manufacturing enterprises

(1) In the case of manufacturing enterprises, a limit shall only be set where they furnish proof that and to what extent, in the last financial year,

1. the electricity purchased from a utility company in accordance with section 37(1) and used by the enterprises themselves exceeded 10 gigawatt-hours at a certain delivery

point,

2. the ratio of the electricity costs of the enterprise to its gross value added as defined by the Federal Statistical Office, *Fachserie 4*, series 4.3, Wiesbaden 2007<sup>2</sup>, exceeded 15 per cent,
3. an individual share of the electricity in accordance with section 37 has been delivered to and used by the company, and
4. the enterprise has ascertained and assessed energy consumption and the potential for energy savings and this process has been certified.

(2) Proof of the requirements pursuant to subsection (1) nos. 1 to 3 above shall be furnished by producing the contracts on electricity supply and electricity bills for the last completed financial year and the certification of a chartered or certified accountant based on the financial statement of the last completed financial year. Proof of the requirements pursuant to subsection (1) no. 4 above shall be furnished by submission of the certification issued by the certifier.

(2a) New enterprises founded after 30 June of the previous year may, in derogation of subsection (1) above, submit data regarding a short business year. Subsection (2) above shall apply *mutatis mutandis*. New enterprises shall be defined as only those enterprises which did not arise on account of a conversion of form. The date on which the new enterprise was founded shall be the date on which the enterprise purchased electricity for the purposes of manufacturing or train operations for the first time.

(3) In the case of enterprises for which the purchased quantity of electricity referred to in subsection (1) no. 1 above is below 100 gigawatt-hours or for which the ratio of electricity costs to gross value added was below 20 per cent, the limitation in accordance with section 40 shall only apply to the total quantity of electricity exceeding 10 per cent of the electricity purchased and used at that delivery point in the last completed financial year; proof shall be furnished in accordance with subsection (2) above. If the enterprise is serviced by several utility companies in the concession period, the limit pursuant to section 40(2) shall be shared by the utility companies in accordance with the individual quantities which they deliver to this final consumer at the delivery point; the enterprise shall make available to the utility companies the necessary information for the calculation of the individual shares.

(4) Delivery points shall be all spatially connected electrical installations of the enterprise at a given industrial site which is connected to the grid of the grid system operator by one or several withdrawal points.

(5) Subsections (1) to (4) above shall apply *mutatis mutandis* to the independent parts of the enterprise.

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<sup>2</sup> Official information: This publication can be ordered from the *Statistisches Bundesamt*, D – 65180 Wiesbaden.

## Section 42 Rail operators

Section 41(1) nos. 1 and 3 and subsections (2), (2a) and (3) shall apply *mutatis mutandis* to rail operators, with the following proviso:

1. Account will only be taken of those quantities of electricity which are directly used for rail transport operations.
2. Rail operators shall mean those enterprises whose consumption was below 100 gigawatt-hours.
3. The delivery point shall be understood as the total of the consumption points in the rail transport operations of the enterprise.

## Section 43 Deadline for applications and effect of decisions

(1) The application in accordance with section 40(1) in conjunction with section 41 or section 42, including the complete application documents, shall be submitted by 30 June of the given year (preclusive period). The decision shall be binding to the applicant, the utility company and the regular transmission system operator. It shall take effect on 1 January of the following year for the duration of one year. The effects caused by a prior decision shall not be taken into account when calculating the ratio of electricity costs to gross value-added pursuant to section 41(1) no. 2 and subsection (3).

(2) In derogation of subsection (1) first sentence above, new businesses within the meaning of section 41(2a) may submit the application up until 30 September of the given year. The first sentence shall apply *mutatis mutandis* to rail operators.

(3) The claim by the regular transmission system operator responsible for the delivery point arising from section 37 against the utility company concerned shall be limited in accordance with the decision by the Federal Office of Economics and Export Control; the transmission system operators shall take such limits into consideration as required by section 36.

## Section 44 Information obligation

Those benefiting from the decision taken in accordance with section 40 shall, upon request, provide the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety and its authorised representatives with information about all the facts which are necessary in order to assess whether the objectives under section 40(1) second sentence will be met. Trade and business secrets shall not be disclosed.

**Part 5**  
**Transparency**

**Chapter 1**  
**Notification and publication obligations**

Section 45  
Basic principle

Installation operators, grid system operators and utility companies shall make available to each other without delay the data required for the nationwide equalisation scheme in accordance with sections 34 to 39, in particular those referred to in sections 46 to 50. Section 38 shall apply *mutatis mutandis*. Data recorded and published in the Register of Installations to be established in accordance with section 64(1) first sentence no. 9 shall no longer be transmitted in accordance with sections 45 to 52 from the date of publication of the data.

Section 46  
Installation operators

Installation operators shall

1. inform the grid system operator of the location and capacity of the installation as well as of the quantity of electricity in accordance with section 33(2),
2. in the case of biomass installations in accordance with section 27(1), inform the grid system operator of which materials are used in accordance with section 27(3) no. 2 and subsection (4) no. 2, as well as provide him with information regarding the technologies used in accordance with section 27(4) nos. 1 and 3, and
3. by 28 February of each year provide the grid system operator with the data required for the final accounts of the previous year.

Section 47  
Grid system operators

(1) Grid system operators which are not transmission system operators shall

1. communicate, in summary form, the details provided by the installation operators in accordance with section 46, the actual tariffs paid and the other details required for the nationwide equalisation scheme to the upstream transmission system operators without delay after these data become available, and
2. communicate, by 31 May of each year, using forms to be made available by the trans-

mission system operator on his website, the final accounts in electronic form for the previous year both for each individual installation and for all the installations combined; section 19(2) and (3) shall apply *mutatis mutandis*.

(2) The following are especially important for determining the quantities of electricity and tariff payments to be equalised in accordance with subsection (1) above:

1. details regarding the voltage to which the installation is connected,
2. the amount of the avoided charges in accordance with section 35(2),
3. details regarding the extent to which the grid system operator has purchased quantities of electricity from a downstream grid system, and
4. details regarding the extent to which the grid system operator has delivered the quantities of electricity in accordance with no. 3 above to final consumers, grid system operators or utility companies or has used them himself.

#### Section 48

##### Transmission system operators

(1) Section 47 shall apply *mutatis mutandis* for transmission system operators, with the proviso that the details and the final accounts in accordance with section 47(1) for installations which are directly or indirectly connected to their grid in accordance with section 8(2) shall be published on their website.

(2) Furthermore, transmission system operators shall

1. inform their regular utility companies without delay as soon as they are available about the quantities of electricity which are to be purchased based on the tariffs actually paid and paid for in accordance with section 37(3), and
2. present to their regular utility companies, by 31 July of each year, the final accounts for the previous year. Section 47(2) shall apply *mutatis mutandis*.

#### Section 49

##### Utility companies

Utility companies shall immediately inform their regular transmission system operator in electronic form of the quantity of electricity delivered to final consumers and present, by 31 May of each year, the final accounts for the previous year.

Section 50  
Certification

Grid system operators and utility companies may request that the final accounts in accordance with section 47(1) no. 2, sections 48 and 49 be certified by a chartered or certified accountant.

Section 51  
Data to be provided to the Federal Network Agency

(1) Grid system operators shall present to the Federal Network Agency in electronic form the details which they receive from the installation operators in accordance with section 46, the details in accordance with section 47(2) no. 1 and the final accounts in accordance with section 47(1) no. 2 and section 48(2) no. 2, including the data required to check these, before the expiry of the respective deadlines; this provision shall apply *mutatis mutandis* to utility companies as regards the details referred to under section 49 and, insofar as they settle differential costs pursuant to section 54(1), to the purchase costs per kilowatt-hour to be added.

(2) Installation operators who do not lay claim to payment of tariffs for electricity from renewable energy sources in accordance with the provisions of this Act but sell it to third parties shall inform the Federal Network Agency in electronic form of the quantity of this electricity by 31 May of each year.

(3) Insofar as the Federal Network Agency makes forms available, the grid system operators, utility companies and installation operators shall transmit the data using these forms. The data in accordance with subsections (1) and (2) above, with the exception of the purchase costs, shall be made available to the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety and to the Federal Ministry of Economics and Technology by the Federal Network Agency for statistical purposes, for the evaluation of this Act and for reporting in accordance with section 65.

Section 52  
Data to be made public

(1) Grid system operators and utility companies shall publish on their website

1. any details in accordance with sections 45 to 49 immediately after their transmission, and
2. the report concerning the ascertainment of data they have provided in accordance with sections 45 to 49, without delay after 30 September of any given year,

and retain this information until the end of the following year; section 48(1) shall remain unaffected.

(2) The information and the report must enable a qualified third party to fully understand the equalised quantities of electricity and tariff payments without further information being required.

## **Chapter 2**

### **Differential costs**

#### Section 53 Notification

(1) Utility companies delivering electricity to final consumers shall be entitled to give notice to any third parties of the difference between the tariffs to be expected in the respective accounting period in accordance with section 37(3) and the purchase costs per kilowatt-hour (differential costs).

(2) When giving notice of the differential costs, the number of kilowatt-hours of electricity from renewable energy sources and from mine gas on which the calculation of the differential costs is based must be stated in a clearly visible and easily legible fashion. The calculation of the differential costs shall be laid out in a manner which is understandable without the need for further information.

(3) Costs which may be added to the charges for the use of the grid may not be shown as differential costs.

#### Section 54 Billing

(1) All utility companies giving notice of differential costs must settle these for the previous year vis-à-vis final consumers by no later than 30 November of the following year and thereby use the actual electricity purchase costs as a basis. Section 53(2) shall apply *mutatis mutandis*.

(2) In derogation of subsection (1) first sentence above, the billing may also be based on the difference between the tariffs paid in accordance with section 37(3) and the average, un-weighted price on the European Energy Exchange AG in Leipzig<sup>3</sup> for annual futures for the calendar year relevant to the billing. The relevant trading period in each case shall be between 1 October two years before the year in question and 30 September one year before the year in question.

(3) Utility companies giving notice to their customers of anticipated differential costs shall reimburse the actual excess differential costs. The burden of proof regarding the correctness of the billing shall be on the utility company.

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<sup>3</sup> Official information: Available on the internet at: [www.eex.com](http://www.eex.com).

### **Chapter 3**

#### **Guarantee of origin and prohibition of multiple sale**

##### Section 55

##### Guarantee of origin

(1) For electricity from renewable energy sources, installation operators may request a guarantee of origin to be issued by an environmental verifier who is accredited in the field of electricity generation from renewable energy sources, or in the case of electricity from hydropower, by an environmental verifier who is accredited in the field of electricity generation from hydropower.

(2) Such guarantee of origin must specify:

1. the energy sources from which the electricity was generated, listed according to type and major components, including the information to what extent the electricity was generated from renewable energy sources within the meaning of Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market (OJ L 283 p. 33), as last amended by Directive 2006/108/EC of the Council of 20 November 2006 (OJ L 363 p. 414),
2. where biomass is used, the extent to which it is exclusively biomass within the meaning of the Ordinance pursuant to section 64(1) first sentence no. 2,
3. the name and address of the installation operator,
4. the quantity of electricity generated in the installation, the period in which it was generated and to what extent it was paid for in accordance with sections 16 to 33, and
5. the location, the capacity and the date of commissioning of the installation.

(3) Such guarantees of origin shall only be used if the information required in subsection (2) above is complete.

(4) Guarantees of origin for electricity from renewable energy sources from installations in other European Union Member States issued in accordance with Article 5 para. 2 of Directive 2001/77/EC shall count as proof of the points referred to in Article 5 para. 3 of the Directive.

##### Section 56

##### Prohibition of multiple sale

(1) Electricity from renewable energy sources and from mine gas, as well as landfill gas or sewage treatment gas fed into a gas network or gas from biomass may not be sold or otherwise transferred more than once or sold to a third party contrary to the provisions of section

34 or section 36(4).

(2) Installation operators paid statutory tariffs for electricity from renewable energy sources or from mine gas shall not be permitted to forward any guarantees for this electricity. Where an installation operator forwards such a guarantee for electricity from renewable energy sources or from mine gas, no statutory tariffs may be paid for this electricity.

(3) While emissions reduction units can be produced within the framework of a joint project implementation in accordance with the Project Mechanisms Act of 22 September 2005 (Federal Law Gazette I p. 2826), as last amended by Article 3 of the Act of 7 August 2007 (Federal Law Gazette I p. 1788), as amended, to reduce emissions from the installation, the electricity from the installation concerned may not be paid for in accordance with sections 16 to 33.

## **Part 6**

### **Legal protection and official procedure**

#### Section 57

##### Clearing house

The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety may establish a clearing house to settle any disputes and issues of application arising under this Act.

#### Section 58

##### Consumer protection

Sections 8 to 14 of the Unfair Competition Act shall apply mutatis mutandis to violations against sections 16 to 33.

#### Section 59

##### Temporary legal protection

(1) Upon request of the installation operator, the court responsible for the principal proceedings may, before an installation has even been erected and in consideration of the merits of the individual case, order the debtor of the claims referred to in sections 5, 8, 9 and 16, by way of a preliminary injunction, to provide information, to temporarily connect the installation, to immediately optimise, boost or expand his grid system, to purchase the electricity and to make an advance payment of an equitable and fair amount of money.

(2) The preliminary injunction may be issued even if the conditions set out in sections 935 and 940 of the Code of Civil Procedure are not met.

## Section 60

### Use of maritime shipping lanes

While installation operators lay claim to payment of tariffs in accordance with section 16 they may utilise the German exclusive economic zone or the costal waters free of charge for the operation of the installation.

## Section 61

### Tasks of the Federal Network Agency

(1) The Federal Network Agency shall have the task of monitoring that

1. the utility companies are only charged the tariffs paid in accordance with section 35 less the avoided charges,
2. the data are submitted in accordance with section 51 and published in accordance with section 52, and
3. third parties are only given notice of differential costs pursuant to sections 53 and 54.

It shall support the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety in the evaluation of this Act and in the compiling of the progress report.

(2) The provisions set out in Part 8 of the Energy Industry Act shall apply *mutatis mutandis* to the exercising of tasks in accordance with subsection (1) above, with the exception of section 69(1) second sentence, subsection (10), sections 91, 92 and 95 to 101, as well as Chapter 6.

(3) The decisions of the Federal Network Agency in accordance with subsection (2) above shall be taken by the ruling chambers; section 59(1) second and third sentences, subsections (2) and (3) and section 60 of the Energy Industry Act shall apply *mutatis mutandis*.

(4) The Federal Network Agency shall charge costs (fees and expenses) for official acts carried out in accordance with subsections (2), (3) in conjunction with section 65 of the Energy Industry Act. The Federal Ministry of Economics and Technology shall be authorised to establish rules governing rates of charges by means of an ordinance, without the consent of the Bundesrat.

## Section 62

### Administrative fines provisions

(1) An administrative offence shall be deemed to have been committed by any party who wilfully or negligently

1. contrary to section 56(1), sells or otherwise transfers electricity or gas more than once or, contrary to section 34 or section 36(4), sells it to a third party, or

2. contravenes an enforceable order in accordance with section 64(2) in conjunction with section 65(1) or (2) or section 69(7) first sentence or subsection (8) first sentence of the Energy Industry Act.

(2) The administrative offence may be punished by the imposition of an administrative fine of up to one hundred thousand euros.

(3) The administrative authority within the meaning of section 36(1) no. 1 of the Administrative Offences Act shall be the Federal Network Agency.

### Section 63 Supervision

In the performance of tasks assigned to them by this Act, federal authorities shall be supervised by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety. This shall not apply to the supervision of the Federal Network Agency.

## **Part 7**

### **Authorisation to issue ordinances, progress report, transitional provisions**

### Section 64 Authorisation to issue ordinances

(1) The German Government shall be authorised to issue ordinances without the consent of the Bundesrat to regulate the following:

1. Requirements in accordance with section 6 no. 2, section 29(2) fourth sentence and section 66(1) no. 6 for wind-powered installations to improve their grid integration and in regard to lighting (system services bonus). The ordinance referred to in the first sentence above shall, in particular, contain the following requirements, where implementation is economically reasonable:
  - a) for installations in accordance with section 29(2) fourth sentence regarding
    - conduct on the part of the installations in the event of faults,
    - maintaining voltages and providing reactive power,
    - maintaining frequencies,
    - proof procedures,
    - re-establishing supply, and
    - enlarging the existing wind parks;

- b) for installations in accordance with section 66(1) no. 6 regarding
  - conduct on the part of the installations in the event of faults,
  - maintaining frequencies,
  - proof procedures,
  - re-establishing supply, and
  - upgrading installations in existing wind parks;
- 2. Within the scope of application of section 27, which materials shall be classed as biomass, which technical procedures may be applied to generate electricity and which environmental requirements must thereby be met;
- 3. In addition to Annex 1, procedures or technologies for which a technology bonus may be paid or may no longer be paid, in order to ensure that the bonus is only paid for state-of-the-art, innovative technologies, including the technical and legal conditions for using the gas network and the recognition of gas withdrawn from a gas network as landfill gas, sewage treatment gas or biogas;
- 4. In addition to Annexes 3 and 4, authorised or unauthorised uses of heat;
- 5. In addition to the definition in Annex 5, provisions regarding the determination and application of the reference yield;
- 6. For the better integration of electricity from renewable energy sources, especially
  - a) financial incentives, including their eligibility criteria, form and billing modalities, in particular with a view to their continuation, demand-based feed-in, as well as for the better grid and market integration of electricity from renewable energy sources; and
  - b) the preconditions for participation in the control energy market.
- 7. In addition to sections 45 to 52, requirements regarding the type and preparation of data to be supplied, where required for the nationwide equalisation scheme to be understandable;
- 8. Technical requirements for installations in order to guarantee the technical safety and stability of the system;
- 9. To further increase transparency and to simplify the nationwide equalisation scheme, in particular
  - a) the establishment of a public directory in which installations are to be registered (Register of Installations),

- b) the form of the Register of Installations, the information to be transmitted, those obliged to transmit information,
- c) regulations governing data protection, as well as the levying of charges, official acts for which charges are levied and rates of charges.

The ordinances in accordance with the first sentence nos. 2, 5 and 6 above require the consent of the German Bundestag.

(2) The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety shall be authorised, in agreement with the Federal Ministry of Food, Agriculture and Consumer Protection, to issue ordinances with the consent of the German Bundestag and without the consent of the Bundesrat to regulate the following:

1. The fact that the entitlement to payment of a tariff for electricity from biomass shall only apply where proof can be furnished that
  - a) when cultivating the utilised biomass, certain requirements of sustainable farming of agricultural and forest areas and the protection of natural habitats have been met,
  - b) when generating the electricity from the utilised biomass, a certain reduction in greenhouse gases is achieved,

including the requirements within the meaning of letters a) and b), the conditions for determining the reduction in greenhouse gases within the meaning of letter b) and the required proof;

2. In addition to Annex 2, materials which are classed or not classed as energy crops or materials which are classed as purely plant-based by-products, including their standard biogas yield.

(3) The German Government shall be authorised to issue an ordinance with the consent of the German Bundestag and without the consent of the Bundesrat regarding the further development of the nationwide equalisation scheme, in particular regarding the following:

1. Releasing the transmission system operators from the obligation to transmit the electricity in accordance with section 36(4) to their downstream utility companies.
2. Obliging the transmission system operators to market the electricity efficiently.
3. Obliging the transmission system operators, in particular for the setting off of revenues, the necessary transaction costs and tariff payments, to hold a joint, transparent account specifically for these transactions (EEG account).
4. Releasing the utility companies delivering electricity to final consumers from the obligation to purchase and pay for a share of the electricity in accordance with section 37(1)

first sentence.

5. Obliging the transmission system operators together and on the basis of the forecast quantities of electricity from renewable energy sources and from mine gas for the following calendar year, the probable costs and revenues for the following calendar year and setting off the balance on the EEG account for the following calendar year, to determine and publish a nationwide, standardised apportionment in the framework of this Act (EEG apportionment).
6. Obliging the utility companies delivering electricity to final consumers to pay the relevant EEG apportionment; advance payments are to be made to that end.
7. Transferring tasks from the transmission system operators to third parties; provisions governing the procedure for this, including the invitation to tenders for the services provided by the transmission system operators as part of the nationwide equalisation scheme, or the quantities of electricity covered by this Act, requirements regarding marketing, including the possibility of compensating the tariff payments or transaction costs by means of financial incentives, the monitoring of marketing, requirements in regard to marketing, running an account and determining of the EEG apportionment, including the obligations of publication and transparency, deadlines and transitional provisions regarding financial equalisation, including the authorisation of the Federal Network Agency, in agreement with the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety and the Federal Ministry of Economics and Technology, to determine the relevant stipulations.
8. Adaptations necessary in regard to the rules governing direct selling as well as the necessary adaptations of the special equalisation scheme for electricity-intensive enterprises and rail operators, the provision governing the possibility of making subsequent corrections, the authorisations of the Federal Network Agency, the notification and publication obligations, as well as the provision governing differential costs with regard to the advanced equalisation scheme.

#### Section 65

##### Progress report

The German Government shall evaluate this Act and submit a progress report to the German Bundestag by 31 December 2011 and subsequently every four years thereafter.

#### Section 66

##### Transitional provisions

(1) In the case of electricity from installations commissioned prior to 1 January 2009, instead of sections 6, 20(2), section 21(2), section 23(1) and (3), sections 24 to 26(1), sections 27 and 28(1), section 29(1) and (2), sections 30, 32, 33, as well as Annexes 1 and 3, the provi-

sions of the Renewable Energy Sources Act of 21 July 2004 (Federal Law Gazette 1 p. 1918) in the version applicable on 31 December 2008 shall apply, with the following provisos:

1. The technical and operational requirements set out in section 6 no. 1 must be met from 1 January 2011.
2. In the case of electricity from biomass installations, section 27(1) no. 1 and subsection (2) shall apply. In the context of Annex 2, the following shall not apply:
  - a) Nos. I.2, I.4, and
  - b) No. IV.8, insofar as this concerns vinasse from an agricultural distillery within the meaning of section 25 of the Federal Spirits Monopoly Act in the version published in the Federal Law Gazette III, No. 612-7, as last amended by section 7 of the Act of 13 December 2007 (Federal Law Gazette I p. 2897), if it is not subject to any other recovery requirements pursuant to Article 25(2) no. 3 or subsection (3) no. 3 of the Federal Spirits Monopoly Act.
3. In the case of electricity from biomass installations first generated after 31 December 2008 using combined heat and power pursuant to Annex 3, the tariff shall increase by 3.0 cents per kilowatt-hour (CHP bonus). Section 20(1), subsection (2) no. 5 and subsection (5) shall apply mutatis mutandis. In the case of electricity from other biomass installations generated using combined heat and power pursuant to Annex 3, the tariff shall increase by 3.0 cents per kilowatt-hour for the first 500 kilowatts of output.
4. The entitlement to payment of a tariff for electricity from biomass within the meaning of the Biomass Ordinance adopted in accordance with section 64(1) first sentence no. 2 shall also apply to electricity from installations which use other biomass as well as biomass within the meaning of the Biomass Ordinance, insofar as the installation operator provides proof of which type of biomass is being used by keeping a record of the substances used with details and documentation of the type, quantity and unit, origin and lower calorific value per unit of the substance used.
  - 4a. In the case of electricity from biomass installations using gas produced from anaerobic fermentation of biomass (biogas), the tariff shall increase by 1.0 cent per kilowatt-hour for the first 500 kilowatts of output if the formaldehyde limits established in line with the requirement to minimise emissions set out in the Technical Instructions on Air Quality are complied with and if proof can be furnished of that fact by presentation of certification from the competent authority. This shall not apply to installations using gas withdrawn from the gas network within the meaning of section 27(2).
5. In the case of electricity generated in installations with a capacity of over 20 megawatts which
  - a) using at least 75 per cent black liquor in relation to the lower calorific value,

- b) achieve a CHP share of electricity generated within the meaning of section 3(4) of the Combined Heat and Power Act of at least 70 per cent,
- c) furnish proof of at least 5,000 hours of full capacity utilisation, and
- d) were commissioned prior to 1 August 2004,

the entitlement to payment of the minimum tariffs shall also exist with a capacity of over 20 megawatts for the difference between the electricity generated in the installation and the electricity used to produce the cellulose during whose preparation black liquor is produced. The tariff shall amount to 7.0 cents per kilowatt-hour. Along with the tariff in accordance with the first sentence above, no entitlements may be allocated to the installation in accordance with the Greenhouse Gas Emissions Trading Act. Any existing decision regarding allocation to the installation shall be revoked with effect for the future. Proof of the requirements under the first sentence, letters a) to c) above and the quantity of electricity to be paid for shall be furnished to the grid system operator annually by presentation of a certificate issued by an environmental verifier who is accredited in the field of electricity generation from renewable energy sources. The proof in accordance with the first sentence letter b) above shall correspond to the generally accepted rules of technology; the generally accepted rules of technology shall be assumed to have been complied with where the report has been compiled in accordance with Worksheet FW 2008 - *Zertifizierung von KWK-Anlagen - Ermittlung des KWK-Stromes* (Certification of CHP Installations - Determining the CHP Electricity) in the applicable version as published by the *Arbeitsgemeinschaft für Wärme und Heizkraftwirtschaft (AGFW)*.

- 6. The tariff paid for electricity from wind-powered installations commissioned after 31 December 2001 and prior to 1 January 2009 shall increase for a period of five years by 0.7 cents per kilowatt-hour (system services bonus) as soon as these installations first meet the requirements set out in the Ordinance under section 64(1) first sentence no. 1 following an upgrade carried out prior to 1 January 2011.

(1a) Installations which were operated as part of a modular installation before 1 January 2009 shall be classified as individual installations by derogation from section 19(1). Multiple installations which

- 1. consist of multiple generators and
- 2. have an energy source facility for each of these generators, in particular a facility for producing gaseous biomass or for storing liquid biomass, and
- 3. have no direct connection to structural works

shall be classified as modular installations.

(2) Until an ordinance in accordance with section 64(1) first sentence no. 2 has been issued, insofar as reference is made in this Act to the ordinance, the Biomass Ordinance of 21 June 2001 (Federal Law Gazette I p. 1234), as amended by the Ordinance of 9 August 2005 (Federal Law Gazette I p. 2419), as amended, shall apply in its place.

(3) This Act shall not apply to installations of which over 25 per cent are owned by the Federal Republic of Germany or one of its *Länder* and which were commissioned prior to 1 August 2004.

(4) Subject to the provisions of subsection (1) above, sections 32 and 33(2) in the version applicable on 30 June 2010 shall apply to electricity from installations pursuant to sections 32 and 33(2) which were commissioned before 1 July 2010.

(5) By derogation from section 43(1), manufacturing enterprises which procure their electricity without the use of a public grid may submit their application pursuant to section 40(1), first sentence, for the years 2009, 2010 and 2011 until 30 September 2010 (cut-off deadline). When an enterprise submits an application for the year 2009, the ratio of the electricity costs to the gross value added pursuant to section 41(1) no. 2 and subsection (3) shall be determined as if the utility company had passed on to the enterprise the relevant share of the tariff to be paid for the year 2007 in accordance with section 37(1) in conjunction with subsection (3); the same shall apply when applications are submitted for the year 2010 in relation to the year 2008. The requirement pursuant to section 41(1) no. 3 shall be deemed to be fulfilled if the utility company has passed on to the enterprise the relevant share of the tariff to be paid for the year 2009 in accordance with section 37(1) in conjunction with subsection (3) and if the enterprise has settled this claim. The requirement pursuant to section 41(1) no. 4 shall apply with the proviso that the process has been certified by 30 September 2010 at the latest. Contrary to the provisions of section 12 of the Ordinance on the Further Development of the Nationwide Equalisation Scheme (*Verordnung zur Weiterentwicklung des bundesweiten Ausgleichsmechanismus*) of 17 July 2009 (Federal Law Gazette I p. 2101), the costs of preferential treatment shall be taken into account as expenditure within the meaning of section 3(4) of the Ordinance on the Further Development of the Nationwide Equalisation Scheme.

## Annex 1

### Technology bonus

Entitlement to the technology bonus in accordance with section 24(3), section 25(3), section 26(3) and section 27(4) no. 1 shall apply to electricity generated in installations with a maximum capacity (within the meaning of section 18) of 5 megawatts using one of the following innovative procedures:

#### I. Gas processing

##### 1. Eligibility criteria:

Entitlement to the technology bonus shall apply to electricity where the gas fed in pursuant to section 24(2), section 25(2) or section 27(2) has been processed to the reach the quality of natural gas and proof has been furnished that the following criteria have been met:

- a) maximum methane emissions into the atmosphere during processing of 0.5 per cent,
- b) a maximum electricity consumption during processing of 0.5 kilowatt-hours per standard cubic metre of crude gas,
- c) supply of the process heat for the gas processing and generation of sewage treatment gas or biogas from renewable energy sources, from mine gas or from the waste heat from the gas processing or feed-in installation without the use of additional fossil energies, and
- d) a maximum capacity of the gas processing installation of 700 standard cubic metres of processed crude gas per hour.

##### 2. Amount of the bonus

The technology bonus shall amount to

- a) 2.0 cents per kilowatt-hour for a gas processing installation with a maximum capacity of 350 standard cubic metres of processed crude gas per hour, and
- b) 1.0 cent per kilowatt-hour for a gas processing installation with a maximum capacity of 700 standard cubic metres of processed crude gas per hour.

Section 19(1) shall apply *mutatis mutandis* to gas processing installations.

## II. Innovative installation technology

### 1. Eligibility criteria:

Entitlement to the technology bonus shall apply to electricity generated in one of the following installations or using one of the following technologies or procedures and where heat is used in accordance with Annex 3 or an electrical efficiency of at least 45 per cent is achieved:

- a) conversion of the biomass by means of thermochemical gasification,
- b) fuel cells,
- c) gas turbines,
- d) steam engines,
- e) organic Rankine cycles,
- f) multi-fuel installations, especially Kalina cycles,
- g) Stirling engines,
- h) technologies for the thermochemical conversion exclusively of straw and other stalk biomass, or
- i) installations which exclusively ferment biowaste and are directly linked to a facility for the post-rotting of the solid fermentation residues if the rotted-down fermentation residues are recovered.

### 2. Amount of the bonus

The technology bonus shall amount to 2.0 cents per kilowatt-hour.

## Annex 2

### Bonus for electricity from energy crops

#### I. Eligibility criteria

1. Entitlement to the bonus shall apply to electricity from energy crops in accordance with section 27(4) no. 2 where
  - a) the electricity is exclusively generated using energy crops or, in the case of anaerobic fermentation of the energy crops or manure (biogas), in combination with purely plant-based by-products within the meaning of the Positive List no. V,
  - b) the installation operator provides proof that no other type of biomass is being used by keeping a record with details and documentation of the type, quantity and unit, and origin of the substances used, and
  - c) no biogas installation is in operation on the same site in which electricity is simultaneously generated using other substances not covered by letter a) above.
2. In the case of installations with a capacity of over 150 kilowatts, entitlement to the bonus shall only apply where exclusively gaseous or solid biomass is used to generate electricity. The use of liquid biomass as the necessary priming and supporting fuels shall pose no obstacle to such entitlement.
3. Entitlement to the bonus shall only apply to that share of the electricity which is generated from energy crops or manure. In the case of anaerobic fermentation of the energy crops or manure (biogas) and any combination of these substances with purely plant-based by-products within the meaning of the Positive List no. V, the share in accordance with the first sentence above shall be determined based on standard biogas yields and proof established thereof. The proof shall be furnished by presentation of a technical expert opinion by an environmental verifier who is accredited in the field of electricity generation from renewable energy sources.
4. Entitlement to the bonus shall only apply to electricity generated in installations requiring authorisation in accordance with the Federal Immission Control Act which utilise gas (biogas) produced by anaerobic fermentation of energy crops or manure where the fermentation residue depot is covered so that no gas escapes during the generation of the biogas and additional gas consumption installations are utilised in the event of a malfunction or over-production.

## II. Definitions

Within the meaning of section 27(4) no. 2:

1. Energy crops shall mean plants or parts of plants which originate from agricultural, silvicultural or horticultural operations or during landscape management and which have not been treated or modified in any way other than for harvesting, conservation or use in the biomass installation, and
2. Manure shall mean all substances classed as manure within the meaning of Regulation (EC) No. 1774/2002 of the European Parliament and of the Council of 3 October 2002 laying down health rules concerning animal by-products not intended for human consumption (OJ L 273 p. 1), as amended by Regulation (EC) No. 2007/2006 of the Commission of 22 December 2006 (OJ L 379 p. 98).

## III. Positive List

The following shall be categorised as energy crops within the meaning of no. I.1.a (Positive List):

1. growth from meadows and pastures, i.e. whole crops in the form of greenery, dry material and silage,
2. fodder crops, including cereals, oil seeds and legumes harvested as whole crops in the form of greenery, dry material and silage,
3. non-processed vegetable, medicinal and spice plants, cut flowers,
4. grains, seeds, corn-cob mixes, tubers, beet, including sugar and common beet, fruit, vegetables, potato foliage, beet foliage, straw, in the form of greenery, dry material and silage,
5. rapeseed oil and sunflower oil, each in their refined or unrefined state,
6. palm oil and soya oil, refined or unrefined,
7. forest waste wood, bark and wood from short rotation plantations accumulating during thinning out and when harvesting trunk wood in silvicultural operations,
8. or parts of plants which accumulate during landscape management, and
9. faeces and urine, including litter used for working animals and horses, as well as food waste which accumulates in agricultural operations plants.

#### IV. Negative List

The following shall not be categorised as energy crops within the meaning of no. I.1.a (Negative List):

1. rejected vegetables, rejected potatoes, rejected medicinal and spice plants, as well as rejected cut flowers,
2. cereal trailings, small parts of beets, beet shavings in the form of the by-products of sugar production,
3. vegetable trailings, potato peels, fruit pulp, brewer's grains, pomace, press cake and oil meal from plant oil production,
4. glycerine from plant oil processing,
5. waste plant oils,
6. (repealed)
7. bioethanol,
8. vinasse from bioethanol production,
9. wood shavings and sawdust,
10. biowaste within the meaning of the Biowaste Ordinance, with the exception of animal faeces and forestry waste and waste from landscape management, and
11. faeces and urine from domestic animals, with the exception of horses.

V. Positive List of purely plant-based by-products and their standard biogas yields

Purely plant-based by-products	Standard biogas yields [kilowatt-hours (electrical) per tonne of fresh matter]
Spent grains (fresh or pressed)	231
Vegetable trailings	100
Vegetables (rejected)	150
Cereals (trailings)	960
Cereal vinasse (wheat) from alcohol production	68
Grain dust	652
Glycerine from plant oil processing	1,346
Medicinal and spice plants (rejected)	220
Potatoes (rejected)	350
Potatoes (pureed, medium starch content)	251
Potato waste water from starch production	43
Potato processing water from starch production	11
Potato pulp from starch production	229
Potato peel	251
Potato vinasse from alcohol production	63
Molasses from beet sugar production	629
Pomace (fresh, untreated)	187
Rape seed oil meal	1,038
Rape seed cake (residual oil content of ca. 15 per cent)	1,160
Cut flowers (rejected)	210
Sugar beet press cake from sugar production	242
Sugar beet shavings	242

## VI. Amount of the bonus

### 1. General bonus

- a) The bonus for electricity in accordance with no. I shall amount to
  - aa) 6.0 cents per kilowatt-hour for the first 500 kilowatts of output in accordance with section 27(1) nos. 1 and 2, and
  - bb) 4.0 cents per kilowatt-hour for output between 500 kilowatts and 5 megawatts in accordance with section 27(1) no. 3.
- b) In derogation of letter a), bb) above, the bonus shall amount to 2.5 cents per kilowatt-hour where the electricity was generated by burning wood which meets the criteria under no. I. above and
  - aa) is not derived from short rotation plantations, or
  - bb) does not accumulate in landscape management.

### 2. Bonus for electricity from biogas

- a) For electricity from biogas installations, the bonus in accordance with no. I. above shall, in derogation of no. 1 above, amount to 7.0 cents per kilowatt-hour for the first 500 kilowatts of output in accordance with section 27(1) nos. 1 and 2,
- b) The bonus in accordance with letter a) above shall increase for electricity from biogas installations
  - aa) by 4.0 cents per kilowatt-hour for the first 150 kilowatts of output in accordance with section 27(1) no. 1, and
  - bb) by 1.0 cent per kilowatt-hour for output between 150 and 500 kilowatts in accordance with section 27(1) no. 2,

when the share of manure within the meaning of no. II.2 above at all times amounts to at least 30 mass per cent.

Proof of the minimum share of manure shall be furnished by presentation of a technical expert opinion by an environmental verifier who is accredited in the field of electricity generation from renewable energy sources. Letter b) above shall not apply to installations utilising gas withdrawn from the gas network within the meaning of section 27(2).

- c) The bonus in accordance with letter a) above shall increase for electricity from biogas installations by 2.0 cents per kilowatt-hour for the first 500 kilowatts of output in accordance with section 27(1) nos. 1 and 2 when mainly plants or parts of plants are used to generate the electricity and they accumulate as part of landscape management. Proof of the share shall be furnished by presenting a technical expert opinion by an environmental verifier who is accredited in the field of electricity generation from renewable energy sources.

3. Sections 18 and 20(1), (2) no. 5, and (5) shall apply *mutatis mutandis*.

#### VII. Commencement and expiry of entitlement

1. Entitlement to the bonus shall arise at that point in time when the criteria are met for the first time.
2. As soon as the criteria are no longer met the entitlement to the bonus shall expire definitively. This shall also apply during periods in which the electricity was used by the installation itself or is sold to third parties in accordance with section 17.

#### VIII. (repealed)

## Annex 3

### CHP bonus

#### I. Eligibility criteria

Entitlement to the CHP bonus in accordance with section 27(4) no. 3 shall apply to a maximum capacity within the meaning of section 18 of 20 megawatts, where

1. the electricity is electricity within the meaning of section 3(4) of the Combined Heat and Power Act, and
2. the heat is used within the meaning of the Positive List no. III, or
3. the heat use demonstrably replaces fossil energies with an energy equivalent comparable to the quantity of fossil heat used and proof can be furnished of the additional costs arising from the supply of the heat, which amount to at least 100 euros per kilowatt of heat capacity.

#### II. Required proof

1. Proof that the criteria in accordance with no. I.1 are met shall be furnished to the grid system operator in accordance with the generally accepted rules of technology; the generally accepted rules of technology shall be assumed to have been complied with where the requirements of Worksheet FW 2008 - *Zertifizierung von KWK-Anlagen - Ermittlung des KWK-Stromes* (Certification of CHP Installations - Determining the CHP Electricity) in the applicable version as published by the *Arbeitsgemeinschaft für Wärme und Heizkraftwirtschaft (AGFW)* are met. Such proof must be furnished each year by presenting a certificate issued by an environmental verifier who is accredited in the field of electricity generation from renewable energy sources. Instead of the proof in accordance with the first sentence above, CHP installations produced in series with a maximum capacity of 2 megawatts may present appropriate documentation from the manufacturer which indicates the thermal and electrical capacity and the electricity coefficient.
2. Proof that the criteria in accordance with nos. I.2 and I.3 are met shall be furnished by presenting a technical expert opinion by an environmental verifier who is accredited in the field of electricity generation from renewable energy sources or in the field of heat supply when the CHP bonus is claimed.

#### III. Positive List

The following shall be categorised as the use of heat within the meaning of no. I.2:

1. the heating, hot water supply or cooling of buildings within the meaning of section 1(1) no. 1 of the Energy Saving Ordinance up to a heating capacity of 200 kilowatt-hours per square metre of useable floor area per annum,

2. the feeding of heat into a network of at least 400 metres in length and with losses due to heat distribution and transmission of below 25 per cent of the useful heat demand of heat customers,
3. the use of process heat for industrial processes within the meaning of nos. 2 to 6, 7.2 to 7.34, 10.1 to 10.10 and 10.20 to 10.23 of the Annex to the Fourth Ordinance Implementing the Federal Immission Control Act of 14 March 1997 (Federal Law Gazette I p. 504), as last amended by Article 3 of the Act of 23 October 2007 (Federal Law Gazette I p. 2470), and the manufacturing of wood pellets for use as fuel,
4. the heating of farm buildings in poultry rearing where the criteria in accordance with no. I.3 are met,
5. the heating of animal housing with the following upper limits:
  - a) poultry fattening: 0.65 kilowatt-hours per animal,
  - b) sow keeping: 150 kilowatt-hours per pig and year, and 7.5 kilowatt-hours per piglet,
  - c) piglet husbandry: 4.2 kilowatt-hours per piglet,
  - d) pig fattening: 4.3 kilowatt-hours per fattened pig, as well as
6. the heating of glasshouses for the rearing and reproduction of plants, where the criteria in accordance with no. I.3 are met, and
7. the use of process heat for the processing of fermentation residues in fertiliser production.

#### IV. Negative List

The following shall not be categorised as the use of heat within the meaning of nos. I.2 and I.3:

1. the heating of buildings which, in accordance with section 1(2) of the Energy Saving Ordinance, are not the subject matter of the Ordinance, with the exception of buildings covered by nos. III.4 to III.6,
2. the use of waste heat from biomass installations for electricity generation, in particular in organic Rankine- and Kalina-cycle processes, and
3. the use of heat from biomass installations which utilise fossil fuels, for example to cover their own heat needs.

## **Annex 4**

### **Heat use bonus**

#### **I. Eligibility criteria**

Entitlement to the heat use bonus in accordance with section 28(2) shall apply where

1. at least one fifth of the available heat capacity is decoupled, and
2. the heat use demonstrably replaces fossil energies with an energy equivalent comparable to the quantity of fossil heat used.

#### **II. Required proof**

Proof that the criteria in accordance with no. I are met shall be furnished by presenting a technical expert opinion by an environmental verifier who is accredited in the field of electricity generation from renewable energy sources or in the field of heat supply as soon as the bonus is claimed for the first time.

#### **III. Positive List**

The following shall be categorised as the use of heat within the meaning of no. I:

1. the heating, hot water supply or cooling of buildings within the meaning of section 1(1) no. 1 of the Energy Saving Ordinance up to a heating capacity of 200 kilowatt-hours per square metre of useable floor area per annum,
2. the feeding of heat into a network of at least 400 metres in length and with losses due to heat distribution and transmission of below 25 per cent of the useful heat demand of heat customers,
3. the use of process heat for industrial processes within the meaning of nos. 2 to 6, 7.2 to 7.34, 10.1 to 10.10 and 10.20 to 10.23 of the Annex to the Fourth Ordinance Implementing the Federal Immission Control Act, as last amended by Article 3 of the Act of 23 October 2007 (Federal Law Gazette I p. 2470), and the manufacturing of wood pellets for use as fuel.

#### **IV. Negative List**

The following shall not be categorised as the use of heat within the meaning of no. I:

1. the heating of buildings which, in accordance with section 1(2) of the Energy Saving Ordinance, are not the subject matter of the Ordinance,
2. the use of heat for the supply, conversion and residue treatment of biogenic raw materials utilised energetically, with the exception of the production of wood pel-

lets for use as fuel,

3. the loading of heat stores without proof of utilisation pursuant to the Positive List.

## Annex 5

### Reference yield

1. A reference installation shall be a wind-powered installation of a specific type for which a yield at the level of the reference yield can be calculated on the basis of the P-V curve (power-wind speed curve) measured by an authorised institution at the reference site.
2. The reference yield shall be the quantity of electricity which each specific type of wind-powered installation, including its hub height, would, if calculated on the basis of measured P-V curves, yield during five years of operation if it were built at the reference site. The reference yield shall be calculated in accordance with the generally accepted rules of technology; the generally accepted rules of technology shall be assumed to have been complied with if the procedures, foundations and calculating methods set out in the *Technische Richtlinien für Windenergieanlagen* (Technical Guidelines for Wind-Powered Installations), Part 5, published by the *Fördergesellschaft Windenergie e.V. (FGW)*<sup>4</sup>, in the version applicable at the time of calculating the reference yield, have been used.
3. The type of a wind-powered installation shall be defined by the type designation, the swept rotor area, the rated power output and the hub height as specified by the manufacturer.
4. The reference site shall be a site determined by means of a Rayleigh distribution with a mean annual wind speed of 5.5 metres per second at a height of 30 metres above ground level, a logarithmic wind shear profile and a roughness length of 0.1 metres.
5. The P-V curve shall be the correlation between wind speed and power output (irrespective of hub height) determined for each type of wind-powered installation. P-V curves shall be determined in accordance with the generally accepted rules of technology; the generally accepted rules of technology shall be assumed to have been complied with if the procedures, foundations and calculating methods set out in the *Technische Richtlinien für Windenergieanlagen* (Technical Guidelines for Wind-Powered Installations), Part 2, published by the *Fördergesellschaft Windenergie e.V. (FGW)*, in the version applicable at the time of calculating the P-V curves, have been used. P-V curves which were determined by means of a comparable procedure prior to 1 January 2000 can also be used instead of P-V curves as specified in the second sentence above, provided that no construction of wind-powered installations of the type to which these curves apply is commenced within the territorial application of this Act after 31 December 2001.

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<sup>4</sup> Official information: This publication can be ordered from the *Fördergesellschaft Windenergie e.V.*, Stresemannplatz 4, D-24103 Kiel

6. Technical expert opinions in accordance with section 29(3) to prove that the installation may at least achieve 60 per cent of the reference yield at the intended site shall include a physical site analysis and use site-specific wind measurements or extrapolatable operational data from a neighbouring wind park and relate them to data from existing wind databases to obtain a long-term prognostic assessment. Calculation of the energy yield shall be based on the flow speed to which the wind-powered installation is exposed.
7. For the purposes of this Act, measurements of the P-V curves in accordance with no. 5 above and calculations of the reference yields of different types of wind-powered installations at reference sites in accordance with no. 2 above, and the determination of possible energy yields at the intended site in accordance with no. 6 above may be carried out by institutions which are properly accredited in accordance with the *Allgemeine Anforderungen an die Kompetenz von Prüf- und Kalibrierlaboratorien* (General Requirements for the Competence of Testing and Calibration Laboratories) (DIN EN ISO/IEC 17025) of April 2000<sup>5</sup> by an accreditation body which is officially recognised or has been evaluated with the involvement of public authorities.
8. When using the reference yield to determine the extended period in which the initial tariffs are to be paid, the capacity within the meaning of section 3 no. 6 shall be taken into account, at most, however, the maximum capacity which the installation is permitted to generate for licensing reasons in accordance with the Federal Immission Control Act. Temporary capacity reductions shall not be taken into account.

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<sup>5</sup> Official information: This publication can be ordered from the Beuth Verlag GmbH, D-10772 Berlin