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Act on Granting Priority to Renewable Energy Sources (Renewable Energy Sources Act)

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As last amended by Article 7 of Law of 23.7.2002 I 2778

Section 1

Purpose

The purpose of this Act is to facilitate the sustainable development of energy supply in the interest of managing global warming and protecting the environment and to achieve a substantial increase in the percentage contribution made by renewable energy sources to power supply in order to at least double the share of renewable energy sources in total energy consumption by the year 2010, in keeping with the objectives defined by the European Union and by the Federal Republic of Germany.

Section 2

Scope

(1) This Act covers the purchase of, and compensation to be paid for, electricity generated exclusively from hydrodynamic power, wind energy, solar radiation energy, geothermal energy, gas from landfills, sewage treatment plants, mines, or biomass within the territorial scope of this Act or within Germany's exclusive economic zone, by utility companies which operate grids for public power supply (grid operators). The Federal Ministry of the Environment, Nature Conservation and Nuclear Safety shall be authorised to lay down rules in agreement with the Federal Ministry of Food, Agriculture and Forestry as well as the Federal Ministry of Economics and Technology by adopting an ordinance, which shall be subject to approval by the German Bundestag. Said ordinance shall specify what substances and technical processes used in connection with biomass fall within the scope of this Act; in addition, the ordinance shall lay down the relevant environmental standards.

(2) This Act shall not apply to electricity

1. produced by hydro-electric power plants and installations fuelled by gas from landfills or sewage treatment plants with an installed electrical capacity of over 5 megawatts, or by installations in which electricity is generated from biomass, with an installed electrical capacity of over 20 megawatts, and
2. produced by installations of which over 25 per cent is owned by the Federal Republic of Germany or one of Germany's Federal States, and
3. produced by installations for the generation of electricity from solar radiation energy, with an installed electrical capacity of over five megawatts. In the case of installations for the generation of electricity from solar radiation energy which are not attached to or built on structures which are primarily used for purposes other

than the generation of electricity from solar radiation energy, the upper capacity limit specified in the first sentence above shall be 100 kilowatts.

(3) New installations shall be installations which were commissioned after 1 April 2000. Reactivated or modernised installations shall be considered as new installations if major components of the installations were replaced. Modernisation work shall be deemed to be major if the modernisation costs amount to at least 50 per cent of the investment cost required to build a completely new installation. Existing installations shall be installations which were commissioned prior to 1 April 2000.

Section 3

Obligation to Purchase and Pay Compensation

(1) Grid operators shall be obliged to connect to their grids electricity generation installations as defined in Section 2 above, to purchase electricity available from these installations as a priority, and to compensate the suppliers of this electricity in accordance with the provisions in Sections 4 to 8 below. This obligation shall apply to the grid operator whose grid is closest to the location of the electricity generation installation, providing that the grid is technically suitable to feed in this electricity. A grid shall be considered to be technically suitable even if notwithstanding the priority to be granted pursuant to the first sentence above a grid operator needs to upgrade its grid at reasonable economic expense to feed in the electricity; in this case, the grid operator shall be obliged to upgrade its grid without delay if this is requested by a party interested in feeding in electricity. Grid data and data of the electricity generation installation shall be disclosed where this is necessary for the grid operator and the party interested in feeding in electricity to do their planning and to determine the technical suitability of a grid.

(2) Pursuant to Sections 4 to 8 below, the upstream transmission grid operator shall be obliged to purchase, and pay compensation for, the amount of energy purchased by the grid operator in accordance with clause (1) above. If there is no domestic transmission grid in the area serviced by the grid operator entitled to sell electricity, the next closest domestic transmission grid operator shall be obliged to purchase and pay compensation for this electricity as specified in the first sentence above.

Section 4

Compensation to be Paid for Electricity Generated from Hydrodynamic Power, Gas from Landfills, Mines, and Sewage Treatment Plants

The compensation to be paid for electricity generated from hydrodynamic power and gas from landfills, mines and sewage treatment plants shall amount to at least 7.67 cents per kilowatt-hour. In the case of electricity generation installations with an electrical capacity of over 500 kilowatts, this shall apply only to that part of the total amount of electricity fed in during a given accounting year which corresponds to the ratio of 500 kilowatts to the total capacity of the installation in kilowatts; the capacity shall be calculated as the annual average of the mean effective electrical capacity measured in the various months of the year. The price to be paid for other electricity shall be at least 6.65 cents per kilowatt-hour.

Section 5

Compensation to be Paid for Electricity Generated from Biomass

- (1) The following compensation shall be paid for electricity generated from biomass:
1. At least 10.23 cents per kilowatt-hour in the case of installations with an installed electrical capacity of up to 500 kilowatts.
 2. At least 9.21 cents per kilowatt-hour in the case of installations with an installed electrical capacity of up to 5 megawatts.
 3. At least 8.70 cents per kilowatt-hour in the case of installations with an installed effective electrical capacity of over 5 megawatts; however, this provision shall not be effective before the date of the entry into force of the ordinance specified in the second sentence of Section 2(1).

The first clause of the second sentence in Section 4 above shall apply mutatis mutandis.

- (2) As of 1 January 2002, the minimum compensation amounts specified in (1) above shall be reduced by one per cent annually for new installations commissioned as of this date; the amounts payable shall be rounded to one decimal place.

Section 6

Compensation to be Paid for Electricity Generated from Geothermal Energy

The following compensation shall be paid for electricity generated from geothermal energy:

1. At least 8.95 cents per kilowatt-hour if the installation involved has an installed electrical capacity of up to 20 megawatts, and
2. At least 7.16 cents per kilowatt-hour if the installation involved has an installed electrical capacity of over 20 megawatts.

The first clause of the second sentence in Section 4 above shall apply mutatis mutandis.

Section 7

Compensation to be Paid for Electricity Generated from Wind Energy

- (1) The compensation to be paid for electricity generated from wind energy shall be at least 9.10 cents per kilowatt-hour for a period of five years starting from the date of commissioning. Hence, the compensation to be paid for installations which, during this period of time, achieve 150 per cent of the reference yield calculated for the reference installation as described in the Annex to this Act shall be at least 6.19 cents per kilowatt-hour. For other installations, the period mentioned in the first sentence above shall be prolonged by two months for every 0.75 per cent which their yield stays below 150 per cent of the reference yield. If the electricity is generated by installations which are located at least three nautical miles seawards from the baselines used to demarcate territorial waters and if these installations are commissioned no later than 31 December

2006, the periods specified in the first sentence and in the second sentence above shall be nine years.

(2) For existing installations, the date of commissioning as defined in the first sentence of (1) above shall be 1 April 2000. For these installations, the period defined in the first 3 sentences of (1) above shall be reduced by half of the operating life of an installation as of 1 April 2000; in any case, however, this period shall not be less than four years starting from 1 April 2000. If performance curves are not available for such installations, an authorised institution as defined in the Annex may perform the necessary calculations on the basis of the design documents of the type of installation concerned.

(3) As of 1 January 2002, the minimum compensation amounts specified in (1) above shall be reduced by 1.5 per cent annually for new installations commissioned as of this date; the amounts payable shall be rounded to one decimal place.

(4) For the implementation of the provisions in (1) above, the Federal Ministry of Economics and Technology shall be authorised to adopt an ordinance laying down rules for the calculation of the reference yield.

Section 8

Compensation to be Paid for Electricity Generated from Solar Radiation Energy

(1) The compensation to be paid for electricity generated from solar radiation energy shall be at least 50.62 cents per kilowatt-hour. As of 1 January 2002, the minimum compensation paid shall be reduced by 5 per cent annually for new electricity generation installations commissioned as of this date; the amounts payable shall be rounded to one decimal place.

(2) The obligation to pay compensation as specified in (1) above shall not apply to photovoltaic installations which are commissioned after 31 December of the year following the year in which photovoltaic installations which are eligible for compensation under this Act reach a total installed capacity of 1 000 megawatts. Prior to the discontinuation of the obligation to pay compensation as specified in (1) above, the German Bundestag shall adopt a follow-up compensation scheme which shall enable installation operators to manage their installations cost-effectively, taking into consideration the decline of marginal unit cost achieved by then in the field of system engineering.

Section 9

Common Provisions

(1) The minimum compensation amounts specified in Sections 4 to 8 shall be payable for newly commissioned installations for a period of 20 years regardless of the year of commissioning, except for installations which generate electricity from hydrodynamic power. For installations which were commissioned prior to the entry into force of this Act, the year 2000 shall be considered to be the year of commissioning.

(2) If electricity generated from various installations is billed via a common metering device, the calculation of the amounts of the different rates of compensation payable

shall be based on the maximum effective capacity of each individual installation. If electricity is generated from several wind energy converters, the calculation of the compensation shall notwithstanding the first sentence above be based on the cumulative values of these installations.

Section 10

Grid Costs

(1) The costs associated with connecting installations as specified in Section 2 above to the technically and economically most suitable grid connecting point shall be borne by the installation operators. The implementation of this connection must comply with the grid operator's technical requirements in a given case and with the provisions laid down in Section 16 of the *Energiewirtschaftsgesetz* (Energy Management Act) of 24 April 1998 (Federal Law Gazette I, p. 730). The installation operator shall be entitled to have the connection implemented either by the grid operator or by a qualified third party.

(2) The costs associated with upgrading the grid exclusively in order to connect new installations in accordance with Section 2 for accepting and transmitting energy fed into the grid for public power supply shall be borne by the grid operator whose grid will have to be upgraded. The grid operator shall specify the specific investment required by presenting the costs in detail. The grid operators shall be entitled to add the costs borne by them when determining the charges for the use of the grid.

(3) Any disputes shall be settled by a clearing centre which shall be established within the Federal Ministry of Economics and Technology, with the involvement of the parties concerned.

Section 11

National Equalisation Scheme

(1) Transmission grid operators shall be obliged to record any differences in the amount of energy purchased and compensation payments made under Section 3 above and to equalise such differences amongst themselves as specified in (2) below.

(2) By 31 March of each year, the transmission grid operators shall determine the amount of energy purchased in accordance with Section 3 above and the percentage share which this amount represents relative to the overall amount of energy delivered to final consumers either directly by the operator or indirectly via downstream grids. If transmission grid operators have purchased amounts of energy that are greater than this average share, they shall be entitled to sell energy to, and receive compensation from, the other transmission grid operators in accordance with Sections 3 to 8 above, until these other grid operators have purchased a volume of energy which is equal to the average share mentioned above.

(3) Monthly instalments shall be paid in accordance with the equalisation amounts and payments to be expected.

(4) Utility companies which deliver electricity to final consumers shall be obliged to purchase and pay compensation for that part of the electricity which their regular transmission grid operator purchased in accordance with the provisions of (2) above. The first sentence shall not apply to utility companies if, relative to the total amount of electricity they deliver, at least 50 per cent of the electricity delivered is electricity as defined in Section 2 (1) in conjunction with (2) above. The part of the electricity to be purchased by a utility company in accordance with the first sentence shall be related to the amount of electricity delivered by the utility company concerned and shall be determined in such a way that each utility company will receive a relatively equal share. The compulsory amount to be purchased (part) shall be calculated as the ratio of the total amount of electricity fed into the grid under Section 3 to the total amount of electricity sold to final consumers; furthermore, it is necessary to deduct from this sum the amount of electricity delivered by utility companies in accordance with the second sentence above. The compensation as specified in the first sentence above shall be calculated as the average compensation per kilowatt-hour paid by all grid operators two quarters earlier in accordance with Section 3. Electricity purchased in accordance with the first sentence shall not be sold at the compensation paid in accordance with the fifth sentence, if that electricity is marketed as electricity pursuant to Section 2 or as comparable electricity.

(5) Each grid operator shall be obliged to make available in good time to the other grid operators the data required to perform the calculations referred to in (1) and (2) above. Each grid operator shall be entitled to request that the other grid operators have their data audited by a chartered accountant or a sworn auditor appointed by mutual agreement. If no agreement can be reached, the chartered accountant or sworn auditor shall be appointed by the President of the Higher Regional Court which has jurisdiction at the seat of the grid operator eligible to receive equalisation payments.

Section 12

Progress Report

By 30 June, every two years after the entry into force of this Act, the Federal Ministry of Economics and Technology shall submit a report drafted in consultation with the Federal Ministry of the Environment, Nature Conservation and Nuclear Safety as well as the Federal Ministry of Food, Agriculture and Forestry on the progress achieved in terms of the market introduction and cost development of power generation installations as specified in Section 2; and by 1 January, every two years after the year of entry into force of this Act, the Ministry shall, where necessary, propose adjustments of the compensation amounts specified in Sections 4 to 8 and of their reduction rates, in keeping with technological progress and market developments with regard to new installations; furthermore, the Ministry shall propose a prolongation of the period for calculating the yield of a wind energy converter as specified in the Annex, based on the experience gained with the period defined in this Act.

Annex

1. The reference installation shall be a wind energy converter of a specific type for which a yield at the level of the reference yield can be calculated on the basis of a performance curve measured by an authorised institution at the reference site.
2. The reference yield shall be the amount of electricity which each specific type of wind energy converter, including the respective hub heights, would yield during five years of operation calculated on the basis of measured performance curves if it were built at the reference site.
3. The type of a wind energy converter shall be defined by the model 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, a logarithmic wind shear profile and a roughness length of 0.1 metres.
5. The performance curve shall be the correlation between wind speed and power output (irrespective of hub height) determined for each type of wind energy converter. Performance curves shall be determined in accordance with the standard procedure defined in the *Technische Richtlinien für Windenergieanlagen* (Technical Guidelines for Wind Energy Converters), rev. 13, as of 1 January 2000, published by *Fördergesellschaft Windenergie e.V.* (FGW), Hamburg, or in the Power Performance Measurement Procedure, version 1, published in September 1997 by the Network of European Measuring Institutes (MEASNET), Brussels/Belgium. Performance curves which were determined by means of a comparable procedure prior to 1 January 2000 can also be used instead of performance curves as specified in the second sentence, providing that the construction of wind energy converters of the type to which they apply is not initiated within the territorial scope of this Act after 31 December 2001.
6. Measurements of the performance curves and calculations of the reference yields of different types of wind energy converters at reference sites shall be carried out for the purposes of this Act by institutions which are accredited for the measurement of performance curves as defined in (5) above in accordance with the General Criteria for the Operation of Test Laboratories (DIN EN 45001) of May 1990. The names of these institutions shall be published in the Federal Official Gazette by the Federal Ministry of Economics and Technology for the information of interested parties.