

**Ordinance
on Generation of Electricity from Biomass
(Biomass Ordinance – BiomasseV)
of 21 June 2001**

Pursuant to Art. 2 (1) sentence 2 of the Renewable Energy Sources Act of 29 March 2000 (Federal Law Gazette I p. 305) in conjunction with Art. 56 (1) of the Act on the Adaptation of Responsibilities of 18 March 1975 (Federal Law Gazette I p. 205) and the Chancellor's Decree of 22 January 2001 (Federal Law Gazette I p. 127), the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, acting in agreement with the Federal Ministries for Consumer Protection, Food and Agriculture and for Economics and Technology, and respecting the rights of the German Bundestag, hereby decrees:

**Art. 1
Scope of Application**

This Ordinance sets forth, for the scope of application of the Renewable Energy Sources Act, what substances shall be considered biomass, what technical processes for generating electricity from biomass fall within the Act's scope of application, and what environmental standards must be met in the generation of electricity from biomass.

**Art. 2
Included Biomass**

(1) Biomass within the meaning of this Ordinance shall be taken to mean fuels made of phytomass and zoomass. This shall also include products, by-products, residues and waste from phytomass and zoomass whose energy content comes from phytomass and zoomass.

(2) Biomass within the meaning of paragraph 1 shall include in particular:

1. Plants and parts of plants
2. Fuels made from plants or parts of plants whose components and intermediate products have all been produced from biomass within the meaning of paragraph 1
3. Waste and by-products of plant and animal origin from agriculture, forestry and commercial fish production
4. Biological waste within the meaning of Art. 2 No. 1 of the Biological Waste Ordinance (Bioabfallverordnung)
5. Gas produced from biomass within the meaning of paragraph 1, by gasification or pyrolysis, and all resulting products and by-products
6. Alcohols produced from biomass within the meaning of paragraph 1, whose components, intermediate products, products and by-products have been produced from biomass.

(3) Without prejudice to paragraph 1, the following shall be considered biomass within the meaning of this Ordinance:

1. Waste wood, comprising used wood (used products made from wood, wood materials and composites with a proportionally high wood content) or industrial waste wood (waste wood from woodworking and wood processing operations and waste wood from operations in the wood materials industry) which is considered waste, except where this conflicts with sentence 2 or where the waste wood, pursuant to Art. 3 No. 4 is not recognised as biomass.
2. Gas produced from waste wood within the meaning of No. 1, except where this conflicts with sentence 3 or the waste wood is not recognised as biomass under Art. 3 No. 4.
3. Plant-oil methyl ester, except where this conflicts with sentence 3.
4. Flotsam from waterbody management and from shoreline management and cleaning.
5. Biogas produced by anaerobic fermentation, where fermentation does not involve the use of materials included in Art. 3 Nos. 3, 7 and 9 or where more than 10% by weight of sewage sludge is used. Sentence 1 No. 1 shall apply to waste wood which contains residue from wood-preserving agents or contains halogenorganic compounds in its coating only in cases where it is used in installations whose certification for establishment and operation is granted under Art. 4 in conjunction with Art. 6 or Art. 16 of the Federal Immission Control Act (Bundes-Immissionsschutzgesetz) no later than three years from the date this Ordinance enters into force. Wood-preserving agents shall include substances used in processing and finishing wood that have biocidal effects on wood-damaging insect pests or fungi, and also substances that reduce the flammability of wood. Sentence 2 shall apply as appropriate to the use of gas produced from waste wood as defined in sentence 1, no. 1.

Sentence 1 No. 3 shall apply only to use in installations that go into operation three years from the date this Ordinance enters into force or, where installations are involved that are subject to certification under the Federal Immission Control Act, whose certification for establishment and operation has been issued in accordance with Art. 4 in conjunction with Art. 6 or Art. 16 of the Federal Immission Control Act.

(4) Substances from which electricity is produced in old installations within the meaning of Art. 2 (3) sentence 4 of the Renewable Energy Sources Act, and for which compensation has been received for electricity produced from biomass prior to 1 April 2000, shall continue to be recognised as biomass in these installations. This shall not apply to substances as defined in Art. 3 (4) and Art. 5 (2).

Art. 3 Excluded Biomass

The following shall not be considered biomass within the meaning of this Ordinance:

1. Fossil fuels and products and by-products made from them.
2. Peat.

3. Mixed municipal solid waste from private households and similar waste from other source areas.

4. Waste wood:

a) that contains more than 0.005% by weight of polychlorinated biphenyls (PCB) oder polychlorinated terphenyls (PCT) within the meaning of the provisions of the PCB/PCT Waste Ordinance (Abfallverordnung) of 26 June 2000 (Federal Law Gazette I p. 923)

b) that contains more than 0.0001% by weight of mercury

c) of other types, if its thermal exploitation as waste for recovery is prohibited under the Closed Substance Cycle and Waste Management Act.

5. Paper, cardboard, pasteboard.

6. Sewage sludges within the meaning of the Sewage Sludge Ordinance (Klärschlammverordnung).

7. Harbour sludge and other waterbody sludges and sediments.

8. Textiles.

9. Animal carcasses or parts thereof and products within the meaning of Art. 1 (1) of the Animal Carcass Disposal Act (Tierkörperbeseitigungsgesetzes), which are to be disposed of in slaughter houses pursuant to ordinances enacted thereunder, and substances which occur through their disposal or through other means.

10. Landfill gas.

11. Gas from sewage treatment installations.

Art. 4 Technical Processes

(1) Technical processes for generation of electricity from biomass within the meaning of this Ordinance include single-stage and multi-stage electricity generation processes carried out by the following types of installations:

1. Combustion systems in combination with steam turbine, steam engine, Stirling engine and gas turbine processes, including organic rankine cycle (ORC) processes.

2. Combustion engine systems.

3. Gas turbine systems.

4. Fuel cell systems.

5. Other types of installations that, like the technical processes listed in Numbers 1 through 4, are operated with regard to the aim of climate and environmental protection.

(2) Where, by a process pursuant to paragraph 1, electricity generation from biomass within the meaning of this Ordinance is only possible by means of ignition or supporting combustion using substances other than biomass, then such other substances may be used.

(3) In installations as defined in paragraph 1 and 2, sewage sludge gas or gas produced by thermal processes under oxygen deficiency (synthesis gas) may be used when the gas (synthesis gas) is produced from sewage sludge within the meaning of the Sewage Sludge Ordinance (Klärschlammverordnung).

Art. 5 Environmental Standards

(1) In order to prevent and control pollution, to protect and safeguard against harmful environmental impacts, to prevent danger, to conserve resources and to ensure environmentally compatible treatment of waste, the statutory provisions that apply to the relevant technical processes and to use of the relevant substances must be complied with.

(2) For the use of waste wood within the meaning of Art. 2 (3) No. 1 that

1. contains residues from wood-preserving agents or

2. contains halogenorganic compounds in their coating, the installation must, on the basis of its license, meet the standards of the Ordinance Combustion of Waste and Similar Combustible Materials of 23 November 1990 (Federal Law Gazette I p. 2545, 2832) last amended by Art. 8 of the Act of 3 May 2000 (Federal Law Gazette I p. 632); Art. 1 (1) sentence 1 and Art. 5 (3) of the Ordinance shall not apply. The same shall apply for the use of gas within the meaning of Art. 2 (3) No. 3 produced from waste wood within the meaning of sentence 1, no. 1 or 2.

(3) In the use of waste wood within the meaning of paragraph 2, sentence 1 in combustion systems in combination with steam-turbine processes as defined in Art. 4 (1) with an installed electrical capacity of more than 5 megawatts, whose heat is not passed to a third party and for which no obligation exists under pollution control certification procedures to use the produced heat in the installation itself, those systems must also achieve the following efficiency levels for gross electricity generation:

a) A minimum of 25 per cent in electricity generation of more than 5 megawatts up to and including 10 megawatts.

b) A minimum of 27 per cent in electricity generation of more than 10 megawatts up to and including 15 megawatts.

c) A minimum of 29 per cent in electricity generation of more than 15 megawatts up to and including 20 megawatts.

These efficiency standards shall also apply to the condensation-only operating mode of installations of this type which at times operate with condensation but mostly operate in condensation-only mode. The electrical efficiency level is thus defined as the relationship between the output power and generation of combustion heat at 100% output, without heat recovery.

Art. 6
Entry into Force

This Ordinance shall enter into force on the day following its promulgation.

The *Bundesrat* has given its consent.

Berlin, 21 June 2001

The Federal Minister for the Environment, Nature Conservation and Nuclear Safety
Jürgen Trittin