

Act
on the Promotion of Renewable Energies in the Heat Sector
(Erneuerbare-Energien-Wärmegesetz – EEWärmeG)*
of 2008

The Bundestag has adopted the following Act:

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Requirements for the use of renewable energies, waste heat, combined heat and power and for energy saving measures and heat grids

Part 1
General provisions

Article 1 Purpose and aim of the Act

(1) The purpose of this Act is to facilitate sustainable development of the energy supply and promote the further development of technologies for the generation of heat from renewable energies, especially with a view to climate protection, efficient use of fossil resources and the reduction of import dependence.

(2) In order to fulfil the purpose contained in (1) while maintaining economic feasibility, the aim of this Act is to contribute to increasing the renewable energies' share in final energy consumption for heat (space heat, cooling and process heat and hot water) to 14 percent by 2020.

Article 2 Definitions

(1) For the purposes of this Act renewable energies shall mean

1. heat extracted from the ground (geothermal energy),
2. heat extracted from the air or water, excluding waste heat (ambient heat),
3. heat made technologically usable to cover thermal energy demand through the use of solar radiation (solar radiation) and
4. heat generated from solid, liquid or gaseous biomass. The biomass type shall be determined according to its physical state on entering the heat generating facility. Only the following energy sources shall be recognised as biomass within the meaning of this Act:
 - a) biomass within the meaning of 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), in the version applicable at the time,
 - b) biodegradable fractions of household and industrial wastes,
 - c) landfill gas,
 - d) sewage treatment plant gas,
 - e) sewage sludge within the meaning of the Sewage Sludge Ordinance of 15 April 1992 (Federal Law Gazette I p. 912), last amended by Article 4 of the Ordinance of 20 October 2006 (Federal Law Gazette I p. 2298, 2007 I p. 2316), in the version applicable at the time and
 - f) vegetable oil methyl ester.

(2) For the purposes of this Act

1. waste heat shall mean heat extracted from exhaust air and waste water flows from technical processes and building structures,
2. effective area shall mean
 - a) in the case of residential buildings, the effective area of the building pursuant to Article 2 No. 14 of the Energy Saving Ordinance of 24 July 2007 (Federal Law Gazette I p. 1519) in the version applicable at the time,
 - b) in the case of non-residential buildings the net floor area of the building pursuant to Article 2 No. 15 of the Energy Saving Ordinance,

3. competent person is a person empowered under Article 21 of the Energy Saving Ordinance to issue energy performance certificates in accordance with the powers granted for residential and non-residential buildings respectively,
4. thermal energy demand shall mean the heat volume required annually to cover
 - a) the heat demand for heating and hot water supply and
 - b) the cooling demand for cooling systems including the costs for delivery, distribution and storage.The thermal energy demand shall be calculated in accordance with the technical methods which are the basis for Annexes 1 and 2 of the Energy Saving Ordinance,
5. a) residential building shall mean any building primarily intended to serve as a dwelling, including residential, retirement and care homes and similar establishments,
 - b) non-residential building shall mean any other building.

Part 2 Use of renewable energies

Article 3 Obligation to use renewable energies

- (1) Owners of newly constructed buildings pursuant to Article 4 (obligated parties) must cover a share of the thermal energy demand with renewable energies as stipulated in the provisions of Articles 5 and 6.
- (2) The Länder can lay down an obligation to use renewable energies in existing buildings. Buildings pursuant to Article 19 (1) and (2) shall also be deemed to be existing buildings.

Article 4 Scope of obligation to use renewable energies

The obligation contained in Article 3 (1) shall apply to all buildings with an effective area of more than 50 square meters in which energy is used for heating or cooling, with the exception of

1. operational buildings primarily used for rearing or keeping animals,
2. operational buildings, if their purpose requires them to be kept extensively and constantly open,
3. underground constructions,
4. glazed facilities and cultivation spaces for the breeding, propagation and sale of plants,
5. air halls and tents,
6. buildings intended to be repeatedly erected and dismantled, and temporary buildings with a planned operating life of up to two years,
7. buildings used for church services or other religious purposes,
8. residential buildings intended to have an operating life of less than four months per year,

9. other operational buildings, if their purpose requires them to be heated to an indoor temperature of less than 12 degrees Celsius or to be heated for less than four months per year and cooled for less than two months per year, and
10. buildings which are part or a secondary installation of a facility covered by the area of application of the Greenhouse Gas Emissions Trading Act of 8 July 2004 (Federal Law Gazette I p. 1578), last amended by Article 19a No. 3 of the Act of 21 December 2007 (Federal Law Gazette I p. 23089), in the version applicable at the time.

Article 5 Share of renewable energies

(1) The use of solar radiation as defined in No. I of the Annex to this Act shall meet the obligation contained in Article 3 (1) if at least 15 percent of the thermal energy demand is covered by this source.

(2) The use of gaseous biomass as defined in No. II of the Annex to this Act shall meet the obligation contained in Article 3 (1) if at least 30 percent of the thermal energy demand is covered by this source.

(3) The use of

1. liquid biomass as defined in No. II.2 of the Annex to this Act, and
2. solid biomass as defined in No. II.3 of the Annex to this Act shall meet the obligation contained in Article 3 (1) if at least 50 percent of the thermal energy demand is covered by these sources.

(4) The use of geothermal energy and ambient heat as defined in No. III of the Annex to this Act shall meet the obligation contained in Article 3 (1) if at least 50 percent of the thermal energy demand is covered by these sources.

Article 6 Supplying several buildings

The obligation contained in Article 3 (1) can also be met if the total thermal energy demand of obligated parties with connected buildings is covered to an amount corresponding to the individual obligations pursuant to Article 5. If, to this end, obligated parties operate one or more installations for the generation of heat from renewable energies, they can require that their neighbours allow their premises to be used to a necessary and reasonable degree for the operation of such installations, and in particular allow access to their premises and, against appropriate compensation, the installation of cables through their premises.

Article 7 Alternative measures

The obligation contained in Article 3 (1) shall be deemed to be met if the obligated parties

1. cover at least 50 percent of the thermal energy demand
 - a) from installations for the use of waste heat as defined in No. IV of the Annex to this Act or

- b) directly from combined heat and power (CHP) installations as defined in No. V of the Annex to this Act,
- 2. take energy saving measures as defined in No. VI of the Annex to this Act or
- 3. cover the thermal energy demand directly from a local or district heating grid as defined in No. VII of the Annex to this Act.

Article 8 Combining measures

(1) To meet the obligation contained in Article 3 (1), renewable energies and alternative measures pursuant to Article 7 can be used in any form of combination with each other.

(2) The percentage shares of actual use of the different renewable energies and alternative measures within the meaning of (1) must amount to 100 in relation to the respective use as prescribed by this Act for each energy type and measure.

Article 9 Exemptions

The obligation contained in Article 3 (1) shall not apply if

- 1. meeting the obligation and implementing alternative measures pursuant to Article 7
 - a) contravenes other obligations under public law or
 - b) is technically not possible in a specific case, or
- 2. the competent authority grants an exemption upon application by the obligated party.

Parties shall be granted exemption from the obligation contained in Article 3 (1) in cases where meeting the obligation and implementing alternative measures pursuant to Article 7 lead to an unreasonable hardship resulting from special circumstances arising from disproportionate costs or other causes.

Article 10 Proofs

(1) Obligated parties must

- 1. prove that they have met the minimum share set out in Article 5 (2) and (3) for the use of biomass in accordance with paragraph (2),
- 2. prove compliance with the requirements set out in No. I to No. VII of the Annex to this Act in accordance with paragraph (3),
- 3. prove the existence of an exemption pursuant to Article 9 No. 1 in accordance with paragraph (4). With regard to Article 6, where there are several obligated parties the obligations contained in the first sentence Nos. 1 and 2 shall be deemed to be met if they are fulfilled by just one of the obligated parties. With regard to Article 8, the obligations contained in the first sentence Nos. 1 and 2 must be fulfilled in each case for the renewable energies used and alternative measures implemented.

(2) Regarding the use of

- 1. supplied gaseous and liquid biomass, obligated parties must

- a) for the first five calendar years starting from the year the heating system goes into operation, submit the invoices of the fuel supplier to the competent authority by 30 June of the following year,
 - b) for the following ten calendar years
 - aa) keep these invoices for at least five years from the date of delivery and
 - bb) submit these invoices to the competent authority upon request,
2. solid biomass, obligated parties must, for the first 15 years starting from the year the heating system goes into operation,
- a) keep the invoices of the fuel supplier for at least five years from the date of delivery and
 - b) submit the invoices to the competent authority upon request.

(3) To prove compliance with the requirements set out in Nos. I to IV of the Annex to this Act, the respective proofs cited in Nos. I.2, II.1(c), II.2 (c), II.3 (b), III.3, IV.4, V.2, VI.3 and VII.2 must be

1. submitted by the obligated party to the competent authorities within three months starting from the year the heating system of the building goes into operation, and subsequently upon request, and
2. kept by the obligated party for at least five years starting from the year the heating system goes into operation if these proofs are not held by the authority.

Sentence 1 shall not apply if the facts which the proofs are intended to verify are already known to the authority.

(4) If an exemption pursuant to Article 9 No. 1 exists the obligated party must notify the competent authority within three months after the heating system commences operation that meeting the obligation contained in Article 3 (1) and the implementation of alternative measures pursuant to Article 7 contravene provisions of public law or are technically not possible. In the case of a contravention of obligations under public law, this shall not apply if the competent authority already knows of the facts establishing the contravention. In the case of technical impossibility, certification from an expert must be submitted to the authority with the notification.

(5) It is prohibited to supply incorrect or incomplete information in a proof, notification or certification pursuant to paragraphs (2) to (4).

Article 11 Monitoring

(1) The competent authority must monitor compliance with the obligation contained in Article 3 (1) and the correctness of the proofs pursuant to Article 10, by at least conducting appropriate spot checks.

(2) In the exercise of their office, the persons authorised to enforce this Act shall have the right to enter premises and building structures, including dwellings. Insofar, the basic right of inviolability of the home (Article 13, Basic Law) shall be restricted.

Article 12 Competence

The competence of the authorities shall be based on Land law.

Part 3 Financial support

Article 13 Funding

The Federation shall provide need-based funding for the utilisation of renewable energies for heat generation of up to 500 million euro per year between 2009 and 2012. Details will be laid down in administrative provisions of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety in consultation with the Federal Ministry for Finance.

Article 14 Supported measures

Support can be given to measures for the generation of heat, in particular the construction or expansion of

1. solar thermal installations,
2. installations for the use of biomass,
3. installations for the use of geothermal energy and ambient heat and
4. local heating grids, storage facilities and transfer stations for heat users, if they have also been fed by installations pursuant to Nos. 1 to 3.

Article 15 Relation between support and obligations to use

(1) Measures cannot be supported if they serve to fulfil the obligation contained in Article 3 (1) or an obligation under Land law pursuant to Article 3 (2).

(2) Paragraph (1) shall not apply to the following measures:

1. measures which meet technical or other requirements which
 - a) in the case of Article 3 (1) are more stringent than the requirements set out in Nos. I to V of the Annex to this Act or
 - b) in the case of Article 3 (2) are more stringent than the requirements pursuant to Land law,
2. measures which cover a share of the thermal energy demand which is
 - a) in the case of Article 3 (1) 50 percent higher than the minimum share pursuant to Article 5 or
 - b) in the case of Article 3 (2) higher than the minimum share prescribed under Land law,
3. measures which are combined with other energy efficiency measures,
4. measures for using solar thermal installations also to heat a building and
5. measures for the use of deep geothermal energy.

(3) In the cases cited in paragraph (2), support can also relate to the overall measure.

(4) Details shall be regulated in the administrative provisions pursuant to Article 13 second sentence.

(5) Support measures undertaken by the Land or by a credit institute in which the Federation or Land participates shall remain unaffected.

Part 4 Final provisions

Article 16 Compulsory connection and use

The municipalities and local authority associations can make use of a provision under Land law authorising them to establish compulsory connection and use regarding a public local or district heating supply grid, also for the purpose of climate protection and resource conservation.

Article 17 Provisions on regulatory offences

- (1) It is a regulatory offence to intentionally or negligently
1. contravene Article 3 (1) by failing to cover, or by not properly covering, the thermal energy demand with renewable energies,
 2. contravene Article 10 (1) first sentence by failing to provide proof, or by not providing it completely or in good time,
 3. contravene Article 10 (2) No. 1(b) (aa), or No. 2(a), or (3) first sentence No. 2, by failing to keep a proof, or by failing to keep it for at least five years or
 4. contravene Article 10 (5) by supplying incorrect or incomplete information.

(2) In the cases cited in (1) Nos. 1, 2 and 4, the regulatory offence can be punished with a fine of up to fifty thousand euro, and in the case cited in (1) No. 3 with a fine of up to twenty thousand euro.

Article 18 Progress report

The Federal Government must submit a progress report on this Act to the German Bundestag by 31 December 2011 and subsequently every four years.

In particular, the Government must report on

1. the status of the market introduction of installations for the generation of heat and cooling from renewable energies with regard to achieving the purpose and aim pursuant to Article 1,
2. technological developments, cost trends and the economic viability of these installations,
3. the quantities of mineral oil and natural gas saved and the resulting reduction of greenhouse gas emissions and

4. the enforcement of this Act. The progress report shall put forward proposals for the further development of the Act.

Article 19 Transitional provision

(1) Article 3 (1) shall not apply to the construction of buildings if the building application was submitted or start of construction was notified before 1 January 2009.

(2) Article 3 (1) shall not apply to building construction not requiring planning permission which must be notified to the competent authorities in accordance with the building regulations, if the required notification was sent to the authority before 1 January 2009. (1) Article 3 (1) shall not apply to any other building construction not requiring planning permission, in particular to the construction of buildings which is not subject to authorisation, notification or other procedures, if construction began before 1 January 2009.

Article 20 Entry into force

This Act shall enter into force on 1 January 2009.

Annex (to Articles 5, 7, 10 and 15)

Requirements for the use of renewable energies, waste heat, combined heat and power and for energy saving measures and heat grids

I. Solar radiation

1. If solar radiation is used with solar collectors the following shall apply:
 - a) the minimum share pursuant to Article 5 (1) shall be deemed to be met if
 - aa) in residential buildings with a maximum of two dwellings, solar collectors with an aperture area of at least 0.04 square metres per square metre of effective area are installed, and
 - bb) in residential buildings with more than two dwellings, solar collectors with an aperture area of at least 0.03 square metres per square metre of effective area are installed; insofar the Länder can lay down higher minimum areas,
 - b) this use shall only be deemed to meet the obligation contained in Article 3 (1) if the solar collectors are certified with the European quality label "Solar Keymark" according to the procedures of DIN EN 12975-1 (2006-06), 12975-2 (2006-06), 12976-1 (2006-04) and 12976-2 (2006-04).
2. For Number 1(b), proof within the meaning of Article 10 (3) shall be the certificate "Solar Keymark".

II. Biomass

1. Gaseous biomass

- a) The use of gaseous biomass shall only be deemed to fulfil the obligation contained in Article 3 (1) if the biomass is used in a CHP installation.
- b) The use of gaseous biomass which is processed to natural gas quality and fed into a grid shall only be deemed to meet the obligation contained in Article 3 (1) if
 - aa) the processing and feed-in of the biogas reduces, according to the relevant best available technology,
 - methane emissions into the atmosphere and
 - electricity consumptionand
 - bb) the process heat needed for the generation and processing of the gaseous biomass is extracted from renewable energies or waste heat. For sentence 1 aa) first indent, compliance with the best available technology shall be presumed if the quality requirements for biogas pursuant to Article 41f (1) of the Gas Grid Access Ordinance of 25 July 2005 (Gasnetzzugangsverordnung, Federal Law Gazette I p. 2210), as amended by Article 1 of the Act of 8 April 2008 (Federal Law Gazette I p. 693) in the version applicable at the time, are complied with.
- c) For letter (a), proof within the meaning of Article 10 (3) shall be certification from an expert, the installation manufacturer or the specialist firm which assembled the installation, and for letter (b), certification from the fuel supplier.

2. Liquid biomass

- a) The use of liquid biomass shall only be deemed to meet the obligation contained in Article 3 (1) if the biomass is used in a boiler which complies with the best available technology.
- b) After entry into force of the ordinance (Sustainability Ordinance) to be issued by the Federal Government on the basis of Article 37d (2) Nos. 3 and 4, paragraph (3) No. 2 of the Federal Immission Control Act (Bundesimmissionsschutzgesetz) as published 26 September 2002 (Federal Law Gazette I p. 3830), last amended by Article 1 of the Act of 23 October 2007 (Federal Law Gazette I p. 2470) the use of liquid biomass shall only be deemed to meet the obligation contained in Article 3 (1) if it can be proved that production of this biomass fulfils the requirements stipulated in the Sustainability Ordinance.
Prior to the entry into force of the Sustainability Ordinance, the use of refined or unrefined palm or soya oil shall not be deemed to meet the obligation contained in Article 3 (1).
- c) for letter (a), proof within the meaning of Article 10 (3) shall be certification from an expert, the installation manufacturer or the specialist firm which assembled the installation, and for letter (b), the proof prescribed in the Sustainability Ordinance.

3. Solid biomass

- a) The use of solid biomass in the operation of firing installations within the meaning of the Ordinance on Small and Medium-Sized Firing Installations as published 14 March 1997 (Federal Law Gazette I p. 490), last amended by Article 4 of the Ordinance of 14 August 2003 (Federal Law Gazette I p.

1614), in the version applicable at the time, shall only be deemed to meet the obligation contained in Article 3 (1) if

- aa) the requirements of the Ordinance on Small and Medium-Sized Firing Installations are met,
 - bb) only biomass pursuant to Article 3 (1) Nos. 4, 5, 5a or 8 of the Ordinance on Small and Medium-Sized Firing Installations is used, and
 - cc) the boiler efficiency factor determined according to DIN EN 303-5 (1999-06) for biomass central heating systems is not less than
 - 86 percent for a capacity up to and including 50 kilowatt and
 - 88 percent for a capacity of more than 50 kilowatt.
- b) Proof within the meaning of Article 10 (3) shall be certification from an expert, the installation manufacturer or the specialist firm which assembled the installation.

III. Geothermal energy and ambient heat

1. a) If geothermal energy and ambient heat are used with electric heat pumps, their use shall only be deemed to comply with the obligation contained in Article 3 (1) if
 - the useable heat supplied has at least the seasonal performance factor set out in (b) and
 - the heat pump is fitted with meters according to (c).
- b) the seasonal performance factor shall be
 - 3.5 for air-to-water and air-to-air heat pumps and
 - 4.0 for all other heat pumps.

Notwithstanding sentence 1, if the building is supplied with hot water by the heat pump or if a substantial share is covered by other renewable energies, the seasonal performance factor shall be

- 3.3 for air-to-water and air-to-air heat pumps and
- 3.8 for all other heat pumps.

The seasonal performance factor shall be calculated according to recognised technical methods. The calculation shall include the heat pump's coefficient of performance, the pump electricity demand for tapping the heat source, the design flow temperature, the design supply temperature for the respective heating system in the case of air-to-air heat pumps, the brine inlet temperature in the case of brine-to-water heat pumps, the primary side water inlet temperature in the case of water-to-water heat pumps, and in the case of air-to-water and air-to-air heat pumps also taking into consideration the climatic region.

- c) The heat pumps must be equipped with meters to gauge the heat volume and electricity which provide measurements enabling the seasonal performance factor of the heat pumps to be calculated. Sentence 1 shall not apply to brine-to-water and water-to-water heat pumps if it can be proved that the heating system has a flow temperature of up to 35 degrees Celsius.
2. If geothermal energy and ambient heat are used with heat pumps driven by fossil fuels, this use shall only be deemed to meet the obligation contained in Article 3 (1), if
 - the useable heat supplied has a seasonal performance factor of at least 1.2;

- No.1 (b) sentences 3 and 4 shall apply accordingly and
- the heat pumps are equipped with a meter to gauge heat quantity and fuel which provides measurements enabling the seasonal performance factor to be calculated; No. 1 (c) sentence 2 shall apply accordingly.

3. Proof within the meaning of Article 10 (3) shall be certification from an expert.

IV. Waste heat

1. If waste heat is used with heat pumps, Nos. III.1 and III.2 shall apply accordingly.
2. If waste heat is used in ventilation and air conditioning systems with heat recovery, this use shall only be deemed to be an alternative measure pursuant to Article 7 No. 1 if
 - a) the heat recovery factor of the system is at least 70 percent and
 - b) the coefficient of performance, derived from the relationship between the recovered and used heat and the electricity needed to operate the ventilation and air conditioning system, is at least 10.
3. If waste heat is used in other systems, this use shall only be deemed to be an alternative measure pursuant to Article 7 No. 1 (a) if it complies with the best available technology.
4. Proof within the meaning of Article 10 (3) shall be certification from an expert, and for No. 2 also certification from the system manufacturer or the specialist firm which installed the system.

V. Combined heat and power

1. The use of heat from CHP installations shall only be deemed to meet the obligation contained in Article 3 (1) and to be an alternative measure pursuant to Article 7 No. 1 (b) if the installation is a high-efficiency cogeneration plant within the meaning of Directive 2004/8/EC of the European Parliament and of the Council of 11 February 2004 on the promotion of cogeneration based on a useful heat demand in the internal energy market and amending Directive 92/94/EEC (OJ. EU L 52 p. 50). CHP installations with an electrical capacity below one Megawatt are deemed to be high-efficiency cogeneration plants if they achieve primary energy savings within the meaning of Annex III of Directive 2004/8/EC.
2. For the use of heat from CHP installations, proof within the meaning of Article 10 (3) shall be
 - a) for installations operated by the obligated party, certification from an expert, the installation manufacturer or the specialist firm which assembled the installation,
 - b) for installations not operated by the obligated party, certification from the installation operator.

VI. Energy saving measures

1. Energy saving measures shall only be deemed to be alternative measures pursuant to Article 7 No. 2, if, through these measures, in the construction of buildings
 - a) the respective maximum level of annual primary energy demand is undercut and
 - b) the requirements for the thermal insulation of the building shell as stipulated in the Energy Saving Ordinance in the version applicable at the time, are surpassed by at least 15 percent.
2. Insofar as other legal provisions stipulate higher requirements for thermal insulation in buildings than the Energy Saving Ordinance, these requirements shall replace the requirements pursuant to the Energy Saving Ordinance cited in Number 1.
3. Proof within the meaning of Article 10 (3) shall be the energy performance certificate pursuant to Article 18 of the Energy Saving Ordinance.

VII. Heat grids

1. The use of heat from a local or district heating supply shall only be deemed to be an alternative measure pursuant to Article 7 No. 3 if
 - a) a substantial share of the heat comes from renewable energies,
 - b) at least 50 percent of the heat comes from installations for the use of waste heat,
 - c) at least 50 percent of the heat comes from CHP installations or
 - d) at least 50 percent of the heat comes from a combination of the measures named in (a) to (c). Nos. I to V shall apply accordingly.
2. Proof within the meaning of Article 10 (3) shall be certification from the heat grid operator.