

German Act on the Promotion of Renewable Energies in the Heat Sector (EEWärmeG)

Summary

The Act on the Promotion of Renewable Energies in the Heat Sector (EEWärmeG) is valid in Germany since 2009. The act introduces the obligation for new buildings to use renewable energies for domestic hot water and space heating. Alternatively the heat demand has to go by 15 % under the limit of EnEV (Act on energy savings). When solar thermal energy is used, it has to cover at least 15 % of heat supply. Other renewable energy sources like biomass and geothermal are also possible as well as the connection to district heating with a minimum share of renewable energies or CHP.



Ordinance Facts

Ordinance title	Act on the Promotion of Renewable Energies in the Heat Sector (EEWärmeG)
Type of ordinance	renewable heat law
Starting date	1. January 2009
Duration	unlimited
Geographical area	Germany
No. of inhabitants	80 Mio, 365.000 km ²
Scope	new-build residential and non-residential buildings; there are exclusions for some non-residential buildings
Technology priorities	solar thermal, biomass, geothermal, use of waste heat, heat from CHP
Size of the solar heating system required	In case of solar thermal it has to cover at least 15 % of heat energy demand (proven by calculation) or meet the following requirements: <ul style="list-style-type: none"> - 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 - 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
Alternative measures	<ul style="list-style-type: none"> - Use of solid/liquid biomass, geothermal energy or waste heat: meet at least 50 % of heat energy demand - Use of biogas/bio-methane in CHP plants: meet at least 30 % of heat energy demand - The requirements of the EnEV for the building are surpassed by at least 15 percent by improved insulation - Connection to district heating grid, which is partly supplied by renewable energies or CHP (combined heat and power generation). <p>Also combination of different technologies is allowed. Exemptions are possible for conservation purposes or economical hardship.</p>

	According to §16 EEWärmeG municipalities can argue for obligation to use and connect to a (solar) district heating net with reasons like protection of climate and resources.
Executing authority	According to the Regional (Länder) regulations.
Execution mechanism	Not regulated by the law.

Development and Implementation

Background	Heat supply in Germany depends at almost 75 % from imported fossil fuel and gas. This results in economical risks, political dependence and emission of greenhouse gases.
Objectives	<ul style="list-style-type: none"> - Increase share of renewable energies in heating from 8.4 % (2008) to 14 %(2020) - reduction of emissions in heat generation - Lowering of political dependence - Minimisation of economical risks by possible rises in fuel costs
Process	The federal parliament Bundestag decided on the 'Integrated Energy- and Climate-Protection-Programme' of the federal government on 6 June 2008. The EEWärmeG is an important part of this program.
Timing	No information available.
Quality schemes product	Solar Keymark
Quality schemes installation	Not in the law. The federal support program 'Marktanreizprogramm' (MAP) has an innovation bonus which requires heat system simulation, hydraulics plan and system description for proof of cost effectiveness
Quality schemes other	Minimum performance factors for heat pumps; Quality- and sustainability requirements for use of biomass
Flanking measures	The law regulates funding and the funding amount until 2012. The MAP of the federal government was widened. E.g. funding of installation of solar thermal collectors at 45-180 €/m ² (up to 40 m ² collector area) or partly a credit at favourable conditions and 30 % repayment funding (over 40 m ² collector area). Since July 2010, plants on new buildings and systems for water heating only will not be subsidised anymore.
Supervision	House owners have to proof the use of renewable energies within three months after starting up of the heat system. The responsible regional governments have to apply random tests and are granted respective rights.
Sanctioning fees	yes, up to 50.000 €
Costs for implementing	Investment costs, as the law also applies for new public buildings. Process costs for the Länder for application of the law. Costs for exemption of the law have to be borne by house owners. Federal funding (incentive scheme): 500 million € p.a. (2009-2012)

Monitoring and Results

Monitoring	The federal government has to submit a report of results to the Bundestag until 31 December 2011. Thereafter a report needs to be submitted every four years.
Quantitative results	not yet available
Costs borne by the end user	Till 2020: according to estimations of federal environmental ministry (BMU) investment of 44 bn € (35 bn € for private buildings, 9 bn € for commercial buildings). Estimated netto costs of 12 bn € due to estimated savings of 31 bn € in operating costs.
Effects on other sectors	Labour market: rise in employment from 235.000 to 300.000 employees

(2007-2020, estimations of research institutions)	
Communication	The EEWärmeG was spread by PR measures, internet homepages of the BMU and within the climate protection program of BMU.
Future outlook	<p>On 28 September 2010 the German government decided that national law has to be adjusted to the EU-Directive 2009/28/EG. For the EEWärmeG the following new aspects were created:</p> <ul style="list-style-type: none"> - Municipalities shall act as role models, therefore after new construction or essential refurbishment of public buildings 15 % of the demand on heating and cooling energy has to be covered by renewable energies, e.g. solar thermal energy. - As a compensating measure it is possible that the municipality or a third person operates a solar thermal plant on the roof of a public building and delivers the produced energy to other buildings. In this case only the municipality can use the plant for fulfilling the ordinance. It is necessary to install 0.06 m² aperture area per m² building area to fulfil the law.

Lessons Learned

Barriers faced and overcome	not yet available
Success factors	Before starting the legislation all possible measures like funding programs and regional laws were evaluated by BMU and discussed with associations and enterprises. The intention was to reach the highest proliferation possible of renewable energies in the heat sector.
Potential for improvement	not yet available
Recommendations	not yet available
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