

Germany: a controversial heating law

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On 8 September the Bundestag passed an amendment to the Buildings Energy Act (*Gebäudeenergiegesetz*, GEG) which was backed by the SPD-Greens-FDP coalition. It includes new regulations on the installation of heating devices in Germany, and introduces a general rule that new heating systems installed after 1 January 2024 must be powered by at least 65% renewable energy. According to the legislators' definition, heat pumps, district heating, biomass boilers, electric boilers, hybrid boilers (under certain conditions), solar collectors and gas systems that can be converted to hydrogen, meet this requirement.

Initially, the new law will apply only to buildings in areas intended for new development. As regards other properties (both those already existing and those under construction in already built-up areas), the new regulations will come into force when the individual local governments adopt mandatory heating plans which will have to determine the areas where heating networks will be expanded and which elements of the gas network are to be converted to hydrogen in the future. Large municipalities (over 100,000 residents) will have to do this by 2026 and small ones by 2028. The act on municipal heating plans is to be adopted by the Bundestag in autumn this year.

If a particular local government announces the conversion of the gas network to hydrogen in its heating plan, the residents will be able to continue installing gas furnaces, but only those capable of burning hydrogen. In cases where the creation of a hydrogen network is not envisaged, it will still be possible to install gas boilers on condition that an appropriate admixture of biogas is used (15% from 2029, 30% from 2035 and 60% from 2040). The act also states that by 2045, when Germany plans to achieve climate neutrality, all heating systems must be powered solely by emission-free energy carriers. As of January 2024, anyone buying a heating system will have to consult an advisor.

A new subsidy programme has been introduced to encourage the replacement of heating systems. Those who decide to replace their heating systems with systems recognised as running on 65% renewable energy will be eligible for co-financing at 30% of the costs. People whose average annual income does not exceed €40,000 will be able to apply for another 30% per household member. An additional 20% bonus can be granted to those who decide to replace boilers that are over 20 years old by 2028. However, the total subsidy is limited to 70% of the declared costs, the maximum amount being €21,000. Additionally, subsidies for thermal modernisation of buildings are also available, so the total amount of the subsidy could even exceed €90,000.

Commentary

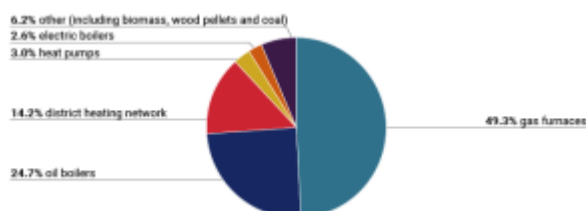
- The main goal of the new legislation is to initiate the decarbonisation of individual heating systems. The building heating sector accounts for 15% of greenhouse gas emissions in Germany: in 2022 it emitted 112 million tonnes of CO₂ equivalent into the atmosphere. The vast majority of German households are heated with fossil fuels: statistically, every second household is heated with natural gas, and every fourth with heating oil (see Chart 1). Emissions of this type are being reduced too slowly for Germany to achieve the goals of its national climate policy, both in the medium term (a planned reduction of 65% by 2030 compared to 1990) and the long term (achieving emission neutrality by 2045). Since heating systems are replaced rarely (usually once in 20–30-years), the need for new incentives to encourage the transition to low-emission solutions is particularly pressing, if Germany is to completely phase out the use of fossil fuels in household heating systems by 2045, as stipulated in its climate policy and the new act.
- Consequently, another major goal of the act is to initiate the process of discontinuing the use of natural gas in individual heating. This is another very important element of the German policy, which assumes an (almost) complete phase-out of the use of natural gas by 2045, when Germany plans to achieve emission neutrality. Currently, household heating accounts for up to a third of natural gas consumption in Germany (see Chart 2). For several decades, gas boilers have dominated the market for new heating systems in Germany, and until recently their purchase was subsidised by the government. Gas furnaces remain the most popular method: in the first half of this year they still accounted for 57% of heating devices purchased (heat pumps 29%, oil boilers 7% and biomass boilers 6%). The intention of the original version of the act, as prepared by Vice-Chancellor Robert Habeck of the Greens, was to halt the sale of new gas boilers relatively quickly (with some exceptions). However, since the option of transition to hydrogen or other decarbonised gas carriers later has been included in the act, these will continue to be sold in the coming years.
- Habeck's law caused huge controversy and became one of the main topics of political and social debate in Germany in the first half of 2023. The transformation of the individual heating sector is considered a much more challenging element of the *Energiewende* than the one that has been taking place in the power industry for years, because it requires passing regulations that interfere directly with citizens' lives and decisions regarding their property (such as who, when and at what cost they will have to install a particular heating system in their house). In particular, the first bill (which was much more radical than the version finally adopted), as leaked to the media in February this year, was widely perceived as an attempt to force the public to make specific, expensive investments. The opposition and numerous voices in the media accused Habeck of pushing through an ideologically motivated policy of prohibition. Thus, the failure to prepare an appropriate communications strategy has greatly raised the political cost of the act, which is one of the main elements of the government's climate policy as agreed upon by the coalition partners.
- The act adopted by the Bundestag is a very strongly modified version of the bill originally submitted, which was been weakened during the parliamentary process to an unprecedented degree. Initially, Habeck's ministry planned a much smaller number of

exceptions to the general ban on the installation of new gas and oil boilers starting from 2024, and a gradual shortening of the maximum period of use of already operating boilers from 30 to 20 years, to name just a few examples. Furthermore, fewer ways of meeting the 65% renewable energy requirement were included in the original bill. For example, it did not envisage the future use of hydrogen at all, and limited the possibility of installing biomass boilers. Habeck actually wanted heat pumps to become the main solution. It was only due to the controversy caused by the act that the content of the regulations was significantly weakened, a number of exceptions and transitional periods were included, and a larger number of permitted technologies were allowed. This led to a significant weakening of the potential effects of the act in terms of reducing greenhouse gas emissions, especially in the first years of its operation. The Federal Ministry for Economic Affairs and Climate Action (BMWK) estimates that it may reduce emissions by a total of 39 million tonnes of CO₂ equivalent by 2030.

- The bill prepared by Habeck's ministry provoked a serious crisis inside the SPD-Green-FDP coalition in spring this year. Since its leak to the media in February this year, the FDP began staunchly opposing the project and sharply criticised both the document itself and Vice-Chancellor Habeck, who was personally responsible for it. Initially, as part of the cabinet's work, and later in the Bundestag, the FDP blocked the progress of negotiations on the bill, insisting on what the Greens saw as excessive concessions. It is speculated that the FDP could have been responsible for leaking the preliminary bill to the media in order to ruin the Greens' initiative in the eyes of public opinion. For their part the Greens, who see this act as one of the most important projects of the incumbent government, accused the FDP of breaking the arrangements made within the coalition. For many weeks, Chancellor Olaf Scholz was unable (or unwilling) to resolve the dispute between the coalition partners, which especially irritated Green politicians. This also led to public dissatisfaction and a significant drop in the ratings of the ruling coalition (as well as those of the Green Party and Vice-Chancellor Habeck). A compromise, in the form of Habeck making concessions in all the major areas, was only reached in June, when the dispute over the GEG led to many other governmental initiatives being blocked.

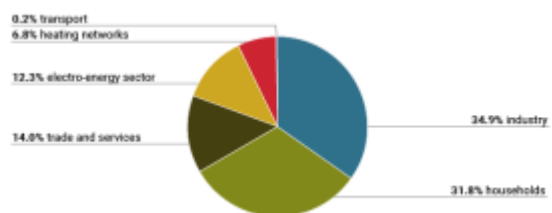
APPENDIX

Chart 1. Structure of heating systems in Germany



Source: BDEW.

Chart 2. Structure of natural gas consumption in Germany by sectors



Source: BDEW.