

Is the “heating hammer” hitting energy efficiency policy? Learnings from the debate around the German Buildings Energy Act

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Abstract

As a key element of its strategy to increase energy efficiency and renewable energies in buildings, Germany has recently revised its building energy act. The revision of the law has received unprecedented media attention and has dominated the energy policy discourse in 2023 in Germany and beyond. Driven by the German tabloid “BILD”, a campaign making use of populist discourses and misinformation has filled the front pages of German newspapers. The high media reception of the so-called “heating hammer” has strongly impacted not only the provisions of the law itself but has also caused considerable damage to future energy efficiency policy developments, leading to a withdrawal of a previously announced tightening of energy efficiency standards as well as the watering down of Germany’s position in the trilogue negotiations on the Energy Performance of Buildings Directive. Given the relevance of the process and the discourse for current and future policy developments, our paper provides an analysis of the different steps in the policy process and their respective media reception. We first summarize the main elements of the revision of the German Buildings Energy Act and discuss how these have evolved from the first draft to the final adopted provisions. We then discuss the evolution of media coverage between the first uptake in February 2023 until the adoption of the law in September 2023. We conclude by reflecting upon the increasing role of populist discourses on energy policy development.

Introduction

Germany has revised its Building Energy Act, known in German as “Gebäudeenergiegesetz” (GEG) in 2023. The GEG is a key legislation aimed at improving the energy efficiency of buildings and fostering the use of renewable energies for heating. The law is an important component of Germany’s efforts to reduce energy consumption and greenhouse gas emissions, in line with its climate protection goals.

The German buildings sector is currently largely based on fossil fuels, with around 80 % of all dwellings being heated with individual gas or oil boilers. The sector has failed to meet its targets for the years 2020–2022 set in the Federal Climate Change Act¹ and is not on track to meet its target for the year 2030.

In November 2021, the newly elected Federal government stipulated a renewable heating obligation in their coalition agreement. The agreement foresees that the GEG would be revised to include the provision that all newly installed heating systems would be obliged to run on at least 65 % renewable energies. The German coalition government was formed after the 2021 German federal election and consists of three political parties: 1) The Social Democratic Party (SPD) led by Olaf Scholz, the Chancellor in the government. 2) The Greens (Bündnis 90/Die Grünen), for which Robert Habeck holds the position of Vice Chancellor of Germany and Federal Minister for Economic Affairs and Climate Action. 3) Free Democratic Party (FDP). The German government is colloquially called “Ampel” (German for “traffic light”) due to the colors representing the three coalition parties.

1. Available at: https://www.gesetze-im-internet.de/englisch_ksg/index.html, checked on 1/31/2024.

While the introduction of a renewable heat obligation had been announced as early November 2021, the leak of an early draft of the legislation initiated an intensive media debate starting in February 2023. Driven by the German tabloid “BILD” and others, narratives based on misinformation filled the front pages of German newspapers for months.

The evolution of the drafting of the law as well as other pieces of energy policy have been influenced by the intense media coverage and the public debate around the law. During the various steps until the adoption of the final law, several provisions have been weakened and delayed. In addition, the intense negative communication around the heating law puts a challenge on energy policy efforts beyond the heating law.

In view of the important role of the debate around the German heating law, this article analyses the different steps of the revision and the key narratives presented by the media. After outlining the methodological approach, we first describe the outcome of the revision as well as the steps leading to the compromise. We then discuss the media coverage and key narratives, followed by our conclusions.

Material and methods

The methodological approach of the article follows two main steps: As a first step, we provide an overview of the main elements of the revision of the German Buildings Energy Act and describe the different stages of the revision. As a second step, we discuss the coverage of the Buildings Energy Act in the media in the timeframe since its announcement in November 2021 until January 2024.

For describing the timeline of the revision of the law, we use official government documents including the different draft legislations and concept papers published by the government.

For analysing the coverage of the law in the media, we first provide an overview of the key narratives promoted by the tabloid BILD, where we use the search function of their webpage to identify the articles that cover the legislation. By accessing all available articles for the search terms ‘Heizhammer’ (heating hammer), ‘Heizgesetz’/‘Heizungsgesetz’ (heating law), ‘Gebäudeenergiegesetz’/‘Gebäudegesetz’ (Building Energy Act) we compiled a dataset of 245 BILD articles². The articles were tokenized by natural language processing tools for a further quantitative analysis and examined for the word frequencies they contained. In combination with a qualitative analysis of a selection of the articles, dominant narratives and key phrases were identified.

Secondly, we analyse how the media coverage of the law evolved over the timeframe until January 2024, using the WISO database³. The WISO database covers around 200 German newspapers, thus providing a comprehensive overview of the media coverage in the country. To extract the articles that cover the German Buildings Energy Act, we use a combination of different terms that refer to the law⁴.

The renewable obligation in the Buildings Energy Act

The most important provision of the GEG amendment is that newly installed heating systems⁵ must be operated with 65 % renewable energy in the future. Figure 1 provides an overview of the approach that was finally agreed upon and has been enshrined in the amendment adopted in September 2023. This only applies to newly installed heating systems, existing heating systems may continue to be operated and repaired.

The obligation is structured in three compliance periods (phase 1 to phase 3):

- In phase one, the installation of fossil heating systems is allowed in existing buildings, however starting from January 2029 these heating systems have to be operated with 15 % renewable energy, starting from January 2035 with 30 % and starting from January 2040 with 60 %. Phase one started on January 1 2024 and ends by June 30 2026 for municipalities with more than 100,000 inhabitants and by June 30 2028 for all other municipalities.
- In phase two, the renewable obligation is fully in place and all newly installed heating systems in new and existing buildings have to be operated with 65 % renewable energy. An exception are H₂-roll-out areas, which may be defined by municipalities in their municipal heat planning. If a municipality defines an H₂-roll-out area, the installation of gas boilers is still allowed in this area and building owners are allowed to run these boilers on fossil gas until the grid is transformed to 100 % hydrogen and latest until the end of the year 2044.
- Phase three: Starting from January 1 2045, no fossil fuels are allowed for heating in buildings.
- In new buildings, the requirement to use 65 % renewable energies is in place since January 1 2024 (with some exceptions).

There are various options for meeting the requirement of 65 % renewable energies. In principle, all renewable energies are permitted. In addition, the law provides for standard cases such as

- all types of electric heat pumps (this also includes the use of geothermal energy): For electric heat pumps, the requirements are met if the heat pumps covers the full heat demand of the building. This means that no further proofs are necessary and there are no requirements on the renewable shares of the electricity consumed by the heat pump.
- connection to district heating: For a connection to existing district heating grids, there are no further requirements regarding the renewable share of the heating delivered through the grid. The decarbonisation of district heating is addressed in a different law (the heat planning law⁶);
- direct electricity heating such as night storage heaters (generally only permitted in very efficient buildings);

2. This also includes the titles and teasers of the BILDplus articles located behind a paywall (n= 19).

3. www.wiso-net.de

4. The search prompt was “Heizungsgesetz OR Gebäudeenergiegesetz OR Heizungshammer OR Heizhammer”.

5. This holds for the total energy demand in combined space and water heating systems, and for each device separately in individual space/water heating systems (§ 71 (4) Buildings Energy Act).

6. The heat planning law can be found here: <https://www.gesetze-im-internet.de/wpg>.

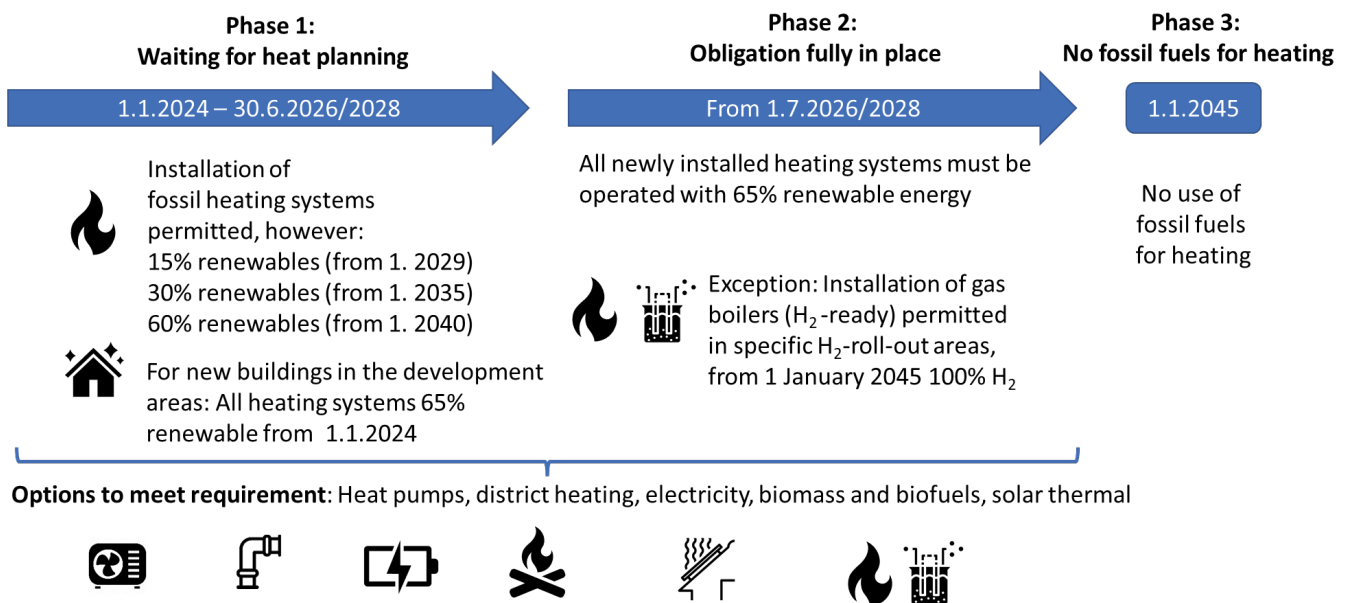


Figure 1. Overview of the provisions on renewable heating in the Buildings Energy Act.

- heat pump in combination with a fossil heating system (hybrid heating): Requirements on minimum thermal output of the heat pump must be fulfilled for this option;
- solar thermal systems (if 65 % requirement is met), typically in combination with other renewable heat sources;
- solar thermal hybrid heating, consisting of a solar thermal system in conjunction with a gas, biomass or liquid fuel firing system;
- green hydrogen (blue hydrogen produced from fossil fuels is also equated with green hydrogen/renewable energies);
- solid, liquid and gaseous biomass such as wood, pellets or biomethane: This means that it is possible to install gas/oil boilers, however these must be operated with 65 % renewable gas/oil.

Timeline in the revision

This section describes the important steps of the revision of the Buildings Energy Act, starting from the first announcement of the renewable energy obligation until its adoption.

- **November 2021 – Coalition Agreement:** The coalition agreement (SPD, GRUENE, FDP 2021) set the stage for the “heating law”. The three governing parties state in the agreement that the Buildings Energy Act would be revised such that starting from January 1 2025 all newly installed heating systems should be operated with 65 % renewable energies.
- **March 2022 – Coalition Decision:** Referring to the energy crisis in the context of the Russian invasion of Ukraine, the government agrees to shift the starting date of the requirement for newly installed heating systems to be operated with 65 % renewable energies to January 1 2024. Notably, while the notion “if possible” is added to the requirement, however without further details or criteria.

- **July 2022 – Concept paper:** The Federal Ministries for Economic Affairs and Climate together with the Federal Ministry for Housing, Urban Development and Building publish a concept paper outlining two possible approaches for implementing the requirement (BMWK und BMWBS 2022). In the paper, two main compliance models are proposed: One allows property owners to choose freely from various renewable heating options, while the other is a two-stage model where the use of scarce resources like biomass or green hydrogen is considered a secondary option.
- **February 2023 – Leaked draft:** On February 27 2023, the tabloid BILD features a leaked draft of the law on its title page. The draft is subject to numerous BILD articles in the days and weeks following the leak, promoting a very negative framing of the law (see next section). In early March 2023, the law is labelled “heating hammer” (Heizungshammer) by the BILD, a term that is subsequently used for referring to the law throughout the reporting in BILD and other media.
- **March 2023 – Coalition Decision:** After 30 hours of negotiations, the three coalition partners agree upon a series of provisions, including the Buildings Energy Act (SPD, GRUENE, FDP 2023). The parties agree that the law is drafted and adopted before the summer break.
- **April 2023 – Cabinet Decision:** By April 19, 2023 the German Federal Cabinet approved the submission of draft legislation to amend the Buildings Energy Act. Hence, the Finance Minister, a member of the FDP, stated on record that the draft law was approved taken into account that additional amendments should be undertaken in the legislative process (Bundesverfassungsgericht 2023).
- **May 2023 – Obstruction:** In the first half of 2023, the FDP opposed the law for weeks, despite the fact that it had already approved the law several times. It ensured that the

GEG was not put on the parliamentary agenda and sent long catalogues of questions to the government (Laschyk 2023).

- **June 2023 – Coalition Decision (Bundestag 2023):** By June 27, 2023, Germany’s ruling parties agreed on the final details of the green energy law. This agreement included some significant changes from the initial proposals: The obligation for heating systems to have a 65 % share of renewable energies, initially proposed to apply to all newly installed heating systems, was adjusted to initially apply only to new buildings⁷. The enforcement of the heating law for existing buildings is tied to the development of municipal heating plans, due on July 1 2026 for municipalities with more than 100,000 inhabitants and July 1 2028 for all other municipalities.
- **July 2023 – Constitutional Court ruling:** The German Federal Constitutional Court halted the foreseen adoption of the revised Building Energy Act, following a challenge by Thomas Heilmann, a Member of the Parliament (Bundestag) from the Christian Democratic Union. Heilmann argued that the parliament was not given sufficient time to discuss the law since the last changes of the act, and the court agreed, emphasizing the parliamentarians’ rights to deliberate (Bundesverfassungsgericht 2023).
- **September 2023 – Adoption:** After the summer recess, the German parliament adopted the heating law⁸. The Bundestag voted in favor of the revised heating law, marking the culmination of months of intense debate and negotiation within the ruling coalition.

Media coverage and narratives

NARRATIVES PROMOTED BY BILD AND OTHERS

The German tabloid BILD and others extensively covered the revision of the Buildings Energy Act, shaping a series of very negative narratives around the introduction of the renewable obligation. BILD labelled the law as the “heating hammer” (Heizungshammer) and published numerous articles around the revision. In the dataset of the BILD heating law articles, in 103 articles the word hammer was used, in 32 articles it was part of the title. The following main themes were particularly prominent:

Mandatory exchange existing heating systems

Since the leak of an early draft of the law in late February 2023, BILD promoted the (incorrect) picture that the requirement to use 65 % renewable energies applies to all heating systems, including existing boilers. On March 1st, this narrative was initiated with an article claiming that running existing gas/oil boilers will be banned (BILD 2023a). In the following days, other articles suggested that all heating systems have to be exchanged by 2034 in single family houses and 2031 in multifamily houses and claim that all gas and oil boilers are

banned in 2024 (BILD 2023b). On April 6 2023 an article in BILD argues, that a “hidden clause” within the draft regulation requires owners of all heating systems (including the ones installed before January 2024) to run on 50 % renewable energy by 2030 (BILD 2023l) and continues to claim that Habeck had intended a complete use ban (BILD 2023m). In total, the word ban or a variation of it (e.g. installation ban, ban policy, ban law) appears in 55 of the articles analyzed (in total 129 times). Such requirements had not been part of any of the drafts for the revised buildings energy act.

High costs and social hardship

Another key narrative in the reporting in BILD focussed on the costs for homeowners, providing examples for calculations of costs that largely exceeded costs for typical installations of heating systems. The distress of homeowners is addressed in 31 different articles. Next to the “heating hammer”, the articles that highlight the high costs for home-owners also refer to the “retrofit obligation” planned at EU level (BILD 2023d, 2023f, 2023e, 2023h). The narrative presents the EU proposal to introduce minimum energy performance standards (MEPS) for existing buildings as part of the revised Energy Performance of Buildings Directive (EPBD) as the even tougher heating hammer. In some articles, the narratives around high costs are presented by showing the hardship for “normal families” that are caused by the laws (BILD 2023o, 2023j).

Blaming Robert Habeck and the Greens

A key theme that is reflected in virtually all of BILD articles covering the “heating law” is the blaming of the German Vice Chancellor Robert Habeck. 60 % (n = 146) of the analyzed articles on the heating law feature Robert Habeck’s name in the text, almost 20 % (n = 47) directly in the title and numerous articles present his picture. The revision of the Buildings Energy Act is solely presented as the project of Robert Habeck, ignoring the fact that the renewable energy obligation for existing heating systems had been part of the coalition agreement and all drafts had been developed in cooperation with the SPD-led Federal Ministry for Housing, Urban Development and Building. An analysis of BILD articles in the blog by kobuk.at⁹ conducted prior to the “heating law” suggests that BILD had been running a campaign against Robert Habeck even before the “heating hammer” (Fink 2023).

FDP defends interests of Germans by fighting against the “heating hammer”

Starting on March 2nd (BILD 2023c) BILD publishes a series of articles highlighting the role of FDP – a member of the coalition government – is fighting against the heating hammer (BILD 2023q, 2023c). On March 30th 2023, a BILD article claims that the previously foreseen complete ban of existing gas and oil boilers had now been withdrawn and suggests that this is a political success for FDP and a relief to home owners (BILD 2023k). In the successive weeks, the discourse of FDP diffusing the heating hammer (and thus saving home owner) continues (BILD 2023r, 2023p, 2023t, 2023s). The presence of the FDP in the role of Habeck’s opponent is also reflected in

7. Restricted to new buildings in new development areas.

8. See <https://dip.bundestag.de/vorgang/gesetz-zur-%C3%A4nderung-des-geb%C3%A4udeenergiegesetzes-zur-%C3%A4nderung-des-b%C3%BCrgerlichen-gesetzbuches/298723>.

9. <https://kobuk.at>

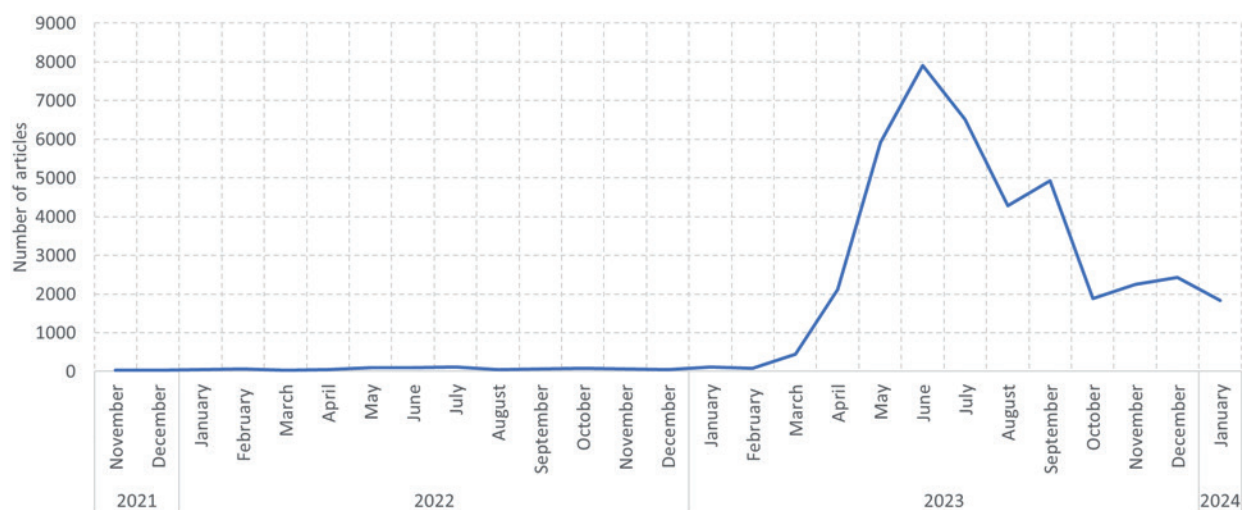


Figure 2. Number of articles on the heating law per month in the WISO-net database.

the frequency of its mentions. In almost 50 % (n = 117) of the articles, the party's name or its chairman Christian Linder is mentioned.

Media, FDP and Opposition Parties: Poorly crafted law

The accusation that the Heating Act was “poorly crafted” has been raised continuously and has been taken up widely in the media and the public discussion, without this accusation being substantiated or concretised. This claim is not further substantiated, the first (leaked) draft bill had been prepared carefully over months of work in the ministries.

MEDIA COVERAGE

Starting with the first articles on the heating law in BILD, the heating law is subject to intense media coverage across the media landscape in Germany. Figure 2 shows the number of articles per month extracted from the WISO-net database, covering around 200 German newspapers. The graph shows that the media coverage continuously increased its intensity from March to June, which is when the adoption had been foreseen but was delayed due to the Constitutional Court Decision (see section on timeline of the revision). Another peak is observed in September, reflecting the adoption of the law in the German Parliament (Bundestag).

The key narratives promoted by BILD and others are reflected broadly in many articles covering the heating law: The search term “heating hammer” provides almost 700 results in articles outside BILD in the time period between March and December 2023. The term “Heizungsverbot” (heating ban) is used in 760 articles in the same period. Next to the narratives presented in the previous section, the role of “ideology” was highlighted in 660 articles. The term “uncertainty” (“Verunsicherung”) together with the term heating law (Heizungsgesetz) results in more than 2,500 articles.

Only a limited number of media outlets delved into the specifics of the rather moderate provisions in the law and explicitly covered the campaign opposing the legislation, notably niche media such as “Klimareporter.de” (Unfried 2023) and the fact checker “Volksverpetzer.de” (Laschyk 2023).

Impact on energy efficiency policy

The intense and negative discourse has had important impacts not only on outcome of the “Heizungsgesetz” itself, but also on other energy efficiency policy instruments in the buildings sector.

MAIN IMPACTS ON THE RENEWABLE ENERGY OBLIGATION

Regarding the “Heizungsgesetz”, a key element influencing the future energy savings and greenhouse gas emission reductions is the shift of the starting date through connecting the law to heat planning. In some municipalities, it may be useful for building owners in certain cases to know whether their building could be connected to district heating or even to a “hydrogen network expansion area” in the future. For the vast majority of Germany, however, neither new district heating nor hydrogen networks will be a real option – yet the validity of the law for all municipalities has been delayed by several years: even for the smallest towns or remote farms in outlying areas where it is clear that no district heating will be installed in decades. Municipalities can decide earlier to designate an area for the construction or expansion of district heating networks or hydrogen network expansion areas, which means that the GEG can be applied earlier if necessary. However, it is highly questionable whether this option will be widely used.

Biomass is widely permitted in the law that has now been passed. The first draft excluded biomass in certain heating systems in new buildings in order to be able to use the limited biomass resources for buildings where other options are technically more difficult to implement. The originally planned mandatory combination of wood and pellet heating systems with a buffer storage tank and a solar thermal or photovoltaic system was also removed without replacement. The requirement envisaged at the time was intended to allow hot water to be generated by solar energy outside the heating period, so that the wood and pellet heating system would not have to be operated during the summer. The planned requirements to reduce dust emissions were also deleted. From an environmental and climate perspective, as well as in terms of health protection in urban areas, these deletions make the law significantly worse than the

original plans. This is because biomass is a limited resource that should not be used in an untargeted manner. This is also underlined by the results of the German projection report (Oeko-Institut 2023). The expected demand for wood energy in 2030 is 60 % higher than the German wood reserves in forests as well as residual and waste wood, if all existing political measures (including the current amendment to the GEG) are included.

The requirements can also be met by combining different technologies. In accordance with the principle of technological neutrality, all conceivable compliance options are permitted – including those that are associated with serious disadvantages for the ongoing heating costs, the availability of fuels or particulate matter pollution in city centres.

MAIN IMPACTS ON OTHER POLICY MEASURES

In addition to the weakening of the Heizungsgesetz itself, a tightening of the efficiency standards for new buildings in Germany that had been agreed upon was withdrawn in September 2023. In a so-called “building summit” (Baugipfel) the German government announced a package of measures for the buildings sector. As one of the proposed measures, the government announced that a previously foreseen tightening of the efficiency standards¹⁰ would not be implemented in the current legislative period anymore. The measures had been part of the initial coalition agreement and was foreseen for January 1 2025. Similarly to the tightening of efficiency standards for new buildings, the government had also proposed to tighten the requirements for existing buildings, which the authors of this paper consider unlikely to happen due to the experience with the Buildings Energy Act.

At EU level, the German government changed its position in the negotiations around on the EPBD, particularly with respect to the introduction of Minimum Energy Performance Standards (MEPS) for residential buildings. While Germany had previously supported their introduction, the Federal Ministry for Housing, Urban Development and Building started to openly oppose their introduction in late March 2023, stating in an interview with BILD (BILD 2023i) that they would not support any provisions for “forced” retrofit (“Sanierungszwang”). An article in Handelsblatt¹¹ celebrates the fact that the final agreement on the EPBD does not include MEPS for residential buildings and directly attributes this to the German interventions.

In addition, the EU proposal for revising the ecodesign requirements for boilers presented as part of the RepowerEU package was opposed by Germany. In its “Save Energy” Communication (EU Commission 2022), the Commission proposes setting stricter ecodesign limits for heating systems at EU level, implying 2029 as an end date for ‘stand-alone’ fossil fuel boilers being placed on the market. The proposal was criticized by BILD and others as an additional “heating hammer” that is even tougher than the German proposal, leading to a reaction

of the EU Commission on Twitter/X¹² stating that the media reporting is misleading.

Discussion and conclusions

The revision of the German Buildings Energy Act, now including a renewable obligation for existing buildings, has been subject to an intense negative media uptake that put a serious challenge to the process and led to several elements that weakened the original proposal.

The key narratives around the heating law in many cases used misinformation and featured a negative framing of politicians (mainly from the green party) paternalizing citizens and acting against the needs of “normal” citizens. In Germany, the specific political situation with a coalition government including the SPD, GREENS and FDP seems to have played a leading role in the media uptake and the strong criticism of the law.

These narratives are also reflected in the communications by the German opposition parties as well as within the parties of the coalition government. The far-right party Alternative for Deutschland (AfD) uses the term “heating hammer” and operates a website dedicated to “stopping the heating hammer”, referring to the costs for citizens as well as framing the law as ideological. In a campaign initiated in May 2023¹³, the Christian Democratic Union (CDU) uses the same rhetoric as the AfD, stating the aim of “stopping heating hammer” and referring to the high costs for citizens.

Beyond the specific German situation, the increasing role of right-wing populist discourses for energy and climate policy has been discussed in several contributions, e.g. (Thalberg K. et al. 2024; Lockwood und Lockwood 2022; Atkins 2022). In the German case, the far-right AfD increased from 15 % in February 2023 to 23 % in October 2023 in a regular poll asking a which party the participants would vote for. The debate on the Heating Act may have contributed to this.

It can also be said that the law was drafted too slowly. In the summer and autumn of 2022, there were major fears of a gas shortage and the state pledged 200 billion euros in gas aid. However, the law only became public after the winter – at a time when society no longer wanted any new burdens and hardship. How different would the debate have been if the ministries had launched the law in 2022 instead of the participation process for the concept paper? The window of opportunity was missed here.

Furthermore, the development of communication strategies was neglected in the preparation of the law. The law, covering a variety of technologies, is complex by nature. However, preparation of communication strategies started too late – and was not ready at the time of the “leak”. This also applies to the accompanying rather high subsidies. As this is regulated in a different legal act – a funding guideline – and these funds first have to be approved by the Ministry of Finance, the exact details about the funding was unclear for a long time, causing additional uncertainty for building owners. The contradictory communication of the coalition government and the parties that form the gov-

10. In the coalition agreement, the governing parties had agreed to raise the efficiency standard to the efficiency level EH 40, for the exact definition of this standard see: <https://www.kfw.de/inlandsfoerderung/Privatpersonen/Neubau/Das-Effizienzhaus/>.

11. See article entitled “How Germany prevented the obligation to renovate” (in German) here: <https://www.handelsblatt.com/politik/international/energetische-sanierung-wie-deutschland-die-sanierungspflicht-verhindert-hat/100002602.html>.

12. See <https://twitter.com/EUinDE/status/1666402134286270465>.

13. See <https://www.cdu.de/artikel/kampagne-fuer-eine-waermewende-ohne-soziale-kaelte>.

ernment was particularly disconcerting. When members of one party within the coalition government oppose a law more vigorously than the opposition, it suggests that the criticism is well-founded. The inconsistent communication of the supporters was also unhelpful: For example, as a reaction to the criticism, at some point all building owners that are over 80 years old were to be exempt from the obligations. This led to new accusations regarding the unequal treatment. Furthermore, the exemption was used as proof that the burdens are apparently greater than officially announced by the government itself.

Concluding, the role of the media and public debate in energy and climate policy-making is increasingly important and needs to be accounted for in the policy-making process. Understanding and monitoring the misinformation is an important step towards developing communication strategies aimed at countering misinformation, not only by correcting false information but also reinforcing the correct information over time.

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