



GdW Position Paper

Green Deal – Renovation Wave:

Revision of the European Buildings Directive
2010/31/EU on the energy performance of
buildings of 19.05.2010 with amendments
of 30.05.2018

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Publisher:
GdW Bundesverband
deutscher Wohnungs- und
Immobilienunternehmen e.V.
Klingelhöferstraße 5
10785 Berlin
Phone: +49 (0)30 82403-0
Fax: +49 (0)30 82403-199

Brussels Office of the GdW
3, rue du Luxembourg
1000 Bruxelles
Phone: +32 2 5 50 16 11
Fax: +32 2 5 03 56 07

E-mail: mail@gdw.de
Internet: <http://www.gdw.de>

Position paper on the revision of the European Buildings Directive

Green Deal – Renovation Wave:

Revision of the European Buildings Directive (Directive 2010/31/EU on the energy performance of buildings of 19.05.2010 with amendments of 30.05.2018)

Preface

The European and national climate protection goals have shifted from just a reduction target to the goal of climate neutrality. Climate neutrality means zero greenhouse gas emissions in the heating and hot water supply of dwellings from 2050 or 2045 onwards. This requires a paradigm shift and a concrete planning. The previous selective approach of renovating individual buildings to a top energy level at great expense no longer works with a view to 2045. There will not be enough time, nor planning and construction capacity, nor private and public money for this approach. In 2020, a study¹ showed that reaching the climate targets in a socially acceptable way by means of building efficiency in Germany would require annual subsidies of 25 billion EUR.

The consultation on the EPBD amendment (until 22 June 2021) was largely aimed at a further tightening of energy requirements. The possibility for comments, if any, was limited to 500 to 1,000 characters².

For this reason, the GdW is presenting this supplementary statement on the amendment to the Buildings Directive, which explains the decisive points from the housing industry's point of view to achieve climate neutrality in the stock of the social housing industry in Germany. The housing industry has already accomplished a lot through considerable investments in the stock. However, the political goals have become so demanding that

- climate policy and funding must be realigned and
- substantial assistance must be provided for tenants with low and medium incomes.

We would like to engage in the discussion.

The GdW Bundesverband deutscher Wohnungs- und Immobilienunternehmen e.V. (Federal Association of German Housing and Real Estate Companies) is the umbrella organisation of the 14 regional housing and real estate associations in which around 3,000 housing companies and cooperatives are organised. They manage a total of around 6 million flats in which over 13 million people reside, including around 65% of the German social housing.

Our housing companies are important partners for the local economy and contribute to securing about 65,000 local jobs. With a share of around 11% of economic output in Germany, the real estate and housing industry is larger than retail or the automotive industry and is one of the main industries in the country.

¹ Bienert, Sven; Groh, Alexander M.: "Wissenschaftliche Plausibilitätsprüfung bzgl. der errechneten öffentlichen Förderungslücke zu Erreichung der Klimaziele durch energetische Gebäudesanierungen im Mietwohnungsbau, Regensburg 2020." (Scientific plausibility check regarding the calculated public funding gap to achieve the climate targets through energy-efficient building refurbishments in residential construction, Regensburg 2020).

² For many questions, a "no" answer could not be specified.

Summary

Central points of the housing industry to reach climate neutrality

A necessary paradigm shift:

- The goal of greenhouse gas neutrality will not be achieved with ever greater pressure on building refurbishment. Instead, much greater attention must be paid to the defossilisation of energy sources for heat supply. In this context, it is important to consistently exploit all possible sources.
- Subsidies for energy efficiency and the defossilisation of energy sources must be set up in the long term and in a reliable way so that they can be financed in an almost gross-rent-neutral way.
- Local energy production from renewable energies by prosumers (landlords and tenants) must become as simple in regulatory terms as the production of heat by a central heating system is today.

Affordable climate protection:

- In Germany, the reduction of energy costs through expensive energy-efficient renovation always goes hand in hand with an increase in housing costs. The avoided energy costs by no means cover the costs for the tenants and ultimately lead to a burden instead of relief. If energy-efficient modernisation is carried out without subsidies, affordable housing is taken out of the market.

Zero-emission buildings:

- We support the introduction of the concept of zero-emission buildings, as opposed to a stricter definition of "lowest-energy buildings". The latter would not lead to an increase in the renovation rate.

Binding minimum standards:

- Minimum standards with penalties would only be conceivable for the housing industry in the long term for the worst building classes if a reliable and sufficient subsidy ensures gross-rent-neutral refurbishment for at least 10 years beforehand.

Cost efficiency:

- Housing companies can only make investments if they are economically viable. An expansion of the investment activity reaches its limits in several cases. An essential part of the problem consists in the decreasing marginal utility with increasing energy standards and the resulting impossibility of affordable refinancing by the overburdened tenants.

District approaches:

- The Buildings Directive should be further developed in such a way that neighbourhoods and "fleets" of properties can be largely self-sufficient.

Climate strategies in housing companies:

- In order to minimise the bureaucratic burden, we advocate that building renovation schedules should not be extended to housing companies. The residential buildings of housing companies can be better considered as a whole portfolio rather than as individual buildings ("fleet approach").

Public sector buildings:

- Public housing companies and publicly subsidised housing that do not receive state compensation payments should not be included in the definition of public buildings. They are entities that operate competitively under market conditions, carry the risks associated with their activities and are susceptible to insolvency.

Life cycle analysis:

- The consideration of CO₂ emissions over the whole life cycle of buildings should be done for new buildings and at the level of building typologies, but not strictly for individual buildings. Digital solutions, in particular interfaces, should be further developed in a consistent manner to ensure the greatest possible interoperability.

Accessible databases:

- Commitments for the development of new databases should first be subject to a cost-benefit analysis. With 20 million residential buildings in Germany, the cost of setting up and maintaining such a database is enormous.

Energy performance certificates:

- Energy performance certificates are sufficient in their current form. On the other hand, the quality of energy advice must be improved so that energy certificates as the result of planning processes are more meaningful and reliable.

Electromobility:

- No stricter regulations on electromobility are needed. The biggest obstacle in the area of multi-family houses is a sufficient grid connection for a large number of charging points, i.e. the provision of the reinforced or a second building connection.

Position statement in detail

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1 A necessary paradigm shift

Society is in the process of shifting from a reduction of greenhouse gas emissions to climate neutrality. By 2050 or 2045 at the latest, no more greenhouse gas emissions are to be emitted in dwellings, and this applies even to heating and hot water.

Climate protection is an important dimension of the management of multi-family rental buildings. But it is also about providing affordable housing to broad segments of the population, a high quality of living, modern and barrier-free flats, a pleasant living environment, social peace in culturally diverse neighbourhoods, all within the framework of economic viability.

Climate protection measures and living in harmony with the global and local environment are becoming increasingly important in society. Greenhouse gas emissions are the product of final energy consumption and the emission factor of the energy source. If the product is to be zero, at least one of the factors must be zero. Energy consumption cannot be zero. Therefore, the first requirement for a climate-neutral building stock is an energy supply with renewable energy sources.

From a technical point of view, two questions can be raised:

- Which renewable energy sources can be used in a specific location or neighbourhood?
- How low should the energy consumption be so that it can be covered by renewable energy sources in this location or neighbourhood?

What is more decisive, however, is a sustainable perspective:

- Which measures reduce greenhouse gases faster and better, taking into account the circumstances of rental apartment buildings and limited resources (planning, manual work, refinancing, material)?
- Which solution makes the best use of the available capacities in terms of time and money, including the limited public and private resources?

It is necessary to acknowledge unpleasant facts:

Energy consumption can be reduced and kept low through a variety of measures, such as thermal insulation, system optimisation and building automation. After 1990, considerable progress was made in this area.

However, despite substantial investments in energy refurbishment, the specific, temperature-adjusted energy consumption has not decreased for about 10 years, at least not in Germany (see the following figure). In den 10 Jahren der Stagnation wurden in Deutschland 400 Milliarden EUR in die energetische Modernisierung von Wohnungen investiert. Almost 2.5 million new low-energy-consuming dwellings were built and 0.26 million dwellings with above-average energy consumption were demolished. In theory, each individual

point should have brought about a recognisable reduction in energy consumption. The actual success, however, is almost zero.

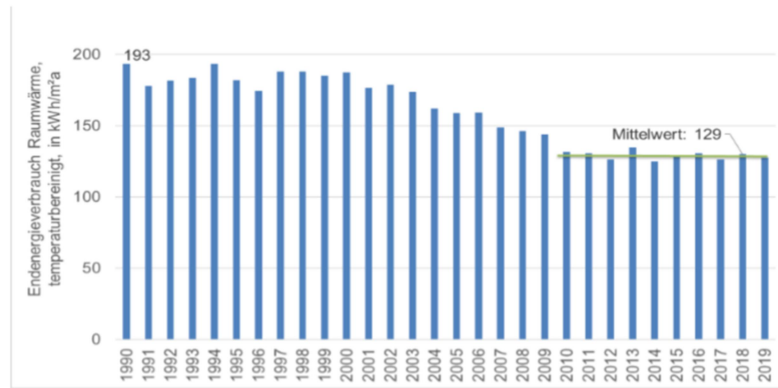


Figure 1: Development of temperature-adjusted space heating consumption in relation to living space. Source: BMWi energy data. Own representation

One of the main reasons is the consumption behaviour of the users. Nevertheless, there is an urgent need to investigate all the possible causes.

The first insight we gain from this is that in reality we need more energy than what has been calculated in theory. Therefore, it is clear that the goal of greenhouse gas neutrality cannot be aimed at efficiency alone, but that the decarbonisation of the heat supply must be addressed to a much greater extent. In order to meet the goal of climate neutrality, we rely on a paradigm shift, combined with the binding goal of greenhouse gas neutrality by 2045:

- focus on greenhouse gas reduction, additional requirement on efficiency.
- building efficiency as an "enabler of renewable energies" (zero carbon ready) can and should thus be regarded as positive. Higher minimum standards would cause the refurbishment rate in particular to decline or even collapse.
- Enable district and fleet approaches.
- Local energy production from renewable energies by prosumers (landlords and tenants) must become as simple in regulatory terms as the production of heat by a central heating system is today.
- Long-term reliable funding to be able to achieve climate targets in the rental sector that are almost neutral in terms of rents. A subsidy with legal entitlement compensates housing companies for the (non-implemented) rent increase.

A coordinated effort for building automation/system optimisation should spread the idea of ensuring efficiency on a broad scale. In Germany, this includes e.g.

- a temporary higher subsidy,
- the inclusion of the use of digital infrastructure in the Operating Costs Ordinance,
- the permission to use dwelling- and room-related data for managing the building, and

- an end-to-end interoperability of controllers for heat generators with building management systems and housing systems.

The use of local photovoltaic systems must be simplified considerably, e.g. by classifying them as a building component instead of a power plant. For example, the electricity generated could be included in the operating costs³ (general electricity, heat pump) or sold as tenant electricity or as a flat rate (e.g. including electricity for e-mobility).

Table 1: The goal of climate neutrality requires a rethink

Before - reduction of GHG	Now - zero GHG until 2045
Thermal insulation reduces energy consumption to the greatest extent possible: constant tightening of allowed transmission heat loss	Renewable energies ensure climate neutrality: consistent development of all sources, simplify PV on roofs, district solutions, consistent sector coupling, use of district heating and electricity: climate neutral 2045
Renewable energies cover the residual energy demand: constant increase in primary energy demand	Energy efficiency enables the sustainable use of renewable energies: zero carbon ready standard for energy demand and its temperature level, depending on the type of energy supply.
Plant optimisation was not of high importance	Building automation and smart homes ensure energy efficiency: consistent support via Operating Costs Ordinance, data use and interoperability

The revision of the EPBD (Energy Performance of Buildings Directive) must respond to the new target with adjusted tools.

The EPBD should therefore:

- support affordable climate protection and maintain cost-effectiveness,
- set minimum standards on greenhouse gas emissions and see energy efficiency as an enabler of climate neutrality,
- take into account the special conditions of housing companies that do not manage individual buildings but entire portfolios,
- take into account that affordable housing is financed and supported differently in different member states.

³ In this context, housing companies should be allowed to calculate prime costs from investment and return as well as maintenance and operation. The same applies to the supply of heat from solar thermal systems.

2 Affordable climate protection

How can we achieve climate neutrality for all?

The strong focus on maximising efficiency in the current EPBD fails to recognise the impact of inefficient energy retrofits on middle and low income groups. Regarding the Commission's reference to energy poverty of tenants, it must be added that the reduction of energy costs through energy refurbishment in Germany is always followed by an increase in housing costs.

Not only is there a risk, but also a serious possibility that we will systematically "clean up" today's affordable housing in Europe with the planned path. So far, there is no evidence of any factual refinancing of the necessary scale. There is good will, but not the governmental financial effort that is necessary to avoid the undermining of social peace. In Germany, the GdW has therefore elaborated the idea of a climate-plus subsidy in consultation with many partners. It is clear here that in order to achieve almost rent-neutral renovation, about 4 billion EUR of social compensation would be needed per year over and above the current subsidies. However, these funds are not yet available.

Conclusion:

Stricter minimum standards will therefore lead to the displacement of affordable housing. In order to prevent this, public funding should be ensured, especially for households with low and medium incomes, which guarantees that rents are almost neutral. In order to ensure planning security, there must be a legal entitlement to this funding. It should be clearly stated that subsidies even for existing legal requirements do not violate European law.

An increase of the minimum standards can therefore only take place under the condition that socially acceptable solutions are found for the current tenants. The ability to pay rent should be always given the highest priority. Climate protection can only succeed with, but not against, people's interests.

3 Zero-emission buildings

We support the introduction of the concept of zero-emission buildings to achieve climate neutrality in the long term.

We consider the current definition of "lowest energy buildings" to be ambitious enough to decarbonise the building stock. Higher legal standards will not lead to an increase in the renovation rate. Efforts should rather be directed towards "zero-emission buildings".

Since the grids do not yet supply climate-neutral energy (district heating grid, electricity grid), the buildings supplied by them cannot yet be climate-neutral. Therefore, a zero-carbon-ready standard should be defined. The main criterion of zero-carbon-ready is the possibility of heating the building with a low-temperature system, e.g. 55 °C flow temperature. The standard must allow connection to

a district heating or electricity grid, which will only gradually become carbon-neutral. The same applies to energy refurbishment: the conditions should be defined under which the energy renovation of a building connected to district heating is considered zero-carbon ready. For instance, it should be possible to heat the building with (low) flow temperature that the district heating network can provide with renewable energies. Exceptions must be made for buildings worthy of preservation and monuments, for which other regulations must be found. It is more important to improve the energy performance of all buildings in a district heating network so that they can be heated with a low flow temperature than to upgrade some buildings in the network to the highest efficiency standards.

4 Binding minimum standards

Can binding minimum standards guarantee the socially acceptable achievement of climate neutrality?

For the housing industry, additional minimum standards are counter-productive. Regulatory law cannot solve the difficult market situation that exists because of the uneconomical nature of efficiency measures. The inefficiency, in turn, arises from the high costs of refurbishment and the inability of middle- and low-income households to pay rent, and is essentially a social dilemma. In particular, regulation cannot produce economic solutions if the market fails to provide them.

In Germany, minimum standards for individual measures already exist. These are known as "retrofitting obligations" or "conditional requirements". They were established in compliance with the economic efficiency requirement. Retrofitting obligations relate to the insulation of roofs or upper storey ceilings, the insulation of pipework, the regulation of heat output and the replacement of standard boilers that are more than 30 years old. "Conditional requirements" means that energy requirements are imposed on measures on the building envelope, such as replacing windows, installing insulation layers and, in some cases, plastering exterior walls.

Binding minimum standards that penalise landlords would lead to the disappearance of affordable housing from the market. In Germany, this would particularly affect flats with households that are compensated for the costs of accommodation. This compensation is usually based solely on the basic rent.

Particular attention must be paid to the difference between individual owners and housing companies that manage larger portfolios, as well as between buildings for rent and for sale, especially in the case of multi-family dwellings. And while the owner of an individual building gets to decide *when* he will renovate it to make it more energy-efficient, managers of portfolios are faced with the question of *how many* buildings they can renovate each year and which building *when*.

Minimum standards that include penalties could only be conceivable for the housing industry in the long term for the worst classes of

buildings if a reliable and sufficient subsidy ensures a rent-neutral refurbishment for at least 10 years beforehand.

5 Cost efficiency

Housing companies can only make investments if they are economically viable, otherwise they would lose their financial and thus economic basis for a long-term existence. The investments are re-financed through any available subsidies and rents. The economically necessary refinancing rents are usually in conflict with socially acceptable rents. An expansion of investment activity thus faces several limits:

- capacities (planning, execution, lending capacity),
- structurally weak housing markets with low rent increase potential and high vacancy rates,
- political interventions in tenancy law that reduce rental income and thus maintenance and refurbishment funds,
- increasing prices for construction services with growing demand.

A major part of the problem is the decreasing marginal utility with increasing energy standards.

At the same time, it has been proven time and again that higher and highest efficiency standards in rented flats do not fulfil the energy-saving expectations. Theoretically calculated consumption values fail to reflect reality, especially in the rental housing sector. If just (only?) the highest efficiency standards are recognised as an effective contribution to climate protection, there will not be a positive background for the challenges of energy refurbishment.

Nevertheless, energy refurbishment with a reduction in energy demand is indispensable for climate protection and to enable a sustainable supply of renewable energies. The most effective way to increase the rate of energy-related refurbishment across the board is through subsidies - especially with regard to economic refurbishment options and potential rent neutrality, which are crucial for social acceptance. To increase cost-effectiveness, subsidies should be expanded and made available steadily over a long period of time.

The funding scheme should take into account greenhouse gas and energy consumption reductions. If subsidies are linked to investment costs on a percentage basis, investments with low investment costs will also receive low subsidies, but the more greenhouse gases and final energy they save, the more they will be subsidised proportionally.

6 District approaches

The necessary renewable energy supply is based on the empowerment of neighbourhoods or rather the development of energy districts on the basis of extensive self-sufficiency. This requires a drastic simplification of local power generation and the promotion of cooperation between public and private housing companies, other building owners and energy suppliers. This also means that policy-makers

must realise that reforms in energy law are necessary for this purpose. PV systems on buildings, for example, should no longer be seen as power plants, but as a building component (similar to solar thermal systems). In the district context, convergence of the heating, electricity and mobility systems is necessary.

Municipalities need to be better equipped with qualified experts and energy advisors. The Buildings Directive could make greater use of these aspects. In this regard, district approaches should be more strongly integrated. The directive could also address the need to support municipalities and point out that the financial means must be sufficient for the purpose. The EU should continue to support the subsidy-free nature of climate measures and show flexibility in the interpretation of the subsidy rules or adapt them accordingly. Further applied research is also needed, especially in the areas of sector coupling, PtX and district solutions, but also in the further development of technologies that can be used by default, especially in the existing housing stock.

7 Climate strategies in housing companies

The German individual renovation roadmap iSFP is a one of the options of the building renovation passport described in the consultation on the EPBD. However, it is only suitable for owners of individual buildings. Housing companies that manage many buildings do not need a building renovation passport, but rather a climate strategy. This strategy describes the transformation of the portfolio towards climate neutrality.

To minimise bureaucracy, building-specific renovation roadmaps should not be extended to housing companies. They are working on climate protection strategies that consider their entire portfolio and not individual buildings separately.

Housing companies have a great deal of experience in their energetic refurbishment. By investing in energy refurbishment and systems engineering, the energy consumption of the buildings managed by housing companies has been significantly reduced, by about one third since 1990. 75% of the managed flats have been completely or partially renovated in terms of energy efficiency or have been newly built since 2008.

The measured consumptions in new buildings as well as in refurbishments are regularly higher than the calculated demand values and often differ (too) little from buildings with lower efficiency standards. Life cycle assessments show that, for example, passive houses do not emit less GHG over their life cycle than gas-heated EnEV 2016 houses⁴. In addition, several new reports⁵ show that buildings from EnEV 2007 or EH70 (2009) onwards tend to systematically overheat, which is a major source of distress for tenants.

⁴Energy expenditure for building concepts throughout the life cycle. UBA text 132/2019.

⁵HLH Vol. 70 (2019) No. 9: "Highly thermally insulated residential buildings tend to overheat" and "Heat free in German flats", as well as strategy paper of AG 42 of the GdW.

The housing industry therefore calls for an energetically appropriate and economically feasible building standard that in practice leads to lasting energy savings and that, in combination with a renewable energy supply, meets the climate targets - "carbon zero ready".

8 Public buildings

In some EU countries, such as Germany, the costs of energy-efficient social and affordable housing are not covered by the state or the municipalities, i.e. the rent in existing buildings in the case of energy-efficient refurbishment depends mainly on the level of construction costs. Therefore, although energy refurbishment can reduce energy poverty, the gross rent, i.e. the total rent, and thus the housing costs increase. The energy savings do not outweigh the rent increases resulting from the refurbishment by far (on average, the rent increases for a flat are about 100 EUR per month, while the energy savings amount to about 30 EUR per month).

Public housing companies and publicly subsidised housing that do not receive state compensation payments should not be included in the definition of public buildings. They are entities that operate competitively under market conditions, carry the risks associated with their activities and are susceptible to insolvency. Housing companies should not be considered as "bodies governed by public law", since the tasks in the general interest that they have been created or entrusted to fulfil are of a commercial nature.

In the case of obligatory energetic refurbishments, as envisaged for the public sector, this would lead to rent increases that could not be recovered. Significant negative effects on social housing and the tenants of municipal and public housing companies could be compensated for by a legal right to subsidies. However, in addition to private and public financing capacities, the limitations of capacities in the craft, in planning and in the delivery of products must also be taken into account.

9 Life cycle

CO₂ emissions over the whole life cycle of buildings should be considered for new buildings and at the level of building typologies, but not for individual buildings. Life cycle analysis for typical building designs should be included in studies and research at EU level and in Member States, and should form the basis for the definition of requirements and funding.

Data for production, construction and end-of-life should be available. In Germany, the Ökobaudat is used for this purpose, but digital solutions must be further developed. At present, interoperable interfaces are lacking: the mass balance data from the design are partly printed out and entered manually in LCA software or partly in EXCEL solutions.

10 Accessible databases

A database with the data of the energy performance certificates can provide comparative values. Thereby, consumption certificates should be preferred. Demand certificates say nothing about the actual energy consumption. Buildings with a high calculated energy demand usually have a much lower energy consumption and buildings with a low calculated demand have a higher consumption. However, greenhouse gas mitigation is about reducing real energy consumption. Energy performance certificates help to identify the number and distribution of high consuming buildings.

Building logbooks will be an internal task of building management for the next few years. Digital data management is still under development in the housing companies and building management. Therefore, building logbooks are not yet a topic for external/public databases.

The EU should develop a proposal for the scope of data, which could be compiled in a building logbook, e.g. BIM data from the building design that must be made available for management.

With regard to the development of an accessible database, however, we must consider how it is to be maintained and kept up to date in view of the 20 million buildings in Germany.

It still seems uncertain what new useful findings can be drawn from accessible databases that justify the high input and maintenance costs, especially since the costs and benefits are not likely to be in the hands of the same person.

We therefore urgently call for a sense of proportion and restraint in the creation of public-law obligations.

11 Energy Performance Certificates

Energy performance certificates are sufficient in their current form, as they document the result of an analysis. Requirements to be met are defined by law, not by the energy certificate. The quality of energy advice must therefore be improved: the certificate is only its formal result. In particular, the training of experts should be improved.

Harmonising the energy certificates for new and existing buildings would not lead to an improvement in energy efficiency.

There are two types of energy certificates: Energy performance certificates as a result of a planning process (new construction, energy consulting) and energy performance certificates for renting. Energy performance certificates for renting cannot have the quality of an energy consultation, as they only provide rough information. Two practical tests⁶ by the housing industry have shown that the results of several energy performance certificates for the same building, which were not the result of an energy consultation, differ by up to 80 %.

⁶ 2006 and 2010. Documents in German will be provided upon request.

Energy consultations are commissioned for a planned investment, not for a rental, and allow a much more detailed analysis of the building.

Access to financial incentives for building renovations should be linked to a planning service that can document the achievement of a certain CO₂ reduction or energy standard in an energy performance certificate.

12 Electromobility

There is no need to tighten regulations on electromobility, but rather to facilitate it. The greatest technical obstacle in the area of multi-family dwellings is a sufficient grid connection for a large number of charging points, i.e. the provision of the reinforced or a second building connection. In addition, there is the other great obstacle of refinancing. In a multi-family house, unlike in a single-family house, the installation of the charging infrastructure requires a comparatively large intervention in the building and the electrical infrastructure. This investment is only offset by the refinancing source of parking space rent. Depending on the local situation, other free parking spaces and public charging infrastructures may not be available at all.

The questions of fire protection and insurance for parking in buildings also need to be clarified. At present, it is not possible to create a private charging infrastructure for parking space tenants in analogy to the rental of flats, which would allow the tenant to bill his energy supplier directly.

13 Conclusions

The housing industry wants to achieve the climate targets by 2045.

And because we want to achieve these goals not only in theoretical calculations on paper, but in reality, we ask you to incorporate into your final decision the recommendations provided by the housing professionals who have many years of practical experience in the field.

This way, we will be able to conciliate the climate targets and the legitimate social interests of tenants and users. Climate protection will then not be a financial threat, but also an opportunity for affordable, sustainable housing.

GdW Bundesverband
deutscher Wohnungs- und
Immobilienunternehmen e.V.

Klingelhöferstr. 5
10785 Berlin
Phone: +49 (0)30 82403-0
Fax: +49 (0)30 82403-199

Brussels Office of the GdW
3, rue du Luxembourg
1000 Bruxelles
BELGIUM
Phone: +32 2 5 50 16 11
Fax: +32 2 5 03 56 07

E-Mail: oener@gdw.de
Internet: <http://www.gdw>