



Evaluation of the German subsidy programmes for new construction

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ABSTRACT

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Germany's housing market faces a persistent shortage of residential space, particularly in urban regions, while the building sector remains a major source of energy consumption and greenhouse gas emissions. In response, the federal government has introduced several subsidy programmes to promote sustainable new construction. This article evaluates these programmes with regard to their contribution to housing supply, climate protection and socio-economic objectives.

The evaluation combines administrative funding data, surveys of grant recipients, expert interviews, secondary statistics and model-based life cycle analyses. The results show that funded buildings achieve life cycle emission reductions of approximately 20–25% compared to conventional new buildings, mainly due to higher energy efficiency, widespread use of heat pumps and photovoltaic systems, and increased use of sustainable building materials. The programmes also contribute significantly to housing supply: around 18–21% of approved dwellings in Germany in 2023–2024 were subsidised, with clear evidence of additionality. One of the programmes particularly supports low- and middle-income households and enables home ownership for families that would otherwise not have entered the housing market. At the same time, the programmes influence market structures by strengthening sustainability standards, expanding life cycle assessment competencies and promoting interdisciplinary planning practices.

Overall, the funding programmes generate measurable ecological, social and economic effects and stabilise construction activity during a period of declining building permits. Nevertheless, trade-offs between climate policy and housing policy remain inherent in new construction. Future programme development should therefore focus on clearer target alignment and more effective financial incentives.

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WHY PROMOTE NEW CONSTRUCTION?

The housing market in Germany has been under pressure for several years. There is a shortage of housing, especially in conurbations and large cities. Overall, the constructions of new residential buildings, but also of non-residential buildings, has fallen short of demand and the German government's new construction targets in the past ([Statistisches Bundesamt, 2026](#)). The construction of new housing will therefore play a key role in the coming years in eliminating the shortage and curbing rent increases in the long term.

At the same time, a large proportion of greenhouse gas emissions (GHG emissions) and energy consumption in Germany comes from the buildings sector ([Umweltbundesamt, 2025](#)). The EU is calling for a significant reduction in GHG emissions by 2030 and GHG neutrality by 2050 ([Statistisches Bundesamt, 2025](#)). In Germany, the Climate Protection Act sets stricter targets, with GHG neutrality to be achieved by 2045 at the latest. In order to prevent further increases in energy consumption in the building sector and secondary emissions across the entire building sector, it is there important to construct new buildings in a particularly sustainable and climate-friendly manner.

For this reason, the federal government's subsidy programmes offer financial incentives to reduce GHG emissions in the life cycle and primary energy requirements in the operating phase of new buildings by complying with the principles of sustainable construction and increasing the use of renewable energies.

However, there is a fundamental conflict of objectives between climate policy and housing policy. New building construction is associated with additional resource consumption and additional emissions. Therefore, climate policy objectives can only be achieved in a relative sense: climate-friendly new buildings have a lower impact on emissions and energy demand than conventional new buildings. Compared to the renovation of existing buildings, the inclusion of the entire life cycle also assumes greater resource consumption and more emissions during the construction phase. During the operational phase, however, no systematic difference is to be expected.

OBJECTIVES AND SUBJECTS OF FUNDING

The federal Ministry of Housing, Urban Development and Construction (BMWSB) offers the following three programmes to promote new construction:

- Climate friendly new construction (KFN)
- Climate friendly new construction in the low-price segment (KNN)
- Home ownership for families (WEF)

What these programmes have in common is that they are designed to encourage the construction and first-time purchase of residential and non-residential buildings, thereby creating new living space and usable floor space. At the same time, they aim to reduce negative environmental impacts. On the one hand, this is to be achieved by reducing GHG emissions over the entire life cycle of the buildings. To this end, sustainability standards are to be raised, and the principles of sustainable construction adhered to and thus disseminated in the market. On the other hand, this is to be achieved through reduced energy consumption and the increased use of renewable energies. All three programmes therefore pursue housing policy, climate policy and construction policy objectives.

KNN and WEF also have other programme-specific objectives. KNN is intended to comply with minimum efficiency standards and, with space-optimised construction methods and construction cost limits, lead to the construction of space-efficient residential units in the low to medium price segment. WEF, on the other hand, aims to increase the home ownership rate, especially among families, thereby relieving pressure on the rental housing market. This explicitly pursues socio-political objectives.

[Figure 1](#) provides an overview of the various objectives and activities of the subsidy programmes.

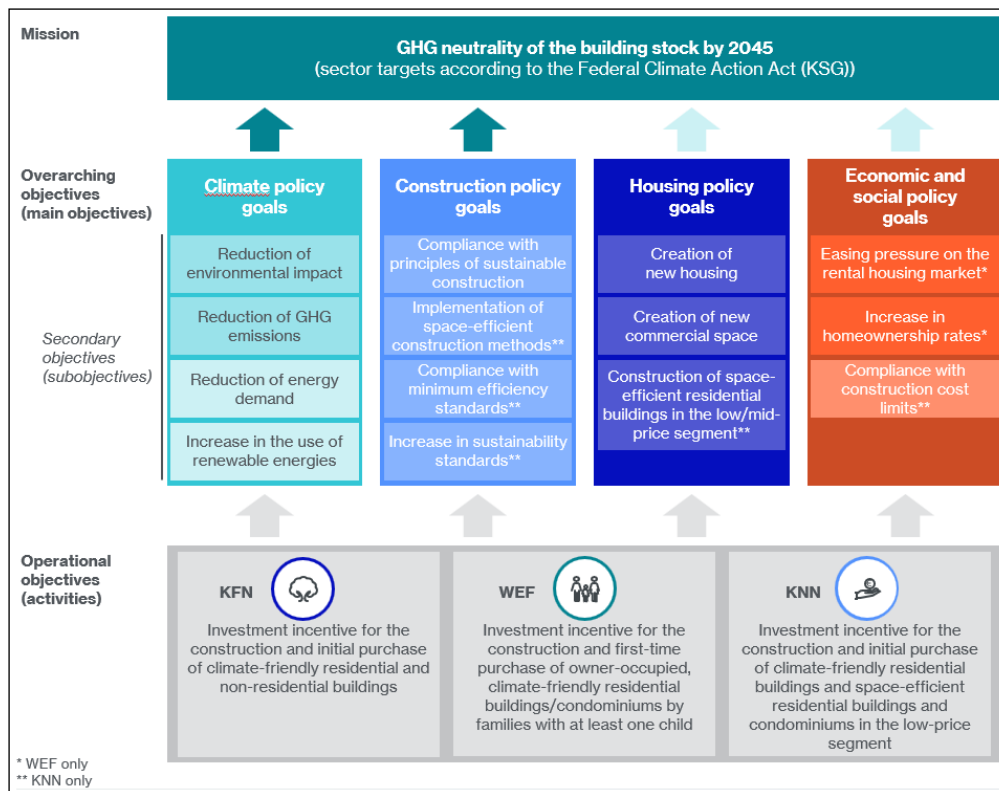


Figure 1 Objectives of New Construction Funding Programmes in Germany. Source: Own compilation based on [BMWSB 2023a](#), [BMWSB 2023b](#), [BMWSB 2024a](#), [BMWSB 2024b](#).

The energy and sustainability standards required for new buildings vary across programmes. However, all programmes mandate compliance with the life cycle emission requirements of the Quality Certification for Sustainable buildings (QNG). The QNG is a national certification system that establishes comprehensive criteria covering the ecological, economic, functional, and sociocultural quality of buildings. Regarding life cycle emissions, two performance levels are defined for residential buildings: Plus (24 kg CO₂eq per m² net floor area and year) and Premium (20 kg CO₂eq per m² net floor area and year).

For non-residential buildings, a distinction is also made between the Plus and Premium levels, but due to the large differences in use, a project specific requirement value must be defined. In all programmes, there is further funding level for Premium level.

Across all programmes, an additional funding tier is available for projects that achieve the Premium level. The corresponding requirements extend beyond life cycle emissions and include aspects such as accessibility, resource efficiency, space efficiency, indoor environmental quality, and user comfort. The programmes also differentiate between funding schemes “with QNG” and “without QNG.” In the latter case, only the life cycle emission requirements must be fulfilled, whereas the full set of QNG criteria does not apply.

In addition to life cycle emissions, there are programme specific requirements for the minimum efficiency standard of buildings and the energy sources used. The use of oil, gas and biomass is excluded in all programmes ([BMWSB 2023a](#), [BMWSB 2023b](#), [BMWSB 2024a](#), [BMWSB 2024b](#)).

FUNDING RECIPIENTS

All three funding programmes are aimed at natural persons who are owner-occupiers of residential property. KFN and KNN are also aimed at homeowners’ associations, sole traders, freelancers, public-law corporations and institutions, and other legal entities under private law (including housing cooperatives). In the subsidy segment for local authorities, the two programmes KFN and KNN are aimed at non-profit organisations, local authorities and companies. WEF is aimed exclusively at families with children and medium to low incomes; these families must acquire at least 50% ownership of owner-occupied residential property and may not exceed an annual taxable household income of 90,000 euros for one child, plus 10,000 euros for each additional child.

The subsidy programmes have different maximum loan and subsidy amounts. These are primarily based on the number of residential units in residential buildings or the net floor space in non-residential buildings. A distinction is also made according to energy efficiency standards

and, in the case of WEF, according to the number of children. The maximum loan amounts for KFN and KNN are comparable for residential buildings. The maximum loan amounts for non-residential buildings are higher in the KFN programme than in the KNN programme; as the latter is aimed at buildings in the low and medium price segment, lower investment and acquisition costs can be assumed here. (BMWSB 2023a, BMWSB 2023b, BMWSB, 2023c, BMWSB 2024a, BMWSB 2024b).

Table 1 shows the maximum loan amounts in the various subsidy programmes.

PROGRAMME	MAXIMUM LOAN AMOUNT ACCORDING TO CURRENT GUIDELINES
KFN residential	100,000 euros per residential unit
KFN residential w QNG	150,000 euros per residential unit
KFN non-residential	2,000 euros per m ² net floor space, max. 10 million euros per project
KFN non-residential w QNG	3,000 euros per m ² net floor space, max. 15 million per project
KNN residential	100,000 to 150,000 euros per residential unit
KNN non-residential	Up to 1,500 euros per m ² net floor space, max. 7.5 million per project
WEF	170,000 euros (families with 1–2 children), 200,000 euros (families with 3–4 children), 220,000 euros (families with 5+ children)
WEF w QNG	220,000 euros (families with 1–2 children), 250,000 euros (families with 3–4 children), 270,000 euros (families with 5+ children)

Table 1 Maximum loan amounts for KFN, KNN and WEF.

Source: Own compilation based on BMWSB 2023a, BMWSB 2023b, BMWSB 2024a, BMWSB 2024b.

METHODOLOGY

TASKS OF THE EVALUATION

The evaluation is intended to contribute to the performance review of the BMWSB's new construction programmes in accordance with the provisions of the Federal Budget code, thereby enabling the optimisation and further development of the funding programmes.

The objectives of the evaluation are therefore

- 1. Monitoring the achievement of objectives**, i.e. analysing whether and to what extent the KFN, KNN and WEF funding programmes are achieving their specific object.
- 2. Impact monitoring**, i.e. analysing whether and to what extent the funding is responsible (causal) for the achievement of the objectives, and
- 3. Monitoring of economic efficiency**, i.e. analysing whether the funding is being used efficiently and effectively (economic efficiency of measures and implementation).

Based on the results of the target achievement, impact and economic efficiency analyses, recommendations and options for action for the further development and optimisation of the funding programmes are to be identified. In addition, the quantitative results of the evaluation in particular must be used to fulfil the national and European reporting obligations of the BMWSB.

The basis for this is an evaluation plan with numerous key questions in various categories (see Figure 2). The main questions are differentiated according to five thematic and content-related dimensions. These include the dimensions of climate protection, sustainability, the real

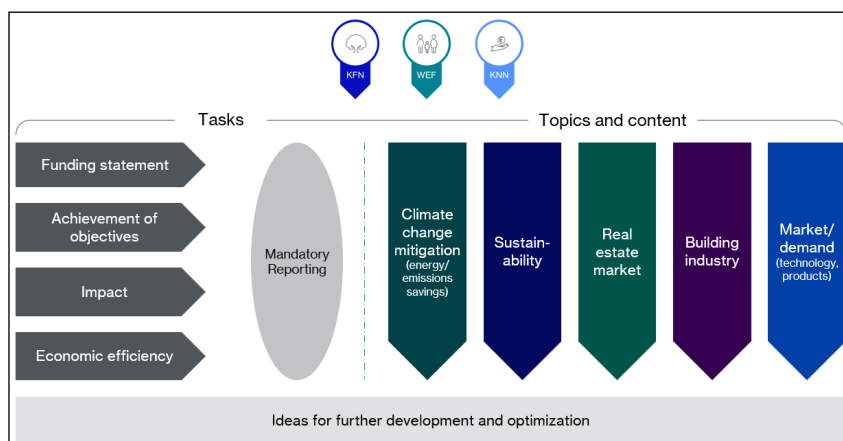


Figure 2 Tasks and content of the evaluation. Source: Own compilation.

METHODS

There are three basic methodological approaches: statistical-quantitative methods, model-based quantitative methods and qualitative methods.

Statistical-quantitative methods include the analysis of administrative funding data (KfW application and approval data),¹ regular and standardised surveys of grant recipients or intermediaries (to obtain specific and up-to-date information on projects, impacts, awareness, motivations, etc.) and the evaluation of secondary statistics (e.g. official data from the Federal Statistical Office on building permits) and market analyses. In addition, econometric methods, such as difference-in-difference approaches, can be used to estimate causal relationships.

Model-based quantitative methods are used in particular to determine energy and greenhouse gas impacts (e.g. primary and final energy savings, GHG reductions) and to estimate economic effects. Suitable energy and emission models as well as macroeconomic impact models are used for this purpose.

Qualitative methods enable the systematic evaluation of information that cannot be quantified or can only be quantified to an insufficient degree. These include document analyses, guided interviews, focus groups, SWOT analyses and the classification of relevant contextual information.

Statistical quantitative methods

Analysis of the funded buildings. The data collection on funded buildings is the quantitative core of the evaluation. This consists of the application and approval data available to the German development bank (KfW). This includes case-specific information on financing (e.g. commitment volume, eligible costs), intended use (e.g. programme number, QNG status) and basic project characteristics (e.g. number of subsidised residential units, total number of residential units in the building, floor space).

The allocation of funds in the form of interest rate subsidies is not included in the data collection on a case-by-case basis but is reported exclusively at the level of the overall programmes (e.g. KfW, KfN, KfF, WEF). The evaluation is descriptive and statistical and as far as possible, differentiated according to programme segments, building types, subsidy criteria or regional characteristics.

Online survey of grant recipients. In order to close information gaps and obtain up-to-date information on the status of the projects as well as on motivation and impact-related aspects, a sample of grant recipients was surveyed in writing as part of a standardised online survey. The results are evaluated descriptively and linked to the administrative funding data.

Semi-structured interviews. For certain key questions, there are no suitable statistical data sources available or there is a need for more in-depth qualitative information and contextual knowledge. For this reason, guided interviews were conducted with experts from the fields of planning, energy consulting, certification and further training, as well as with institutional actors (including the BMWBS).

The interviews address, among other things, further training opportunities and skills development, as well as structural market and framework conditions.

In the first step of the evaluation, the interviews were partly exploratory in nature and also served as a measurement to record the initial state.

Secondary statistical analyses. In addition, official statistics (e.g. building permit figures from the Federal Statistical Office), industry and market analyses, and other available data sets are used. These are used to classify the funding activities in the market and environmental context (e.g. construction industry, new construction and renovation dynamics) and to validate the results from the funding data and surveys.

¹ Data accessibility: The data used is not published, as it contains confidential information.

Model-based quantitative methods

The reduction in GHG emissions in the life cycle of funded buildings is determined on the basis of a model. The basis for this is the CONIC (Construction Impact Calculator) model developed by IREES,² which is used to calculate the environmental impact of different building types, construction methods and efficiency standards over the entire life cycle.

The procedure comprises several consecutive steps.

Data preparation and reclassification. First, the data on funded buildings was cleaned up (correction of input errors, plausibility checks of building allocations). To determine the number of funded residential buildings, applications with identical structural characteristics (including application and approval dates, approval volumes) were merged and the residential units were totalled.

As some building categories had been recorded incorrectly, they were reclassified using statistical analyses and algorithmic checks (e.g. based on net floor space, volume and window and door areas). In the case of non-residential buildings, such verification was only possible to a limited extent, as the diversity of uses leads to a wide dispersion of parameters. Cases that could not be clearly classified were therefore assigned to suitable types on the basis of floor space, energy requirements and heating technologies.

Derivation of type and reference buildings. Based on the data collection of funded buildings and survey data as well as building permit statistics, funded and reference buildings for residential and non-residential buildings were defined for 2023 and 2024.

The building type and use remain identical; differences exist in particular with regard to energy efficiency, heat supply, construction methods, and technical building systems. The relevant data for funded buildings was derived from the dataset and transferred to the CONIC model.

The reference buildings are based on the statutory minimum requirements for the respective year (Building Code 2023 and 2024).³

Modelling and energy characterisation. Since it is not possible to map all individual buildings, representative model buildings have been defined. For residential buildings, these include single-family, two-family and multi-family houses with variants in terms of heat supply (heat pump or heating network), photovoltaics, storage and ventilation. Non-residential buildings are modelled as average usage buildings.

The typical buildings are characterised by key parameters (e.g. area, volume, U-values, PV area, storage size). Energy requirements are calculated using the ZUB Helena software in accordance with DIN 18599. Medians of the data collection on funded buildings are used for all characteristics.

Calculation of GHG reduction and extrapolation. CONIC is used to calculate the life cycle emissions of the typical and comparative buildings in accordance with the QNG calculation rules (including user electricity, own electricity consumption, F-gases). This is followed by the allocation to construction methods and the determination of the GHG reduction for each variant. Finally, the specific reduction determined is extrapolated to the number of funded residential units or buildings. For residential buildings, scaling is based on the actual number of funded residential units, as not all units in a building are necessarily eligible for subsidies.

RESULTS AND DISCUSSION

OUTPUT AND INVESTMENT IMPACT

In the 2023 funding year, 18,948 funding applications were approved in the funding programmes. On this basis, 47,851 residential units with 3.7 million square metres of living space in approximately 13,500 residential buildings and 949 non-residential buildings with around 2.1 million square metres of space will be built. This will involve investments of around €33.2 billion, with a commitment volume (loan amount) of just under €6.8 billion and over €1.4

² Institute for Resource Efficiency and Energy Strategies in Karlsruhe, Germany.

³ Insufficient data on the condition and level of equipment of the reference buildings; therefore, minimum requirements are assumed.

billion in funding. The KFN programme accounts for the largest share of the funded projects. Slightly more residential buildings without QNG certification were approved than those with it, but the number of residential units with QNG certification is higher than that of residential units without this certification. It is striking that projects with QNG certification generate more investment volume and absorb significantly more commitment volume and subsidies than projects without QNG certification. Among other things, this is because, structurally, QNG certification can mainly be economically viable for larger projects, and these projects are typically designed to be “future-proof” in order to minimize the need for upcoming upgrades. Both factors lead to larger investment volumes and, consequently, higher amounts of funding drawn down.

In terms of new construction activity in Germany as a whole, a total of 163,906 buildings were approved in 2023, of which 11.6% were approved under federal subsidy programmes. Of the 259,639 approved dwellings, around 18.4% were subsidised projects.

In the 2024 funding year, the number of approved applications for residential buildings rose slightly, while the number of residential units declined; the number of applications for non-residential buildings decreased. A total of around €32.4 billion in investments was capitalised. The volume of commitments amounted to just under €6.9 billion, with subsidies of around €871 million being used. Across Germany about 77,000 buildings were permitted in 2024 (22.7% subsidised in mathematical terms).

Figure 3 shows the development of approved applications across all programmes. However, a direct comparison between years is not to be made: In both years, funding was not available in all twelve months, in part only for half a year. In contrast to absolute funding numbers, relative numbers and specific key indicators shown below, can well be compared.

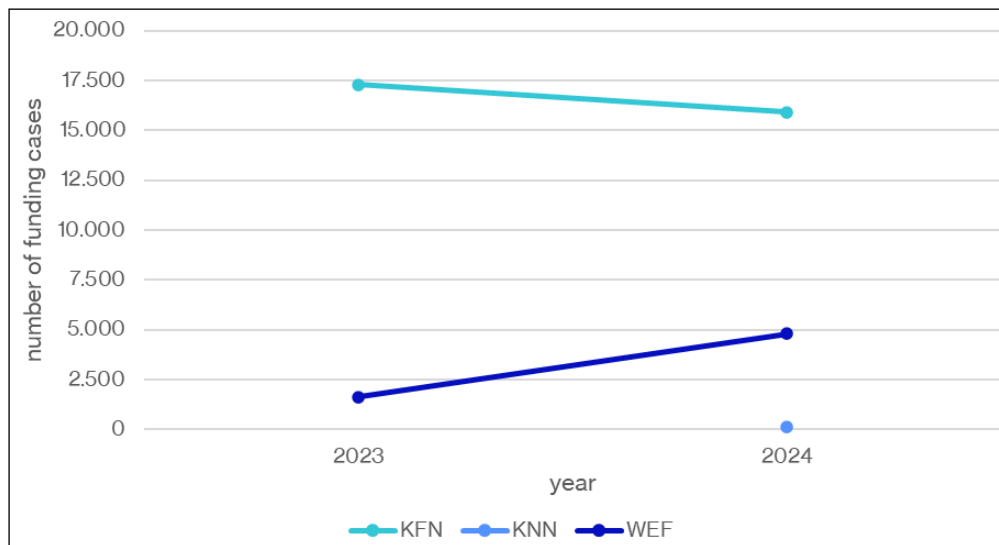


Figure 3 Development of approved applications across all programmes.

Source: Own compilation.

In funding practice, there are clear differences between the programmes. On average, WEF projects involve smaller living spaces than KFN-funded cases, which is also related to the structure of the recipients: WEF is aimed at private individuals for owner-occupied housing, whereas KFN more frequently supports larger and more investment-intensive projects. Accordingly, the socio-economic characteristics of the applicants also differ.

The evaluation confirms a clear additional effect of the funding: a significant proportion of the projects would not have been realised without support, or at least not to the same extent. This effect is particularly pronounced in the WEF programme: more than half of the households receiving funding would not have purchased residential property without the support, and only around 10% would have implemented their project unchanged.

The KFN programme also shows a clear additional effect. The proportion of subsidised projects in all building permits rose from 16.8% (2023) to 22.7% (2024), even though the total number of permits declined.⁴ This argues against pure windfall effects and in favour of induced construction activity.

⁴ In 2023, two of three programmes did not start from January 1st, but later in the year. The third programme started with 2024. The numbers are therefore not exactly comparable.

The programmes differ significantly in terms of their objectives: KFN has the strongest climate policy impact, as evidenced by high investment volumes, high QNG shares and above-average GHG reductions. WEF primarily reaches low- and middle-income households (73–76%), thus fulfilling its social policy objective. KNN focuses on space-efficient, cost-limited new buildings in the low-price segment, often in the form of larger multi-family houses.

Although structurally more single-family homes than multi-family homes are subsidised, the majority of subsidised residential units are built in the multi-family home segment. In the KFN programme in particular, larger, partly QNG-certified multi-family projects contribute significantly to the creation of additional living space. In terms of housing, the relevant impact of the subsidy – measured in terms of newly created residential units – is therefore predominantly in multi-storey residential construction.

BUILDING QUALITY & CLIMATE IMPACT

The subsidy programmes reduce GHG emissions over the life cycle of the buildings. However, the extent of the savings depends largely on the design of the reference buildings and the reference value selected (entire buildings vs. only subsidised residential units in the building).

The evaluation therefore considers several scenarios in order to reflect the uncertainties in the specifications of the reference buildings. Figure 4 shows the GHG emissions of all funded buildings and the corresponding reference buildings, across all subsidy programmes and differentiated by the assumed specifications of photovoltaic systems in the reference buildings. Depending on the scenario, this results in a reduction effect of 20–24% in 2023 and 20–25% in 2024.

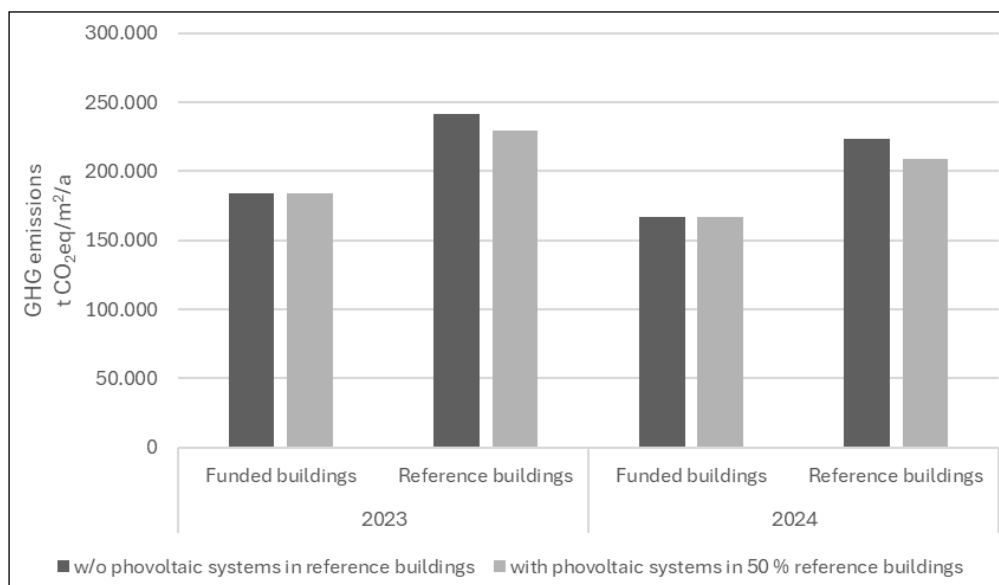


Figure 4 Life cycle emissions of funded and reference buildings.

Source: Own compilation.

Fundamental differences between the years arise from changed legal requirements for the comparable buildings, different measures of subsidised and reference buildings as well as different application numbers.

The reduction in GHG emissions from funded buildings compared to other new buildings is due in particular to the following factors:

- Funded buildings are almost universally equipped with photovoltaic systems, which means that a high proportion of their energy requirements are covered independently and renewably. Electricity storage systems are also installed in a significant proportion of the subsidised residential buildings.
- Funded buildings use more timber construction than other new buildings, both in residential and non-residential buildings.
- When it comes to insulation materials, funded buildings often opt for renewable raw materials or mineral products that are ecologically beneficial.

- Funded buildings increasingly use renewable energies for heating, in particular air source heat pumps, while fossil fuel heating systems are still used in reference buildings.
- Most funded buildings have a ventilation and air conditioning system with heat recovery installed to further optimise energy requirements and improve indoor air quality.
- In selected non-residential buildings, cooling systems are used where their use is recommended.
- The funded buildings are more energy-efficient than the legal standard, which leads to lower final and primary energy consumption.

The savings are mainly due to the higher energy efficiency and own electricity generation of funded buildings. As these buildings use heat pumps and photovoltaic systems, the share of renewable energies is also increased. For this reason – and because the construction of buildings generally generates initial GHG emissions – the differences in GHG emissions during the construction phase between subsidised and non-subsidised buildings are relatively small. This also applies to the building sector as defined by the Climate Protection Act, as only GHG emissions from the use of fossil fuels are taken into account there.

In summary, it can be stated that the subsidy programmes lead to more sustainable buildings, which, due to their technical equipment, contribute to long-term efficiency gains and sector coupling while also helping to mitigate already noticeable impacts of climate change, such as heat stress.

TARGET GROUP IMPACT & HOUSING

In 2022, 43.7% of households lived in owner-occupied homes. Compared to 2011 (45.1%), this represents a decline of 1.4 percentage points. The development varied greatly from region to region: while some eastern German regions continued to catch up, the rate fell in many western German regions, especially in conurbations, where there was an increase in the number of rental apartments in multi-family houses. The range extends from significant declines (e.g. Regensburg: -17.6% between 2011 and 2022) to strong increases (e.g. Suhl: +13.9%). In absolute terms, Leipzig is at the lower end with around 13%, while in the district of Südwestpfalz, around 73% of households live in owner-occupied housing ([Statistisches Bundesamt 2024](#)).

New construction subsidy programmes contribute to the formation of home ownership (48% of subsidised households have rented flats before) and counteract the decline in the rate, but in many places, they can only mitigate it. The number of building permits fell from around 68,000 buildings (2023) to 55,000 (2024). At the same time, the proportion of subsidised buildings in all permits rose from 29% to around 42% – despite the incomplete subsidy year 2023 ([BBSR: 2025](#)). This particularly underlines the importance of KfN subsidies for new construction activity.

Home ownership subsidies (WEF) are specifically aimed at families with low and middle incomes, but their impact depends heavily on regional market conditions. In 2023, 8.5% of subsidised cases were WEF, rising to 21.6% in 2024. In relation to all building permits, this corresponds to around 2.5% (2023) and 9% (2024) respectively. WEF projects are disproportionately common in peripheral regions and have a lower overall market impact than KfN.

The programmes also play a significant role in housing construction: around 26% of approved dwellings in 2023 and around 31% in 2024 were initiated by subsidies. In 2023, the proportion of rental dwellings predominated, while in 2024 the proportion of owner-occupied units rose. In both cases, additional dwellings are being built, some of them in high-density rural areas. Newly created residential property also often frees up rental apartments (see e.g. number of new owners above, who rented before). Overall, therefore, the housing markets can be expected to ease, even if detailed regional analyses are still limited at present due to the small number of cases.

IMPLICATIONS ON THE MARKETS

The mandatory introduction of life cycle analysis in funding programmes for new building has led to a noticeable increase in qualified staff. The number of specialists registered in the energy efficiency expert list rose from approximately 14,900 in 2023 to around 22,000 in 2024. Since

2024, the additional LCA qualification has also been included in the list of energy efficiency experts, with approximately 3,700 specialists holding this qualification. At the same time, the range of continuing education courses on offer has expanded significantly and become more structurally differentiated. LCA qualifications are now offered at various levels of application and cover both basic methodological knowledge and in-depth project-related application skills in qualification modules.

As stated in the interviews, a functional shift is also evident in planning practice. Ecological assessment is no longer carried out downstream but is incorporated at an early stage in the concept and design phases. The choice of materials, component structure and variant decisions are increasingly being examined from a balance sheet perspective. This integrative planning approach also carries over to organisational responsibilities, as LCA analysis is understood as a cross-cutting task in planning practice and leads to closer cooperation between different planning disciplines such as architecture and energy consulting. This intensifies interdisciplinary cooperation within the planning processes. Thus, the funding requirements not only affect formal verification, but also lead to a quantifiable expansion of qualifications and a structural expansion of energy efficiency-related services in new construction.

The interviews with experts make it very clear that QNG funding sets high standards and is changing construction and planning. The development of new building products often follows the guidelines set by the funding programmes. Even though the share of QNG Premium funding in particular is still very low at present, the requirements are already having an impact on the further development of sustainability standards in construction. However, experts believe that the continuity of the programmes is important for their establishment in order to maintain the incentive effect and establish new standards through trickle-down effects.

OVERARCHING FINDINGS

The evaluation shows that the KFN, KNN and WEF programmes have a lasting impact on the technical, planning and organisational framework conditions for new construction in Germany. This is particularly evident in building services engineering, life cycle assessment and QNG sustainability certification. The mandatory or funding-relevant application of life cycle assessment structurally shifts planning processes: ecological assessments are carried out earlier, which means that material selection, construction and technical systems are already checked for environmental impacts in the design phases. This promotes more integrated planning between architecture, technical building equipment and energy consulting. The QNG seal sets a benchmark that strengthens sustainable building products and drives market development towards low-emission and recyclable solutions. However, normative and technical inconsistencies make implementation difficult, so there is a need for reform to create more uniform framework conditions.

At the same time, the subsidy has an impact on the market and the industry: the number of qualified staff, especially those with life cycle assessment expertise, is rising significantly, so that life cycle assessment considerations are increasingly becoming standard. This is leading to a lasting professionalisation of the new construction sector beyond the subsidy logic.

Social and regional effects show differences: WEF supports low- and middle-income households and enables home ownership for target groups that would have little access to the free market. At the same time, funding volumes are concentrated in southern German states such as Bavaria and Baden-Württemberg, while eastern German states are underrepresented, reflecting regional market and income structures.

TARGET ACHIEVEMENT, CAUSALITY AND COST-EFFECTIVENESS

The KFN programme makes a substantial contribution to climate policy: the greenhouse gas reduction calculated over the life cycle is 20–24% (2023) and 20–25% (2024) compared to comparable non-subsidised buildings. The programmes also make a significant contribution to the creation of housing: in 2023, around 29% of all approved new buildings were subsidised projects, and in 2024 this figure will already exceed 41%. This indicates a relevant additional effect and argues against a mere shift in existing construction activity.

At the same time, the subsidy increases the technical quality of buildings and promotes sustainable construction methods, for example through higher LCA competencies and the increased use of ecological building materials. Difference-in-difference analyses also show that the decline in building permits in the subsidised segment was weaker than in the rest of the market. The programmes thus have a stabilising effect and support construction activity in difficult economic times.

Cost-effectiveness is assessed both in terms of the ecological impact per subsidy (measure cost-effectiveness) and the administrative burden (implementation cost-effectiveness). Due to high GHG reductions and large volumes, KfN has a convenient GHG subsidy efficiency compared to other German subsidy programmes. WEF is more cost-intensive per tonne of CO₂ saved but has significant socio-political effects. The cost of applying for funding is usually between €2,000 and €5,000 for residential buildings and slightly higher for non-residential buildings; this corresponds to approximately 2–13% of the total funding amount. The utilisation of funds remains moderate in relation to the volume of commitments, which indicates an overall efficient use of budgetary resources.

RECOMMENDATIONS FOR FURTHER DEVELOPMENT

The evaluation of the KfN, KfW and WEF subsidy programmes shows that the programmes are effective overall, but could be further developed in several dimensions, both structurally and operationally. The recommendations aim to increase the accuracy, efficiency and steering effect of the funding architecture while addressing the trade-offs, inconsistencies and implementation deficits identified in the evaluation. The following remarks systematise these recommendations in terms of content and classify them according to the empirical findings of the evaluation.

Align the support system more clearly and explicitly address conflicts of interest

The evaluation clearly shows that there are inherent conflicts of interest between the central target areas – climate protection, the provision of housing and socially oriented home ownership promotion. New construction is always associated with additional resource consumption and emissions, so that a purely climate protection-oriented perspective cannot achieve an absolute reduction in emissions; Rather, the support programmes reduce emissions relative to conventional new buildings. This applies in particular to KfN, whose intended climate policy effects simultaneously stimulate new construction activity and thus exacerbate the tension between GHG reduction and additional land and resource consumption. The evaluation therefore recommends that the programme's target priorities be defined more clearly and communicated explicitly in order to avoid conflicts and misguided incentives in the future. This applies in particular to the differentiation between KfN as a transformation instrument for climate-friendly construction and the socially or price-oriented programmes WEF and KfW.

Improve data collection – need for more accurate and complete data sets

The evaluation reveals systematic gaps in the available data. These relate in particular to (a) detailed building characteristics, (b) information on demolition and replacement construction, and (c) information on use, space and technical equipment. Several analyses – such as those on GHG reduction over life cycles or regional impact – therefore had to rely on assumptions, projections and simplified modelling. The evaluation explicitly points out that more precise data collection is necessary in order to better determine the causality of the measures, calculate reliable impact indicators and ensure valid performance monitoring in accordance with the Federal Budget Code (BHO). This applies in particular to KfW application data, which does not yet contain all variables relevant for ecological, economic and social impact analyses.

Making interest rate subsidies more attractive – low steering effect in the current design

The evaluation concludes that interest rate subsidies in their current form have only a limited effect in significantly influencing funding decisions. In times of structurally changed interest rate markets, interest rate subsidies are becoming less attractive, especially in the case of funding programmes that require high levels of own funds or credit volumes. The evaluation points out that a stronger financial incentive – either through higher interest rate reductions, supplementary grant components or improved conditions – could increase the effectiveness of the programmes.

A reform appears to be particularly useful for KFN, as this is where the largest share of investment volumes and GHG reductions are achieved, but at the same time, the additionality of the programme among higher-income households is estimated to be comparatively low.

Clearly separate funding logic – avoid mixed objectives and overlaps

The three current funding programmes have different areas of application, target groups and mechanisms of action, but in practice these are often not clearly distinguished from one another. Since the federal government can only provide subsidies for new construction on the basis of “maintenance of ambient quality” (Art. 74 (1) No. 24 GG) and subsidies without a climate protection element would therefore be unconstitutional, it is particularly important that the programmes are precisely and transparently aligned. At the same time, the programmes are already being merged under a common funding umbrella in terms of political implementation, although the specific funding criteria – such as climate-friendly new construction, affordable housing or home ownership – are likely to remain differentiated. Against this background, the evaluation recommends clearly structuring the target architecture within the future overall programme and clearly identifying the individual funding criteria so that the respective climate policy impact intention remains recognisable and misinterpretations are avoided. Such clarity would improve the controllability of the funding, facilitate the evaluation of its effects and prevent programmatic objectives from becoming possibly confused in communication or implementation.

Need for adjustment foreseeable – but programmes fundamentally functional and effective

Despite the positive impacts, continuous adjustment process is necessary in order to be able to respond appropriately to new market developments, technical standards and regulatory framework conditions – such as amendments to the Energy Efficiency Act, EU requirements or the development of the LCA market. The evaluation therefore recommends regular review and adjustment of the funding conditions. The programmes are robust but not static; their effectiveness depends crucially on how flexible and evidence-based they are in responding to new challenges.

ADDITIONAL FILE

The additional file for this article can be found as follows:

- **PowerPoint Slides.** PowerPoint Slides relating to this article. DOI: <https://doi.org/10.66506/essp.4-058-26.s1>

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COMPETING INTERESTS

The authors have no competing interests to declare.

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