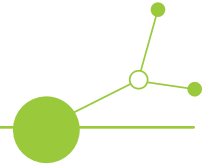


D.3.5.1 Baseline on financing models and instruments, potentials, and policy frameworks in partner countries



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A. Country overview

1. Germany

1.1. General overview of the financial sector

The German financial sector is based on three parts: the private banks, public banks and cooperative banks. In addition to that, development banks pursue economical, structural and socio-economic goals and the Bundesbank embeds Germany in the European system of central banks. (Manfred Kühnle, 2020)

Financial regulatory oversight is conducted by the Federal Financial Supervisory Authority (BaFin), which regulates banks, financial services institutions, and insurance companies (www.bafin.de).

As for all countries in the Eurosystem, the Governing Council of the ECB has the mandate to ensure price stability with their monetary policy. The Bundesbank President is a voting member in the Council. (Bundesbank, 2023)

In Germany, the housing market has been influenced by a combination of stable demand, regulatory changes, and a growing focus on energy efficiency. However, deep renovation projects encounter challenges, especially for smaller investors. They face the burden of high upfront costs compared to a relatively low return on investment as in most cases costs cannot be apportioned to tenants due to strong tenant protection regulations. Thus, the only benefit often lies in the increase of property value while most energy savings solely benefit tenants. Furthermore, smaller investors may encounter difficulties securing loans or finding favourable financing options for deep renovation projects.

Cooperative buildings on the other hand may find it comparatively easier to secure financing for renovations, with a cooperative structure allowing for cost-sharing among owners. Nonetheless, the issue of cost apportionment to tenants remains a concern.

Public building owners, such as municipalities, while having access to financial sources, navigate constraints imposed by fiscal policies and debt limits. Germany's emphasis on energy efficiency is evident in robust subsidy programs, such as those offered by the government-owned development bank KfW (KfW, 2023).

Despite progress in energy-efficient refurbishments, there still persists a gap between desired and actual refurbishment rates. Policymakers are actively refining strategies and incentives to accelerate renovation efforts in the evolving housing market. (Deutscher Bundestag, 2022).

1.2. Public support schemes

The Economic Recovery Acceleration Act (BEG - Bundesförderung für effiziente Gebäude) in Germany is a funding program aimed at promoting energy efficiency measures and the transition towards more sustainable buildings. It primarily supports energy-efficient renovations and retrofits for residential and non-residential buildings. The funding covers a wide range of energy efficiency measures for buildings, including improvements in insulation, heating systems, windows, ventilation and renewable energy installations like solar panels or heat pumps. Moreover, also the



project preparation and construction supervision can be supported. To qualify for BEG funding, buildings must adhere to specific energy performance standards.

The BEG includes several different support options that are available depending on the type of the project:

- Direct grants cover a portion of the costs associated with energy-efficient renovations and upgrades in buildings. These grants are non-repayable funds that can help offset expenses incurred for eligible measures such as insulation, heating system upgrades, window replacements, or renewable energy installations. This support mechanism is the main part of the BEG.
- Low-interest loans with favourable terms to support building owners in financing energy efficiency projects. These loans are meant to assist in covering the remaining costs of eligible renovations after accounting for grants or other financial contributions.
- BEG allows applicants to combine different funding options, such as grants and loans, to maximize financial support for comprehensive energy efficiency measures. This combination of incentives aims to facilitate larger-scale renovations or more extensive energy improvements in buildings.
- Additional bonus incentives may be available for specific measures or situations that promote particularly high energy savings or meet certain criteria outlined within the BEG guidelines. These bonuses can supplement the standard grants or loans and encourage the implementation of advanced energy-efficient technologies or practices.

After the BEG was initiated in July 2021, the interest in funding was very high which led to a momentary stop of funding in January 2022. In this 7-month period, 101.000 projects for new and renovated buildings were accepted. Following on that, the level of efficiency needed for the application was raised. (Bethke, 2022) This didn't stop the interest in the program as the applications even rose to around 300.000 applications between the 27.7.2022 and 14.8.2022. (BAFA, 2022) Since then, the bar was raised again in January 2023. Another adaptation to the recent changes of the GEG is coming soon. New numbers of applications and accepted projects have not been published since summer 2020.

As the EFRE fond targets regional development, it is managed by the federal states individually and with different focus areas. In Bavaria, the energetic renovation of state- and municipality-owned buildings can be supported. This only includes non-residential buildings. The selection of funded projects is mostly done by the potential of GHG reduction. Moreover, also projects creating green areas and supporting biodiversity can be funded. In the period 2014-2020, sustainability and energy efficiency weren't part of the target for EFRE in Bavaria. This means that the impact of the program can only be evaluated for the period 2021-2027. There is no information yet about the funded projects in this period. (StmWi, 2023)

1.3. Fiscal policies

The responsibility for fiscal policy is distributed on different levels in Germany. Some parts are decided on federal level, for example the personal income tax or the vehicle tax. Others such as the secondary residence tax and business tax fall in the responsibility of the state government and municipalities respectively. In special cases such as agricultural taxes, the EU has an influence on the German fiscal policies. (BpB, 2023)



To a certain degree, building renovation measures are tax deductible. Thereby, different conditions apply on self-used and rented buildings. Until 2020, this did not include the procurement of building materials.

Since 2020, the energetic renovation of a self-used private building is supported through an additional fiscal reduction. The specialty here is that the reduction also includes materials. This measure is limited to a deduction of 40.000€ per building in the period between 2020 and 2029. As an alternative to the fiscal reduction, the building owner can also choose funding that enables subsidised loans or a direct cost reduction. (Olesja Hess, 2022)

1.4. Green and climate bonds

Since 2020, the federal government has actively engaged in the issuance of green bonds, thereby fostering the growth of the market for environmentally sustainable financial products. The utilization of twin bonds serves to elucidate the value of green investments, providing investors with a transparent representation of associated benefits. This transparency is further bolstered through comprehensive reporting on the Green Federal Securities and the corresponding green expenditures derived from the federal budget. Notably, Green Federal Securities, referred to as "Green Twins," share similarities with traditional federal securities but are uniquely designated to encompass budgetary expenditures contributing to climate, environmental, and nature protection (deutsche Finanzagentur, 2022).

The "Green Bond Framework" aligns with the International Capital Market Association's (ICMA) Green Bond Principles, categorizing expenditures into key thematic areas: transportation, international cooperation, energy and industry, agriculture and forestry, as well as research, innovation, and information (Bundesministerium für Finanzen, 2020).

Germany's inaugural Green Bond, introduced in June 2020, featured a 10-year tenor, a volume of EUR 9.5 billion, and a coupon rate of 0.00% per annum. A more recent 10-year bond was launched in January 2023, with a volume of EUR 6.25 billion and a coupon rate of 2.3% per annum (deutsche Finanzagentur, 2023).

Germany has emerged as the leading ESG bond issuer in the European Union, as indicated by a recent report from the Association for Financial Markets in Europe (Afme). The report, titled "Capital Markets Union - Key Performance Indicators," is a collaborative effort involving twelve prominent European and international organizations. It assesses the advancement of European capital markets based on nine key indicators, analysing trends over the past six years.

In the first half of 2023, Germany secured a dominant position as the largest EU issuer of Green Bonds, capturing a market share of 20.3%. Notably, Germany has consistently maintained its position as the top issuer of green bonds among all EU member states for the fourth consecutive year. During the initial half of 2023, Germany issued ESG bonds totalling EUR 36.9 bn, contributing to its robust track record. This noteworthy figure compares to EUR 58.6 bn for the entire year of 2022 respectively EUR 48,8 bn in 2021 and EUR 33,8 bn in 2020. (Association for Financial Markets in Europe, 2023).

A majority of these bonds is used for the transportation sector with 55% allocation in 2020 followed by 24.6% for international cooperation. Additionally, approximately 8.1% each were allocated into



research, innovation and awareness raising as well as energy and industry. Lastly, 4.2% were assigned to agriculture and forestry (deutsche Finanzagentur, 2022)

As previously mentioned, the German Green Bond Framework is in accordance with the 2021 edition of the Green Bond Principles (GBP) published by the International Capital Market Association (ICMA). Additionally, Germany has adhered to EU standards, ensuring alignment with the EU Taxonomy 17, thus reinforcing the eligibility criteria outlined in the Green Bond Framework.

In Germany, there are currently no statutory regulations governing green/climate bond classification. Nevertheless, private initiatives have proactively established standards to enhance market transparency, thereby ensuring the sustainable quality of bonds. Notably, the Green Bond segment on the Frankfurt Stock Exchange aggregates bonds that align with the Green Bond Principles stipulated by the ICMA which require an external assessment (Börse Frankfurt, 2023). Furthermore, the bond issuer is obliged to report on the allocation and impact of the green expenditures. In the definition of expenditures recognized as 'green', the central objectives of the German Climate Action Program were considered (deutsche Finanzagentur, 2022).

1.5. Green loans

Prominent players in the German financial sector, including government-owned development bank KfW, are driving the adoption of green loans. KfW, a stalwart in sustainability initiatives, offers a range of financial products, notably green loans, aimed at supporting energy-efficient construction, renewable energy ventures, and environmental protection projects.

Leading commercial banks in Germany, such as Deutsche Bank and Commerzbank, have strategically integrated green finance into their portfolios. These institutions provide green loans tailored to both businesses and individuals, facilitating eco-friendly initiatives.

Additionally, specialized green banks in Germany such as the “UmweltBank” focus exclusively on sustainable finance. These smaller institutions contribute to the broader landscape by offering customized green loans designed to support environmentally conscious projects. Collectively, these entities play a pivotal role in advancing green financing initiatives in the country.

Financeable projects include measures that increase the resource and energy efficiency of buildings and industry as well as the funding of green energy like solar and wind projects. Furthermore, eco-friendly business loans are offered to companies which engage in environmentally sustainable practices.

Since 2018 the „UmweltBank“ recorded an average yearly increase of issued loan volume by 5.5% (Statista, 2022). The KfW also experienced a strong increase to a total volume of EUR 166.9 bn loans issued in 2022 from EUR 107 bn in the previous year. However, it has to be noted that the KfW does not solely offer green loans but also educational loans or loans aimed at Start-Ups which are not mainly involved in environmentally friendly practices (KfW, 2023).

The prerequisite for issuing a green credit is the adherence of the borrower to predefined ESG objectives. This can be achieved either through periodic ESG ratings or by establishing predefined ESG-related KPIs. In a KPI-linked bilateral loan, concrete sustainability goals and deadlines are defined between the company and the bank, specifying when the company is expected to achieve progress towards these goals. If the borrower fails to meet the goals, an interest rate increase is



implemented until the agreed-upon objectives are achieved. Conversely, the interest rate can decrease if the borrower surpasses the goals ahead of schedule. With reference to specific ESG performance indicators, sustainability goals can be integrated into financing for general corporate purposes. Possible KPIs may include reducing CO2 emissions, transitioning from fossil fuels to wind or solar energy, and minimizing workplace accidents.

The ESG rating-linked bilateral loan shares many similarities with the KPI-linked bilateral loan. It also allows financing for general corporate purposes without an immediate sustainability focus. The key difference lies in the reference point: instead of individual performance indicators, the comprehensive ESG rating by a recognized external rating agency serves as the benchmark (Commerzbank, 2023).

1.6. Energy service companies (ESCO) and Public-private partnership

The work of energy service companies and public-private partnerships is regulated in several laws in Germany.

The most important law in this context is the Energy Services Act (EDL-G). It transposes the EU Energy Efficiency Directive into German law and is meant to provide the legal framework for promoting energy services and improving energy efficiency. This is done in the form of “energy audits”. These energy audits are systematic inspections and analyses of energy consumption and efficiency measures within the organization's buildings, industrial facilities, or processes. Large companies and corporations (following EU suggestion 2003/361/EG) in Germany are obligated to undergo those audits regularly. As an alternative, the companies can also choose an energy management system or an environmental management system instead.

The federal office of economics and export control (BAFA) gives municipalities a refund of 80% (limited to EUR 1200) if they have net energy costs of less than EUR 10.000 (goClimate, 2023).

Another legal framework in this sector is the heat planning act (Wärmeplanungsgesetz). It is expected to be confirmed by the end of 2023 and is meant to go hand in hand with the recently updated building energy act (GEG). The GEG regulates the sustainable transition of energy in buildings, the most important aspect is that heating systems in new buildings must use at least 65% sustainable sources. The heat planning act on the other hand focuses on the municipal level instead of the building level. It obligates all municipalities to create a heat plan including a status quo analysis and future plans including heat networks. Existing heat networks need to use at least 30% sustainable sources 2030, 80% in 2040 and be carbon neutral in 2045. Large municipalities with over 100.000 inhabitants need to complete this heat plan until June 2026, smaller municipalities until June 2028. As some federal states already have regulations about heat plans, this procedure has already been done in many German cities. This makes it easier for the other regions to establish their plans and therefore the association of Cities states that the timeframe is “feasible, but ambitious”. (bpb, 2023)

The federal government decided to invest EUR 500 Mio in the support for municipal heat planning. This money was supposed to be taken from the “Climate and transformation fond” that was stopped by the federal constitutional court on 15.11.2023. At this point, it is uncertain how projects relying on this fond will be financed.



1.7. Citizen-led initiatives

1.7.1. Crowdfunding

On the 10.11.2021, an EU regulation for crowdfunding was decided. Since the transition period for this regulation ended on 10.11.2023, it now applies to all cases of crowdfunding. Some aspects of the EU regulation are: Before being allowed to start a crowdfunding platform, the provider needs to apply for a license with the BaFin. (BaFin, 2023) The provider also needs to ensure fair and appropriate prices, give detailed information about individual portfolio management of loans, avoid conflicts of interest etc. (European Parliament and the Council of the European Union, 2020)

Depending on the exact strategy of the platform, different forms of license requirement can apply. A common case is the definition as investment broker which is a form of financial service and is handled with the German banking act. (Monika Dibbelt, 2023) If the platform doesn't obtain any money from the investors, the payment services supervision act applies. (Begner, 2012)

The first CF-platform in Germany started in 2011. Since then, this financing model had become an important option especially in social projects and start-ups as well as the energy sector. The market volume developed from EUR 1.5 Mio in 2011 to EUR 417,7 Mio in 2019. In 2019, 75% of the marked volume were reached by building projects followed by 20,9% for companies and 2,2% for Energy projects. The market decreased due to the Covid pandemic, new data on the total market volume after the pandemic is not yet available. Reduced to equity crowdfunding, the marked volume in the first half of 2023 was around EUR 11,3 Mio (afme, Nov 2023). In August 2023, 13 crowdfunding platforms were already registered under the new EU regulation (afme, Nov 2023). Important market players for crowd investing in buildings in Germany are: Exporo, Engel & Völkers Digital Invest, Bergfürst, Zinsbaustein.de, Dagobertinvest, Rendity, Home Rocket, Ynto and mybilio. (crowdfundinvest.de, 2020)

1.7.2. Energy communities (Bürgerenergiegesellschaften) and Energy cooperatives (Energiegenossenschaften)

Terms and regulations for German Energy communities (Bürgerenergiegesellschaften) are defined in EEG (renewable energy law) whereas some adaptations have been done to this topic in the new version of 2023. In order to fulfil the criteria, the community needs to include at least 50 natural persons. At least 75% of the voting rights need to be held by natural persons in a radius of 50km. Apart from natural persons, small and medium companies as well as municipalities can participate, and no member can hold more than 10% of the community. (Dr. Lena-Sophie Deißler, 2022)

The government aims to support the formation of energy communities as this is a measure to rise acceptance for sustainable energy projects in the local public and the participation of citizens. One form of support is that under certain conditions, energy communities don't need to participate in the EEG tendering process. The definition of energy communities in the EEG is compatible with the definition of renewable energy communities as defined by the EU in the directive 2018/2001. (Dr. Lena-Sophie Deißler, 2022) Another support system are risk funds to secure the operation of energy communities. By now, this system only exists in Thüringen and Schleswig-Holstein. On federal level, a corresponding fund especially for wind energy communities was created in 2023. (Genossenschaftsverband, 2023)



In German law, energy cooperatives are energy communities that chose the cooperative model as form of company. This means that they fall under all regulations and support systems that exist for energy communities in general. The specialty of a cooperative is that it is owned and operated democratically by its members. A representative study showed in 2022 that more than 1/3 of the adults in Germany would be interested in joining a wind energy cooperative (Genossenschaftsverband, 2022).

The energy agency of Northern Bavaria offers guidance for municipality-led wind energy projects. In this position, we experience that energy communities are usually not chosen as project company for wind parks. Instead, the most popular choice is the GmbH & Co. KG. But this does not mean that energy communities and especially energy cooperatives don't play an important role in the sector. A very popular system is that an energy cooperative owns shares of the GmbH & Co KG. In this way, citizens can be shareholders of the wind park, but they are organized within each other and don't own small shares one by one.



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