

Fundamental and social rights in the green transition - energy efficiency and energy poverty

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1. EXECUTIVE SUMMARY

The adoption of the Federal Climate Protection Act (*Bundes-Klimaschutzgesetz*, KSG) in 2019 and its amendment following the widely recognised 'Klima-Beschluss' (Climate Decision) of the German Federal Constitutional Court in 2021 marked a turning point in political efforts to reduce Germany's GHG emissions. The Act sets legally binding overall emission targets until 2045 and annual sector-specific emission budgets. The German federal government must meet the targets and keep within the budgets through respective policies and measures, such as for enhancing sustainable energy use and energy efficiency.

The Climate Protection Programme 2023 of the 'Ampel coalition' government (December 2021 – November 2024) contains measures that could significantly contribute to meeting Germany's emission reduction targets. However, further efforts and a faster implementation of measures are necessary, especially in those sectors with insufficient emission reductions, such as the heating/building and transport sectors. Most residential households in Germany still heat with gas or oil; the rate of energy efficient refurbishments of residential buildings has been too low for years.

The 'Ampel coalition' government has put more emphasis on the long discarded social implications of climate protection policies. For example, it has proposed, but not yet implemented, a monitoring system for draft climate and energy legislation and policies to assess their social impacts (*Sozialmonitoring Klimaschutz*). With the first socially staggered funding programme for the replacement of fossil fuel heating systems, the government introduced a paradigmatic change in Germany's funding landscape in 2023.

To inform the research on just transition and energy efficiency in Germany, the national CO2 pricing for emissions in the heating and transport sectors was chosen for in-depth analysis. It was subject of ten semi-structured interviews conducted with the coordinating and implementing authorities (Groups COORD and IMPL), civil society (Group CIVIL), academia and associations representing certain population groups (Group OTHER). The national CO2 pricing was introduced in 2021 and is a key instrument to reduce emissions and promoting sustainable energy use and energy efficiency in Germany's heating and transport sectors.

The interviews underscore that the costs of transformation processes often disproportionately burden low-income households. However, they also highlight often-discarded structural factors that can lead to differing impacts across population groups. Besides household income, these factors include people's housing situation (i.e. rental

or owner-occupied housing), place of residence (i.e. rural or urban) and (financial) capability to switch to energy efficient technologies.

Available social compensation and support measures alleviate cost burdens for some but not all affected households. The interviews highlight existing barriers to access support and compensatory measures for certain groups. To the extent that these measures are accessible, in some cases, they are criticised as insufficient in terms of scope and scale. The interviews underline the urgent need for sufficient group-tailored support and compensation measures to transition from fossil fuels to renewable energy sources and to improve energy efficiency.

The country research and interviews identify several challenges and gaps: inadequate information and communication on overarching narratives and future paths of climate and energy policies curtailing public awareness; state budget and political constraints slowing down policy adoption and implementation; and the perceptible climate political roll back and diminishing public support threatening the success of policies.

The research results highlight Germany's approach to addressing energy poverty, which is primarily conceptualised as an issue of income poverty rather than a question of energy efficiency. The lack of an official definition of energy poverty, as well as of transport poverty, has hampered respective data collection to assess the scope of affected households and to put the issue on the political agenda. Germany will now have to address this shortcoming in the context of its national Social Climate Plan (SCP) to be eligible for funds from the EU's Social Climate Fund as of 2026.

Germany has been a front-runner in introducing a CO₂ pricing for the heating and transport sectors. Such a pricing will soon apply EU-wide under the new EU emissions trading system (EU ETS₂) as of 2027. The research on the national CO₂ pricing can give valuable insights in this regard: the pricing's main effects so far, its (potential) social implications, existing challenges and gaps as well as required political action to ensure, on the one hand, the social acceptability of the CO₂ pricing, and on the other hand, its effectiveness as an instrument to reduce emissions in the heating and transport sectors.

2. Reaching climate targets through energy efficiency

In Germany, the Federal Government's Climate Protection Programme 2030 (*Klimaschutzprogramm 2030*)¹ (adopted in 2019) and Climate Protection Programme 2023 (*Klimaschutzprogramm 2023*)² (adopted in 2023) set out already implemented as well as planned measures to reduce greenhouse gas (GHG) emissions and to promote efficient and sustainable energy use.

The Climate Protection Programme 2030 laid out Germany's initial emission reduction targets (national climate targets) that became legally binding with the Federal Climate Change Act (*Bundes-Klimaschutzgesetz*, KSG) adopted in 2019³ and amended in 2021⁴ following the so-called 'Klima-Beschluss'⁵ (Climate Decision) of the German Federal Constitutional Court (*Bundesverfassungsgericht*) in 2021: reducing emissions by at least 65 % and 88 % by 2030 and 2040 respectively (compared to 1990) and reaching carbon neutrality by 2045. The Climate Decision marked one turning point in national political efforts to reduce Germany's GHG emissions. According to the court, the initial national GHG emission targets set out in the KSG of 2019 postponed high emission reduction burdens to future generations, and therefore deemed the KSG inadmissible with their freedom rights.

The KSG was amended again in July 2024. While Germany's overall emissions reduction targets remained, sector specific annual emissions reduction targets, such as for the heating/building and transport sectors, were replaced with annual emission budgets for each sector. Before, federal ministries in the lead for different sectors had to issue an immediate plan of action if the sector-specific annual target had not been reached. Whether Germany is on track to reach its overall emission reduction targets is now solely assessed based on projections of the cumulative emissions across sectors permitted in the overall period from 2021 to 2030 (or later from 2031 to 2040). If the permitted emissions are exceeded in total, the federal government must act.⁶ The reform of the KSG has been widely criticised for postponing effective and socially just climate

¹ German Federal Government (*Deutsche Bundesregierung*) (2019), [Klimaschutzprogramm 2030](#), 8 October 2019.

² German Federal Government (*Deutsche Bundesregierung*) (2023), [Klimaschutzprogramm 2023](#).

³ Germany, [Federal Climate Change Act](#) (*Bundes-Klimaschutzgesetz*, KSG), 12 December 2019.

⁴ Germany, [Federal Climate Change Act](#) (*Bundes-Klimaschutzgesetz*, KSG), 12 December 2019.

⁵ Germany, Federal Constitutional Court (*Bundesverfassungsgericht*), Karlsruhe, [1 BvR 2656/18](#), [1 BvR 78/20](#), [1 BvR 96/20](#), [1 BvR 288/20 \(Climate Change\)](#), 24 March 2021.

⁶ Germany, [Federal Climate Change Act](#) (*Bundes-Klimaschutzgesetz*, KSG), as amended on 15 July 2024.

protection measures; the non-governmental organisations Greenpeace, Germanwatch⁷ and Deutsche Umwelthilfe⁸ submitted respective constitutional complaints to the German Federal Constitutional Court in July and September 2024.

Whereas the Climate Protection Programme 2030 included a mix of measures to restructure national energy generation through investment programmes, tax reliefs, research programmes and some legislative changes⁹, the 2023 Programme puts an emphasis on legislative initiatives and investment programmes to meet emission reduction targets. It contains more measures focused on cross-sectoral and socially just transition to carbon neutrality.¹⁰ In August 2023, the Council of Experts on Climate Change (*Expertenrat für Klimafragen*, ERK) acknowledged that the measures presented in the programme could make a significant contribution to climate protection but pointed to the need for further efforts to reach the targets of the KSG.¹¹

In August 2024, Germany submitted the Update of its Integrated National Energy and Climate Plan (NECP-U) to the European Commission.¹² The NECP-U outlines key components and new developments of German energy and climate policy. It details policies and measures Germany is implementing along the five dimensions of the Energy Union, including decarbonisation and energy efficiency (see chapter 2.1.). It lays out how the concepts of `just transition` and `leaving no one behind` are considered in the policies and measures (see chapter 2.2.) and what actions Germany is taking to address energy poverty (see chapter 2.3.)

Political demands for a social approach to climate protection and just transition have been voiced for some time by an active civil society in Germany, ranging from trade unions, social and environmental organisations, organisations representing specific groups (e.g. tenants) to loose social movements, like Fridays For Future.

The 'Ampel coalition' government in Germany (December 2021 – November 2024) put more emphasis on a socially just transition in its Climate Action Programme 2030 and has introduced a few measures to support vulnerable and low-income households, such as an income bonus for the replacement of heating systems (see chapters 2.3. and 3.1.2). Other measures such as a social monitoring system for draft climate and energy

⁷ See [constitutional complaint](#) by Greenpeace and Germanwatch, 16 September 2024

⁸ See [constitutional complaint](#) by Deutsche Umwelthilfe, 16 July 2024.

⁹ German Federal Government (*Deutsche Bundesregierung*) (2019), [Klimaschutzprogramm 2030](#), 8 October 2019, pp. 52, 29, 150, 24, 34 and 38.

¹⁰ German Federal Government (*Deutsche Bundesregierung*) (2023), [Klimaschutzprogramm 2023](#), pp. 4–6.

¹¹ Germany, Council of Experts for Climate Change (*Expertenrat für Klimafragen*, ERK) (2023), [Stellungnahme zum Entwurf des Klimaschutzprogramms 2023](#), 22 August 2023.

¹² Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK) (2024), [Update of the Integrated National Energy and Climate Plan](#).

legislation and policies (*Sozialmonitoring Klimaschutz*) have been announced but not yet implemented.

Significant amounts of public funding are necessary to implement Germany's climate and energy policies. According to the Research Services of the German Bundestag (*Wissenschaftliche Dienste des Deutschen Bundestags*) Germany's energy transition alone will cost between € 500 billion per year or € 13.3 trillion in total by 2045.¹³ Germany's state budget in 2023 was about € 480 billion¹⁴. Tight budget restraints, among others, because of unforeseen expenditure, such as financial assistance to Ukraine, have hindered rapid implementation of climate and energy policies and of measures to ensure a just transition, for example through more socially staggered funding or support programmes for vulnerable and low-income households to adapt their energy consumption (see chapter 3.1.3.).

Political dynamics, such as differing priorities during the period of the 'Ampel' coalition government and the manifestation of (right-wing) populist political influence rejecting climate action have further slowed down policy implementation. Public support for the green transition is diminishing as it is increasingly seen as 'socially unjust' and as too expensive in times threatened by economic recession and social decline (see chapter 3.3.).

2.1. Energy efficiency

For the research project on Germany's national CO₂ pricing in the heating and transport sectors, emission reduction and energy efficiency targets in these sectors are most relevant. The KSG sets the annual CO₂ emission budgets for the heating/building sector as follows:¹⁵ 97 million tonnes of CO₂ for 2024 and 102 million tonnes CO₂ for 2023. The sector's emissions exceeded the cap in 2023.¹⁶ Subsequent to the reform of the KSG in 2024 (see chapter 2), the relevance of the sector emission budgets has significantly reduced as overshoots can be compensated by emission reductions in other sectors.

¹³ Research Services of the German Bundestag (*Wissenschaftliche Dienste des Deutschen Bundestags*) (2024), [Kurzinformation zur Berechnung der Investitionskosten für die Energiewende](#), WD 5 - 3000 - 135/24, 15 September 2024.

¹⁴ Germany, Federal Ministry of Finance (*Bundesministerium der Finanzen*, BMF) (2023), [State Budget 2024](#).

¹⁵ Germany, [Federal Climate Change Act](#) (*Bundes-Klimaschutzgesetz*, KSG), as amended on 15 July 2024, Annex 2a.

¹⁶ In 2023, the building/heating sector emitted 1.2 million tonnes CO₂ equivalents more than permitted, see German Environment Agency (*Umweltbundesamt*, UBA), ['Klimaemissionen sinken 2023 um 10,1 Prozent – größter Rückgang seit 1990'](#), press release, 15 March 2024.

Regarding targets for energy-efficient refurbishments of buildings, only a few have been set by the federal government: a decree based on the Climate Protection Programme 2030¹⁷ stipulates a yearly increasing refurbishment rate only for federal real estate: 1.0 % for 2022, 1.3 % for 2023, 1.7 % for 2024, and 5.0 % annually for the years 2030–2045.¹⁸ An updated¹⁹ overall annual target for the energy-efficient refurbishment of buildings is lacking. A study by adelphi of 2022, commissioned by the Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK), concludes that to achieve Germany's 2045 emission reduction targets, it needed an annual energy-efficiency refurbishment rate of residential buildings of up to 1.7 % until 2030 and up to 1.9 % until 2040.²⁰ In 2023, the refurbishment rate for residential and non-residential buildings was 0.7 % and has been below 1 % for years.²¹ The German Long Term Renovation Strategy of 2020 states that more data is needed to develop a new target that will be available in an update of the Strategy, initially announced for June 2024, but not yet available as of December 2024.²²

To enhance energy efficiency in the heating/building sector, the NECP-U details measures in the twice amended Building Energy Act (*Gebäudeenergiegesetz*, GEG): new-builds must comply with a certain efficiency standard and the installation of new heating systems and their energy sources must meet certain requirements.²³ To incentivise rental property owners to energy-efficiently refurbish their buildings, the NECP-U details modified laws on rent increases following the installation of a heating system in line with

¹⁷ German Federal Government (*Deutsche Bundesregierung*) (2019), [Klimaschutzprogramm 2030](#), 8 October 2019, p. 57.

¹⁸ See Federal Ministry of the Interior and Community (*Bundesministerium des Inneren und für Heimat*, BMI), [Decree on energy efficiency in Federal real estate property \(Energieeffizienzfestlegungen für klimaneutrale Neu-/ Erweiterungsbauten und Gebäudesanierungen des Bundes](#), Erlass BW II 3-82012-12/10-11), 25 August 2021, p. 7.

¹⁹ In its Energy Concept 2010, the federal government stipulated an annual target energy-efficient refurbishment of 2 % for all buildings in Germany until 2020, see German Federal Government (*Deutsche Bundesregierung*) (2010), [Energiekonzept für eine umwelt schonende, zuverlässige und bezahlbare Energieversorgung](#), 28 September 2010, p. 5.

²⁰ Adelphi et al.(2022), [Hintergrundpapier zur Gebäudestrategie Klimastrategie 2045](#), Berlin, Basel, München, Freiburg, Heidelberg, Dresden, 2022, p. 9. Green Budget Germany (*Forum Ökologisch-Soziale Marktwirtschaft*, FÖS) (2024), [Zielkonforme Energetische Gebäudesanierung für Klimaschutz, wirtschaftlichen Erfolg und soziale Gerechtigkeit](#), Berlin, p. 2.

²¹ Green Budget Germany (*Forum Ökologisch-Soziale Marktwirtschaft*, FÖS) (2024), [Zielkonforme Energetische Gebäudesanierung für Klimaschutz, wirtschaftlichen Erfolg und soziale Gerechtigkeit](#), Berlin, p. 2.

²² Germany, Federal Ministry for Economic Affairs and Energy (now Federal Ministry for Economic Affairs and Climate Action, *Bundesministerium für Wirtschaft und Klimaschutz*, BMWK) (2020), [Langfristige Renovierungsstrategie der Bundesregierung](#), August 2020, pp. 7, 12.

²³ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK) (2024), [Update of the Integrated National Energy and Climate Plan](#), 29 August 2024, p. 182–183.

the requirements of the GEG²⁴ as well as the CO2 Cost Sharing Act (*Kohlendioxidkostenaufteilungsgesetz*, generally referred to as *CO2 Kostenaufteilungsgesetz*). The Act regulates the CO2 cost sharing between rental property owners and tenants, depending on the energy efficiency level of the building (see chapter 3.1.).²⁵

As another objective, the NECP-U enlists the expansion of the heating and cooling networks: in the medium term, at least 100,000 new buildings are planned to be connected to heating networks annually.²⁶

For the transport sector, the KSG²⁷ stipulates the amount of permitted CO2 emissions in the respective year to be 128 million tonnes of CO2 for 2024, and 134 million tonnes of CO2 for 2023. In the sector, too, the cap was exceeded in 2023²⁸, as in all previous years except in 2020.²⁹ In the NECP-U, the federal government refers to the 2010 Energy Concept which stipulates a reduction of CO2 emissions in the transport sector of about 10 % by 2020 and of about 40 % by 2050 compared to 2005. The NECP-U mentions the Klimaschutzplan 2050, which foresees Germany's transport sector to become almost carbon-neutral by 2050.³⁰ To this end, the federal government aims to have at least 15 million fully electric cars registered by 2030³¹ and one million publicly available refuelling and charging points for passenger cars installed by 2030.³²

²⁴ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK) (2024), [Update of the Integrated National Energy and Climate Plan](#), 29 August 2024, p. 329.

²⁵ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK) (2024), [Update of the Integrated National Energy and Climate Plan](#), 29 August 2024, p. 192.

²⁶ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK) (2024), [Update of the Integrated National Energy and Climate Plan](#), 29 August 2024, p. 80.

²⁷ Germany, [Federal Climate Change Act](#) (*Bundes-Klimaschutzgesetz*, KSG), 12 December 2019, Annex 2a.

²⁸ In 2023, the transport sector emitted 146 million tonnes CO2, see German Environment Agency (*Umweltbundesamt*, UBA), [`Klimaemissionen sinken 2023 um 10,1 Prozent – größter Rückgang seit 1990`](#), press release, 15 March 2024.

²⁹ German Environment Agency (*Umweltbundesamt*, UBA) (2024), [`Treibhausgas-Projektionen 2024 – Ergebnisse kompakt`](#), Dessau-Roßlau, March 2024, p. 15.

³⁰ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK) (2024), [Update of the Integrated National Energy and Climate Plan](#), 29 August 2024, p. 80.

³¹ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK) (2024), [Update of the Integrated National Energy and Climate Plan](#), 29 August 2024, p. 325, p. 158. Mid 2024, 1.4 million fully electric cars were registered in Germany, see General German Automobile Club (*Allgemeiner Deutscher Automobil Club*, ADAC), [`Verbrenner-Aus`](#), 1 October 2024.

³² Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK) (2024), [Update of the Integrated National Energy and Climate Plan](#), 29

Individual e-mobility in Germany is still low with only 1.4 million fully electric cars registered as of January 2024 (about 2.9 % of all registered cars).³³ Of all new cars registered between January and October 2024, 19.8 % were fully electric.³⁴ By mid-2024, 125,000 refuelling and charging points were publicly available.³⁵ Following the EU's re-regulation for car registration in 2023, only cars and vans with zero emissions will be permitted to be newly registered in Germany as of 2035.³⁶ To promote the purchase of e-vehicles, Germany had a respective state subsidy programme. However, due to budgetary restraints the 'Ampel' coalition government had to abruptly abolish the programme in December 2023.³⁷

2.2. Just transition

In the context of **just transition**, the NECP-U mentions potential structural disadvantages of rural areas, in particular public transport infrastructure, but does not specify concrete measures.³⁸ To strengthen regional transformation processes and to keep and create jobs in these regions, the federal government partners with the federal states (*Bundesländer*) in the joint task force 'Improving the regional economic infrastructure' (*Gemeinschaftsaufgabe zur Verbesserung der regionalen Wirtschaftsstruktur*, GWR). Alongside the goal of creating and securing jobs in economically disadvantaged regions and making them more attractive to employees, the NECP-U sets out to accelerate transformation processes towards a sustainable, climate-neutral economy. It mentions the continued development of a nationwide

August 2024, p. 159. By mid-2024, 125,000 refuelling and charging points were publicly available in Germany, see General German Automobile Club (*Allgemeiner Deutscher Automobil Club*, ADAC), [Verbrenner-Aus](#), 1 October 2024.

³³ Federal Motor Transport Authority (*Kraftfahrt-Bundesamt*, KBA), [Stock of motor vehicles by environmental characteristics](#), Table 13.2.1, 1 January 2024.

³⁴ Federal Motor Transport Authority (*Kraftfahrt-Bundesamt*, KBA), [press release no° 39/2024 'New car registrations'](#), 15 November 2024.

³⁵ General German Automobile Club (*Allgemeiner Deutscher Automobil Club*, ADAC), ['Verbrenner-Aus'](#), 1 October 2024.

³⁶ See European Commission (2023), ['Fit for 55: EU reaches new milestone to make all new cars and vans zero-emission from 2035'](#), press release, Brussels, 28 March 2023.

³⁷ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK) (2024), [Umweltbonus endet mit Ablauf des 17. Dezember 2023](#), press release, 16 December 2023.

³⁸ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK) (2024), [Update of the Integrated National Energy and Climate Plan](#), 29 August 2024, pp. 327–328; this has also been criticised by civil society, see Germanwatch (2024), [Deutschlands Energie- und Klimaplan auf dem Prüfstand](#), Berlin/Bonn, 17 October 2024, p. 17.

funding system for disadvantaged regions but does not specify respective measures to this end.³⁹

The NECP-U acknowledges that the production of renewable energies will be more visible in rural regions and might therefore pose a challenge; but it also sees an opportunity for otherwise structurally disadvantaged regions to make use of available land and to create new jobs.⁴⁰ The NECP-U highlights the importance of avoiding environmental and health impacts from the expansion of renewable energies and in this context aims to keep installations “as much as possible” away from high-conservation-value land.⁴¹ Norms of participation, such as the choice of the place of installation, are not enumerated in this context. The NECP-U mentions the EU Just Transition Fund which supports the transition of former coal mining regions but does not detail specific measures on this.⁴²

Germany refers to the principle of ‘**leaving no one behind**’ in its NECP-U in the context of the transformation process. It states that the federal government will pay attention to the social dimensions of energy and climate policies, acknowledging that transformation and just transition processes can only succeed when supported by the entire population. The NECP-U highlights that basic needs and services, such as energy, food and housing must be affordable for everyone.⁴³

‘Leaving no one behind’ is indirectly addressed by the NECP-U in relation to energy poverty and the national CO₂ pricing for the heating and transport sectors⁴⁴ (see chapter 3). It acknowledges that the annual increases of the national CO₂ price impact low-income households more, a finding that is underscored by the interviews and studies.⁴⁵

³⁹ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*) (2024), [Update of the Integrated National Energy and Climate Plan](#), 29 August 2024, p. 328.

⁴⁰ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*) (2024), [Update of the Integrated National Energy and Climate Plan](#), 29 August 2024, p. 328.

⁴¹ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*) (2024), [Update of the Integrated National Energy and Climate Plan](#), 29 August 2024, p. 330.

⁴² Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*) (2024), [Update of the Integrated National Energy and Climate Plan](#), p. 335.

⁴³ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*) (2024), [Update of the Integrated National Energy and Climate Plan](#), 29 August 2024, p. 325.

⁴⁴ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*) (2024), [Update of the Integrated National Energy and Climate Plan](#), 29 August 2024, pp. 105-109.

⁴⁵ See for instance Matthes, F.C., Schumacher, K., Blanck, R., Cludius, J., Hermann, H., Kreye, K., Loreck, C., ‘[CO₂-Bepreisung und die Reform der Steuern und Umlagen auf Strom: Die Umfinanzierung der Umlage des Erneuerbare-Energien-Gesetzes](#)’, Berlin, 2 June 2021, p. 47; and J. Behringer, L. Endres, M. Korsinnek, ‘[CO₂-Bepreisung: Akzeptanz und Kostenwahrnehmung nach der Preiserhöhung 2024](#)’, Düsseldorf, August 2024, p. 2.

To alleviate the effects of the CO2 price on different groups the NECP-U outlines several measures the federal government has taken: abolition of the EEG-levy; heating and energy costs-related components in social security (*Bürgergeld*) and housing benefits (*Wohngeld-PLUS*); income-related components of individual measures of the federal funding for efficient buildings programme (*Bundesförderung für effiziente Gebäude – Einzelmaßnahmen*, BEM–EM); the CO2 price cost sharing between tenants and rental property owners (CO2 Cost Sharing Act, *CO2 Kostenaufteilungsgesetz*); and programmes for free-of-charge energy saving consultation.⁴⁶ The measures are described in more detail in chapter 2.3 on energy poverty and were subject of the interviews (see chapter 3.1.2.).

The NECP-U emphasises that more attention needs to be paid to distribution effects, once the national CO2 pricing for the heating and transport sectors transitions to the new EU emissions trading system (EU ETS2) in 2027 (see chapter 3). To alleviate burdens and support especially lower and middle-income groups through the transformation, Germany will use allocated funds from the EU Social Climate Fund (EU SCF) as of 2026. Concrete measures or timeframes in this regard are not laid out in the NECP-U.⁴⁷

The obligation of the state to analyse and monitor the social impacts of climate policies during the design phase to ensure social compatibility is underlined in the NECP-U.⁴⁸ The federal government has proposed, but not yet implemented, a social monitoring system for draft climate and energy legislation and policies (*Sozialmonitoring Klimaschutz*) (see chapter 2.4.).⁴⁹

Germany also addresses `just transition` and `leaving no one behind` in its draft National Sustainable Development Strategy (*Entwurf Deutsche Nachhaltigkeitsstrategie*, DNS) to implement the Sustainable Development Goals (SDGs) / Agenda 2030. The DNS acknowledges that people with low income are often more exposed to and negatively impacted by environmental pollution and the consequences of climate change than people with higher income.⁵⁰ The DNS aims to create healthy environmental and living

⁴⁶ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK) (2024), [Update of the Integrated National Energy and Climate Plan](#), 29 August 2024, p. 105–109, 184 f., 244–246, 325–330.

⁴⁷ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK) (2024), [Update of the Integrated National Energy and Climate Plan](#), 29 August 2024, p. 326.

⁴⁸ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK) (2024), [Update of the Integrated National Energy and Climate Plan](#), 29 August 2024, p. 329.

⁴⁹ See German Bundestag (*Deutscher Bundestag*) (2024), [Unterrichtung durch die Bundesregierung - Klimaschutzbericht 2024](#), Drucksache 20/12760, 30 August 2024, p. 85.

⁵⁰ German Federal Government (*Deutsche Bundesregierung*) (2024), [Deutsche Nachhaltigkeitsstrategie Weiterentwicklung 2024 – Dialogfassung](#), May 2024, p. 14, p. 35.

conditions for all.⁵¹ To strengthen social justice, social inclusion and participation, also in the workplace, the strategy stipulates a number of measures, including social security benefits, a professional development programme (*Lebenschancen BaföG*), and the project ‘transformation guide’ (*Transformationslotse*),⁵² where individual employees are trained in and serve as focal points for aspects related to digital transformation and change management in the workplace.⁵³ The DNS highlights the need to combine climate protection with social justice as the costs of transformation processes often disproportionately burden low-income households. As one measure to address this, the social monitoring system for draft climate and energy legislation and policies (*Sozialmonitoring Klimaschutz*) is mentioned.⁵⁴

2.3. Energy poverty

There is no official definition of energy poverty in Germany. Energy poverty is not conceptualised as an issue on its own, but as an issue of income poverty that is addressed as part of German poverty alleviation policy. In the chapter on ‘energy poverty’ in the NECP-U, Germany points to energy-related components the national social security benefits system provides as a comprehensive framework for supporting households with no or low income (Volume II and Volume XII of the German Social Code, *Sozialgesetzbuch*, SGB).⁵⁵ The NECP-U includes additional measures, the federal government has adopted in the context of energy poverty, i.e. measures to alleviate energy-related cost burdens and to support households to adapt energy consumption.

Examples of measures outlined in the NECP-U⁵⁶ (see chapter 3.1.2. for more detail on some of the measures):

Measures for households with no or very low income

⁵¹ German Federal Government (*Deutsche Bundesregierung*) (2024), [Deutsche Nachhaltigkeitsstrategie Weiterentwicklung 2024 – Dialogfassung](#), May 2024, p. 14.

⁵² German Federal Government (*Deutsche Bundesregierung*) (2024), [Deutsche Nachhaltigkeitsstrategie Weiterentwicklung 2024 – Dialogfassung](#), May 2024, p. 14–17.

⁵³ German Federal Government (*Deutsche Bundesregierung*) (2024), [Deutsche Nachhaltigkeitsstrategie Weiterentwicklung 2024 – Dialogfassung](#), May 2024, p. 16.

⁵⁴ German Federal Government (*Deutsche Bundesregierung*) (2024), [Deutsche Nachhaltigkeitsstrategie Weiterentwicklung 2024 – Dialogfassung](#), May 2024, p. 49.

⁵⁵ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK) (2024), [Update of the Integrated National Energy and Climate Plan](#), pp. 105-109, p. 251.

⁵⁶ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK) (2024), [Update of the Integrated National Energy and Climate Plan](#), pp. 105-109, pp. 244-246.

- German social security benefits (*Bürgergeld*) cover heating and energy costs in the amount of reasonable actual costs⁵⁷
- Electricity Saving Check PLUS-programme (*Stromspar-Check PLUS*)⁵⁸ offers free-of-charge energy saving consultation on how to save heating energy, water and electricity

Measures for **low-income households**

- Loans, in exceptional cases grants, for households unable to meet their energy costs and whose energy supply has been cut off or is at risk of being cut off
- Housing Benefit Plus Programme (*Wohngeld Plus*)⁵⁹ has a heating benefit component that is aligned with average increases in heating costs
- One-off payment for the month, in which the annual heating cost statement or expenses for an adequate stockpile of heating supplies is due. Eligible are people with low income facing financial distress, who otherwise have no claim to social security benefits (*Bürgergeld*).

Measures for all households, with a **particular supportive effect for low-income households**:

- Abolishment of the EEG-levy on electricity consumption in July 2022 (Renewable Energy Sources Act surcharge)⁶⁰
- CO2 Cost Sharing Act (*CO2-Kostenaufteilungsgesetz*)⁶¹ regulates the CO2 cost sharing between tenants and rental property owners, depending on the energy efficiency level of the building
- Electricity, gas and heating price brakes (*Strom- und Gaspreisbremsen*) applied between January and December 2023
- Federal Funding for Efficient Buildings – Individual Measures (*Bundesförderung für effiziente Gebäude, BEG EM*) provides besides general subsidies an income

⁵⁷ Heating costs are paid for in addition to social security benefits (*Bürgergeld*) up to an adequate amount of consumption in relation to other households in the vicinity. If heating costs exceed the predetermined adequate amount, -recipients of social security benefits must cover the exceeding amount unless they prove exceptional circumstances (e.g. sickness; small children or older persons living in the household). Electricity costs are included in the regular rate of social benefits, paid as a lump sum regardless of a household's actual electricity consumption. The lump sum is adjusted on a yearly basis, also considering price increases for electricity (cf. Para. 28a, section 3 of the Social Security Code XII (SGB XII)).

⁵⁸ The programme is managed by the German Caritas Association (*Deutscher Caritas-Verband*) and the Association of Energy and Climate Protection Agencies (*Verbraucherzentrale Bundesverband*) and runs until March 2026.

⁵⁹ *Wohngeld Plus* is a state subsidy for housing costs (for rented accommodation and owner-occupied property) to support low-income households above the threshold of eligibility for social security benefits.

⁶⁰ The EEG-levy was introduced in 2000 as a tax of 3.72 cents per kilowatt hour and served to subsidise the expansion of solar, wind, biomass and hydropower plants.

⁶¹ Until 2022, the costs for CO2 pricing were borne entirely by the tenant. As of 2023, rental property owners are required to contribute to CO2 costs, depending on the energy-efficiency level of the building.

bonus of 30 % for heating system replacements by owner-occupied households with an annual gross income of up to € 40,000⁶²

The NECP-U outlines that in case of payment default of electricity or gas bills, households may, under further conditions, request a suspension of cut offs by energy suppliers. The option is only available until April 2025; a long-term solution is intended but not yet found.⁶³

The fact that Germany lacks an official definition of energy poverty and addresses it as an income poverty issue and not as one of energy efficiency was criticised during the interviews.

“So, the fundamental cause of energy poverty is the lack of energy efficiency. [...] The problem was never recognised. One has only ever looked at prices and income. But it's a triangular causation. And [...] this third aspect of high fossil fuel demand, which has actually been known in the British debate for decades, [was simply not recognised in Germany]. And British climate policy is also very strongly focussed on combating energy poverty because it is an efficiency problem. Essentially.”

“[...] Also, fundamentale Ursache von Energiearmut ist die mangelnde Energieeffizienz [...]. Das Problem wurde nie gesehen. Man hat immer nur auf Preise und auf Einkommen geguckt. Aber es ist ein Ursachendreieck. Und [...] dieser dritte Punkt hoher fossiler Energiebedarf, was in der britischen Diskussion eigentlich seit Jahrzehnten bekannt ist, [wurde in Deutschland nicht gesehen]. Und auch die britische Klimapolitik ist ganz stark auf Bekämpfung von Energiearmut ausgerichtet, weil es ein Effizienzproblem ist. Im Wesentlichen.“

Data on energy poverty in Germany are very limited. As pointed out by several interviewees a prerequisite for data collection is an adequate definition of energy poverty, which is still lacking in Germany. One interviewee mentions that data on income and energy cost burdens are available from the income and consumption sample (*Einkommens- und Verbrauchsstichprobe, EVS*)⁶⁴ of the German Federal Statistical Office (*Statistisches Bundesamt, Destatis*) but a blending of socio-economic data (e.g. income) with energy efficiency data (e.g. energy efficiency of buildings) is not, which makes accurate data collection on energy poverty very difficult.

⁶² Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz, BMWK*) (2024), [Update of the Integrated National Energy and Climate Plan](#) , p. 326.

⁶³ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz, BMWK*) (2024), [Update of the Integrated National Energy and Climate Plan](#) , p. 327.

⁶⁴ Germany, Federal Statistical Office (*Statistisches Bundesamt, Destatis*), [Einkommens und Verbrauchsstichprobe EVS](#).

Available data on energy poverty in Germany are mainly estimates and differ depending on the indicators used. The Institute for Applied Ecology (*Öko-Institut*) and Green Budget Germany (*Forum Ökologisch-Soziale Marktwirtschaft*, FÖS) estimate the share of households in the lower half of the income distribution affected by energy poverty to be between 5 % and 33 % or between one and 7.25 million households respectively.⁶⁵ When households that receive social benefits are taken out of the calculation, the estimates show about 5.5 million households affected by energy poverty. When calculations are based on the indicator proposed by Öko-Institut, FÖS and the German Environment Agency (*Umweltbundesamt*, UBA)⁶⁶ to assess energy poverty for the EU Climate Social Fund, estimates arrive at 3.1 million affected households. Estimates show that energy poverty in Germany extends to the middle of the income distribution.⁶⁷

As a positive example of how energy poverty can be addressed politically, one interviewee referred to the working group 'energy poverty' established by the Ministry of Economic Affairs, Industry, Climate Action and Energy (*Ministerium für Wirtschaft, Industrie, Klimaschutz und Energie des Landes NRW*, MWIKE) in the State of North Rhine-Westphalia.⁶⁸ The working group aims to create a network of relevant stakeholders in connection to energy poverty and assembles representatives from academia, municipal utility companies, the Consumer Association North Rhine-Westphalia (*Verbraucherzentrale NRW*), one unemployment initiative, and the ministry itself. The group's purpose is to jointly identify and implement innovative approaches to combat energy poverty and avoid energy cut offs because of payment defaults. On its website, the ministry informs the public about energy poverty and ways to reduce energy costs and consumption.⁶⁹

As in the case of energy poverty, there is no official definition of transport poverty in Germany. Transport poverty is still an under-explored social phenomenon; the public debate on it still in its early stages. There is no reference to transport poverty in the German NECP-U. A few research institutions, such as Agora Verkehrswende and the German Aerospace Center (*Deutsches Zentrum für Luft- und Raumfahrt*, DLR) have

⁶⁵ Institute for Applied Ecology (*Öko-Institut*), Green Budget Germany (*Forum Ökologisch-Soziale Marktwirtschaft*, FÖS) (2024), [CO₂-Preis in Deutschland - Umsetzung des ETS II und des Klima-Sozialfonds in Deutschland](#), p. 25.

⁶⁶ German Environment Agency (*Umweltbundesamt*, UBA) (2022), [Der Klima-Sozialfonds im Fit-for-55-Paket der Europäischen Kommission – Definition und Quantifizierung vulnerabler Haushalte und notwendige Investitionsbedarfe](#), Dessau-Roßlau.

⁶⁷ Institute for Applied Ecology (*Öko-Institut*), Green Budget Germany (*Forum Ökologisch-Soziale Marktwirtschaft*, FÖS) (2024), [CO₂-Preis in Deutschland - Umsetzung des ETS II und des Klima-Sozialfonds in Deutschland](#), p. 25.

⁶⁸ For the working group and participants, refer to [ministry's webpage](#).

⁶⁹ Ministry of Economic Affairs, Industry, Climate Action and Energy (*Ministerium für Wirtschaft, Industrie, Klimaschutz und Energie des Landes NRW*, MWIKE), [Gas und Strom](#).

published preliminary studies and discussion papers to draw more attention, such as on the effects of transport poverty on social participation.⁷⁰

Data on transport poverty is very limited. The Institute for Applied Ecology (*Öko-Institut*) and Green Budget Germany (*Forum Ökologisch-Soziale Marktwirtschaft, FÖS*) indicate that data collection on transport poverty is complex and multi-layered. In addition to financial burdens and needs of households, availability and access to transport services, for example in rural areas, are also significant.⁷¹ In the context of the national CO₂ pricing in the transport sector, UBA estimated in 2022 that about 0.7 million households in the lower five income deciles are vulnerable in this sector due to the CO₂ price.⁷²

To be eligible for funds from the EU's Social Climate Fund as of 2026, Germany will have to address energy and transport poverty more thoroughly in its national Social Climate Plan to be submitted to the European Commission by mid-2025.

2.4. Fundamental rights impact assessment

In Germany, no encompassing legal obligation exists to undertake impact assessments of legislation or policies, including those on energy transition and climate protection. Legislative processes and subsequent control mechanisms are designed to ensure that (draft) legislation is compatible with fundamental rights as laid out in the German Constitution (*Grundgesetz*) and, if applicable, with the EU Charter of Fundamental Rights. Internal rules of procedure (*Geschäftsordnungen*) often stipulate regulatory impact assessments, legally obliging the respective enacting authorities, usually without, however, detailing a set procedure.⁷³ There are more detailed guidelines for regulatory impact assessments by several federal ministries and federal state ministries

⁷⁰ Agora Verkehrswende (2023), [Mobilitätsarmut in Deutschland, Diskussionspapier](#), Berlin. German Aerospace Center (*Deutsches Zentrum für Luft- und Raumfahrt, DLR*), [Mobilitätsarmut und soziale Teilhabe in Deutschland, Studie für Agora Verkehrswende](#), Berlin.

⁷¹ Institute for Applied Ecology (*Öko-Institut*), Green Budget Germany (*Forum Ökologisch-Soziale Marktwirtschaft, FÖS*) (2024), [CO₂-Preis in Deutschland - Umsetzung des ETS II und des Klima-Sozialfonds in Deutschland](#), p. 26.

⁷² German Environment Agency (*Umweltbundesamt, UBA*) (2022), [Der Klima-Sozialfonds im Fit-for-55-Paket der Europäischen Kommission – Definition und Quantifizierung vulnerabler Haushalte und notwendige Investitionsbedarfe](#), Dessau-Roßlau.

⁷³ See for instance § 44 Joint rules of procedure of the federal government ([Gemeinsame Geschäftsordnung der Bundesministerien](#), GGO Bund); § 38 Joint rules of procedure of the state ministries in North Rhine-Westphalia ([Gemeinsame Geschäftsordnung für die Ministerien des Landes NRW](#), GGO NRW).

(*Landesministerien*)⁷⁴, but they are non-binding and only address the issuing institutions. Government institutions can voluntarily commission the German Research Institute for Public Administration (*Deutsches Forschungsinstitut für öffentliche Verwaltung*)⁷⁵ to assess legislative proposals.

Existing monitoring mechanisms for energy and climate protection policies do not focus on social or fundamental rights impacts, but merely on the reduction of GHG emissions in individual sectors, such as housing and transport. The Climate Protection Programme 2023 includes an annual monitoring of emissions developments and targets⁷⁶, which the federal government reports on in its annual Climate Protection Report.⁷⁷ However, in its draft updated National Development Strategy the federal government acknowledges social impacts of climate protection policies that can cause social hardship. It considers ex-ante assessments of such impacts to be one building block to accelerate climate protection policies and increase public acceptance.⁷⁸

As part of the Climate Protection Programme 2023 the federal government plans to set up a social monitoring system for climate protection (*Sozialmonitoring Klimaschutz*) to analyse the social distribution effects of new climate protection policies before they enter into force. The Federal Ministry for Economic Affairs and Climate Protection (*Bundesministerium für Wirtschaft und Klimaschutz, BMWK*) is leading the concept phase for the new monitoring system; as of December 2024, no timeframe has been publicly communicated.⁷⁹

⁷⁴ Germany, Federal Ministry of the Interior (*Bundesministerium des Innern und für die Heimat*) (2009), [Arbeitshilfe zur Gesetzesfolgenabschätzung](#), June 2009; North Rhine-Westphalia, Ministry of the Interior (*Landesministerium des Inneren*) (2021), [Leitfaden Rechtsetzung in Nordrhein-Westfalen](#), 23 March 2021.

⁷⁵ [German Research Institute for Public Administration](#) (*Deutsches Forschungsinstitut für öffentliche Verwaltung*).

⁷⁶ German Federal Government (*Deutsche Bundesregierung*) (2023), [Klimaschutzprogramm 2023](#),

⁷⁷ German Bundestag (*Deutscher Bundestag*) (2024), [Unterrichtung durch die Bundesregierung – Klimaschutzbericht 2023](#), Drucksache 20/11660, 2 June 2024.

⁷⁸ German Federal Government (*Deutsche Bundesregierung*) (2024), [Deutsche Nachhaltigkeitsstrategie Weiterentwicklung 2024 – Dialogfassung](#), May 2024, p. 49.

⁷⁹ German Federal Government (*Deutsche Bundesregierung*) (2023), [Klimaschutz Programm 2023](#), 4 October 2023, p. 25.

3. Addressing different aspects of energy efficiency and energy poverty: The national CO2 pricing for emissions in the heating and transport sectors

Germany has repeatedly failed to meet the emission reduction targets for the heating and transport sectors (see chapter 1.2). Given the urgency of reaching Germany's emission reduction targets and initially reaching net zero in 2045 (see chapter 1), it is imminent that efficient measures rapidly reduce emissions in these sectors. The national CO2 pricing for the heating and transport sectors, introduced in January 2021, was the centrepiece of the former federal government's Climate Protection Programme 2030 (*Klimaschutzprogramm 2030*) (see chapter 1). It is a key instrument for reducing emissions and promoting energy efficiency in these sectors. Therefore, the national CO2 pricing was chosen for in-depth analysis. It was subject of ten semi-structured interviews conducted with the coordinating and implementing authorities, civil society, academia and associations representing certain population groups.

A CO2 price increases the costs for fossil energy consumption as it is passed on to end users. This can lead to negative social impacts on certain population groups, such as low-income households or households that are incapable of adapting their energy consumption or enhancing energy efficiency.

The national CO2 pricing in the heating and transport sectors was introduced via the National Emissions Trading System (*Nationaler Emissionshandel*, nEHS)⁸⁰ regulated by the Fuel Emissions Trading Act (*Brennstoff-Emissionshandelsgesetz*, BEHG)⁸¹, adopted in 2019. The pricing makes fossil fuels for heating and transport more expensive. Companies that bring heating oil, natural gas, petrol and diesel onto the market must pay a CO2 price for these products. They are obliged to purchase emission rights for the

⁸⁰ The nEHS was set up by the German Federal Government to complement the European emissions trading system EU ETS1, which already applies to the energy industry, energy-intensive industry and air traffic within the EU. The heating and transport sectors are not covered by the EU ETS1. [National Emissions Trading System](#) (*Nationaler Emissionshandel*, nEHS).

⁸¹ Germany, [Fuel Emissions Trading Act](#) (*Brennstoffemissionshandelsgesetz*, BEHG), 12 December 2019.

CO2 emissions produced by the fuels via the nEHS. The energy suppliers then pass the CO2 costs on to end users.⁸²

The CO2 pricing is designed to encourage a switch to renewable energy sources for heating and transport, the use of electric vehicles, the installation of climate-friendly heating systems and the energy-efficient renovation of buildings. Ultimately, these incentives should lead to greater energy efficiency and climate protection.⁸³

To avoid sudden financial burdens on end users the federal government launched the nEHS with a politically determined fixed price system per tonne of CO2 emitted. The federal and states governments agreed to set the CO2 price at € 25 per tonne for 2021 and at € 30 for 2022. Due to the sudden and sharp increase in energy prices in 2022 and 2023, the federal government suspended the increase of the CO2 price in 2023. Initially, the price was set to rise to € 40 in 2024, but due tight budgetary restraints, it was set at € 45. In 2025, the price will rise to € 55 and from 2026 a price corridor of at least € 55 and at most € 65 will apply.⁸⁴

In 2027, the EU's new emissions trading system EU ETS2⁸⁵ that will cover the CO2 emissions from the buildings/heating, road transport and additional sectors will enter into force. In Germany, the EU ETS2 will replace the nEHS and the CO2 price for the heating and transport sectors will be determined by the market for emission certificates, in which certificates are auctioned to energy suppliers.⁸⁶ According to the German Environment Agency (*Umweltbundesamt*, UBA) CO2 prices per tonne of CO2 emitted are expected to rise significantly.⁸⁷ Projections for the price level by 2030 range from € 48 to € 300 (see projections by the European Commission and research institutions, such as Cambridge Econometrics, Mercator Research Institute on Global Commons and Climate Change (MCC), Kiel Institute for the World Economy (*Kiel Institut für*

⁸² Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK), [Der CO2 Preis – Wichtiger Beitrag zum Klimaschutz](#), 2024.

⁸³ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK), [Der CO2 Preis – Wichtiger Beitrag zum Klimaschutz](#), 2024.

⁸⁴ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK), [Der CO2 Preis – Wichtiger Beitrag zum Klimaschutz](#), 2024.

⁸⁵ European Commission, [ETS2 : buildings, road transport and additional sectors](#).

⁸⁶ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK), [Der CO2 Preis – Wichtiger Beitrag zum Klimaschutz](#), 2024. Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK) (2024), [Update of the Integrated National Energy and Climate Plan](#), p. 317.

⁸⁷ German Environment Agency (*Umweltbundesamt*, UBA), [CO₂-Bepreisung sozialverträglich gestalten](#), 31 July 2023.

Weltwirtschaft, IfW Kiel), Potsdam Institute for Climate Impact Research (*Potsdam-Institut für Klimafolgenforschung, PIK*).⁸⁸

The revenues generated⁸⁹ from the national CO2 pricing are allocated to the German Climate and Transformation Fund (*Klima- und Transformationsfonds, KTF*) which is used by the federal government to finance economic development, energy efficiency and climate protection measures. The federal government originally planned to use the fund to compensate households for higher energy costs induced by the CO2 pricing through a directly transferred climate bonus (*Klimaprämie*), generally referred to as Climate Money (*Klimageld*). Due to budgetary restraints and a not yet available allocation system to ensure a just distribution of the money⁹⁰, the federal government has, however, postponed its introduction indefinitely. The form of distribution of the climate money (distributed as per capita or socially staggered) has not been determined either.⁹¹

3.1. Leaving no one behind – target groups, eligibility, accessibility, equality

3.1.1. Groups affected by / vulnerable to the national CO2 pricing

The national CO2 pricing affects all end users of heating and transport fuels, intending to incentivise people to switch their energy consumption from fossil to renewable energy sources and to increase energy efficiency. However, the interviews underscore

⁸⁸ Institute for Applied Ecology (*Öko-Institut*), Green Budget Germany (*Forum Ökologisch-Soziale Marktwirtschaft, FÖS*) (2024), [CO2-Preis in Deutschland – Umsetzung des ETSII und des Klima-Sozialfonds in Deutschland](#), February 2024, pp. 14-15.

⁸⁹ Revenues generated by the national CO2 pricing: 2022: € 6.4 billion, 2023: € 10.7 billion. German Environment Agency (*Umweltbundesamt, UBA*), [‘New record revenue in emissions trading: More than 18 billion euros for climate protection’](#), press release, 4 January 2024.

⁹⁰ The federal government is currently working on an allocation mechanism, see Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz, BMWK*) (2024), [Update of the Integrated National Energy and Climate Plan](#), p. 107.

⁹¹ In June 2022, the federal government informed the German Bundestag that the Federal Ministry of Finance (*Bundesfinanzministerium, BMF*) was developing a schedule and payout mechanism for the Climate Money, see German Bundestag (*Deutscher Bundestag*) (2022), [Einführung eines Klimageldes](#), Drucksache 20/2180, 2 June 2022.

differing impacts of the CO2 price across population groups, depending on household income, housing situation, place of residence and the capability to switch to energy efficient technologies.

Almost all interviewees differentiate between absolute and relative cost impacts of the CO2 pricing on household income. In absolute terms, CO2 costs increase with rising household income, as higher income households on average produce more CO2 emissions through their consumption, for example because they drive more fuel-intensive cars and/or heat larger living spaces. In relative terms, households in the lower five income deciles pay a higher percentage of their income for energy and thus for CO2 costs. Financially, they are more affected by the CO2 price than households in the upper five income deciles. Data by the German Environment Agency from 2022 show that for households in the lower five income deciles CO2 cost burdens range between 0.3 % and 0.9 % of net household income, depending on factors such as housing situation, i.e. rental property, type of heating system, energy-efficient housing, age, family status, place of residence etc.⁹²

“And then, of course, we must look at the burdens, including the relative burdens to income. And then, of course, we see that CO2 pricing is a regressive tax, so it has a regressive effect, so to speak. This means that people who spend a lot on energy [costs] compared to their income have a much heavier burden. And of course this is particularly true for the bottom five deciles. And upper income groups will hardly have noticed this difference so far.”

„Und dann müssen wir natürlich auf die Belastungen schauen, und zwar auch die relativen Belastungen dann auch zum Einkommen. Und dann sehen wir natürlich, dass die CO2-Bepreisung eine regressive Steuer ist, sozusagen also eine regressive Wirkung hat. Das heißt, Menschen, die sehr viel für Energie aufwenden im Vergleich zu ihrem Einkommen, haben eine sehr viel stärkere Belastung. Und das trifft natürlich dann wirklich auf die unteren fünf Dezile besonders zu. Und obere Einkommensgruppen werden diesen Unterschied kaum wahrgenommen haben bisher.“

The interviews highlight structural factors that prevent people from reducing fossil fuel energy use and thus from avoiding CO2 costs. These factors include the energy efficiency state of people’s housing, their place of residence and their capability to switch to energy efficient technologies. Taking this into account, low- and middle-income households with structurally high CO2 emissions, for example because they heat with fossil fuels or live in rural areas and have long commutes, are particularly vulnerable to CO2 costs.

⁹² German Environment Agency (Umweltbundesamt, UBA) (2022): [Teilbericht - Wirkung des nationalen Brennstoffemissionshandels –Auswertungen und Analysen](#), Climate Change 45/2022, p.78.

“We have a very wide range within the income groups. And why is that? It's simply down to structural factors, which are more or less the amount of energy I need to generate a room temperature of 21 degrees, for example [...]. So, inefficient houses, inefficient and fossil fuelled energy generators for heat generation are [...] the cause of high costs, [the] central cause. And that's why you can also see [the range of burdens] within the income deciles [...]: the more inefficient my house, the further I must drive, without alternatives to the fossil fuelled combustion engine car, the more I spend without being able to change anything. Because the lower my income, the less I can invest in energy efficiency or e-mobility.”

„Wir haben innerhalb der Einkommensgruppen sehr hohe Spannbreiten. Und woran liegt [das]? Das liegt schlicht und ergreifend an strukturellen Faktoren, [...] quasi der Menge an Energie, die ich brauche, um zum Beispiel 21 Grad Raumtemperatur zu erzeugen. [...] Also, ineffiziente Häuser, ineffiziente und fossile Energieerzeuger zur Wärmeerzeugung sind [...] eigentlich die Ursache für hohe Kostenbelastung, [die] zentrale Ursache. Und deswegen sieht man auch die [Spannbreite der Belastungen] innerhalb der Einkommensdezile [...]: Je ineffizienter mein Haus, je weitere Wege ich fahren muss, ohne Alternativen zum fossilen Verbrenner [...], desto mehr gebe ich aus, ohne gegebenenfalls was ändern zu können. Denn je geringer das Einkommen, desto weniger kann ich auch investieren in Energieeffizienz oder E-Mobilität.“

In Germany, the rate of energy-efficient refurbishments of buildings has been below 1 % for years (0.7 % in 2023) (see chapter 2.1.).⁹³ About half of all residential households still heat with gas and one third with oil.⁹⁴ The interviews underscore that people are incapable to reduce their CO₂ emissions for different reasons, depending on their housing situation. Generally, low-income households live in buildings with lower energy efficiency and must consume more energy for heating. Interviewees stress that the level of energy-consumption only depends to a small extent on people's behaviour and to a much larger extent on the energy efficiency state of buildings.⁹⁵

“And on top of that, of course, people with low income are much more likely to live in poorly insulated buildings, which means that energy consumption tends to be higher. So, if I still have single-glazed windows (..) I naturally must heat more.”

⁹³ Green Budget Germany (Forum Ökologisch-Soziale Marktwirtschaft, FÖS) (2024), [Zielkonforme energetische Gebäudesanierung für Klimaschutz, wirtschaftlichen Erfolg und soziale Gerechtigkeit](#), Berlin, 2024, p. 2.

⁹⁴ Bundesverband der Energie- und Wasserwirtschaft e.V. (German Association of Energy and Water Industries, BDEW) (2023), [Wie heizt Deutschland 2023?](#), Berlin, December 2023, p. 11.

⁹⁵ Institut Wohnen und Umwelt (IWU)/ Institut für sozial-ökologische Forschung und Bildung (ECOLOG) (2023), [Einflüsse und Wechselwirkungen nutzerabhängiger und -unabhängiger Aspekte auf Energiebedarf und -verbrauch von Wohngebäuden](#), September 2023.

„Und dazu kommt natürlich schon, dass Einkommensärmere schon deutlich häufiger in schlecht isolierten Gebäuden leben und dadurch auch dann in der Tendenz der Energieverbrauch natürlich auch höher ist. Also habe ich noch einfach-verglaste Fenster (..) muss ich natürlich mehr heizen.“

In owner-occupied property, people with low or middle income tend to face financial obstacles regarding energy efficient refurbishments. On paper, these households have their housing property as an asset but lack financial means to insulate it and replace the heating system. In addition, especially older and retired people are often ineligible for a bank loan to finance the energy-efficient refurbishment of their homes.

“The most memorable example is somehow an older woman, living alone in the countryside in an old, detached house. She bought it at some point, her husband died, she no longer has a high pension, owns a property but often has a very low income. If the house is in a poor energy condition, one must heat it a lot and then the CO2 price hits harder [...].”

„Das einprägsamste Beispiel ist halt irgendwie eine ältere Frau, alleinstehend auf dem Land in einem alten Einfamilienhaus. Irgendwann mal gekauft, Mann gestorben, keine hohe Rente mehr, hat einen Immobilienbesitz, aber häufig ein ganz geringes Einkommen. Aus einem energetisch schlechten Zustand muss man ganz viel heizen und dann schlägt der CO2 Preis stärker zu [...].“

In rental housing, tenants cannot reduce their CO2 emissions by themselves as they depend on the property owner to conduct energy efficient refurbishments. One interviewee highlights that in Germany over 50 % of tenants belong to the lower-income third. These tenants often live in poor energy efficient buildings with high energy demand and thus higher CO2 costs. Already today, every fourth tenant household is overburdened with housing costs.⁹⁶ Interviewees point out that rental property owners can and do pass on the costs for energy-efficient refurbishments to tenants by increasing the basic rent via the modernisation levy.⁹⁷

One interviewee points to the highly heterogeneous group of rental property owners in Germany. Often, they only own one flat they rent out. So far, the refurbishment rate and the use of refurbishment subsidies among these owners is low. They often lack the financial means to conduct refurbishments.

⁹⁶ German Tenants' Association (*Deutscher Mieterbund*, DMB) / Institut for Applied Ecology (*Öko-Institut*) (2023), [Wohn- und Energiekostenbelastung von Mietenden](#), Berlin. Institut für Energie- und Umweltforschung Heidelberg (ifeu) (2024), [Klimaschutz in Mietwohnungen: Modernisierungskosten fair verteilen](#), Berlin.

⁹⁷ Institut für Energie- und Umweltforschung Heidelberg (ifeu) (2024), [Klimaschutz in Mietwohnungen: Modernisierungskosten fair verteilen](#), April 2024.

The interviews underscore that the CO2 cost burden for individual transport depends on factors such as the place of residence and household income. Across income groups, households in the low- and middle-income bracket spend the largest share of their income on car fuel, and thus face higher CO2 costs. In rural areas the CO2 cost burden is even higher.⁹⁸ Low and middle-income households in rural areas often do not have access to a well-functioning public transport system and thus rely on individual transport to commute to work, for example. They also do not have the financial means to switch to e-mobility.

One interviewee points out that CO2 costs do not just affect private households, but also social organisations, such as outpatient care services. The CO2 costs, for example for their fleet, increase their operational costs, as does changing their fleet to e-mobility or refurbishing their offices to avoid CO2 costs.⁹⁹

3.1.2. Available support and social compensation measures, challenges and access barriers

The interviews highlight mitigation measures taken by the federal government in direct connection with the national CO2 pricing. Interviewees also mention policies and measures not directly connected to the pricing, but which have mitigating and compensatory effects for certain groups.

As a direct measure to reduce cost burdens of the national CO2 pricing, the federal government abolished the **EEG-levy**¹⁰⁰ on electricity consumption for all households in July 2022. The levy consisted of a tax of 3.72 cents per kilowatt hour and supported the development of renewable energy sources. It is currently financed with revenues generated by the CO2 price through the Climate and Transformation Fund (*Klima- und Transformationsfonds*, KTF). In relative terms, low-income households profit from the abolishment of the levy as they spend a higher proportion of their income on electricity (progressive income effect).¹⁰¹ However, as one interviewee points out, the EEG-levy

⁹⁸ Institut for Applied Ecology (Öko-Institut) (2021), [Sozialverträgliche Kompensation der CO2-Bepreisung im Verkehr](#).

⁹⁹ The German Environment Agency has analysed the challenges of social organisations regarding energy efficient refurbishment and switching to renewable energy sources: German Environment Agency (Umweltbundesamt, UBA) (2024), [Klimaschutz in Nichtwohngebäuden: Herausforderungen für soziale Einrichtungen, Texte | 96/2024](#), June 2024.

¹⁰⁰ The Federal Government (Deutsche Bundesregierung) has a [dedicated webpage](#) on the abolishment of the EEG-levy.

¹⁰¹ Green Budget Germany (Forum Ökologisch-Soziale Marktwirtschaft, FÖS) (2021), [Soziale und ökologische Auswirkungen einer Senkung der EEG-Umlage](#), pp. 25.26.

was abolished when energy prices increased sharply due to Russia's invasion of Ukraine. Thus, households most likely do not notice any cost saving effect.

The **CO2 Cost Sharing Act** (*CO2-Kostenaufteilungsgesetz*)¹⁰², in force since January 2023, is a direct measure to relieve tenants of CO2 costs by incentivising them to save energy and rental property owners to conduct energy-efficient refurbishments. The Act introduces a ten-stage model to determine the amount of CO2 costs to be borne by rental property owners depending on the energy efficiency level of the building. Generally, the interviewees welcome the measure, but some doubt that tenants are aware of the regulation (yet). Interviewees highlight certain challenges and barriers that could limit the regulation's effectiveness:

- Existing power asymmetries between tenants and rental property owners due to a tight rental housing market may deter tenants from challenging the correct calculation of the CO2 cost shares on their annual utility bill. Tenants with self-contained gas heating systems (*Gasetagenheizung*), must even request back the rental property owners' CO2 cost share, for example by invoice.
- Lack of knowledge of CO2 cost share calculation and other barriers, such as language skills, can make it difficult for certain groups of tenants to comprehend and check the calculated CO2 cost share on their utility bill.

„[...] [W]e have quite an asymmetry in the housing market. And tenants [...] firstly [...] must understand [the law] and secondly, they must have the courage to [...] say “Your bill is wrong because you actually have to pay the CO2 price.” Or in the case of gas-fired floor heating systems, for example, they [tenants] must write an invoice to their landlord or landlady. And I only believe it [this happening] when I see it [...].”

*„[...] [W]ir haben ja eine ziemliche Asymmetrie auch auf dem Wohnungsmarkt. Und da müssen Mieter [...] erstens [...] [das Gesetz] verstehen und zweitens müssen sie den Mut aufbringen, [...] zu sagen, „Ihre Abrechnung ist falsch, weil Sie [der*die Vermieter*in] [...] eigentlich den CO2-Preis zahlen [müssen].“ Oder bei Gas-Etagen-Heizungen zum Beispiel müssen Sie ihrem Vermieter oder der Vermieterin ja eine Rechnung schreiben. Und das will ich erst mal sehen, [...].”*

The interviews underscore that available social security and housing benefits have a mitigating and compensatory effect on low-income households. Under the minimum guaranteed income schemes, households with no or low income can apply for **social security benefits** (*Bürgergeld*), which cover heating costs, including CO2 costs, up to an adequate amount of consumption (see chapter 2.3.).

¹⁰² Germany, The CO2 Cost Sharing Act ([Kohlendioxidkostenaufteilungsgesetz](#)), 5 December 2022.

Low-income households not eligible for `Bürgergeld` can apply for housing benefits. With the reform of the **Housing Allowance Plus Act** (*Wohngeld Plus*) in January 2023, the German Environment Agency (*Umweltbundesamt*, UBA) estimates that the number of eligible households went up from 600,000 to two million.¹⁰³ The reformed housing benefit includes a permanent flat-rate heating allowance and a lump-sum climate component to minimise additional burdens in the context of energy efficient refurbishments. An amount to relieve burdens on heating costs due to the CO2 price was added to the housing benefit already in 2021 when the national CO2 pricing came into effect.¹⁰⁴

*“As far as compensation measures are concerned, in Germany we have, of course, taken measures [...] within the framework of social legislation [...] [W]e have recipients of welfare benefits [Bürgergeld-Empfänger*innen], including recipients under the Asylum Seekers' Benefits Act. [...] they are protected in the housing sector, so to speak, to the extent that the state covers these costs by assuming the costs of accommodation, which also includes heating costs. In addition, with the introduction of the national CO2 pricing, we have also integrated a CO2 component into housing benefits. [...] So, [...] we're not so bad when it comes to compensating for social transfers.”*

„[...] Kompensationsmaßnahmen haben wir in Deutschland natürlich [...] im Rahmen der Sozialgesetzgebung [...] [W]ir haben also Bürgergeld-Empfänger, auch Empfänger nach Asylbewerberleistungsgesetz. Die [...] sind sozusagen im Wohnbereich insofern geschützt, dass der Staat diese Kosten übernimmt, mit der Übernahme der Kosten der Unterkunft, wo [...] auch die Heizkosten enthalten sind. Zusätzlich haben wir auch mit Einführung der nationalen CO2-Bepreisung [...] eine CO2 Komponente im Wohngeld integriert. [...] [B]ei den kompensatorischen Sachen für Sozialtransfers sind wir gar nicht so schlecht.“

Interviewees confirm that by no means all households entitled to benefits claim them.¹⁰⁵ They attribute this to various challenges and barriers:

- fear of stigmatisation, especially among low-income groups;
- shame and psychological barriers, particularly for older people;
- bureaucracy and lacking capabilities of eligible recipients to master complex application processes;

¹⁰³ German Environment Agency (*Umweltbundesamt*, UBA) (2024), [Soziale Aspekte von Umweltpolitik im Bedürfnisfeld Wohnen](#), Texte 22/2024, March 2024, p. 93.

¹⁰⁴ German Environment Agency (*Umweltbundesamt*, UBA) (2024), [Soziale Aspekte von Umweltpolitik im Bedürfnisfeld Wohnen](#), Texte 22/2024, March 2024, pp. 93-94.

¹⁰⁵ The issue is also raised in German Environment Agency (*Umweltbundesamt*, UBA) (2024), [Soziale Aspekte von Umweltpolitik im Bedürfnisfeld Wohnen](#), Texte 22/2024, March 2024, p. 94.

- understaffed municipalities leading to lengthy approval/rejection periods that may deter eligible households to apply or re-apply for benefits (in case the first application was rejected);
- lack of awareness about one's eligibility for benefits, due to inadequate information or (online) tools to check eligibility.

“We experience it even worse when it comes to the housing benefit, because in practice the housing benefit application is one of the most complicated and difficult applications that I personally know. As someone who has been working intensively on the subject for 15 years, I always find it difficult to go through the application process properly. I can imagine that people who have a different background will have even more difficulties.”

„Noch viel schlimmer erleben wir es eine Stufe darüber beim Wohngeld, weil der Wohngeldantrag in der Praxis einer der kompliziertesten und schwierigsten Anträge ist, den ich persönlich kenne. Wo ich als jemand, der sich seit 15 Jahren mit dem Thema schon intensiv beschäftigt hat, immer wieder Schwierigkeiten habe, den Antrag wirklich sauber durchzuspielen. Da kann ich mir vorstellen, dass Menschen, die einen anderen Hintergrund haben, dann noch viel mehr Schwierigkeiten haben.“

“[...], there are psychological barriers, especially when it comes to citizens' income [Bürgergeld], particularly for older people. People are ashamed to apply for social security benefits, which they must apply for, and therefore tend to live below the minimum subsistence level from their own resources. We experience that in conversations, at least on the fringes ... in the advice sessions [...].”

„[...] Dann gibt es [...], gerade beim Thema Bürgergeld, auch wiederum insbesondere für ältere Menschen, die psychologischen Hemmnisse. Also die Leute schämen sich dafür, eben Sozialleistungen zu beantragen, die sie beantragen müssen und leben deswegen eher unterhalb des Existenzminimums aus eigenen Mitteln. Das erleben wir in Gesprächen zumindest am Rande [...].“

In course of the reform of the Buildings Energy Act (*Gebäudeenergiegesetz*, GEG)¹⁰⁶ in 2023, the federal government added a funding component for the replacement of heating systems and the construction, conversion and extension of a building's energy network to the federal funding programme for energy-efficient buildings (*Bundesförderung für effiziente Gebäude*, BEG). The funding component BEG-individual measures (BEG-Einzelmaßnahmen) provides a subsidy to owner-occupiers of detached and semi-detached houses to switch to renewable and energy efficient heating systems covering up to 50 % of total costs. Low-income owner-occupiers with an annual gross

¹⁰⁶ Germany, [Buildings Energy Act](#) (*Gebäudeenergiegesetz*, GEG), 8 August 2020.

household income of up to €40,000 receive an additional subsidy of 30 % (income bonus), whereby a subsidy cap of 70 % applies.¹⁰⁷

“The fact that there is a grant is also something that can be read as an additional option for people with low income, because they simply don't usually benefit as much from a loan subsidy or from subsidised [...] loans.”

„Die Tatsache, dass es [Zuschüsse] gibt, ist bereits auch etwas, was man auch lesen kann als eine zusätzliche Möglichkeit für Personen mit geringerem Einkommen, weil die schlicht und einfach bei einer Kreditförderung nicht so stark profitieren in der Regel oder auch bei zinsvergünstigten [...] Krediten.“

Interviewees welcome the income component of the measure as an important step to enable low-income households to increase energy efficiency; one interviewee even refers to this as a paradigmatic change in Germany's funding landscape. Interviewees criticise the fact that the measure only covers owner-occupiers and private rental property owners (with potentially low income) and that it merely supports the replacement of heating systems and no other energy efficiency measures, such as building insulation.

Although energy efficient refurbishments pay off economically and ecologically in the long run, interviewees highlight that, despite funding programmes like BEG, households with low income can still not finance energy efficient refurbishments. Often these households cannot afford or are ineligible for bank loans, especially older and retired people. Data on the distribution effect of the BEG indicate that in most cases well qualified higher-income households apply for and receive funding.¹⁰⁸

To alleviate CO2 cost burdens for private transportation and to incentivise people to switch to public transportation interviewees point to the **'Deutschlandticket'** (Germany Ticket) as an indirect measure. The ticket was introduced in May 2023 as a monthly subscription and costs € 49 per month¹⁰⁹, € 58 per month as of 2025.¹¹⁰ In certain regions, recipients of social security or housing benefits, can get the ticket at a reduced priced. In some parts of North Rhine-Westphalia, for instance, the `Deutschlandticket Sozial' costs € 39 per month, € 48 per month as of 2025.¹¹¹ Deutschlandticket-holders can travel with local and regional public transport throughout Germany. Although welcoming the measure, interviewees highlight that for recipients of social security

¹⁰⁷ Germany, Federal Office for Economic Affairs and Export Control (*Bundesamt für Wirtschaft und Ausfuhrkontrolle*), [Bundesförderung für effiziente Gebäude, BEG](#).

¹⁰⁸ prognos (2024), [Funding effects BEG 2022](#), January 2024, p. 5.

¹⁰⁹ The Deutschlandticket is financed by the federal state budget and the budget of the federal states.

¹¹⁰ German Federal Government (*Deutsche Bundesregierung*) (2024), [Ein Ticket für Deutschland - Fragen und Antworten](#), 18 November 2024.

¹¹¹ Rheinbahn, [Deutschlandticket Sozial](#).

benefits and low-income households the ticket price may still be too high. The share allocated for individual transportation costs in social security benefits (*Bürgergeld*) is just above € 50.¹¹² People living in rural areas may also not benefit from the ticket, as these areas often lack a well-functioning public transport system.

“For those on lower incomes, the price is still too high, even at € 49, and even more so for families. So, look at those on SGB II benefits [social welfare benefits]. They have just € 50 for the entire mobility sector. But that doesn't just consist of public transport, but if one doesn't (have) a car, (...) if one wants to substitute for a car, then one needs at least one more bike. Maybe there will be a long-distance journey to your grandmother's 70th birthday”.

„Für Einkommensärmere ist der Preis, also selbst die € 49, (...) noch zu hoch und erst recht für Familien. Also guckt man sich an im SGB-II-Bezug: Die haben gerade mal € 50 für den gesamten Mobilitätsbereich. Aber der besteht ja nicht nur aus ÖPNV, sondern wenn man kein Auto [hat], (...) wenn man das Auto (...) substituieren möchte, dann braucht man mindestens noch ein Fahrrad. Vielleicht gibt es auch mal eine Fernverkehrsreise zum 70. Geburtstag der Großmutter.“

One interviewee mentioned the increase of the **commuter allowance** from € 0.3 to € 0.38 per kilometre from the 21st distance kilometre, as of January 2022, as a further measure to relieve cost burdens for private transportation. However, this mostly benefits higher-income households, which tend to have longer commute distances. To benefit from the allowance, people must claim it in their annual income tax declaration. Low-income households often do not pay any or very little income tax and may not benefit from the allowance.

Overall, interviewees approve of the available social compensation and support measures but consider them insufficient, especially in view of rising CO₂ prices for heating and transport fuels in the coming years. There are barriers to access support and compensatory measures for people from low-income groups. To the extent that these measures are accessible, in some cases, they are criticised as insufficient in terms of scope and extent. Interviewees emphasise the lack of adequate support and compensation measures for people with an income above the social security benefits threshold and below the average income in Germany. An urgent need for more support measures for low- and middle-income households to transition from fossil fuels to renewable energy sources and improve energy efficiency was expressed by all interviewees.

¹¹² For an overview of standard rates for basic needs included in social security benefits for 2024 refer to the website of [Landeszentrale für politische Bildung Baden-Württemberg](#).

3.1.3. Proposed support and compensation measures for impacted groups

The fact that the federal government has not yet introduced a direct financial compensation for households, the so-called Climate Money (*Klimageld*) (see chapter 3) was often raised in interviews. Some interviewees acknowledge existing state budgetary restraints and the lack of an allocation system for the compensation (see chapter 3). They nevertheless see the measure as paramount to relieve CO₂ cost burdens, especially for low- and middle-income households, and to increase social acceptance of the national CO₂ pricing as a climate protection instrument. The interviewee's opinions vary on the allocation method for the money: some favour a per capita distribution as it is the easiest and most unbureaucratic, others support a socially staggered allocation as it is considered socially more just.¹¹³

While not rejecting direct financial compensation measures per se, interviewees, however, stress that those measures do not decarbonise households in the long run. As noted by one interviewee if groups impacted by the CO₂ pricing are financially compensated, they continue to afford buying oil and gas and thus do not mitigate their CO₂ emissions. As a result, market-based CO₂ prices, as foreseen under the EU ETS₂, will continue to rise and households will need even higher financial compensation to alleviate household cost burdens, leading to further CO₂ price increases (price spiral).

„[...] the climate money alone will not enable people, especially the lower income groups, to free themselves from these fossil fuel costs in the long term. This means that targeted climate protection measures are also needed for these target groups. That means renovating buildings in neighbourhoods, that means adequate alternatives to individual and fossil-fuelled private transport. (...) Easy access to electromobility for people who don't have € 50,000 to spare. [...] So, these are all measures needed to make climate protection a success. [...] Climate protection works very well for people with money, that must be said. We've already made a lot of progress there. [...] And the lower income groups can only avoid this pressure with help.“

¹¹³ A number of studies assess different concepts for the distribution of Climate Money, see Greenpeace, Green Budget Germany (*Forum Ökologisch-Soziale Marktwirtschaft*, FÖS) (2024), [Klimageld schafft Ausgleich - Effekte von CO₂-Preisen und Entlastungswirkung eines umfassenden Klimagelds](#), Berlin/Hamburg. Bach, S., Buslei, H., Felder, L., Haan, P., (2023), [Verkehrs- und Wärmewende: CO₂-Bepreisung stärken, Klimageld einführen, Anpassungskosten verringern](#), German Institute for Economic Research (*Deutsches Institut für Wirtschaftsforschung*, DIW), *DIW Wochenbericht* 23/2023, Berlin, pp. 273-280. Institute for Applied Ecology (Öko-Institut) (2023), [Verfassungsrechtliche Grundfragen und sozio-ökonomische Auswirkungen eines „Klimageldes“](#), Berlin. Institute for Applied Ecology (Öko-Institut), Green Budget Germany (*Forum Ökologisch-Soziale Marktwirtschaft*, FÖS) (2024), [CO₂-Preis in Deutschland - Umsetzung des ETS II und des Klima-Sozialfonds in Deutschland](#).

„[...] das Klimageld allein wird aber die Leute nicht befähigen, vor allem die unteren Einkommensgruppen, sich von diesen fossilen Kosten langfristig befreien zu können. Das heißt, es braucht auch noch gezielte Klimaschutzmaßnahmen für diese Zielgruppen. Das heißt Gebäudesanierung in Quartieren, das heißt adäquate Alternativen zu einem individual und fossil betriebenen Individualverkehr. (..) Einfacher Zugang zur Elektromobilität für Menschen, die jetzt keine € 50.000 auf der hohen Kante haben. [...] Also das sind alles Maßnahmen, die [...] es braucht, damit einerseits Klimaschutz gelingt. [...] Klimaschutz funktioniert sehr gut für die Leute, die Geld haben. Das muss man so sagen. Da ist es auch schon sehr weit fortgeschritten. [...] Und die unteren Einkommensgruppen können eben nur mit Hilfe diesem Druck ausweichen.“

The interviews support the need for more targeted measures tailored to specific groups. These measures should include socially staggered funding programmes to support vulnerable and low-income households to reduce fossil fuel consumption and improve energy efficiency as well as regulatory measures to alleviate low-income households of CO2 costs. Interviewees made several suggestions, for example:

Rental and owner-occupied property owners:

- socially staggered funding programmes for energy efficient refurbishment, extending beyond heating system replacement, for owner-occupier households in the residential sector
- funding programmes for energy efficient refurbishment for low-income property owners in the private rental sector

Tenants:

- energy efficient refurbishment programmes specifically tailored for social housing (re-)introducing funding programmes for energy efficient refurbishments based on a street-by-street approach, i.e. by targeting neighbourhoods with energy inefficient housing and socially precarious conditions¹¹⁴
- reform of the German Civil Code to allow ordinary increases in rent only if they are linked to quality improvements or energy efficiency measures by property owners

¹¹⁴ A similar programme called [`Energetische Sanierung, Klimaschutz und Klimaanpassung im Quartier`](#) by the Federal Ministry for Housing, Urban Development and Building expired at the end of 2023.

- linking the modernisation levy for rental property owners to energy-efficient refurbishments, i.e. allowing them to pass on the levy to tenants via rent increases only if such refurbishments are undertaken

Individual transport:

- social leasing models for e-vehicles for low-income households, similar to the model implemented in France¹¹⁵
- extension of the public transport network, particularly in rural areas, which also operates during off-peak hours

3.2. Impact

In general, all interviewees agree that, so far, the low level of the CO2 price has had little impact on reaching emission targets in the heating and transport sectors. An assessment by the German Environment Agency (*Umweltbundesamt*, UBA), which only covers the transport sector¹¹⁶, indicates that the current CO2 price would have to be at least doubled to have a steering effect.¹¹⁷ One interviewee links the CO2 price to more transition initiatives by businesses, such as initial plans to invest in green technologies.

For one interviewee from Group COORD the emission reduction effects of the national CO2 pricing are not quantifiable; any effect of the currently still low CO2 price level is superimposed by a bundle of other motivations of why people change their consumption behaviour, i.e. maybe they must replace their heating systems or vehicles anyway. Unless there is a method that separates other motivations leading to a change in behaviour or investment decisions, an accurate quantification of the effects of the CO2 pricing is not feasible.

Although, all interviewees assess the social impacts of the CO2 pricing so far as minimal in general, due to the still low national CO2 price levels, most of them emphasise the varying extent to which it affects different groups. Compared to the significant cost burdens, especially for low- and middle-income households, triggered by the sharp

¹¹⁵ In France, households with an annual income of € 15,400 and a commute distance of at least 15 kilometres or of a total of 8,000 kilometres annually can receive subsidies that decrease the leasing rate for low-income households to up to € 54 per month.

¹¹⁶ German Environment Agency (*Umweltbundesamt*, UBA) (2021), [CO2-Preis im Verkehrssektor](#), November 2021, p. 6 f.

¹¹⁷ The German Environment Agency (*Umweltbundesamt*, UBA) reiterates this finding for both, the heating and transport sectors, in connection with expected CO2 price increases under the EU ETS2. German Environment Agency (*Umweltbundesamt*, UBA) (2023), [CO2-Preis im Gebäude- und Verkehrsbereich effektiv und sozialverträglich gestalten](#), July 2023, p. 3.

increase of energy prices following Russia's invasion of Ukraine, the cost impact of the CO2 price is considered still relatively small.

The interviewees underscore that with an increase of the CO2 price in the coming years social impacts will be much more significant. The impacts may already become more visible in 2026, when a price corridor of € 55 to € 65 will apply. Impacts will most certainly be significant once the national CO2 pricing transitions to the EU ETS2 in 2027, for which much higher CO2 prices are projected (see chapter 3). All interviewees agree that so far this has not been adequately addressed or even been ignored in political discussions. To avoid profound social impacts, some interviewees indicate that prices may also need to be fixed under the EU ETS2. Some interviewees, on the other hand, apprehend that politically fixed prices at a low level will significantly limit the effectiveness of the EU ETS2 to reach national and EU emission reduction targets in the heating and transport sectors. All interviewees agree that more socially staggered funding and compensation measures are necessary to address social impacts.

"[...] But my apprehension is that if the CO2 price after 2027 (...) is left to free-market forces, i.e. it is no longer fixed how high the CO2 price is, that we will then suddenly get into dimensions of, I don't know, € 150, € 200 per tonne of CO2 [emitted] and that there will suddenly be a real price shock (...) and then politicians will get cold feet. So, it's precisely those who are now saying 'yes, one has to leave everything to the free market', when it really comes, the free market, that he [the politician] then says: 'but that's not how we imagined it, it's all become far too expensive. Now we have to somehow (...) ensure that prices fall again.' So, I think many politicians don't even realise what they've decided, what impact it will have as of 2027."

„[...] . Aber meine Befürchtung ist, wenn jetzt der CO2 Preis nach 2027 [...] den Kräften des freien Marktes überlassen wird, also eben nicht mehr festgelegt ist, wie hoch der CO2 Preis ist, dass wir dann auf einmal in Dimensionen kommen, von was weiß ich, € 150, € 200, die Tonne CO2 und dass dann auf einmal ein regelrechter Preisschock [...] kommt und dann Politik kalte Füße kriegt. Also gerade die, die jetzt sagen, ja, muss man alles dem freien Markt überlassen, wenn er dann wirklich kommt, der freie Markt, dass er [der Politiker] dann sagt, Mensch, aber so haben wir uns das jetzt aber nicht vorgestellt, das ist ja alles viel zu teuer geworden. Jetzt müssen wir woanders irgendwie [...] wieder dafür sorgen, dass die Preise sinken. Also ich glaube, viele in der Politik wissen noch gar nicht, was sie da beschlossen haben, was für Auswirkungen das haben wird ab 2027.“

Some interviewees point to some positive impacts of the CO2 pricing: the long disregarded social implications of climate policies now receive more attention in Germany; and the revenues generated by the CO2 pricing for the Climate and Transformation Fund (*Klima- und Transformationsfonds*, KTF) are used to fund energy efficient measures, such as energy efficient refurbishments of buildings.

The interviews underline the signalling effect of the CO2 pricing, setting a clear path for the future: households are incentivised to switch to energy efficient alternatives as the costs for fossil fuel energy will increase over time. Subsequently, green and energy efficient technology will become more marketable.

3.3. Information, communication and social acceptability

The Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK) provides information about the national CO2 pricing on its website,¹¹⁸ among others, on the CO2 price level, the revenues generated from the CO2 price for the Climate and Transformation Fund as well as on direct mitigation measures, such as the abolishment of the EEG-levy and the CO2 cost sharing regulation for tenants and rental property owners (see chapter 3.1.2.). , BMWK, among others, has also initiated a website where certain households can obtain targeted and partly subsidised energy advice.¹¹⁹ One interviewee emphasises that information on the CO2 pricing is also disseminated through political communication by the ministry.

The German Environment Agency (*Umweltbundesamt*, UBA), as implementing authority, provides similar information as BMWK as well as studies, evaluations and concepts for measures to increase the social acceptability of the CO2 pricing. The National Emissions Trading Authority (*Deutsche Emissionshandelsstelle*, DEHSt)¹²⁰ at UBA also gives detailed information on the National Emissions Trading System (nEHS) to energy suppliers.

The interviews underscore that the national CO2 pricing is well known among professionals in climate protection and energy efficiency, but not among the public. Some interviewees attribute this to the information available, which is generally sufficient and useful for professionals, but insufficient for reaching the public. Others

¹¹⁸ Information on the CO2 pricing is found on a [dedicated webpage](#) and the [official webpage](#) of the ministry. The ministry is also responsible for the official [energy transition campaign](#).

¹¹⁹ Property owners of residential and non-residential buildings can contact certified and registered energy advisors on a [dedicated webpage](#). Consumer associations (*Verbraucherzentrale*) offer [energy advice for consumers](#); the advice is free-of-charge for low-income households. The Federal Office for Economic Affairs and Export Control (*Bundesamt für Wirtschaft und Ausfuhrkontrolle*, BAFA) [partially funds energy advice for property owners](#) of residential and non-residential buildings.

¹²⁰ Refer to the [website of National Emissions Trading Authority \(Deutsche Emissionshandelsstelle, DEHSt\)](#).

point to the technical complexity of the CO₂ pricing making it challenging to clearly communicate the rationale behind this climate policy to the public.

When it comes to information and communication on existing mitigation and compensation measures, interviewees differentiate: while some find the information available overall insufficient, others consider information on the 'Deutschlandticket' and the income bonus for low-income households, provided as part of the federal funding programme for the replacement of heating systems (BEG-EM) (see chapter 3.1.2.) to be adequate. However, some interviewees point out that people may not associate these measures directly with the national CO₂ pricing.

“So overall one has to say that information is very sparse [...] I conclude that from the fact that one can see that the information in society about the CO₂ price is very, very weak and [...] the price development is hardly known and also compensation measures are little known. How it will develop in the future under the [EU] ETS2 is very little known. [...] That means that the materials that are circulating, including from the government etc. and from the associations and political parties, have a target group that is very, very small. That is the politically interested population, and it [the information] certainly also reaches the daily newspapers, but it is not widely known by the broad public.”

“Also, insgesamt muss man sagen, dass die Informationen sehr spärlich sind [...] Das schließe ich daraus, dass man sieht: Die Informationen in der Gesellschaft über den CO₂-Preis [sind] insgesamt sehr, sehr [...] schwach ausgeprägt und [...] die Preisentwicklung ist kaum bekannt und auch Ausgleichsmaßnahmen sind wenig bekannt, Wie es sich zukünftig entwickeln wird im [EU] ETS2 ist sehr wenig bekannt. [...] Das heißt, dass die Materialien, die kursieren, auch von der Regierung etc. und von den Verbänden und Parteien, die haben eine Zielgruppe, die ist sehr, sehr klein. Das ist die politisch interessierte Bevölkerung, und die erreichen sicherlich auch die Tageszeitungen, aber sie setzen sich jetzt nicht in der Breite durch.“

Several interviewees indicate that public awareness of the national CO₂ pricing and associated support measures is higher when it affects people's daily lives. This is likely to be the case with the CO₂ cost sharing between tenants and rental property owners (see chapter 3.1.2.). The level of awareness also depends on the extent to which people can influence costs through consumption choices: for example, fuel prices at petrol stations fluctuate throughout the day, but people can choose when and at which petrol station they refuel. Tenants, on the other hand, can often only influence a little their energy consumption for adequately heating their homes, as they cannot change its energy efficiency level; hence, awareness of and interest in the CO₂ price may be lower among this group.

One interviewee points out that many civil society organisations have attempted to fill the information gap. One hope has been that certain occupational groups, such as craftsmen, builders and technicians for heating systems, could act as multipliers of information on the CO2 price path, but so far, the federal government has not provided sufficient information tailored to these groups.

Interviewees from all interview groups consider the public acceptability of the CO2 pricing to be low.¹²¹ The lack of clear and comprehensible communication is given as one reason for this. Often, people only notice rising energy and transport costs. They also note higher prices for other products (due to higher ancillary costs, including the CO2 price) and perceive this as a burden, without understanding the rationale behind the CO2 pricing. One interviewee highlights that communication on the pricing primarily takes place in the media, and media coverage tends to focus on CO2 price increases at the start of the year. Another interviewee points to research suggesting that people tend to be more critical of pricing instruments for climate protection than funding or transformation programmes and even regulatory policies.¹²²

Interviewees from all interview groups place the low acceptability of the national CO2 pricing in a broader context. They highlight diminishing public support for climate protection and the energy transition as well as growing social and political polarisation. Although, the public generally supports climate protection in principle, concrete measures lack approval. One interviewee points out that some people do not believe in human-induced climate change or reject climate protection policies perceiving them as 'state paternalism'. Most interviewees judge the federal government has failed to communicate central aspects of the CO2 pricing. These include an overarching narrative, the price effects on heating and transport fuels, as well as the expected price path of the CO2 pricing. They stress the need to address these shortcomings.

"[...] that's also the point where I say that it's a shame that we don't have more room to sell things. This government also failed because we couldn't tell the stories about what we do [...]. [...] and then the BILD-newspaper [German tabloid newspaper] takes away our information sovereignty, with the 'heating hammer' or with 'rip-off'. Or when they simply say, like the AfD [German right-wing populist political party] does: 'there is no problem and yet you must pay'. That's the basic story of the critics. [...] We've been trying

¹²¹ This is supported by Behringer, J., Endres, L., Korsinnek, M. (2024), [CO2-Bepreisung: Akzeptanz und Kostenwahrnehmung nach der Preiserhöhung 2024](#), *IMK Policy Brief Nr. 175*.

¹²² The study compiles the results of citizen assemblies in 11 EU Member States, see Lage, J., Thema, J., Zell-Ziegler, C., Best, B., Cordroch, L., Wiese, F. (2023), ['Citizens call for sufficiency and regulation – A comparison of European citizen assemblies and National Energy and Climate Plans'](#), *Energy Research & Social Science 104 (2023) 103254*.

to counteract this type of storytelling, including through information work, for four years, and it's not working.”

„[...] das ist auch der Punkt, wo ich sage, dass es schade [ist], dass wir eben nicht mehr Raum haben, auch Dinge zu verkaufen. Diese Regierung ist ja auch daran gescheitert, dass wir die Geschichten [...] über das, was wir machen [...] nicht erzählen [...]. So, und dann wird uns der Rang der Informationshoheit von der BILD-Zeitung abgelaufen, mit dem Heizungshammer oder mit der Abzocke. Oder wenn dann einfach gesagt wird, [...] so AfD-seitig: Es gibt gar kein Problem und trotzdem müsst ihr zahlen. Das ist ja die Grundgeschichte der Kritiker. [...] und gegen diese Geschichte anzuarbeiten, auch mit der Informationsarbeit, probieren wir [dies] seit vier Jahren und es klappt nicht.“

“In my opinion, it needs to be made clearer what the whole thing [the CO2 pricing] does, [and] what the alternatives would be: The most expensive solution would be to do nothing when it comes to climate protection. And in our view, communication urgently needs to be expanded in this regard.”

“Es muss meines Erachtens deutlicher gemacht werden [...] was das Ganze [die CO2-Bepreisung] bewirkt, [und] wie auch die Alternativen wären: Dass die teuerste Lösung wäre, nichts zu machen beim Klimaschutz. Und da muss aus unserer Sicht dringend die Kommunikation ausgebaut werden.“

One interviewee suggests informing people on the CO2 pricing when making purchasing decisions, and exemplifies a recent regulation on vehicles: when new cars are offered or advertised for sale, long-term rent or lease, a label¹²³ must display to consumers the estimated fuel price increases due to the CO2 pricing for the specific car type within the next 10 years, based on expected CO2 price levels (low, medium, high CO2 prices¹²⁴). One interviewee stresses the need for public campaigns on the CO2 price and ways to avoid it, in particular low threshold advice for individuals as well as more educational work in schools.

¹²³ Car Energy Consumption Labelling Ordinance (*Pkw-Energieverbrauchskennzeichnungsverordnung*, Pkw-EnVKV), last amended in February 2024; also refer to [explanatory statement](#) issued by the German Federal Government (*Bundesregierung*).

¹²⁴ Expected fuel price increases are annually updated by the Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK). The estimated average price categories are currently set by BMWK as follows (refer to this [statement](#)): medium (€ 115), low (€ 55), high (€ 190).

3.4. Stakeholder engagement and participation

In 2019, a stakeholder consultation process¹²⁵ for the implementing Fuel Emissions Trading Act (*Brennstoffemissionshandelsgesetz*, BEHG) took place. Such consultations are required for every standard legislative act in Germany. Many interviewees are not aware or do not have detailed knowledge on this specific stakeholder consultation. One interviewee notes that the political decision to introduce the national CO₂ pricing was rather abrupt, leaving only 100 days for the entire legislative process. Hence, the timeframe for stakeholder submission was very short – one interviewee remembered it to have been only about three days.¹²⁶

Some interviewees point out that both the official consultations and preceding discussions on the national CO₂ pricing were not selective and attempted to include all relevant stakeholders. Some interviewees recall specific stakeholders involved including the German Tenants' Association (*Deutscher Mieterbund*, DMB), the Federation of German Consumer Associations (*Verbraucherzentrale Bundesverband*, VZBV), Caritas (a welfare organisation), environmental organisations, the petroleum industry, and gas suppliers.

Interviewees from all interview groups confirm that a dynamic and controversial process preceded the decision to introduce the national CO₂ pricing. Two intertwined aspects dominated the discussion: first, the need for fixed CO₂ prices at the start of the pricing to ensure predictability; second, the effects of the CO₂ pricing on households and the need for compensatory measures. One interviewee considers this process as a form of stakeholder participation and engagement. Several interviewees perceived a broad consensus among political parties and relevant stakeholders at the time for the introduction of the CO₂ pricing.

Some interviewees emphasise that the widely supported demand to directly compensate households (with the Climate Money) from the start of the national CO₂ pricing, was accepted by the federal government at the time. It has, however, still not been implemented (see chapters 3 and 3.1.). The government, however, adopted and implemented demands for an initially fixed and low CO₂ price.

¹²⁵ All stakeholder submissions can be found on a [dedicated webpage](#) at BMUV.

¹²⁶ Some submissions, among them a [submission](#) by the environmental organisation Germanwatch, note that the draft act was published for consultation on 19 October 2019 (Saturday), the deadline was 21 October 2019 (Monday). In their submission, most stakeholders criticised the short consultation timeframe.

Some interviewees emphasise that participation and engagement of relevant stakeholders continues through the institutionalised Working Group ‘Emission Trading’ (*Arbeitsgruppe Emissionshandel zur Bekämpfung des Treibhauseffekts*, AGE) and its associated sub working groups. AGE was set up in 2001¹²⁷ to address the demands and concerns of stakeholders, primarily energy suppliers, affected by CO2 emissions trading under the EU ETS1. In 2020, a sub-working group to AGE on the national emissions trading system (nEHS), i.e. the national CO2 pricing, was added. AGE is coordinated by the Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK)¹²⁸, which has commissioned the think tank adelphi with the provision of the AGE-secretariat, administrative support for AGE members and expert advice.¹²⁹

AGE and its sub-working groups meet several times per year¹³⁰ and facilitate a continuous stakeholder exchange on CO2 emissions trading, at EU and national level, on an informal level. The working groups engage a broad circle of stakeholders from energy companies like RWE to environmental organisations like World Wild Fund (WWF).¹³¹ Business associations pay a financial contribution to the secretariat, NGOs and trade unions are exempt; Chatham House Rule applies.

One interviewee stresses that both, BMWK and UBA, encourage discussions with and among stakeholders on the CO2 pricing’s implementation, its social impacts and future development, for example through regular conferences and other discussion formats.

Affected parties and other stakeholders can provide input or raise concerns with the implementing authority at UBA, the National Emissions Trading Authority (*Deutsche Emissionshandelsstelle*, DEHSt), or with BMWK directly. According to an interviewee from Group COORD, the number of communications on the national CO2 price that BMWK receives from citizens has increased in recent years.

Regarding the accessibility of affected groups, one interviewee made a general observation on participation: standard consultations processes often rely on the written and spoken word and have a preset procedure. Many people belonging to low-income households feel insecure with these forms of participation and are thus frequently

¹²⁷ The federal government set up AGE in the context of the National Climate Action Programme (18 October 2000), refer to the [document](#) by the Ministry listing initial participants. See also German Environment Agency (*Umweltbundesamt*, UBA (2008), [Wirksamkeit des Klimaschutzes in Deutschland bis 2020](#), March 2008, p. 85 f.

¹²⁸ Until 2021, AGE was led by the Federal Ministry of the Environment (*Bundesministerium für Umwelt, Naturschutz und nukleare Sicherheit*, BMU).

¹²⁹ adelphi, [Projektträgerschaft der deutschen Arbeitsgruppe Emissionshandel \(AGE\)](#).

¹³⁰ One interviewee informed that meetings take place every four to six weeks, another interviewee stated that meeting take place seven times per year.

¹³¹ A list with all participants dating from 3 May 2017 can be found in [BT-Drs. 18/12216](#), p. 29, 31.

excluded once again. There is a need for a critical reflection on how to involve these groups in a way that allows them to express themselves.

3.5. Governance and accountability, data and monitoring

Prior to the introduction of the national CO₂ pricing, an impact assessment of the implementing Fuel Emissions Trading Act (*Brennstoffemissionshandelsgesetz*, BEHG)¹³² was conducted in form of a mandatory explanatory memorandum¹³³ to the draft act (*Begründung des Gesetzesentwurfs*). The memorandum does not address potential impacts on groups or on social or fundamental rights. It does, however, state that sustainability aspects were considered during the drafting process.¹³⁴ One interviewee expressed general scepticism about the quality of such sustainability assessments.

The Climate Protection Programme 2030 (*Klimaschutzprogramm 2030*) contains a brief impact assessment,¹³⁵ referring to the regressive income effect of the CO₂ price on low-income households. It also mentions possible impacts on other groups, such as commuters and tenants. To avoid negative income effects and impacts, the programme foresees the revenues generated by the CO₂ price to be allocated to funding programmes included in the programme or to be given back to citizens as financial relief.

Several interviewees point out that the Federal Ministry of the Environment, Nature Conservation and Nuclear Safety (*Bundesministerium für Umwelt, Naturschutz und nukleare Sicherheit*, BMU), in the lead at the time, had commissioned several research institutions to conduct studies on the design of the CO₂ pricing, its distributive effects and possible compensation and mitigation measures. The German Institute for Economic Research (*Deutsches Institut für Wirtschaftsforschung*, DIW)¹³⁶ and Green Budget Germany (*Forum Ökologisch-Soziale Marktwirtschaft*, FÖS)¹³⁷, for example,

¹³² Germany, [Fuel Emissions Trading Act](#) (*Brennstoffemissionshandelsgesetz*, BEHG), 12 December 2019.

¹³³ German Bundestag (*Deutscher Bundestag*) (2019), [Entwurf eines Gesetzes über einen nationalen Zertifikatehandel für Brennstoffemissionen \(Brennstoffemissionshandelsgesetz – BEHG\)](#), BT-Drs. 19/14746, November 2019.

¹³⁴ German Bundestag (*Deutscher Bundestag*) (2019), [Entwurf eines Gesetzes über einen nationalen Zertifikatehandel für Brennstoffemissionen \(Brennstoffemissionshandelsgesetz – BEHG\)](#), BT-Drs. 19/14746, November 2019, p. 23 f.

¹³⁵ German Federal Government (*Deutsche Bundesregierung*) (2019), [Klimaschutzprogramm 2030](#), October 2019, p. 27.

¹³⁶ Bach, S., Isaak, N., Kemfert, C., Kunert, U., Schill, W.-P., Wäger, N., Zaklan, A. (2019), [Für eine sozialverträgliche CO₂-Bepreisung](#), Berlin, p. 1–2.

¹³⁷ Zerkawy, F., Fiedler, S., Kresin, J. (2019), [Lenkungs- und Verteilungswirkungen einer klimaschutzorientierten Reform der Energiesteuern](#), Berlin, p. 12 ff.

assessed a mix of measures to achieve progressive distributive effects for low-income households: a per capita reimbursement of different amounts; measures for electricity price reductions, such as a decrease of the electricity tax and EEG-levy, and other measures, for example an increase of the commuter allowance and investments in climate-friendly mobility. The implications of the CO2 pricing and its socio-economic impact were also examined by the Scientific Advisory Board (*Wissenschaftlicher Beirat*) to the former Federal Ministry of Economic Affairs and Energy (*Bundesministerium für Wirtschaft und Energie*, BMWi).¹³⁸

The regular progress reports, as foreseen by BEHG and compiled by the National Emissions Trading Authority (*Deutsche Emissionshandelsstelle*, DEHSt), evaluate and forecast the effects of the national CO2 pricing on energy prices, also for private households. The annual emissions projection reports¹³⁹ by the German Environment Agency (*Umweltbundesamt*, UBA) evaluate and estimate the emission reduction effects of the pricing, among other climate protection policies. Some interviewees assume that the upcoming income and consumption survey for 2023 (*Einkommens- und Verbrauchsstichprobe*, EVS) by the Federal Statistical Office (to be released in 2025), may include data on the income share spend by households on the CO2 price and associated income effects. EVS is a five yearly voluntary household survey to assess living conditions in Germany.¹⁴⁰ Various research institutions also regularly conduct studies on the distributive effects¹⁴¹ and public acceptance¹⁴² of the CO2 pricing.

Some interviewees highlight data collection by the National Emissions Trading Authority (*Deutsche Emissionshandelsstelle*, DEHSt), for example on the revenues generated by the national CO2 pricing¹⁴³ and on CO2 emissions by energy suppliers that participate in

¹³⁸ Scientific Advisory Board to the Federal Ministry for Economic Affairs and Climate Action (*Wissenschaftlicher Beirat*) (2019), [Energiepreise und effiziente Klimapolitik](#), Berlin, pp. 13–15.

¹³⁹ For example, see the annual emission projection report 2024 (short version): German Environment Agency (*Umweltbundesamt*, UBA), [Treibhausgas-Projektionen 2024 – Ergebnisse kompakt](#), March 2024.

¹⁴⁰ Germany, Federal Statistical Office (*Statistisches Bundesamt*, Destatis), [Einkommens und Verbrauchsstichprobe EVS](#).

¹⁴¹ See Kalkuhl, M., Kellner, M., Bergmann, T., Rütten, K. (2023), [CO2-Bepreisung zur Erreichung der Klimaneutralität im Verkehrs- und Gebäudesektor: Investitionsanreize und Verteilungswirkungen](#), MCC-Arbeitspapier, on distribution effects of the CO2 price, arguing, for example, for more accompanying relief measures for particularly affected groups; Mohammadzadeh Valencia, F., Mohren, C., Ramakrishnan, A., Merchert, M., Minx, J.C., Steckel, J.C. (2024) [Public support for carbon pricing policies and revenue recycling options: a systematic review and meta-analysis of the survey literature](#), *NPJ Climate Action* (2024)3:74.

¹⁴² See Behringer, J., Endres, L., Korsinnek, M. (2024), [CO2-Bepreisung: Akzeptanz und Kostenwahrnehmung nach der Preiserhöhung 2024](#), *IMK Policy Brief Nr. 175*; Funke, F., Mattauch, L., Douenne, T., Fabre, A., Stiglitz, J.E. (2024), [Supporting carbon pricing when interest rates are higher](#), *CIREW Working Paper N° 2024-94*.

¹⁴³ In 2023, the national CO2 pricing generated € 10.7 billion (€ 6.4 billion in 2022). German Environment Agency (*Umweltbundesamt*, UBA) (2024), [New record revenue in emissions trading: More than 18 billion euros for climate protection](#), 4 January 2024.

the National Emissions Trading System for fuels (*Nationaler Emissionshandel*, nEHS). Energy suppliers are obliged to submit annual emissions reports on the amount of fossil fuels they have distributed in the respective reporting year to DEHSt.¹⁴⁴ One interviewee emphasises the importance of monitoring and data collection for an emissions trading system to be an effective climate protection instrument.

“[...] emissions trading without monitoring is not possible. So, if you don't tell the companies very clearly what emissions they must report, then one gets climate protection on paper, as only 90 % or 80 % of the emissions are reported. So, compliance, monitoring is pivot of successful emissions trading. That has always been clear. It was clear in EU emissions trading, and it is also clear in the BEHG [national emissions trading for transport and heating fuels]. And therefore, the consequence is: [...] every tonne [of CO₂] that is emitted must be reported. Or, in the context of the BEHG, every tonne of fuel placed on the market must be reported. And then a certificate must be acquired and submitted for every tonne of emissions relating to this quantity of fuel. This compliance part is hub and pivot and prerequisite for the success of emissions trading. And that is why it is also monitored super, super strictly.”

“[...] Emissionshandel ohne Monitoring geht nicht. Also wenn Sie den Unternehmen nicht sehr klar sagen, was sie an Emissionen berichten müssen, dann kriegen sie Klimaschutz auf dem Papier, indem eben immer nur so 90 % oder 80 % der Emissionen auch berichtet werden [...] das Monitoring ist der Dreh und Angelpunkt eines erfolgreichen Emissionshandels. Das war immer schon klar. Das war im EU-Emissionshandel klar, das ist auch im BEHG [Nationaler Emissionshandel für fossile Brennstoffe für Wärme und Verkehr] klar. Und deswegen Konsequenz ist: [...] Es muss über jede Tonne [CO₂], die emittiert wurde, berichtet werden. Oder im BEHG-Kontext über jede Brennstoffmenge, die in Verkehr gebracht wurde, muss berichtet werden. Und dann muss eben für jede Tonne der Emissionen, die auf diese Brennstoffmenge bezogen ist, muss dann auch ein Zertifikat erworben werden und abgegeben werden. Dieser Compliance Teil ist Dreh und Angelpunkt und Erfolgsbedingung für den Emissionshandel. Und deswegen wird der auch super super strikt überwacht.”

Several interviewees deplore a lack of data on energy poverty (see chapter 2.3.) as well as on energy efficiency levels of buildings. Organisations, such as consumer associations (*Verbraucherzentralen*) and the German Tenants' Association (*Deutscher Mieterbund*, DMB), advise people on their energy consumption and associated costs. During advisory sessions they collect respective data, but do not disclose them for data protection reasons.

¹⁴⁴ More information on data collection on part of DEHSt can be found on its [dedicated webpage](#).

Regarding complaints about the national CO₂ pricing, energy suppliers that participate in the nEHS can revert to standard procedures to complain about administrative action, for example access to courts. Some interviewees positively note the relatively low number of legal complaints since the nEHS entered into force. Among others, they attribute this to the institutionalised Working Group 'Emission Trading' (*Arbeitsgruppe Emissionshandel zur Bekämpfung des Treibhauseffekts*, AGE) and associated sub-working groups, where participants can openly raise concerns and discuss solutions with BMWK, DEHSt and other stakeholders (see chapter 3.4.).

On an informal level, citizens can enquire via constituencies and the German Bundestag (*Deutscher Bundestag*) on measures taken by the state; citizens can also contact the Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK) or the German Environment Agency (*Umweltbundesamt*, UBA) directly. One interviewee notes that citizens increasingly turn to BMWK about the national CO₂ pricing by means of 'Bürgerbriefe' (communications by citizens to the state).

Consumers can consult advisory services, provided by consumer associations (*Verbraucherzentralen*) and the German Tenants' Association (*Deutscher Mieterbund*, DMB), for example. Avenues for complaints concerning mitigation and compensation measures (see chapter 3.1.2.) vary greatly. Under the CO₂ Cost Sharing Act (see chapter 3.1.2.), for instance, tenants may challenge their CO₂ cost share calculated by the property owner in civil court proceedings.

4. Conclusions and key recommendations

4.1. Main effects

To this point, the following effects of the national CO₂ pricing for the heating and transport sectors can be identified:

- **emission reduction effects in the respective sectors have so far been small (if quantifiable at all):** the national CO₂ price has so far been too low to steer fossil fuel towards sustainable energy consumption and energy efficiency on a big scale. Despite the CO₂ pricing, the heating and transport sectors still fail to meet emissions reduction targets. Compared to 1990, the transport sector has reduced its CO₂ emissions by 10.9 %, which is significantly less than in other sectors.¹⁴⁵ Since 2021, annual emissions in the sector have barely sunk.¹⁴⁶ Emissions reduction in the heating sector has been more noticeable: compared to 1990, the sector emits 51.4 % less CO₂.¹⁴⁷ Since the introduction of the CO₂ pricing, annual emissions have sunk but not sufficiently enough to meet the targets.¹⁴⁸ The reduction of emissions in 2022 (of six million tonnes CO₂

¹⁴⁵ German Environment Agency (*Umweltbundesamt*, UBA) (2024), [‘Klimaschutz im Verkehr’](#), Dessau-Roßlau, 15 July 2024.

¹⁴⁶ Annual CO₂ emissions in the transport sector since 2021: 147 million tonnes CO₂ equivalents (2021); 148 million tonnes CO₂ equivalents (2022); 146 million tonnes CO₂ equivalents (2023). The numbers for 2021 and 2022 are available in German Environment Agency (*Umweltbundesamt*, UBA) (2024), [‘Berechnung der Treibhausgasemissionsdaten für das Jahr 2022 gemäß Bundesklimaschutzgesetz – Begleitender Bericht’](#), Dessau-Roßlau, 15 March 2023, p. 24; the numbers for 2023 are available in German Environment Agency (*Umweltbundesamt*, UBA) (2024), [‘Treibhausgas-Projektionen 2024 – Ergebnisse kompakt’](#), Dessau-Roßlau, March 2024, p. 15.

¹⁴⁷ German Environment Agency (*Umweltbundesamt*, UBA) (2024), [‘Klimaschutz im Verkehr’](#), Dessau-Roßlau, 15 July 2024.

¹⁴⁸ Annual CO₂ emissions in the heating sector since 2021: 118 million tonnes CO₂ equivalents (2021); 112 million tonnes CO₂ equivalents (2022); 102 million tonnes CO₂ equivalents (2023). The numbers for 2021 and 2022 are available in German Environment Agency (*Umweltbundesamt*, UBA) (2024), [‘Berechnung der Treibhausgasemissionsdaten für das Jahr 2022 gemäß Bundesklimaschutzgesetz – Begleitender Bericht’](#), Dessau-Roßlau, 15 March 2023, p. 21; the numbers for 2023 are available in German Environment Agency (*Umweltbundesamt*, UBA) (2024), [‘Treibhausgas-Projektionen 2024 – Ergebnisse kompakt’](#), Dessau-Roßlau, March 2024, p. 14.

equivalents) compared to 2021 were due to favourable weather conditions and the significant fuel price increases,¹⁴⁹ following Russia's invasion of Ukraine.

- **overall, social impacts have so far been minimal** because of the still low CO2 price level; at the same time, different groups are affected to varying degrees by the CO2 pricing.
- **stronger linkage between climate protection instruments and social acceptability:** following the introduction of the national CO2 pricing its social impacts on low-income and other vulnerable households have gained more political attention. The linkage has been prominently discussed in connection with the announced, but not yet implemented, financial compensation to alleviate CO2 cost burdens for households, i.e. Climate Money. It also been discussed in connection with new requirements for changing heating systems in course of the 2023 amendment of the Buildings Energy Act (*Gebäudeenergiegesetz*, GEG), resulting in the first socially staggered funding programme for heating system replacements.
- **revenues generated from the national CO2 pricing fund energy efficiency and climate protection measures:** all revenues are allocated to the German Climate and Transformation Fund (*Klima- und Transformationsfonds*, KTF) and are used to finance social mitigation measures, such as the abolishment of the EEG-levy on electricity consumption as well as industrial decarbonisation and energy-efficiency measures.¹⁵⁰ Between 2021 and 2023, the national CO2 pricing generated a total of € 24.3 billion (2021: € 7.2 billion, 2022: € 6.4 billion, 2023: € 10.7 billion).¹⁵¹
- **steering and signalling effects towards green and energy efficient technologies:** the CO2 pricing sets a clear path for sustainable and efficient energy use in the future as the consumption of fossil fuels will get more costly over time. Even though private households have so far not adapted their energy consumption and enhanced energy efficiency on a big scale, because of the low CO2 price levels and structural barriers, this is likely to change with rising CO2 prices and effective support and compensation measures. Businesses increasingly take the CO2 price into account and start investing in green technologies.

¹⁴⁹ German Environment Agency (*Umweltbundesamt*, UBA) (2024), '[Berechnung der Treibhausgasemissionsdaten für das Jahr 2022 gemäß Bundesklimaschutzgesetz – Begleitender Bericht](#)', Dessau-Roßlau, 15 March 2023, p. 21.

¹⁵⁰ German Environment Agency (*Umweltbundesamt*, UBA) (2022), '[Emissionshandel 2021 mit Rekorderneinnahmen von über 12 Milliarden Euro](#)', Dessau-Roßlau, 5 January 2022; German Federal Government (*Deutsche Bundesregierung*) (2023), '[Milliardeninvestitionen in Energiewende, Klimaschutz und Transformation](#)', Berlin, 9 August 2023.

¹⁵¹ The numbers for 2021 in German Environment Agency (*Umweltbundesamt*, UBA) (2022), '[Emissionshandel 2021 mit Rekorderneinnahmen von über 12 Milliarden Euro](#)', Dessau-Roßlau, 5 January 2022; the numbers for 2022 and 2023 are available in German Environment Agency (*Umweltbundesamt*, UBA) (2024), '[Neue Rekorderneinnahmen im Emissionshandel: Über 18 Milliarden Euro für den Klimaschutz](#)', Dessau-Roßlau, 4 January 2024.

- **good preparation for the CO2 pricing under the EU ETS2 as of 2027:** Germany has been a front-runner in introducing a CO2 pricing for the heating and transport sectors. Such a pricing will soon be introduced EU-wide. Thus, foundational requirements and procedures for a CO2 pricing in these sectors, for example to designate and equip an implementing authority, are already in place. There is some political awareness of (potential) social impacts of the pricing and required action to alleviate them. In view of much higher CO2 prices expected under the EU ETS2, this awareness now needs to turn into concrete political action to ensure social acceptability as well as effectiveness of the CO2 pricing.

4.2. Challenges and gaps

The country research and interviews highlight several challenges and gaps regarding climate protection and energy efficiency policies:

- **(factors for) social impacts have long been disregarded:** policies have often not been immediately linked to social impacts; measures to address this are proposed but not yet implemented, such as the social monitoring system for climate protection (*Sozialmonitoring Klimaschutz*). When social impacts are politically and publicly considered, the focus is often on the context of income effects, particularly on low-income households. Structural factors that reinforce impacts, also on middle-income households, tend to be less prominent in the discussion, for example housing situation (owner-occupied or rental housing), place of residence (urban/rural) and capability to adapt energy consumption.
- **sufficient group-tailored support and compensation measures are lacking:** measures to mitigate the social impacts of national CO2 pricing in the heating and transport sectors exist, but they are often limited in scope and scale. Certain groups, such as low-income households or older people, face barriers in accessing these measures. Socially staggered funding programmes to support vulnerable and low-income households to reduce fossil fuel consumption and improve energy efficiency are still the exception and need to be scaled up, especially in view of the significant increases of the CO2 price expected under the EU ETS2. Direct social compensation measures, particularly benefitting low-income households, have been promised but not implemented (i.e. Climate Money).
- **state budget and political constraints slow down implementation:** significant amounts of public funding are necessary to implement Germany's climate and energy policies and associated support and compensation measures; tight budget restraints have and will continue to hinder rapid implementation.

Political dynamics, such as differing priorities during the period of the 'Ampel' coalition government in Germany (December 2021 - November 2024), have further slowed down progress, with political preferences ranging from social and regulatory approaches to liberal, market-based solutions.

- **insufficient information and communication hampers public awareness and support:** political communication on the effects and benefits of, sometimes complex, policies as well as on support measures in place to alleviate social cost burdens has not or not effectively reached the public, contributing to the overall decline of public support for climate action.
- **climate political roll back and diminishing public support threatens success of policies:** the rise of (right-wing) populist political influence at EU- and national level opposing climate protection policies, increasingly hinders an immediate and efficient policy implementation and may even threaten set climate targets. The public increasingly depicts climate protection and energy transition as ideologically charged and socially unjust (as something for 'wealthy people'). The affordability of the green transition is increasingly questioned in the current crises-ridden times, i.e. armed conflicts, fear of economic recession and social decline. Measures to generate public support, such as direct financial compensation in form of the Climate Money, are being delayed for budgetary and other reasons.

4.3. Lessons learned and good practices

To this point, it is not yet possible to derive lessons learned and good practices from the research.

4.4. Recommendations

- an **obligatory 'social check' or 'social monitoring' of draft legislation**, like the 'climate check' proposed in the Climate Protection Programme 2023, to assess potential social implications of climate and energy efficiency legislation and policies
- a **better policy mix tailored to address distributional effects** of climate protection / energy efficiency policies, i.e. adapting funding programmes to align with new regulations

- **transparent and group-targeted communication** by political mandate holders of the narrative behind climate protection and energy transition policies, i.e. goals, impacts and social support and compensation measures, to engage the population and strengthen social cohesion
- improved transparency and targeted communication regarding the allocation of revenues generated by the CO2 pricing (Climate and Transformation Fund) to improve social justice, e.g. socially staggered funding programmes for heating system replacement
- more **funding and regulatory measures tailored to low- and middle-income households** to facilitate the transition from fossil fuel to renewable energy consumption and increase energy efficiency in the housing and transport sector
- (temporary) **direct financial compensation** (either per capita or socially staggered) to alleviate CO2 cost burdens for low-income and vulnerable households, and to increase social acceptability of energy transition and efficiency policies
- extension of **low threshold advice services** on energy transition and efficiency measures, for example, through consumer associations
- **low threshold information and awareness campaign formats** on (future) effects of CO2 costs on fossil fuel prices, for example targeted at household's purchasing decisions of vehicles and heating systems
- stronger **political focus on energy poverty** and compensation/mitigation measures to increase social acceptability of the energy transition
- adoption of a broad **definition of energy poverty** (in the context of Germany's Social Climate Plan) not solely based on income poverty, but considering other factors like energy efficiency levels of housing and household's capability to reduce fossil fuel energy consumption and to improve energy efficiency
- improved data availability for the collection of (disaggregated) **data on energy and mobility poverty**, i.e. blending socio-economic data with energy efficiency data

Annexes

Annex I. Design of the action

Information about the action	
<p>Objective</p> <p><i>Please include:</i></p> <ul style="list-style-type: none">• Objective• Area of contribution• Explicit focus	<p>The national CO2 pricing for the heating and transport sectors (not yet covered by the European emissions trading scheme; EU ETS1) intends to incentivise the economy and consumers for more climate protection, particularly to transition their energy consumption for heat and transport towards renewable energy sources. The national CO2 pricing makes climate-damaging fuels for heating and transportation more expensive. Distributors of heating oil, natural gas, petrol, diesel or coal initially pay the CO2 price (by purchasing emission certificates). These additional costs are then passed on along the supply chain to the end consumers.</p> <p>The CO2 pricing is one instrument to reach Germany's emission targets set out in the Federal Climate Change Act (<i>Bundes-Klimaschutzgesetz</i>, KSG). It sets out Germany's overall national emission targets until the year 2045. Before the KSG's second amendment in 2024, it also set out annual emission reduction targets for each sector. Now, each sector is assigned an annual emission budget and overshoots can be compensated by emission reductions in other sectors.¹⁵² The federal government has repeatedly failed to meet the emission targets for the transport and buildings/heat sectors.¹⁵³ The operation of</p>

¹⁵² Germany, [Federal Climate Change Act](#) (*Bundes-Klimaschutzgesetz*, KSG), as amended on 15 July 2024

¹⁵³ Germany, Council of Experts for Climate Change (*Expertenrat für Klimafragen*, ERK), [Council of Experts on Climate Change confirms that transport sector misses mitigation target again, not clear for buildings](#), press release, 15 April 2024.

	buildings causes about 30 % (2022) of Germany's CO2 emissions; the transport sector about 20 % (2022). ¹⁵⁴
<p>Background</p> <p><i>Please include:</i></p> <ul style="list-style-type: none"> • Starting date • Origin and development • Rationale • Stakeholders involved 	<p>The national CO2 pricing was introduced on 1 January 2021.</p> <p>The Federal Ministry for the Environment (<i>Bundesministerium für Umwelt und Verbraucherschutz</i>, BMUV) (until 2021 in the lead for the national CO2 pricing) conducted formal consultations and published statements by 39 different stakeholders on its webpage.</p> <p>A regular stakeholder exchange on the national CO2 pricing takes place within the Working Group Emissions Trading (<i>Arbeitsgruppe Emissionshandel</i>, AGE) and associated sub working groups organised by the Federal Ministry for Economic Affairs and Climate Action (<i>Bundesministerium für Wirtschaft und Klimaschutz</i>, BMWK). The working groups meet several times per year and engage a broad circle of stakeholders from energy companies like RWE to environmental organisations like WWF. AGE is coordinated by BMWK¹⁵⁵, which has commissioned the think tank adelphi with the provision of the AGE-secretariat, administrative support for AGE members and expert advice.¹⁵⁶</p>
<p>Timeline</p> <p><i>Please include:</i></p> <ul style="list-style-type: none"> • Timeline and duration • Milestones, reviews, amendments planned 	<p>The national CO2 pricing via the national emissions trading system (<i>Nationaler Emissionshandel</i>, nEHS) entered into force in 2021. From 2027 it will be replaced by the new EU ETS2. How Germany will transfer its national emissions trading system for the heating and</p>

¹⁵⁴ Germany, Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*, BMWK) (2023), [Energieeffizienz in Zahlen Entwicklungen und Trends in Deutschland 2022](#), February 2023.

¹⁵⁵ Until 2021, AGE was led by the Federal Ministry of the Environment (*Bundesministerium für Umwelt, Naturschutz und nukleare Sicherheit*, BMU).

¹⁵⁶ adelphi, [Projekträgerchaft der deutschen Arbeitsgruppe Emissionshandel \(AGE\)](#).

	<p>transport sectors to the EU ETS2 is not yet determined and subject of political discussion.</p> <p>In 2022 the Federal Government submitted its first progress report on the national CO2 emissions trading/pricing to the German Bundestag (also refer to “external governance” below). To inform the progress report the German Environment Agency (<i>Umweltbundesamt</i>, UBA) compiled a scientific report on the effects of the national fuel emissions trading / CO2 pricing.</p>
<p>Scope and development</p> <p><i>Please include:</i></p> <ul style="list-style-type: none"> • Activities included • Planned developments, phases, repetitions or other • Project continuation in the future 	<p>At least until 2026, the CO2 price per tonne of CO2 emitted is politically determined. The Federal Government and the governments of the Länder agreed to initially set the CO2 price at € 25 per tonne for 2021 and at € 30 for 2022. In view of the sudden increase in energy prices due to Russia’s war against Ukraine, the Federal Government suspended the increase of the CO2 price in 2023. Initially, it was set that the price rises to € 40 per tonne in 2024. However, due to budgetary constraints the federal government decided to set the price at € 45 in 2024. A price of € 55 per tonne is planned for 2025. From 2026, a price corridor of at least € 55 and at most € 65 is to apply.</p> <p>After 2026, the newly established EU ETS2, entering into force in 2027, will replace the national emissions trading scheme for the heating and transport sectors. According to the German Environment Agency (<i>Umweltbundesamt</i>, UBA) significantly higher CO2 prices are possible and can be expected.</p>
<p>Internal governance</p> <p><i>Please include:</i></p> <ul style="list-style-type: none"> • Legal basis 	<p>Fuel Emissions Trading Act (<i>Brennstoffemissionshandelsgesetz</i>, BEHG) – Federal Law</p>

<ul style="list-style-type: none"> • Bodies/units responsible for management, implementation, monitoring • Organigram (please attach if available) • Persons working on the action 	<p>Federal Ministry for Economic Affairs and Climate Action is the lead ministry; the responsible unit within the ministry is the dedicated working group ‘AG KB2 Klimaschutzgesetz, Emissionshandel’</p> <p>Responsible for the implementation and monitoring of the BEHG is the German Emissions Trading Authority (<i>Deutsche Emissionshandelsstelle</i>, DEHSt) at the German Environment Agency (<i>Umweltbundesamt</i>, UBA); Organigram: DEHSt, Division V - Climate Protection, Energy, German Emissions Trading Authority)</p> <p>At DEHSt a staff of about 120-150 people work on the implementation of the national emissions trading system (nEHS).</p> <p>The dedicated working group at BMWK dealing with the EU and national emissions trading systems has a staff of about 15 people.</p>
<p>External governance</p> <p><i>Please include:</i></p> <ul style="list-style-type: none"> • Reporting obligations • Accountability • Partnerships • Collaborations 	<p>Pursuant to Section 23 (1) of the BEHG the federal government evaluates the Act. It submitted a progress report to the German Bundestag in 2022 and planned to submit a second progress report at the end of November 2024. (As of December 2024, the report has not been publicly available yet). After that it will submit a progress report every four years. UBA provides a scientific research report as a basis for the BEHG progress report.</p> <p>Energy suppliers that participate in the nEHS and purchase emission certificates have several reporting obligation to DEHSt, such as annual emission reports.</p>
<p>Funds</p> <p><i>Please include:</i></p> <ul style="list-style-type: none"> • Budget available for the action • Funding sources, (including administrative level) 	<p>The German Emissions Trading Authority (<i>Deutsche Emissionshandelsstelle</i>, DEHSt), as the implementing body of the EU and national emission trading systems, is funded by the revenues gained from the emissions trading</p>

• Information on fundamental rights conditionalities if any	<i>(Systemkosten-Refinanzierungsregel)</i> and not by tax money.
Other aspects to be considered	