

Policy Paper

Carbon Pricing in Germany:

Future Outlook and Priority Areas

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EXECUTIVE SUMMARY

Due to a combination of factors, carbon pricing through emissions trading as an important climate policy instrument has found a place in Germany's mainstream politics. Some of the factors contributing to this development include the setting of more ambitious climate targets and an intensified political discourse regarding climate policy. While carbon pricing has increasingly been recognized in Germany as a powerful instrument of climate policy, several aspects concerning the actual implementation of carbon pricing still remain unclear. At the same time, the release of the Fit for 55 Package, a set of proposals by the European Commission aimed at reducing greenhouse gas emissions by at least 55% by 2030, has highlighted the further development of carbon pricing policies as an important focus area for the next few years. Further, the vulnerability with regard to Russian sources of energy in the aftermath of Russia's invasion of Ukraine has highlighted the challenge of increased energy costs, thereby underscoring the urgency of implementing measures for social compensation.

This policy paper provides reflections on the recent discourse on carbon pricing in both Germany and the European Union, and outlines priority areas for intervention in Germany through four policy recommendations.

- A. The German government should commence the process of reviewing the BEHG, which covers the national carbon pricing scheme for transport and buildings, including the potential advancement of the price corridor phase, the concrete design of the market phase, along with a clear scheme for compensating social hardships arising from a higher carbon price.
- B. The development of the broader policy mix to support carbon pricing in the presence of market failures and market barriers, particularly in the transport and buildings sectors, should form a priority area for future climate policy. It will be crucial to develop a coordinating framework for facilitating the smooth interaction between the various relevant ministries.
- C. The extension of carbon pricing to various sectors in the economy requires the design of transparent social compensation measures, with the reduction of the electricity price and a per-capita compensation mechanism forming the core of the compensation package. The relevant criteria, timelines and administrative aspects of compensatory payouts should be determined and legislated at the earliest.
- D. Engagement with end-consumers (households) through targeted and transparent political communication about the carbon pricing regime, its objectives, and related support mechanisms should form a further focus area of the carbon pricing policy in Germany.

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INTRODUCTION

The recent developments following Russia's invasion of Ukraine have brought into sharp focus the new challenges of aligning the decarbonisation process with geopolitical developments, the diversification of energy supplies, and decreasing the dependence on fossil fuels. The strengthening of a carbon price signal can help serve an important function in this context of accelerated, cost-efficient decarbonisation.

Further, the dependence and vulnerability with regard to Russian sources of energy has also highlighted the challenge of increased energy costs for households, thereby underscoring the urgency of implementing measures for ensuring the affordability of energy prices, particularly through a social compensation mechanism to relieve households, an area where the utilisation of revenues from carbon pricing can play a major role.

This paper traces the development of the carbon pricing discourse in Germany and the European Union (EU) over the recent months, and makes recommendations for future policy action for the further development of the carbon price system.

Carbon pricing in the recent political discourse in Germany

The year 2021 proved to be a milestone year for setting targets for climate change mitigation, both for the EU and for Germany. The setting of ambitious goals further led to discussions on the concrete instruments and measures that will help achieve these goals. Following a decision of Germany's constitutional court, Germany's Climate Protection Act was amended to incorporate a more ambitious target.¹ The emissions reduction goal for 2030 was increased by 10%, to 65% compared to emissions in 1990, and the target to achieve climate neutrality by 2050 was advanced to 2045.² Climate change and climate policy gained importance in the political discourse in Germany, with an increasing appreciation of the potential of carbon pricing.

¹ See German Constitutional Court (Bundesverfassungsgericht or BVerfG), "Leitsätze zum Beschluss des Ersten Senats vom 24. März 2021 – 1 BvR 2656/18 –, Rn. 1-270" (Decision of the First Senate of 24 March 2021 – 1 BvR 2656/18 –, Rn. 1-270)

http://www.bverfg.de/e/rs20210324_1bvr265618.html; "Intergenerational contract for the climate", The German Federal Government, <https://www.bundesregierung.de/breg-de/themen/klimaschutz/climate-change-act-2021-1936846>.

² "Gesetz beschreibt verbindlichen Pfad zur Klimaneutralität 2045 / Klimaziel für 2030 wird von 55 auf 65 Prozent erhöht", Bundesministerium für Umwelt, Naturschutz, nukleare Sicherheit und Verbraucherschutz (June 24, 2021), available at <https://www.bmu.de/pressemitteilung/novelle-des-klimaschutzgesetzes-vom-bundestag-beschlossen/>.

Over a decade and a half after the emissions trading system in the European Union (EU-ETS) had commenced its first phase in 2005,³ and shortly after Germany's domestic emissions trading law (BEHG) entered into force in January 2021, carbon pricing emerged as a prominent political issue in Germany in the context of the federal parliamentary elections, and then formed a crucial element of the climate policy package in the coalition agreement of the new federal government.

The focus on carbon pricing as an essential component of the future climate policy in the party manifestoes of five prominent political parties during the German federal election in 2021 (namely the Union formed by the Christian Democratic Union and the Christian Social Union (CDU/CSU), the Social Democratic Party (SPD), the Green Party (BÜNDNIS 90 / DIE GRÜNEN), and the Free Democratic Party (FDP)) provided strong evidence that that emissions trading as a climate policy instrument was increasingly gaining acceptance and approval in Germany's political discourse.⁴

These party programmes also emphasized that carbon pricing needs to be augmented by other policy instruments, for example, by the abolishment of the EEG surcharge.⁵ Creating strong synergies between carbon pricing and other regulations was therefore seen as an important priority for the next phase of German climate policy. Further, the manner in which the revenues from carbon pricing should be employed to finance social balancing measures, and thereby reduce the political cost of the transition to climate neutrality, emerged as a significant area for future political decisions.

The coalition agreement of the new German government (formed by the SPD, the Green Party, and the FDP that was presented on November 24, 2021, expressly recognized carbon pricing as a central instrument of future climate policy.⁶ The coalition agreement emphasized the role of an ambitious carbon price for the decarbonisation process, including the proposal for a floor price at the level of the EU, and the delineation of social compensation measures to reduce the burden of the energy transition on households.⁷ The agreement also advocated the formation of a uniform emissions trading system spanning across all relevant sectors in the 2030s.⁸

³ See "Development of EU ETS (2005–2020)", available at https://ec.europa.eu/clima/eu-action/eu-emissions-trading-system-eu-ets/development-eu-ets-2005-2020_en.

⁴ See Annex I for further details.

⁵ See Annex I for further details.

⁶ See "Mehr Fortschritt wagen – Bündnis für Freiheit, Gerechtigkeit und Nachhaltigkeit. Koalitionsvertrag 2021 – 2025 zwischen der Sozialdemokratischen Partei Deutschlands (SPD), BÜNDNIS 90 / DIE GRÜNEN und den Freien Demokraten (FDP)" (hereinafter the "Coalition Agreement 2021"), available at

<https://www.bundesregierung.de/resource/blob/974430/1990812/04221173eef9a6720059cc353d759a2b/2021-12-10-koav2021-data.pdf?download=1>.

⁷ Coalition Agreement 2021, *supra* note 6, at 62–63.

⁸ *Ibid* at 62.

These proposals for the further development of the carbon pricing framework were formulated at the end of the first year of operation of Germany's own carbon pricing law, and also developed some of the proposals contained in the Fit for 55 Package concerning the further development of the carbon pricing regulations at the EU level. In effect, this prominent political support for carbon pricing voiced by the German coalition parties provides a strong signal for the further development of emissions trading at the German, European, and potentially global level. Nevertheless, the new government still needs to devote further consideration to the development of the carbon pricing framework, including its interplay with additional non-price policy instruments aiming to accelerate decarbonisation. In recent times, the political discourse in light of the Russian invasion of Ukraine has also underlined the increasing importance of addressing the question of increased energy costs for households and highlighted the urgency of implementing measures for social compensation to relieve households. The utilisation of revenues from carbon pricing can play a major role in this effort.

Legislative developments in Germany: national emissions trading through the BEHG

The German law establishing a national emissions trading system known as the *Brennstoffemissionshandelsgesetz* (BEHG)⁹ or the Fuel Emission Allowance Trading Act came into force on January 1, 2021, a few months before the Fit for 55 Package proposed by the European Commission in July 2021 (discussed in Section III below). The purpose of this legislation is to price emissions from fossil fuels and to create the basis for trading in allowances for such emissions, insofar as these emissions are not covered by the EU emissions trading system, *inter alia* to help reach the national climate targets.¹⁰ The BEHG lays down the scheme of obligations for the parties responsible under the Act, such as the submission of a monitoring plan,¹¹ the identification of and reporting on fuel emissions,¹² and surrender of emission allowances¹³.

The stipulation of the conditions for the sale of emission allowances forms the crux of the BEHG: in the introductory phase between January 1, 2021 and December 31, 2025, emission allowances will be sold at a fixed price, starting at 25 Euros per certificate in 2021, and increasing by 5 Euro per year to reach 35 Euros in 2023, and thereafter increasing by 10 Euro per year to reach 55 Euro in 2025.¹⁴ From 2026 onwards, certificates will be auctioned.¹⁵ A price corridor

⁹ Gesetz über einen nationalen Zertifikatehandel für Brennstoffemissionen (*Brennstoffemissionshandelsgesetz* – BEHG; engl. Fuel Emission Allowance Trading Act), available at <https://www.gesetze-im-internet.de/behg/BJNR272800019.html>.

¹⁰ § 1, *Brennstoffemissionshandelsgesetz* (BEHG).

¹¹ § 6, BEHG.

¹² § 7, BEHG.

¹³ § 8, BEHG.

¹⁴ § 10(2), BEHG.

¹⁵ § 10(1), BEHG.

has been set for 2026, with a minimum price of 55 Euros and maximum price of 65 Euros per emission allowance.¹⁶ The law also requires the implementation of the national emissions trading registry in the form of an electronic database, containing accounts for emission allowances, availability restrictions, and records of the reported and verified fuel emissions of responsible parties.¹⁷ The Federal Environment Authority is the competent authority in charge of maintaining the national emissions trading registry.¹⁸

Legislative developments in the EU: EU-ETS and the Fit for 55 Package

The EU revised its climate targets in 2021: it now aims to achieve climate neutrality by 2050,¹⁹ and as an interim target, to reduce net greenhouse gas emissions by at least 55% (compared to 1990 levels) by 2030²⁰. The specific recommendations for EU-ETS reform²¹ are set out in the form of proposed amendments to Directive 2003/87/EC concerning the EU-ETS (the “EU ETS Directive”)²², the Decision on the Market Stability Reserve²³, and Regulation (EU)

¹⁶ § 10(3), BEHG.

¹⁷ § 12(1), BEHG.

¹⁸ § 12(1), §13(1), BEHG.

¹⁹ Article 2(1), Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 (June 30, 2021) (“European Climate Law”), available at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R1119>.

²⁰ Article 4(1), European Climate Law.

²¹ European Commission, “Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union, Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading scheme and Regulation (EU) 2015/757” (July 14, 2021), available at https://eur-lex.europa.eu/resource.html?uri=cellar:618e6837-ee6-11eb-a71c-01aa75ed71a1.0001.02/DOC_1&format=PDF (hereinafter “EU Commission Proposal for ETS Reform”).

²² Directive 2003/87/EC of the European Parliament and of the Council establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC (October 13, 2003), available at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32003L0087> (hereinafter “EU ETS Directive”).

²³ Decision (EU) 2015/1814 of the European Parliament and of the Council concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading scheme and amending Directive 2003/87/EC (October 6, 2015), available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2015.264.01.0001.01.ENG.

2015/757 concerning carbon dioxide emissions from maritime transport²⁴. The strengthening of the EU-ETS, through a revision of the ETS Directive (which was last amended in 2018, to be consistent with an EU economy-wide emissions reduction target of at least 40% by 2030 compared to 1990²⁵) oriented towards these ambitious climate targets, forms part of the proposals in the Fit for 55 Package.

The Fit for 55 Package proposes the strengthening of the EU-ETS in the following ways:

1. **Maritime transport emissions:** The extension of the EU-ETS to cover maritime transport emissions has been proposed to start from the year 2023, including a phase-in period in the years 2023–2025, during which allowances for only a portion of the verified emissions need to be surrendered by shipping companies.²⁶ The allocation of allowances and the application of surrender certificates in relation to maritime transport activities will be applicable to 100% of the emissions from ships performing voyages that start and end in ports falling under the jurisdiction of an EU Member State, and to 50% of the emissions from ships that perform voyages where one of the ports of arrival or departure is under the jurisdiction of an EU Member State (and the other port outside it).²⁷
2. **Road transport and buildings sectors:** The Fit for 55 Package recommends that the road transport and buildings sectors be covered “through separate but adjacent emissions trading”.²⁸ This is envisaged as a “separate

²⁴ Regulation (EU) 2015/757 of the European Parliament and of the Council on the monitoring, reporting and verification of carbon dioxide emissions from maritime transport, and amending Directive 2009/16/EC (April 29, 2015), available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2015.123.01.0055.01.ENG#:~:text=Regulation%20%28EU%29%202015%2F757%20of%20the%20European%20Parliament%20and,and%20amending%20Directive%202009%2F16%2FEC%20%28Text%20with%20EEA%20relevance%29.

²⁵ European Commission, “Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union, Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading scheme and Regulation (EU) 2015/757” (July 14, 2021), available at https://eur-lex.europa.eu/resource.html?uri=cellar:618e6837-ee6-11eb-a71c-01aa75ed71a1.0001.02/DOC_1&format=PDF (hereinafter “EU Commission Proposal for ETS Reform”), at 1

²⁶ Proposed Article 3ga to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 42.

²⁷ Proposed Article 3g to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 41.

²⁸ Recital (43), EU Commission Proposal for ETS Reform at 33. The creation of this new system under the EU-ETS is proposed to be executed through the insertion of the

self-standing system from 2025”²⁹, where in the first year, the regulated entities will be required to hold a greenhouse gas emissions permit and to report their emissions for the years 2024 and 2025,³⁰ and follow issuance and compliance obligations from 2026³¹. For reasons of technical feasibility and administrative efficiency, and due to the large number of small emitters in these sectors, the point of regulation is proposed to be further upstream in the supply chain than at the point of the emitters.³²

The extension of the emissions trading system to the buildings and road transport sectors is proposed through the insertion of a new Chapter IVa in the EU-ETS Directive. The new emissions trading system to be established in the buildings and road transport sectors is often referred to as “ETS-2”, operating parallel to the original ETS, which is often referred to as “ETS-1”. With effect from January 1, 2025, regulated entities carrying out activities within the scope of the new Chapter IVa³³ covered under the proposed Annex III of the Directive, require a greenhouse gas emission permit under this chapter.³⁴ Starting in 2026, the allowances covered by the chapter will be auctioned, unless they are placed in the Market Stability Reserve (MSR).

Under Chapter IVa, the Member States shall determine the use of revenues generated from the auctioning of allowances.³⁵ In addition to the activities mentioned in Article 10(3), the auction revenues under this Chapter shall be utilized for the following purpose(s):

- a) measures intended to contribute to the decarbonisation of heating and cooling of buildings or to the reduction of the energy needs of buildings and

proposed Chapter IVa to the EU-ETS Directive (see EU Commission Proposal for ETS Reform at 52 for Chapter IVa).

²⁹ EU Commission Proposal for ETS Reform at 19, proposed Chapter IVa to the EU-ETS Directive (EU Commission Proposal for ETS Reform at 52).

³⁰ See EU Commission Proposal for ETS Reform at 19, proposed Articles 30b (EU Commission Proposal for ETS Reform at 52–53), and Article 30f (EU Commission Proposal for ETS Reform at 56–57).

³¹ EU Commission Proposal for ETS Reform at 19, proposed Article 30c (EU Commission Proposal for ETS Reform at 53–54), Article 30d (EU Commission Proposal for ETS Reform at 54), and proposed Article 30e (EU Commission Proposal for ETS Reform at 56) to the EU-ETS Directive.

³² EU Commission Proposal for ETS Reform at 19.

³³ These activities are to be specified in Annex III of the EU-ETS Directive.

³⁴ Proposed Article 30b(1) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 52.

³⁵ Proposed Article 30d(5) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 55. The exception to this is the revenues established as own revenues in accordance with Article 311(3), Treaty on the Functioning of the European Union and entered in the Union Budget.

measures for providing financial support for low-income households in worst-performing buildings;³⁶ and

b) measures intended to accelerate the uptake of zero-emission vehicles or to provide financial support for fully interoperable refuelling and recharging infrastructure for zero-emission vehicles, or to encourage a shift to public forms of transport and improving multimodality, or financial support to address social aspects concerning low- and middle-income transport users.³⁷

The proposed Directive expressly stipulates that Member States should use a part of their auction revenues generated under Chapter IVa to address social aspects of emissions trading, with a specific emphasis on vulnerable households, vulnerable micro-enterprises and vulnerable transport users – terms that have been defined in the draft Social Climate Fund Regulation.³⁸

Events of excessive price increase of the auctioned allowances over a period of three months will be regulated through the release of allowances from the Market Stability Reserve (MSR).³⁹ The allowances for the buildings and road transport sectors shall be placed in and released from a separate section of the MSR.⁴⁰

As per the European Commission's proposal, the review of the new Chapter IVa pertaining to ETS-2 shall be carried out through a reporting of the European Commission to the European Parliament by January 1, 2028 on the effectiveness, implementation and practical application of the implementation of the provisions of the chapter.⁴¹ The feasibility of the integration of the sectors covered in ETS-1 and ETS-2 will be assessed by the European Commission by October 31, 2031.⁴²

3. Linear Reduction Factor: It is proposed that the Linear Reduction Factor is increased from 2.2% to 4.2% from the year following the entry into force of the Directive amending the EU-ETS, combined with a one-off downward adjustment

³⁶ Proposed Article 30d(5)(a) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 55.

³⁷ Proposed Article 30d(5)(b) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 55.

³⁸ See proposed Article 30d(5) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 55 and proposed Article 2(11), (12) and (13), Proposal for a Regulation of the European Parliament and of the Council establishing a Social Climate Fund (hereinafter "Proposed Regulation for establishing a Social Climate Fund"), available at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0568>.

³⁹ Proposed Article 30h to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 57.

⁴⁰ Proposed Article 1a of the Decision (EU) 2015/1814, EU Commission Proposal for ETS Reform at 58.

⁴¹ Proposed Article 30i to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 58.

⁴² Proposed Article 30i to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 58.

of the cap, leading to a reduction of the overall quantity of the allowances at an increased annual pace, leading to an overall emission reduction of EU-ETS sectors by 61% by 2030 (compared to 2005).⁴³ An additional increase in the total number of allowances on account of the inclusion of maritime transport emissions in the EU-ETS is also envisaged.⁴⁴

4. Use of Auction Revenues: The proposed revisions to the EU-ETS Directive stipulate that, except for revenues established as own revenues in accordance with Article 311(3) TFEU and entered in the Union Budget, the Member States shall determine the use of revenues generated from the auctioning of allowances.⁴⁵ The revenues shall be used in accordance with the criteria contained in Article 10(3), except for the revenues used for the compensation of indirect carbon costs in Article 10a(6).⁴⁶ The social aspects of the energy transition are directly addressed here through the inclusion of a specific provision in Article 10(3) on “*measures intended to improve energy efficiency, district heating systems and insulation, or to provide financial support in order to address social aspects in lower- and middle-income households, including by reducing distortive taxes*”.⁴⁷

5. Social Climate Plans and Social Climate Fund: The Fit for 55 Package includes a proposal for the establishment of a Social Climate Fund for financing the plans of the Member States for addressing the social aspects of the emissions trading in the buildings and road transport sector.⁴⁸ The Fund will rely on the principles of fairness and solidarity between and within Member States, and is aimed at supporting the European citizens most affected or at risk of energy or mobility poverty.⁴⁹ The target groups for the social aspects of emission trading are identified to be vulnerable households, vulnerable micro-enterprises and vulnerable transport users.⁵⁰ The resources of the Fund will correspond to 25% of the expected revenues from the new emissions trading in the period

⁴³ EU Commission Proposal for ETS Reform at 17; proposed Article 9, EU Commission Proposal for ETS Reform at 44.

⁴⁴ EU Commission Proposal for ETS Reform at 17; proposed Article 9, EU Commission Proposal for ETS Reform at 44.

⁴⁵ Proposed Article 10(3) to the EU-ETS Directive to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 45.

⁴⁶ Proposed Article 10(3) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 45

⁴⁷ Proposed Article 10(3)(h) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 45.

⁴⁸ EU Commission Proposal for ETS Reform at 6. See also the Proposed Regulation for establishing a Social Climate Fund.

⁴⁹ EU Commission Proposal for ETS Reform at 35.

⁵⁰ Proposed Article 30d(5)(b) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 55.

between 2026 and 2032.⁵¹ The Member States are additionally expected to use their auction revenues for financing part of the costs of their Social Climate Plans.⁵² The draft Regulation for establishing a Social Climate Fund provides that Member States shall contribute to at least 50% of the total estimated costs of their Plans, and for this purpose, use *inter alia* the revenues from the auctioning of their allowances from ETS-2.⁵³

6. **Modernisation Fund:** The Modernisation Fund has been aligned with the objectives of the European Green Deal and the European Climate Law, including through the elimination of support to investments related to any fossil fuels.⁵⁴ The proposal envisages the auctioning of 2% of the total quantity of allowances between 2021 and 2030 to establish a fund known as the Modernisation Fund for improving energy efficiency and modernising the energy systems of Member States.⁵⁵ The beneficiaries for this amount of allowances shall be the Member States with a per-capita GDP at market prices below 60% of the European Union average in the year 2013.⁵⁶ Additionally, 2.5% of the total quantity of allowances between the year following the enforcement of the revised EU-ETS Directive and 2030 shall be auctioned for the Modernisation Fund, where the beneficiary Member States shall be those with a GDP per capita at market prices below 65% of the Union average during the period 2016 to 2018.⁵⁷

It has been proposed that at least 80% of the financial resources from the Modernisation Fund shall be used to support investments in the generation, use of electricity, and heating and cooling from renewable resources, the improvement of demand-side energy efficiency, energy storage and the modernisation of energy networks, the support of low-income households, and a just transition in carbon-dependent regions in the beneficiary Member States.⁵⁸

7. **Promoting Innovation:** The proposed amendments give a push to innovative technologies that can help mitigate climate change. The free allocation of certificates in case of installations covered by the obligation to

⁵¹ Fit for 55 Proposal on the EU-ETS at 35.

⁵² Fit for 55 Proposal on the EU-ETS at 35.

⁵³ Article 14, Proposed Regulation for establishing a Social Climate Fund.

⁵⁴ See EU Commission Proposal for ETS Reform at 18; proposed Article 10d to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 49–50.

⁵⁵ Proposed Article 10(1) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 44–45.

⁵⁶ Proposed Article 10(1) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 44–45.

⁵⁷ Proposed Article 10(1) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 44–45.

⁵⁸ Proposed Article 10d(2) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 49–50.

conduct an energy audit is made conditional on the implementation of the recommendations of the audit report, and in this manner, incentives are created for the adoption of low-carbon technologies.⁵⁹ In the absence of implementation of measures for greenhouse gas reduction recommended by energy audit reports under the Energy Efficiency Directive, or other equivalent measures, the amount of free allocations could be reduced.⁶⁰

The proposal also expands the scope of the Innovation Fund, allowing it to provide support to projects through competitive tendering mechanisms such as Carbon Contracts for Difference (CCDs).⁶¹ The Fund itself is increased by 50 million allowances, a combination of allowances available through free allocation (40 million) and available from auctioning (10 million).⁶² Additionally, the revenue from the auction of 150 million allowances issued under Chapter IVa (buildings and road transport) shall be made available for the Innovation Fund,⁶³ in order to “stimulate the green transition” by addressing the transitional and social challenges from the carbon pricing in the new sectors alongside the targeted support for innovation⁶⁴.

The Innovation Fund focuses on the sectors listed in Annex I and the proposed Annex III of the ETS Directive, pertaining to ETS-1 and ETS-2, respectively, and will include environmentally safe carbon capture and utilisation (“CCU”) and innovative renewable energy and storage technologies.⁶⁵ As per the proposed amendments, the Innovation Fund can also potentially support break-through innovative technologies and infrastructure for the decarbonisation of the maritime sector, and for the production of low-and zero-carbon fuels in aviation, rail, and road transport.⁶⁶ Sectors covered in the CBAM regulation will receive special attention.⁶⁷

⁵⁹ Fit for 55 Proposal on the EU-ETS at 17; proposed Article 10a(1) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 45.

⁶⁰ Fit for 55 Proposal on the EU-ETS at 17; proposed Article 10a(1) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 45.

⁶¹ Fit for 55 Proposal on the EU-ETS at 18. See also proposed Article 10a(8) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 47–48.

⁶² Fit for 55 Proposal on the EU-ETS at 18; proposed Articles 10a(8) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 47–48.

⁶³ Proposed Article 30d(3) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 54.

⁶⁴ EU Commission Proposal for ETS Reform at 20.

⁶⁵ Proposed Article 10a(8) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 47–48.

⁶⁶ Proposed Article 10a(8) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 47–48.

⁶⁷ Proposed Article 10a(8) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 47–48.

I. Agenda for progress: Further development of the German carbon pricing framework

Harmonising the BEHG with the Fit for 55 Package

Even as the Fit for 55 Package proposals continue to await final deliberation and incorporation, in Germany the discussion should start on the future outlook for the BEHG. The Impact Assessment Report accompanying the Fit for 55 Package, released in July 2021, notes that “Germany has indicated its interest to have its system replaced by an EU-wide system.”⁶⁸ Subsequently, in December 2021, the new government in Germany finalised its coalition agreement, which contains the pledge to review the BEHG in order to assess its compatibility with a possible ETS-2 and, if necessary, to adapt it to ensure the smoothest possible transition.⁶⁹ At the same time, ETS-2 faces strong opposition in the EU from countries such as Poland, Hungary, Romania, Chechia, Slovakia, as well as from the social democratic, green, and left-wing parties in the EU Parliament.⁷⁰

Consequently, clear guidance is needed regarding all possible scenarios: (i) the continuation of the BEHG alongside the ETS-2, (ii) the integration of the BEHG into the ETS-2, and (iii) the rejection of the proposal for ETS-2 such that the BEHG would need to continue in Germany as a standalone emissions trading system focusing on transport and heating.

In addition, the German government should provide reliable guidance on the price per tonne of CO₂ emissions, and the expected price trajectory in a timely manner, so as to create greater certainty for the investment decisions of companies in the forthcoming years. The coalition agreement of the current German government indicates a preference for an EU-ETS floor (minimum) price of 60 Euro/Tonne of CO₂, failing which, a national floor price of 60 Euro/Tonne could be considered as a fall-back option.⁷¹ However, the coalition agreement is silent on the time frame envisaged for setting this floor price, and whether this suggested price pertains to ETS-1 alone or also takes into consideration the potential implementation of ETS-2. For reference, at the time of writing this paper, the EU-ETS price is 83.46 Euro/Tonne⁷², while the German emissions trading price is fixed statutorily at 30 Euro for the year 2022.

⁶⁸ “Impact Assessment Report accompanying the document ‘Directive of the European Parliament and of the Council amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union, Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading scheme and Regulation (EU) 2015/757” Commission Staff Working Document (July 14, 2021) (hereinafter “Impact Assessment Report accompanying the EU Commission Proposal for ETS Reform”) at 112.

⁶⁹ Coalition Agreement 2021, *supra* note 6, at 63.

⁷⁰ Kaiser, Tobias, “Ein wichtiger Baustein des Klimaplanes droht zu kippen: Die EU-Kommission will Benzin, Heizöl und andere Brennstoffe teuer machen. Darüber gibt es Streit” *Die Welt* (February 18, 2022).

⁷¹ Coalition Agreement, *supra* note 6, at 63.

⁷² Source: EMBER Carbon Pricing, <https://ember-climate.org/data/carbon-price-viewer/> (April 25, 2022).

At present the BEHG stipulates a fixed price for an emissions certificate corresponding to the emission of one tonne of greenhouse gases, measured in CO₂ equivalents, increasing incrementally from 25 Euro in 2021 to 55 Euro in 2025, and then switching to a price corridor ranging from 55 Euro to 65 Euro in 2026.⁷³ These figures could need to be recalibrated based on the ETS-2 price, which is yet unknown. Some experts recommend bringing forward the price corridor and auctioning of certificates from 2026 to 2023, to counter certain the legal objections to the BEHG in its current form, as well as to gain insights into the working of the market-based system and the relevant actors, and to transition to a higher and broader price corridor from 2026, once there is greater political certainty about the long-term direction of the carbon pricing system.⁷⁴ A national minimum price starting in 2025 is also recommended, in order to ensure a smooth transition to ETS-2 and to send a strong signal to other EU member states.⁷⁵

In our assessment, in view of the discussion at the EU level having progressed in the direction of expanding the scope of the EU-ETS to new sectors, and since more ambitious climate goals were stipulated after the BEHG was enacted, and further considering that the current German government has already expressed an inclination to set a floor price of 60 Euro/Tonne of CO₂, a carbon price in the range of 55–65 Euros under the BEHG should be introduced earlier than 2026. However, this must necessarily be accompanied by the timely formulation of concrete social compensation measures to mitigate the burden of this higher carbon price on households.

The coalition agreement of the current German government expresses the intention to make a recommendation on the design of the market phase of the BEHG after 2026,⁷⁶ but the exact focus points and timeframe have not been clarified. In our view, the further development of the German emissions trading scheme, including the price corridor phase, should be finalised by the government at the earliest. As part of this process, it would be advisable to gain feedback from the relevant stakeholders regarding the functioning of the emissions trading system under the BEHG up till now.

Policy mix for supporting the emissions trading system

In view of its contribution in tackling emission-based externalities and setting a price signal for the investment trajectory required for decarbonisation, carbon pricing could play the role of the leading instrument in the policy mix of instruments geared towards climate change mitigation. And yet, carbon pricing alone, without supplementary non-pricing policies and investments in low-carbon

⁷³ § 10(2), BEHG.

⁷⁴ Pahle, Michael, et al., “Eckpunkte und no-regret Maßnahmen für die Weiterentwicklung der CO₂-Bepreisung auf deutscher und europäischer Ebene” *Ariadne-Hintergrund*, available at https://www.kopernikus-projekte.de/aktuelles/news/ariadne_co2-bepreisung, at 6–7.

⁷⁵ *Ibid* at 8.

⁷⁶ Coalition Agreement 2021, *supra* note 6, at 63.

technology and infrastructure, would be highly unlikely to reduce CO₂ emissions to levels that are consistent with Paris Agreement climate targets.⁷⁷ Based on the available evidence, it has been argued that carbon pricing is unlikely to achieve deep decarbonisation over the short, medium and long term without additional policy levers.⁷⁸ Specifically, appropriate sector-specific complementary policy instruments and measures would facilitate the correction of sector-specific market failures, which could otherwise potentially weaken the dynamic incentive effect of carbon pricing.⁷⁹

Notably, the buildings and transport sectors suffer from a set of market failures and market barriers, which cannot be addressed by the introduction of carbon pricing in these sectors alone.⁸⁰ Reducing emissions in these sectors requires the development of infrastructure that is conducive to the decarbonisation pathways. For example, the available evidence does not suggest that carbon pricing alone can sufficiently accelerate investment in the requisite innovation ecosystem and new infrastructure (for example, charging stations) that are necessary for transitioning to electric vehicles.⁸¹ In fact, policies which expand the infrastructure for electromobility, and local and long-distance public transport can actually serve to increase the effectiveness of carbon pricing.⁸² Additionally, issues in the transport sector such as congestion, noise and air pollution are not addressed adequately by a carbon price, and therefore require targeted policies.⁸³ Similarly, the buildings sector suffers from a set of market failures and barriers that hinder the shift to sustainable improvements in buildings.⁸⁴ Finally, additional policies enacted to support the carbon price might help policymakers to credibly commit to long-term climate targets.⁸⁵

⁷⁷ Rafaty, Ryan et al., “Carbon pricing and the elasticity of CO₂ emissions” *Cambridge Working Papers in Economics* (2020) at 49.

⁷⁸ See Tvinnereim, Endre and Mehling, Michael, “Carbon pricing and deep decarbonisation” *121 Energy Policy* (2018) at 187.

⁷⁹ Edenhofer, Ottmar et al., “Optionen für eine CO₂-Preisreform” *MCC-PIK-Expertise für den Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung* (2019), available at https://www.mcc-berlin.net/fileadmin/data/B2.3_Publications/Working%20Paper/2019_MCC_Optionen_f%C3%BCr_eine_CO2-Preisreform_final.pdf, at 9.

⁸⁰ See, for example, Thomas, Samuel et al., “Pricing is just the icing: The role of carbon pricing in a comprehensive policy framework to decarbonise the EU buildings sector” *Regulatory Assistance Project* (2021) at 13; Edenhofer, Ottmar et al., “A whole-economy carbon price for Europe and how to get there” *Bruegel Policy Contribution* (2021), available at <https://www.bruegel.org/2021/03/a-whole-economy-carbon-price-for-europe-and-how-to-get-there/?msclid=128a5c6fc6a511ec9a29bbb2cc55e08c>, at 4.

⁸¹ Tvinnereim, Endre and Mehling, Michael, “Carbon pricing and deep decarbonisation” *121 Energy Policy* (2018) at 187.

⁸² Edenhofer, Ottmar et al. (2019), *supra* note 80, at 9.

⁸³ *Ibid* at 10.

⁸⁴ Thomas, Samuel et al. (2021), *supra* note 81, at 13–14.

⁸⁵ Edenhofer, Ottmar et al. (2021), *supra* note 81, at 4.

These considerations are supported by the Impact Assessment Report accompanying the proposal for amending the EU-ETS Directive, which concludes that emissions in the buildings and road transport sectors would not decrease adequately to be on the path to achieve an economy-wide 55% emission reduction, without the simultaneous implementation of additional measures.⁸⁶ The modelling for the impact assessment found that “*over-reliance on strengthened regulatory policies would lead to higher burdens on economic operators and more significant investment challenges*”, while “*carbon pricing alone will not allow overcoming persisting market failures and non-market barriers*”.⁸⁷ The Impact Assessment proceeds to identify the “optimal policy mix” to be a combination of carbon pricing with regulatory policies (particularly focused on renewable energy and energy efficiency) as well as sectoral policies.⁸⁸

Policies that complement carbon pricing, by addressing the prevalent market failures and ensuring investment and innovation in low-carbon technologies have been termed “carbon price amplifiers”.⁸⁹ A checklist for such a policy design addresses three aspects: first, a direct link between the complementary policies and carbon pricing which allows these policies to be phased out when the carbon price reaches a sufficient level; second, formulating complementary policies directly in terms of carbon emissions to target the climate externality; and third, incentivising competition between different abatement technologies and suppliers to ensure that the cheapest options for abatement are selected.⁹⁰ It has also been recommended that, in order to design the wider policy mix alongside carbon pricing, subsidies and standards should “possess at least some of the economic attributes of carbon pricing”.⁹¹

Not only will complementary measures enhance the functioning of the carbon price, but a well-functioning price signal could also support the other policy measures aimed at decarbonising the sector. For example, in case of the buildings sector in the EU, the electrification of heating systems and the rebalancing of the prices of fossil fuels and electricity will play a central role in the process of decarbonisation and reaching the 2030 goals.⁹² When the environmental costs of carbon emissions are reflected in energy prices, the increased cost of using carbon-intensive fuels would result in improved paybacks to energy efficiency upgrades and heating system replacements, thereby reinforcing the effectiveness of other policy measures in the building sector.⁹³

⁸⁶ Impact Assessment Report accompanying the EU Commission Proposal for ETS Reform at 18.

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ Edenhofer, Ottmar et al. (2021), *supra* note 81, at 9.

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² Thomas, Samuel et al. (2021), *supra* note 81, at 13.

⁹³ *Id.*

The Fit for 55 Package delineates the broad goals that the policy mix accompanying the carbon pricing in the buildings and transport sectors should support, and also outlines how the revenues from the auctions in the emissions trading system should be used.⁹⁴ The identified areas for policy interventions include measures aimed at decarbonising the heating and cooling of buildings and reducing their energy needs, measures for accelerating the uptake of zero-emission vehicles and financial support to create the supporting infrastructure for them, measures to encourage a shift to various modes of public transport, as well as measures for financial support for addressing the social aspects concerning the economically vulnerable groups in both the buildings and road transport sectors.⁹⁵

Notably the European Commission does not propose concrete policy measures in this context, nor does it prescribe binding targets, indicating that the Member States will have the freedom to design the appropriate framework for complementary measures to accelerate decarbonisation in these sectors, while also meeting the requirement of financially supporting the economically vulnerable groups during this transition. In order to avoid huge inconsistencies in measures across Member States, and to ensure that the measures are consistent with the ETS, the formulation of an EU-wide framework of guidelines for such measures would be a helpful addition. This approach would be consistent with the observations made by the European Commission at an earlier point of time, which emphasized the need for coherence between different policies in the future policy framework in the buildings and road transport sectors with the recommendation for the policy design for each specific measure as well as implementation and monitoring.⁹⁶

Designing the interplay of various sectoral and cross-sectoral policy measures to complement the carbon price should be treated as a key task of climate policy.⁹⁷ A clear regulatory principle for aligning various political instruments with each other, and with climate protection goals, can help ensure that the measures complement each other, instead of weakening each other or counteracting each other.⁹⁸ In the specific context of Germany, the coordination between various

⁹⁴ Proposed Article 30(d)(5) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 55.

⁹⁵ Proposed Article 30(d)(5) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 55.

⁹⁶ “Impact Assessment accompanying the document Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – Stepping up Europe’s 2030 climate ambition: Investing in a climate-neutral future for the benefit of our people” Commission Staff Working Document (September 17, 2020), available at <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020SC0176>, at 41.

⁹⁷ Edenhofer, Ottmar et al., (2019), *supra* note 80, at 10.

⁹⁸ Knodt, Michèle et al., “Wegmarken für das EU-Klimaziel 2030: Versteckte Risiken und Chancen der Szenarien der EU-Kommission für den Pfad zur Klimaneutralität” Ariadne-Kurzdossier (2020), available at <https://www.pik->

ministries for the further development of the carbon price regulations needs to be a further area of deliberation. This is particularly relevant in light of the recent creation of new rearranged ministries, such as the Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz*), and the consequent reorganisation of portfolios within ministries.

Measures for Social Compensation

When carbon pricing is extended to sectors such as buildings and transport, consumers will directly bear the effects of higher prices, which underscores the urgency of addressing the social aspects of the accelerated transition to climate neutrality. Revenue recycling, or the mechanisms through which income generated from carbon taxation is earmarked and returned back to society, has emerged as the most feasible mode for politicians to garner adequate public support for enacting carbon taxation policies.⁹⁹ Through revenue recycling, policymakers address the immediate costs arising from the carbon taxation which directly impact consumers, even as the environmental gains from the carbon taxes are experienced by society only over a longer time-frame.¹⁰⁰

It has been recommended that deliberations about the distributional impacts of the new ETS system should start as soon as possible, and that a substantial share of its revenues should be reserved for addressing the social concerns arising from its implementation.¹⁰¹ It is argued that this approach could help achieve a price level closer to the efficient level, through the timely addressing of the equity and efficiency aspects of the price system.¹⁰²

Some authors have recommended that the assessment of the distributional impacts of introducing a carbon price for heating fuels should be based on three sets of factors: (i) geographical conditions influencing the amount of energy used for heating as well as the carbon content of fuel used for heating, (ii) the vertical inequalities arising from the impact of carbon pricing on different income deciles, and (iii) the horizontal inequities in the use of heating fuels and in the ability to respond to the carbon price within the same income decile.¹⁰³

The BEHG is largely concerned with administrative aspects of establishing the carbon pricing system in Germany and does not prescribe the manner in which the revenues from the sale of certificates will be used. The revenues from the sale of allowances under the BEHG flow into the Energy and Climate Fund (*Energie- und Klimafonds*), a special fund established by legislation (*Gesetz zur Errichtung eines Sondervermögens „Energie- und Klimafonds“ – EKFG*) to

potsdam.de/de/institut/abteilungen/transformationsspfade/projekte/ariadne/kurz dossier_eu-klimaziel2030, at 18.

⁹⁹ Beiser-McGrath, Liam F. and Bernauer, Thomas, “Could revenue recycling make effective carbon taxation politically feasible?” *Science Advances* (2019) at 1.

¹⁰⁰ *Id.*

¹⁰¹ Edenhofer, Ottmar et al. (2021), *supra* note 81, at 5.

¹⁰² *Id.*

¹⁰³ Thomas, Samuel et al., (2021), *supra* note 81, at 22–30.

promote environmentally friendly, reliable and affordable energy supply and climate protection.¹⁰⁴ In January 2022, the Federal Environmental Agency announced that the sale of allowances under the BEHG from October 2021 at a fixed price of 25 Euro per tonne of CO₂ generated revenues of 7.2 Billion Euros.¹⁰⁵ This was in addition to revenues of 5.3 billion Euros generated from the auction of certificates under the EU-ETS for Germany in the year 2021,¹⁰⁶ which also flow into the Energy and Climate Fund¹⁰⁷. In total, about 12.5 billion Euros of revenue was generated through the two emissions trading systems, which flowed into the Energy and Climate Fund.¹⁰⁸

The Energy and Climate Fund has been established predominantly for financing measures in the following areas: energy efficiency, renewable energy, energy storage and grid technologies, energy-efficient building refurbishment, regional climate protection, international climate and environmental protection, and electromobility.¹⁰⁹ In their current form, neither the BEHG nor the EKFG explicitly mention the possible utilisation of the revenues from the allowances under the BEHG for social compensation measures in the form of payments to households and end-consumers.

In order to create greater transparency, clarity, and certainty in planning, the mechanism for addressing the social aspects of the decarbonisation transformation led by carbon pricing should also find a place in legislation. This is all the more urgent in view of the proposals in the Fit for 55 Package, which, if implemented, would require Member States to implement Social Climate Plans and, more specifically, focused measures for addressing economically vulnerable groups in both the buildings and transport sectors.¹¹⁰

In the context of Germany, the reduction of the electricity price through the reduction of a statutory levy on electricity known as the EEG surcharge (EEG-Umlage), along with a per-capita compensation (known interchangeably as a “climate payout”, “citizen energy compensation” or “climate bonus”) has been argued to be the most optimal mix of measures for providing relief from the

¹⁰⁴ § 2(1), Gesetz zur Errichtung eines Sondervermögens „Energie- und Klimafonds“ (EKFG), available at <https://www.gesetze-im-internet.de/ekfg/BJNR180700010.html?msckid=4ff23e1fc54c11eca9f9f7ee14ba7449>.

¹⁰⁵ “Emissionshandel 2021 mit Rekordeinnahmen von über 12 Milliarden Euro” German Environment Agency Press Release (January 5, 2022), available at <https://www.umweltbundesamt.de/presse/pressemitteilungen/emissionshandel-2021-rekordeinnahmen-von-ueber-12>.

¹⁰⁶ *Id.*

¹⁰⁷ § 4(1), EKFG

¹⁰⁸ German Environment Agency (2022), *supra* note 106.

¹⁰⁹ § 2(1), EKFG.

¹¹⁰ See Proposed Article 30d(5), Proposed Article 30(d)(5) to the EU-ETS Directive, EU Commission Proposal for ETS Reform at 55; Proposed Regulation for establishing a Social Climate Fund.

financial effects of carbon pricing.¹¹¹ In the year 2021, 4.7 billion Euros of the total revenue of 7.2 billion Euros generated under the BEHG was utilised towards reducing the EEG surcharge, which in turn contributed towards containing the increase in electricity prices in Germany.¹¹²

The current German government's coalition agreement also reflects the intention to compensate the imminent rise in prices and assure the acceptance of the carbon market system through a monetary compensation mechanism in addition to the abolition of the EEG surcharge.¹¹³ In our assessment, the criteria, time frame and exact modalities of the payouts under this compensation mechanism should be deliberated at the earliest possible and also anchored in legislation. Implementing such compensatory payouts will require the execution of a series of administrative actions, which should be initiated without delay. These administrative measures could include, for example, the creation of a climate payment register, or the linking of the payouts with the existing social security payments and the tax identification numbers.¹¹⁴

A. Political Communication

As carbon pricing is increasingly gaining importance in the German and European political discourse as a key instrument for achieving ambitious decarbonisation goals, its effects will also be felt more closely in society. Active engagement with issues concerning the social perception and degree of acceptance for carbon pricing should also, therefore, be a priority for policymakers. A recent study in Germany clearly shows the varying level of acceptance for a carbon price across income groups: in contrast to an approval rate of 71.3% in the highest income group, the lowest income group showed an approval of 40%.¹¹⁵ This highlights the importance of a targeted redistribution of the revenues from the carbon price, to enable low-income households to experience a noticeable relief.¹¹⁶

In another study, interviews conducted with citizens in the United States of America and Germany found that providing information on the utilisation of

¹¹¹ See Kalkuhl, Matthias et al.: "CO₂-Bepreisung: Mehr Klimaschutz mit mehr Gerechtigkeit" MCC-Arbeitspapier (2021), available at <https://www.mcc-berlin.net/forschung/publikationen/publikationen-detail/article/co2-bepreisung-mehr-klimaschutz-mit-mehr-gerechtigkeit.html>, at 8-9.

¹¹² German Environment Agency (2022), *supra* note 106.

¹¹³ Coalition Agreement 2021, *supra* note 6, at 63.

¹¹⁴ See Färber, Gisela and Wieland, Joachim, "Rechtliche und Verwaltungsorganisatorische Möglichkeiten der Umsetzung einer Klimaprämie" Deutsche Universität für Verwaltungswissenschaften Speyer Gutachten (2022), available at <https://www.wvf.de/fileadmin/fm-wwf/Publikationen-PDF/Klima/Studie-Rechtliche-und-verwaltungsorganisatorische-Moeglichkeiten-einer-Klimapraemie.pdf>.

¹¹⁵ Frondel, Manuel et al.: "Akzeptanz der CO₂-Bepreisung in Deutschland: Evidenz für private Haushalte vor Einführung des CO₂-Preises", RWI – Leibniz-Institut für Wirtschaftsforschung Diskussionspapier (2021), at 15.

¹¹⁶ *Id.*

revenue from carbon tax has a significant impact on individuals' preferences, and without such information, they are significantly less willing to pay for carbon taxation.¹¹⁷ The data from another set of interviews conducted with German-speaking households in 2021 revealed that 59% of the respondents would support a higher carbon price, if the revenues from the carbon pricing were to fully flow back to the private consumers.¹¹⁸ It has been emphasized by some authors that a per-capita compensation payment is also advantageous due to its visibility, and therefore, it could contribute towards the greater acceptance for climate protection measures and a higher carbon price.¹¹⁹ Furthermore, the available literature on the acceptability of climate policy, and in particular carbon taxes, indicates that policy design to protect low-income households is found to have greater appeal.¹²⁰

These findings underscore the importance of effective political communication as one of the cornerstones for the further development of policy in the field of carbon pricing. In order to facilitate greater societal acceptance of carbon pricing, the details of carbon pricing must be conveyed in a credible manner, such that the details are transparent and comprehensible.¹²¹ In our assessment, targeted information campaigns on the carbon pricing system in Germany, its process and goals, the utilisation of revenue generated through the sale of emission certificates, and concrete measures to protect low-income households should form a focus area for the current government.

¹¹⁷ Beiser-McGrath, Liam F. and Bernauer, Thomas, *supra* note 100, at 3.

¹¹⁸ "CO₂-Bepreisung. Ergebnisse einer Verbraucher:innen-Befragung" Verbraucherzentrale Bundesverband e.V. (2021), https://www.vzbv.de/sites/default/files/2021-09/21_09_17_Slides_Umfrage%20CO2%20Bepreisung_FINAL.pdf.

¹¹⁹ Gechert, Sebastian and Dullien, Sebastian, "Steigender CO₂-Preis: Warum der Klimabonus Ideal für den sozialen Ausgleich ist" *Hans-Böckler-Stiftung: IMK Kommentar Nr. 2* (2021), available at https://www.boeckler.de/de/faust-detail.htm?sync_id=HBS-008027, at 2.

¹²⁰ Baranzini, Andrea et al., "Carbon pricing in climate policy: seven reasons, complementary instruments, and political economy considerations" *WIREs Climate Change* (2017) at 8.

¹²¹ EPICO Klimainnovation und Konrad-Adenauer-Stiftung, "Vier Bausteine für eine Innovationsagenda" *Konzeptpapier des Policy Accelerator for Climate Innovation* (2021), available at <https://epico.org/de/veroeffentlichungen/vier-bausteine-fuer-eine-innovationsagenda>.

CONCLUSION

As carbon pricing is increasingly permeating the mainstream political discourse in Germany as a credible instrument for climate policy, several areas require further development and concretisation. This paper identifies the areas that are ripe for intervention in the context of domestic policy in Germany, particularly in the backdrop of the Fit for 55 Package proposals and the commitment of the recently formed government in Germany towards carbon pricing: first, a review and revision of the BEHG; second, facilitating the interaction of the broader policy mix of climate policy instruments with carbon pricing; third, the development of social compensation measures in a clear and transparent manner, and the setting up of the relevant administrative framework; and fourth, targeted political communication about carbon pricing to clarify its goals and garner stable political support. In our view, deliberations and policy actions on these topics should commence in Germany at the earliest, instead of waiting for further clarity to emerge at the EU level on the direction of the EU-ETS.

Annex I: Carbon pricing as an element of the 2021 Bundestag election campaigns

Carbon pricing as an instrument found explicit acceptance in the election manifestoes of four prominent political parties for the 2021 Bundestag elections in Germany: the Union comprising the Christian Democratic Union and the Christian Social Union (CDU/CSU), the Social Democratic Party (SPD), the Green Party, and the Free Democratic Party (FDP). In contrast, the Left Party (Die Linke) outrightly rejected emissions trading as the lead instrument for climate protection¹²², and the Alternative for Germany Party (AfD) rejected any form of carbon taxation¹²³, although it did not expressly engage with carbon pricing. Despite the differing approaches and content of proposals contained in the party programmes, it was a significant development that carbon pricing clearly emerged as a mainstream political topic in Germany in 2021.

The manifesto of the SPD emphasized the importance of the role of the carbon price, as part of the national emissions trading system since the beginning of 2021, in making climate-friendly alternatives more attractive.¹²⁴ As further steps, the SPD proposed financing the abolition of the EEG surcharge partly through the revenues from the carbon pricing system, and a potential per capita bonus alongside the increase of the carbon price.¹²⁵

The Green Party identified carbon pricing as one of many instruments for achieving the climate targets, and one that should be used in an effective and socially just manner.¹²⁶ To this end, it proposed a carbon price of 60 Euro in the year 2023, and thereafter increase in concert with other measures, to achieve the climate targets set for the year 2030.¹²⁷ The documents also proposed the return of revenues from the emissions trading system through a per capita

¹²² “Zeit zu handeln! Für soziale Sicherheit, Frieden und Klimagerechtigkeit: Wahlprogramm zur Bundestagswahl 2021” Die Linke (The Left Party) (2021), available at https://www.die-linke.de/fileadmin/download/wahlen2021/Wahlprogramm/DIE_LINKE_Wahlprogramm_zur_Bundestagswahl_2021.pdf?msckid=f1aa23dbc55c11ecbc4e26c9d9e4c6ec, at 68.

¹²³ “Deutschland. Aber normal. Programm der Alternative für Deutschland für die Wahl zum 20. Deutschen Bundestag.” Alternative für Deutschland (Alternative for Germany), available at https://www.afd.de/wp-content/uploads/sites/111/2021/06/20210611_AfD_Programm_2021.pdf, at 175.

¹²⁴ “Aus Respekt vor deiner Zukunft. Das Zukunftsprogramm der SPD” Sozialdemokratische Partei Deutschlands (Social Democratic Party of Germany) (2021), available at <https://www.spd.de/fileadmin/Dokumente/Beschluesse/Programm/SPD-Zukunftsprogramm.pdf>, at 10.

¹²⁵ *Id.*

¹²⁶ “Deutschland. Alles ist drin. Bundestagswahlprogramm 2021” BÜNDNIS 90/DIE GRÜNEN (Green Party) (2021), available at https://cms.gruene.de/uploads/documents/Wahlprogramm-DIE-GRUENEN-Bundestagswahl-2021_barrierefrei.pdf, at 19.

¹²⁷ *Ibid* at 20.

payment in the form of “Energy Money”, a reduction of the EEG surcharge, and a Climate Bonus Fund for low-income commuters.¹²⁸

The FDP manifesto contained a strong recommendation for the extension of the EU-ETS to all sectors and geographical areas as quickly as possible.¹²⁹ The incumbent CDU/CSU Union advocated a comprehensive system of European emissions trading, including the extension of the emissions trading system to sectors such as mobility, heating, and shipping.¹³⁰ A return of the revenues from the emissions trading system to citizens and businesses through electricity rebates also found a place in the party programme.¹³¹

¹²⁸ *Id.*

¹²⁹ “Nie gab es mehr zu tun. Wahlprogramm der Freien Demokraten” *Freie Demokratische Partei (Free Democratic Party)* (2021), available at https://www.fdp.de/sites/default/files/2021-08/FDP_BTW2021_Wahlprogramm_1.pdf, at 58.

¹³⁰ “Das Programm für Stabilität und Erneuerung. Gemeinsam für ein modernes Deutschland.” *Christlich Demokratische Union Deutschlands / Christlich-Soziale Union (Christian Democratic Union and Christian Social Union)* (2021), available at <https://www.csu.de/common/download/Regierungsprogramm.pdf>, at 41.

¹³¹ *Id.*

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