

10. July 2023

Effective and socially acceptable design of CO₂ pricing in the building and transport sectors

The CO₂ pricing of fuels and heating materials via emissions trading is a key lever for achieving climate targets in the building and transport sectors. However, it must be ensured that no social hardships arise in the process. This paper, based on a study by the German Environment Agency (UBA), shows how this can be done. The time and political pressure to act is high – implementation of the concept should start this year.

The Fuel Emissions Trading Act (BEHG) has included all fuel emissions outside the European Emissions Trading System (EU ETS 1) in a National Emissions Trading System (nEHS) in Germany since 2021. However, due to very low fixed prices, the nEHS (2023: €30/t CO₂) currently has hardly any steering effect towards climate protection and has not yet been a significant driver of the trend in energy price: at around 7ct/litre petrol and just under 0.6ct/kWh gas, nEHS is currently only responsible for around 5% of end-user prices.

The recently adopted EU ETS for fuels (EU ETS 2) will replace nEHS in 2027. Significantly rising CO₂ prices are possible and can be expected in the course of the transition to the EU ETS 2.

In contrast to nEHS, EU ETS 2 has fixed emission caps. The CO₂ price will therefore be formed as a scarcity price on the market from 2027. This represents a turning point in climate policy since the EU ETS 2 will for the first time effectively safeguard the European reduction targets in the building and transport sectors. CO₂ prices will be formed in conjunction with sector-specific instruments and measures from 2027 onwards: the weaker the climate policy instrument mix, the higher the CO₂ prices and vice versa. The CO₂ price is thus uncertain from today's perspective. However, the reduction pressure in building and road transport is enormous in both Germany and the whole of the EU. The reduction target in the EU ETS 2 for 2030 is 42% compared to 2005, whereas the reduction in the EU was only around 13% by 2021 – meaning that the current reduction rate will have to quadruple by 2030. This initially underlines the need for consistent strengthening and creation of accompanying instruments in these sectors. Due to an ambitious cap and, in case of doubt, only moderately designed regulatory legal instruments, CO₂ prices may increase significantly and abruptly to triple-digit levels from 2027 onwards even taking into account the price-dampening measures agreed for the EU ETS 2 (e.g. MCC 2023¹). In the EU ETS 1, the CO₂ price has already reached the €100/t mark in the current year.

A climate dividend and support programmes for vulnerable groups to reduce fossil fuel consumption can reconcile ambitious carbon pricing and social acceptability.

Significantly rising CO₂ prices will lead to noticeable and possibly also sudden cost increases for private households. Without support, this may lead to considerable societal and political challenges, therefore the pressure to act is high. The UBA concept shows that an ambitious CO₂ price and social goals can go hand in hand. To achieve this, the revenues that the Federal Government receives from CO₂ pricing in the transport and building sectors must flow back to the citizens. UBA's proposal therefore calls for the payment of a climate dividend combined with targeted additional support programmes for vulnerable households. These households are particularly heavily burdened by the CO₂ price and are not in a position on their own to reduce

¹ 2023 MCC CO₂-Bepreisung Klimaneutralität Verkehr Gebäude.pdf (mcc-berlin.net)

these burdens sufficiently quickly through behavioural adjustments or investment climate protection measures.

The climate dividend provides a basic safeguard against social hardship and can strengthen and sustain social acceptance of ambitious CO₂ pricing.

A substantial part of the CO₂ revenues should be refunded to households via a climate dividend. The climate dividend should be high enough to relieve the lower income strata on average. The incentives for households to take energy efficiency measures or switch to non-fossil energies are retained. This is because those who emit less CO₂ retain a higher net proportion of the climate dividend. However, not only can the climate dividend compensate for income losses due to the CO₂ price, it also creates additional scope in households for financing efficiency and climate protection measures in addition to specific support programmes. A key advantage of the climate dividend is that it also takes effect when CO₂ prices are high – and does so automatically if the amount of the climate dividend is linked to the CO₂ price and the resulting increase in revenue for the Federal Government. The climate dividend should be paid out as a direct payment with high transparency and a communicative link to CO₂ pricing, comparable to child benefit. This can make a significant contribution to ensuring societal acceptance of high CO₂ prices and ambitious climate protection policies. From an administrative perspective, the climate dividend may be paid out as a per capita payment. However, considerations under European law regarding the use of revenues from the EU ETS 2 and the Federal Government's limited fiscal leeway argue more in favour of a differentiated payment. The decisive factor is that the climate dividend is now coming before rising CO₂ prices. The legal prerequisites have already been created by the 2022 Annual Tax Act. What is needed now are more far-reaching political decisions on the introduction of a climate dividend – as already laid out in the coalition agreement.²

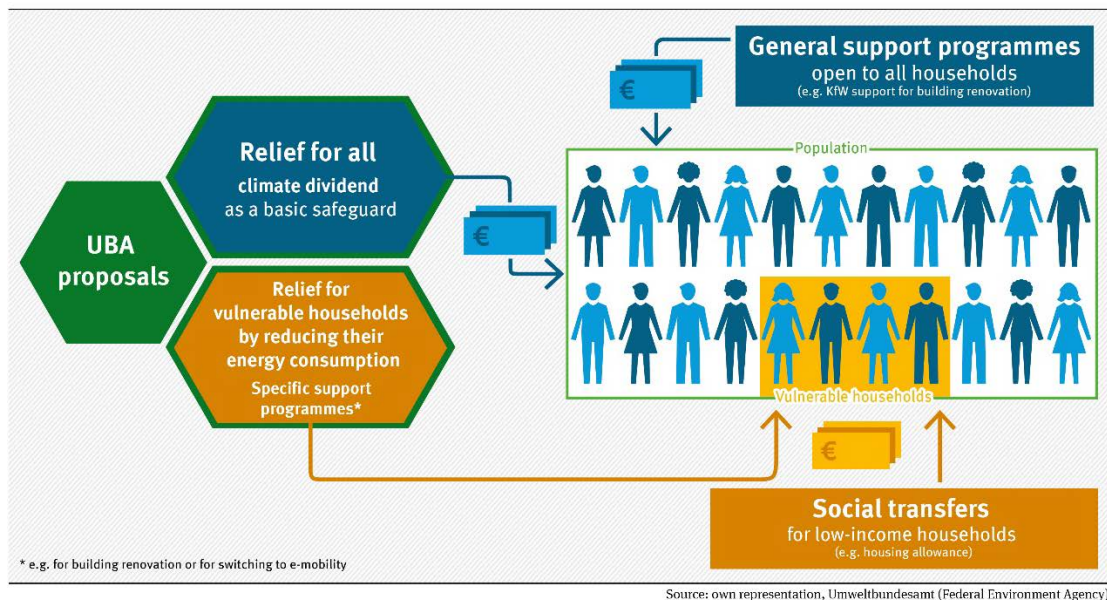
Specific support programmes for vulnerable households must complement the climate dividend.

Social hardship cannot be prevented by a climate dividend alone. This is because some of the households particularly affected by CO₂ pricing are considered vulnerable and are particularly affected by fossil energy price increases because they have a structurally high fossil energy demand while at the same time only a low income. These households have limited scope for action to respond to fossil fuel price increases since they lack the financial means for energy modifications or to buy an electric car. This applies, for example, to households living in poorly insulated apartments and using oil or gas heating systems, or to long-distance commuters who have to drive to work in a fossil fuel car for lack of alternatives. The state should launch or expand specific efficiency and decarbonisation measures support programmes for such households. Due to the high synergies between climate protection and social goals, these programmes are the silver bullet and crucial for a socially acceptable climate policy: they reduce GHG emissions and sustainably lower household energy costs. These programmes should be financed proportionally from the revenues of CO₂ pricing. Beyond that, however, they need a broader funding base. This is logical as the funding measures not only address the impacts of CO₂ pricing but also permanently increase resilience to sudden energy price increases. The funding approach is also in line with the main thrust of the new EU Social Climate Fund which will be launched in parallel with the EU ETS 2 and will start as early as in 2026. In order to be able to draw on this fund, the Federal Government must submit a National Social Climate Plan to

² Our concept is compatible with any flanking measures in the commercial sector (e. g. logistics). Our proposals aim to use the revenues directly attributable to private households. This leaves the revenues attributable to commercial users for possible flanking measures. However, we assume that the CO₂ costs of the commercial sector can be passed on to households for the most part. This is also the basis for the established compensation system for maintaining competitiveness under the BEHG (BEVC). This will apply to an even greater extent in the future due to the Europeanisation of CO₂ pricing. Therefore, this revenue should also flow back to households on a proportionate basis.

the EU Commission by mid-2025 in which vulnerable households, mobility users and micro-enterprises are quantified and specific measures and investment volumes are concretely defined.

Figure 1: Who gets financial reliefs?



Source: German Environment Agency's own representation

Act now and make the CO₂ price effective and socially acceptable:

- ▶ **Create a transparent and plannable transition to ETS 2:** We recommend actively communicating the implications of the EU ETS 2 decisions and vigorously flanking them with a time lead. To avoid a "rude awakening" in 2027, **the initial prices per tonne of CO₂ in the nEHS should be doubled from 2024 onwards** (€90/2024, €110/2025 and €110-130/2026) to smooth the price increase. This sustainably and transparently rising CO₂ price path will provide strong incentives for climate protection measures in the building and transport sectors and protect private households from investment "fossil cost traps" in these areas (keyword: "Now is the time to quickly renew the gas boiler").
- ▶ **Introduce climate dividend and support programmes:** The additional revenue from an increase in the BEHG price path should be **channelled into a climate dividend and specific support programmes for vulnerable households from 2024 onwards**, actively flanking the rise in CO₂ prices. The Federal Government's annual revenue from the nEHS could thus rise to more than €25 billion from 2024. This would create a significant new scope for financing the above-mentioned programmes.³ An amendment to the BEHG to increase CO₂

³ An increase in the CO₂ price from €35 to €90/t and around 280 million certificates will result in revenues of around €25 billion. This is an additional €15 billion compared to the Federal Government's current financial planning. This means that if the additional financial framework for 2024 is fully utilised, a climate premium per capita of up to €180 or €720 p.a. for a family of four could be financed. In the case of a differentiated payment, the amounts for households with lower and middle incomes could be increased accordingly so that a climate premium exceeding €1,000 p.a. could be financed for families. However, the specific support programmes for vulnerable households should be financed at least proportionately from CO₂ revenues. This and BECV and any commercial programmes reduce the scope for a climate premium. An expansion of the financing base with reference to the additional VAT revenues from CO₂ pricing (approx. €3 billion in 2024) can counteract this.

prices and the creation and active communication of the above-mentioned reimbursement programmes should be adopted this year.

Publisher

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Umweltbundesamt

Completion: July/2023

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