

Statement

of EnBW Energie Baden-Württemberg AG

on the revision of the European Emissions
Trading System (ETS Directive)

June 2021



Key elements of the ETS reform from EnBW's perspective

- on the revision of the European Emissions Trading System (ETS Directive)
- EnBW is committed to the consistent transformation of the energy system towards sustainable, efficient, low-carbon generation and has set itself the goal of climate neutrality by 2035. An ambitious target design and an effective, consistent carbon price signal in all sectors has been a core demand of EnBW for a long time.
- EnBW supports an ambitious climate target for 2030 of at least -55% and would also consider a target of -60% to be feasible and efficient if the framework conditions are set correctly. This requires a stringent alignment of the regulatory framework, including support for industrial transformation while ensuring sufficient carbon leakage protection.
- A robust ETS should continue to be the central climate instrument - both ensuring that targets are met and short-, medium- and long-term investment signals are sent out - and be strengthened accordingly. In our view, a reform of the ETS Directive is necessary in any case, as otherwise the steering effect of emissions trading would vanish due to further increasing surpluses and the associated price decline. A higher target for 2030 should also result in a correspondingly higher contribution from the ETS sectors.
- The individual reform options, in particular a so-called rebasing, a tightened reduction path (linear reduction factor, LRF), the individual parameters of the Market Stability Reserve (MSR) and the regular cancellation mechanism, strongly interact with each other and should therefore only be analysed and adjusted in a comprehensive way.
- Comparable CO₂ pricing in all sectors is necessary: Not only must all sectors contribute to reducing emissions on the way to climate neutrality, but also the most efficient solutions must be stimulated across sectors (sector coupling/integration). An immediate extension of the current emissions trading system to further sectors, in particular the building or heating/cooling sector and the land transport sector, must be thoroughly analysed due to the strongly differing CO₂ avoidance costs and appears premature at this point in time. Rather, a separate trading system should be considered, which could be transferred to the ETS at a later stage, possibly after 2030. Alternatively, the introduction of a CO₂ component via the EU Energy Tax Directive, combined with an ambitious minimum rate, would be conceivable.
- Overall, EnBW advocates the following combination of reform options for a reduction target of at least 55% by 2030:
 - A moderate rebasing (at least 200 mn. tCO₂) together with a correspondingly smaller increase of the LRF. This would allow for a partial correction to actual current emission levels and thus reduce the substantial surpluses in the short term

without triggering significant price jumps. Nevertheless, necessary price signals would emerge earlier. At the same time, the MSR would be triggered less and would therefore return more to its basic role as a balancing instrument for external demand shocks. In addition, a smaller CO₂ budget would be used in the period up to 2030, when some more easily achievable emission reductions are still possible. This might leave more room for manoeuvre after 2030 when reductions will be more difficult to achieve.

- Despite the reduced role of the MSR due to rebasing, a reform of the individual parameters is necessary: In order to ensure a continued short-term response of the MSR to possible external shocks, the current withdrawal rate of 24% should be maintained instead of falling back to 12% in 2024 as planned. The respective withdrawal and issuance thresholds should be adjusted to the necessary hedging needs and thus decrease.
- The previously voluntary deletion option for Member States in the case of major unilateral emission reduction measures, such as a statutory phase-out of coal-fired power generation, should be converted into an automatic mechanism to ensure the integrity of emissions trading.
- Despite the adjustments mentioned, major external shocks with corresponding price distortions cannot be ruled out. Only as a hedging mechanism, a carbon price floor should be introduced to strengthen investment security - especially for market-based renewable energies - which should be set at EUR 35 as a starting point and, if necessary, reviewed at regular intervals.
- Measures to avoid carbon leakage will continue to be necessary in the future. EnBW takes a critical view of the discussed introduction of a border adjustment mechanism (CBAM), as the threatening trade conflicts would rather complicate than promote the energy transition. A mixture of keeping the current free allocations, in principle maintaining the proportion to auctioning quantities, and innovation-promoting support for the conversion of industrial generation processes, e.g. via Carbon Contracts for Difference (CCfDs), would be preferred options.

1. Preliminary remarks

EnBW is committed to the consistent transformation of the energy system towards sustainable, efficient, low-carbon generation and is investing significantly in the expansion of renewable energies, energy efficiency, the modernization and replacement of the conventional power plant fleet, the expansion of grids and storage facilities as well as smart supply concepts. EnBW therefore welcomes an ambitious climate protection policy, in particular the goal of climate neutrality by

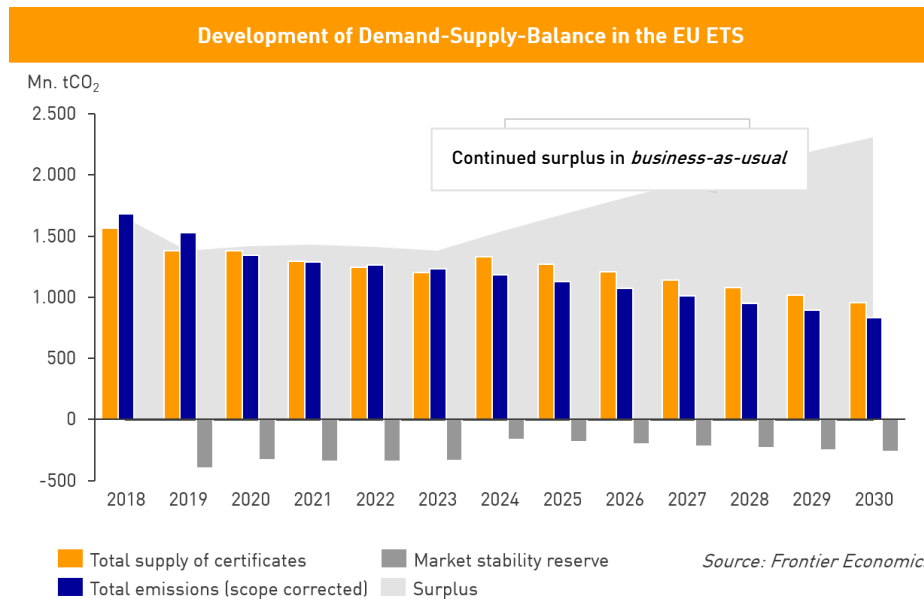
2050. In line with the European Commission's impact assessment¹, we assume that the European electricity sector will have to achieve climate neutrality as early as 2040 in view of its easier decarbonization options - as EnBW, we have already set ourselves this goal for 2035 and integrated it into key indicators for investment decisions.

In order to achieve the climate targets, a robust and stringent framework is needed. This includes a target architecture in line with the Paris Agreement as well as consistent instruments for their implementation. The period up to 2050 is short and in some cases covers little more than one investment cycle. Therefore, the framework needs to be adapted as quickly as possible securing clear investment signals.

EnBW therefore welcomes the currently discussed adjustment of the target architecture for 2030. We consider the compromise negotiated by the Council and the European Parliament of an adjustment to at least -55% as the lower limit of what would be necessary. We would have also considered the adjustment to -60% proposed by the European Parliament as feasible and efficient, with accordingly stringent framework conditions. The right balance must be struck between making the most of emission reductions possible at an early stage while achieving the fastest possible development and cost degression for technical solutions, without driving up costs excessively in the short term. The respective industries and sectors have different abatement options and time paths. The more broadly and cross-sectorally coordinated these investments are implemented, the more efficient the development will be overall. Greenhouse gas sinks and their strengthening should be more strongly integrated into climate protection targets in the future. However, a separate regulation, at least in relation to the ETS, would be preferable. Otherwise, it would be difficult for market participants to predict possible impacts due to sometimes considerable fluctuations as a result of weather and natural events.

In our view, consistent CO₂ pricing should continue to be one of the core elements of European climate policy, with the ETS as the central instrument. The reforms of the ETS in recent years have in principal proven to be effective: The Market Stability Reserve helps to absorb surpluses and has also recently helped to absorb some of the reduced demand following the COVID 19 crisis. However, recent price increases have occurred primarily in anticipation of announced reforms and do not reflect the current supply/demand balance. For CO₂ price signals to trigger the necessary investment in the longer term, the reforms must be ambitious and implemented in a consequent manner. Otherwise, the surpluses will continue to build up in the coming years and the ETS will lose its steering function in terms of investment signals (see figure).

¹ [Impact Assessment](#) for the Communication of the European Commission "A clean Planet for all", [COM \(2018\)773](#), 28.11.2018, and Communication of the European Commission "More ambition for Europe's Climate Target for 2030, COM (2020)562 final, 17.09.2020



Which reforms are necessary from EnBW's point of view will be explained below. The position is based i.a. on an analysis of the individual reform options and their respective interactions carried out on our behalf by Frontier Economics, which was published in the form of a short report.²

2. Recommended reform options in detail

- (1) Maintaining the ratio of mitigation contributions from ETS and non-ETS sectors is appropriate

Under the previous 40% target, the ratio of the mitigation contribution of ETS and non-ETS sectors (including shipping, road transport, heating and cooling, and services) was 43% to 30% compared to 2005. We expect this ratio to remain in the future target architecture - although calculating the distribution of ambition levels between ETS and non-ETS sectors is complex given the discussion on sink inclusion (LULUCF) and the UK's departure from the EU.

Hence, we expect that the energy sector, subject to the ETS, will have to continue to provide over-proportionate mitigation contribution in the future. This also emerges i.a. from the Commission's impact assessment of the 2030 Target Plan³. This seems appropriate in view of the divergences in abatement costs between the ETS and non-ETS sectors. In the long term, however, the climate neutrality target requires comparable efforts in all sectors.

According to the calculations of the Frontier Economics study we commissioned, a 2030 target of -55% (including LULUCF) would result in a reduction target in the ETS sectors of 59% compared to 2005, and 41% in the non-ETS sector.

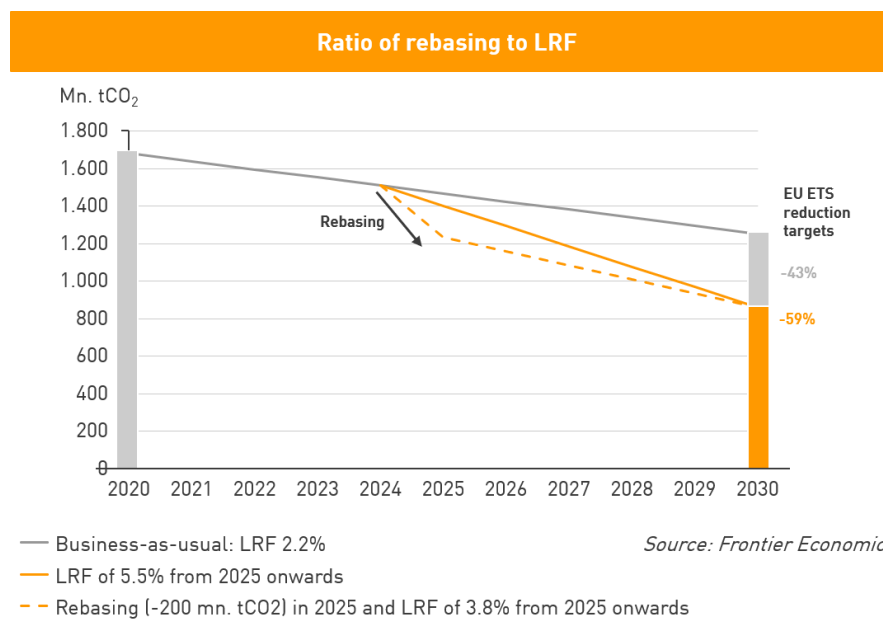
² Study „Assessment of reform options for the EU ETS“, FrontierEconomics, May 2021

³ Impact Assessment to the Communication of the European Commission "Stepping up Europe's 2030 climate ambition", 17.09.2020

These comments apply assuming the current scope of the ETS. In case of additional sectors to be transferred to the ETS, the quantity structure and thus the reduction requirements would have to be adjusted accordingly. In our view, however, the sectoral expansion of the ETS (possibly except for European maritime transport) is not advisable at present (see comments below).

- (2) A combination of partial rebasing and a correspondingly more moderate increase in the linear reduction factor (LRF) makes sense

The individual reform options for the ETS cannot be analyzed in isolation, as they interact strongly with each other. Nevertheless, a distinction can be made between the elements that determine the underlying quantity structure and its development in a predictable way from the beginning (these are mainly the calculation of the initial quantity of emissions and the rate of the annual reduction of the available quantity, the linear reduction factor (LRF)), and those elements that variably influence the supply quantity. The latter include the market stability reserve (MSR) and, with limitations, additional cancellation mechanisms. The MSR, despite its importance, should rather be reduced to its basic role: It is designed as an instrument for absorbing major short-term fluctuations in demand, not as an instrument for influencing prices in the long term or for reducing structural surplus quantities.



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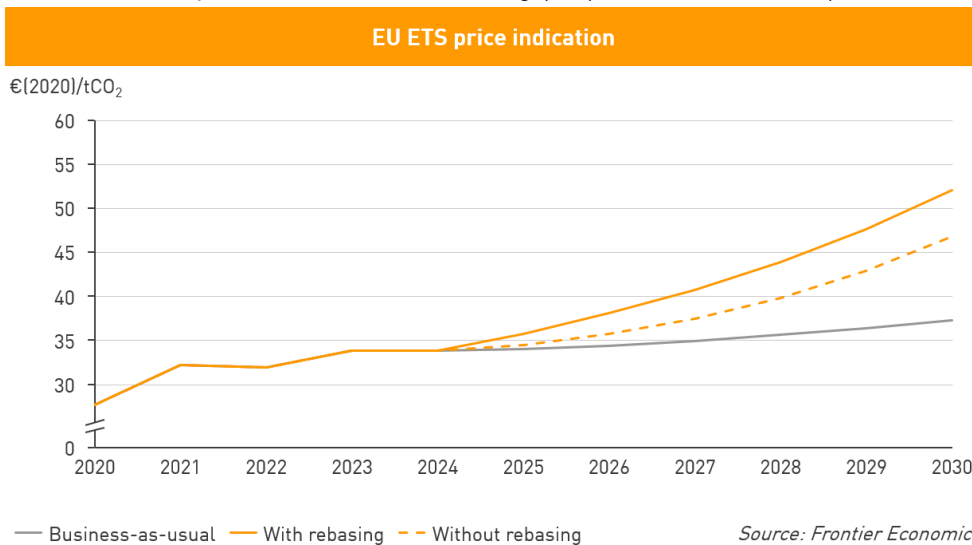
Due to the duration of the legislative process and implementation deadlines, the new rules are unlikely to be applied before 2025. This would leave only about half of the trading period to achieve the significantly higher ambitions. It is to be expected that the price development will already adjust to the expected outcome of the legislative process and at least to the higher medium-term targets. However, due to the uncertainties on the outcome of the negotiations, some volatility must probably be assumed. In our view, it is important to obtain legal certainty for the further regulatory framework as soon as possible. All opportunities should be used to allow planned measures to take effect as early as possible.

EnBW is in favour of moderate rebasing, i.e. a one-off reduction in the assumed total initial quantity of emission allowances. The reason for this is that the historical emission volumes were always set too high, so that a subsequent correction is necessary. Quantities between 150 and 350 mn.

tCO₂ are being discussed for rebasing. The exact calculation is also not trivial and depends strongly on which specific year or which average over several years is assumed. We propose a rebasing of 200 mn. tCO₂ at the earliest possible date, probably 2025. This value is in the middle of the spectrum mentioned above and, in our assessment, represents a good balance between an effective correction of the quantity framework and an excessive shortage of the market.

The advantage would be that the substantial surplus that already exists would be reduced rapidly. By lowering the cap with effect for all subsequent years, such moderate rebasing in 2025 would mean that the LRF could be flattened to 3.8% by 2030, according to the calculations of the study we commissioned. Without rebasing, an LRF of 5.5% per year would probably be required. Another very significant advantage of rebasing is that the available cumulative emission amounts would be about 3% lower by 2030, thus sparing the effective supply amount 2021-2030 ("CO₂ budget"). At the same time, the MSR would have to function less to absorb already existing surplus quantities. Instead, it would again be an instrument triggered only in the event of short-term major supply-demand imbalances, as originally envisioned.

According to rough calculations, the CO₂ price effect of a one-time withdrawal of 200 mn. tCO₂ seems relatively moderate. The rebasing proposed here corresponds to only 12% of the cap in



2025 or 3% measured against the total effective allocation in Phase IV of the total quantity. This would likely increase the CO₂ price by about 5 EUR/MW in 2030, compared to not implementing

rebasings. It must be emphasized that all options ensure sufficient liquidity until 2030.

A combination of the two options - rebasing and adjustment of the MSR parameters - is also recommended due to their different effects on auctioning and free allocation quantities: Since the MSR in- and outtake quantities are calculated on the basis of the total number of allowances in circulation (TNAC), they initially only affect the quantities up for auction. Rebasing, on the other hand, changes the total quantity of allowances and thus affects both, amounts for auctioning and free allowances, equally. A combination of the two options thus also contributes to a better balance in the development of auctioning vs. allocation quantities.

(3) MSR reform: maintaining withdrawal amounts and adjusting trigger levels.

The MSR in its current form has proven its effectiveness exceptionally well during the current COVID-19 crisis. The current high withdrawal rate of 24% was able to ensure a high flexibility of the MSR in case of unforeseen events. Against this background, EnBW believes that a higher transfer rate to the market stability reserve would be needed also in the future. Therefore, we are in favour of maintaining the current rate of 24% instead of the foreseen drop to 12% from 2024 onwards.

It is also important to remember that MSR thresholds are based on the hedging needs of market participants. However, if the total volumes in the ETS decrease, the hedging needs in terms of volume will also decrease. Therefore, it will be necessary to adjust the existing thresholds of 833 and 400 mn. tCO₂. Either a new, permanently fixed threshold range (e.g. 600 and 200 mn. tCO₂) could be aimed for. Alternatively, the threshold values could be continuously lowered over time based on rules. If the thresholds are redefined between 200 and 600 mn. tCO₂, it can be assumed that the MSR could remove between 3 and 3.8 bln. tCO₂ from the market in the period to 2030. By combining rebasing with a 24% withdrawal rate, it is estimated that by 2027/28 it will be possible to bring the total quantity of allowances in circulation (TNAC) back into the targeted threshold ranges. This means that surplus allowances will no longer only be transferred to the MSR but will also be returned to the market.

Especially in view of its purpose of absorbing external shocks, as a complementary measure, a faster activation of the MSR after such an event would be desirable. Due to the necessity of the verification procedure with regard to concrete emission quantities, certain limits are set here, but an acceleration to Q2 instead of Q4 of the given year would be welcome.

(4) Automatic cancellation mechanism in the event of unilateral national measures

Despite the fundamentally regained steering effect of the ETS, unilateral national decisions to exclude emission-intensive technologies, such as further coal phase-out decisions, could still disturb a proper functioning of the ETS. Each Member State must have the freedom to decide at national level; however, national measures must not have a negative impact on the ETS. Against this background, the cancellation of corresponding emission allowance quantities should not be at the discretion of the respective Member State, as is currently the case, but should be carried out in an automatic, rule-based procedure due to the impact on all players subject to the ETS.

(5) Introduction of a minimum price as a hedging instrument against greater price erosion

EnBW has been calling for the introduction of a price floor in the ETS for some time. This should not serve to regulate prices; the ETS should remain a quantity control instrument in the future. However, it is an important function of the ETS to set investment signals, i.e. to give investments

in lower-emission solutions an advantage over more emission-intensive ones. In the energy sector in particular, market-driven investment incentives are important in order to be able to replace state-driven support mechanisms (such as the German EEG) in the future. A minimum price would serve as a hedging mechanism to prevent the electricity price for unsubsidized RES-plants from falling below a certain level. This mitigates investment risk and may lead to significantly more renewable additions "in the market." Otherwise, corresponding risk premiums would be added to the capital costs or priced into the subsidy auctions.

Even in light of current price developments, a carbon price floor remains an important instrument. Despite the previously called-for strengthening of mechanisms that are fundamentally intended to bring the supply of allowances into line with fluctuating demand, such as the Market Stability Reserve (MSR), significant external shocks cannot be ruled out that could lead to collapses in the ETS price.

From EnBW's point of view, this price floor should start below the expected market price in 2025 of EUR 35/t CO₂ and be regularly adjusted to the expected price development. At the same time, it has to be acknowledged that the effect of the ETS price on the electricity price will decrease mid-to long-term due to an increasingly climate-friendly electricity generation mix (also in the course of the coal phase-out).

(6) Maintaining carbon leakage measures

An ambitious reform of the ETS will lead to a price increase. Energy-intensive industries, which are exposed to international competition, must continue to be effectively protected in order to avoid undesirable carbon leakage. We therefore support maintaining a free allocation of emission rights for affected companies. The switch to climate-friendly processes can additionally be supported by incentives such as carbon contracts for difference (CCfDs). It should be noted, however, that while CCfDs can help industry to make cost-intensive changes to its processes in order to close the gap at a given CO₂ price, they do not provide effective carbon leakage protection.

The discussed Carbon Border Adjustment Mechanism (CBAM), on the other hand, we see as problematic, as the "right" levy is hardly calculable for complex supply chains and negative trade effects are to be expected.

(7) No immediate extension of the ETS to other sectors, but ensuring appropriate CO₂ pricing

In principle, the structure of emissions trading ensures that emissions reductions are initially made where they can be achieved most cost-effectively at the time. In principle, this argues in favour of extending the ETS to other sectors as well. In particular, shipping and land transport as well as the heating/cooling and building sectors are under discussion. Air transport is already

subject to emissions trading, albeit with special regulations in some cases. Here, a stronger harmonization or full inclusion in the ETS would be under discussion, which we would support.

Furthermore, with increasing decarbonization of the ETS sectors, especially the energy sector, the emission volumes and thus the liquidity of trading are becoming smaller and smaller. An expansion to additional sectors would therefore increase the volume base and thus continue to enable robust pricing with as little volatility as possible.

However, this ignores the fact that in some sectors sufficient or cost-effective technology options have yet to be developed. In particular, with respect to the road transport sector and the heating/cooling sector, the very different CO₂ abatement costs would drive CO₂ prices in the ETS significantly higher without sufficient technical or cost-effective CO₂ abatement solutions being available. They would also likely not be incentivized, as it would always be cheaper to buy the necessary allowances on the market. At the same time, from a sector coupling perspective, it is important in the long term to achieve a comparable CO₂ pricing in all sectors.

Many uncertainties remain with respect to price dynamics, different distribution effects in the respective Member States, possibly heterogeneous obligated party structures, etc. Therefore, it seems reasonable to first consider, if at all, a separate trading system in these sectors. This would initially allow a slow approach to pricing and its consequences. A transfer to the existing ETS could then be considered at a later stage, if necessary, probably not before 2030. Alternatively, a minimum CO₂ tax could be established in these sectors, which EnBW has supported in principle to date. However, this option also faces the challenge that a sufficiently high CO₂ price level should be pursued with the risk of higher social impacts in some Member States.