Fit to lose the climate challenge

How the ESR/CARE's trajectory, flexibilities and loopholes hollow out the target

December 2021

Summary

The Effort Sharing regulation (ESR) sets binding national climate targets for each EU member state. While the Regulation is essential to ensure that countries put in place the needed climate measures to contribute to the EU's overall emissions reduction goal, national targets remain empty shells if not properly implemented and enforced. The Commission's ESR proposal contains many ingredients that would hollow out the targets. T&E analysis finds that the emissions reduction trajectory sets a far too generous emissions budget for 2021-2030. In addition, flexibilities and loopholes in the regulation mean that, by 2030, emissions in the ESR sectors would not be cut by -40%, but by a mere -33%.

This briefing presents the detailed results of T&E's modeling on the impact of the ESR's trajectory and flexibilities on the 2030 target, and suggests how to improve it.

The design of the ESR's trajectory and the flexibilities allowed to member states affect the EU's emissions budget enormously. While different emissions budgets allow the EU to achieve its -40% reduction goal for the ESR sectors, the impact on our climate differs significantly. T&E found that, **with the proposed trajectory in place, where the existing flexibilities are used at their full extent, member states would only need to realise 29% of the theoretical emissions abatement envisaged by the Commission for 2021-2030.** Translated to the EU's CARE target for 2030, emissions in the road transport, buildings, agriculture, small industry and waste sector would not be cut by -40% in 2030, but only by -33.2%. This is because on the one hand member states' **emissions will already be well below the Commission's trajectory in 2021-2023, allowing them to build up a considerable surplus**, and on the other hand because **some of the ESR's flexibilities are in fact 'loopholes' that bring external credits into the ESR system**.

T&E proposes an alternative trajectory that would lead to a ESR's 'actual emission cuts' of 837Mt, increasing the actual emission cuts that are envisaged under the Commission proposed trajectory by 594Mt. As if countries such as France and Czech Republic did not emit any ton of CO2eq in 2019. T&E trajectory would use 2018-2020 average emissions as the basis for drawing a new trajectory from 2020 to the ESR's new -40% 2030 target. Member states would then be required to comply with this trajectory already from 2021, as their emissions projections for 2021 are even below this more ambitious trajectory.

The analysis also demonstrates the necessity to limit the ESR's flexibilities. There are two types of flexibilities under the ESR.

While T&E recognises the added value of flexibilities such as banking, borrowing and trading to optimize the path towards the 2030 target in light of national circumstances (e.g. to bridge the implementation phase of a big measure or face unforeseen events), these flexibilities must remain within an acceptable scale. Once these flexibilities start rewarding countries not for taking brave and forward looking climate measures, but for the effect of a drop in economic activity beyond a country's control, the ESR/CARE is no longer true to its goals. Projections from the EEA show that emissions will be well below the AEA in 2021, 2022 and 2023 as a result of Covid. Allowing countries to bank all of their AEA surplus in 2021, 2022 and 2023, as is the case under the current rules, would mean handing them a generous '**Covid dividend**' of which they can dispose to meet their 2030 target while doing the minimum. Therefore the limits on banking in 2021, 2022 and 2023 need to be strengthened.

Then there are those 'flexibilities' that prevent action from taking place in the ESR/CARE sectors and shift the pressure to the ETS and land use sectors (flexibilities with the ETS and LULUCF sectors, a 'Safety' and 'Additional' Reserve). Together with the 2021 bonus of extra emissions credits allocated to low income member states, these flexibilities inflate the emissions budget or disincentive emission cuts in the ESR sectors. They are in fact loopholes in the Regulation and should be repealed.

While everyone is focussing on the 2030 headline emissions reduction targets, the impacts of the trajectory design and of harmful flexibilities on the emissions budget matters gravely.

If all the improvements concerning the trajectory and the flexibilities that T&E is proposing in this briefing are implemented, actual 2021-2030 emissions reductions in the ESR sectors would amount to 1241Mt. This is a whopping difference with the meager 243Mt of actual emission cuts to which the Commission's proposal would lead.

1. Legislative context: from 2009 to July 14th 2021

In 2009 the EU agreed to the Effort Sharing Decision (ESD), setting binding national climate targets for 2013-2020. These targets did not cover the whole EU economy. The ESD only required member states to take responsibility for reducing emissions in specific sectors: road transport, buildings, agriculture, waste and small industries. The power sector and major industries (steel, cement, chemicals etc.) were already covered by Europe's carbon market (Emissions Trading System or ETS) since 2005. Under the ESD member states were obliged to collectively reduce their emissions in the sectors covered by -10% (compared to 2005). This target was distributed between member states on the basis of relative GDP per capita. The result was that not all member states had to reduce emissions. Countries with a relatively low GDP/capita were allowed to increase their emissions, though by no more than a given limit.[1] This sectoral target was in line with the EU's economy-wide goal to reduce emissions by 2020 by -20% (compared to 1990). While the EU reached this target collectively, 3 member states (Germany, Malta and Ireland) failed to meet their ESD target for 2013-2020. These countries will now need to buy credits from other member states or international markets to compensate for their deficit.[2]

In 2018 a new ESD was agreed upon and turned into a Regulation: the Effort Sharing Regulation or ESR. National climate targets were set for the next compliance period: 2021-2030. In line with the EU's economy-wide goal of -40% (compared to 1990) at the time, the ESR sectors were made responsible for reducing emissions by -29%[3] (compared to 2005). These targets were distributed between member states on the basis of their GDP/capita (as previously agreed) and cost-effective reduction potential. Unlike under the ESD, no country was allowed to still increase emissions.[4] Other major changes concerned the flexibilities provided by the ESD: the Regulation made it now possible to transfer credits from the LULUCF[5] and ETS sectors, but credits from international projects were no longer allowed for compliance.

The ESR is now being reviewed to bring it in line with the Union's new economy-wide 2030 goal of -55% net emissions reductions (compared to 1990). As part of its Fit for 55 package, the Commission in

[1] For example, while Bulgaria was allowed to increase its emissions by up to 20%, Denmark had to reduce its emissions by the same amount.
[2] The total gap was 30,7 Mtt or the equivalent of the 2019 emissions of Slovakia .
[3] Originally the target was 30%, but after Brexit, the target was equivalent to 29%.
[4] Bulgaria received a 0% reduction target.
[5] Emissions and removals from and the land use sector were included in the Union's emissions commitment only in 2018 with the adoption of the LULUCF. Before the adoption of the LULUCF in 2018, member states were only obliged to account for emissions and removals from the land sector, without having to comply with any reduction target.

July proposed to increase the target for the ESR sectors to -40% (compared to 2005) and to increase each member state's national target in line with that collective goal. The spread between countries is still 40 percentage points, though per capita emissions will converge around the EU average as of 2030. The proposal includes some other small changes to the ESR: Malta's ETS flexibility has been increased (and target untouched), the use of LULUCF credits has been split into two time periods (2021-2025 and 2026-2030) and a voluntary 'Additional Reserve' stocking unused LULUCF credits has been introduced.

2. Why is the ESR a cornerstone of the EU's climate policy

Together with the ETS and the LULUCF, the ESR is a fundamental pillar of the EU's climate policy architecture and, by covering 60% (and growing) of the EU's emissions, it is also the biggest one. The ESR is essential insofar it binds member states to commit to emissions abatement, gives them incentives to undertake climate action (both at EU and national level) in the ESR sectors and holds them accountable in the transition towards a decarbonised economy. In this way, countries cannot refrain from taking responsibility in the sustainable transition and cannot leave to other entities - be it the market or other countries - the guidance towards climate neutrality. Given the deeply political nature of the sustainable transition and the existence of non-market barriers in many sectors - including the ESR sectors - the decarbonisation of the economy requires that national governments take ownership in putting in place the needed climate policies and measures as a condition for success. The ESR responds exactly to the need to induce national climate leadership without which urgent climate action would not simply be possible and the EU's climate goals would be missed.

3. What is missing in the ESR review?

In close collaboration with other NGOs and think tanks working on the ESR review, T&E identified **five key areas of improvement for the ESR**. These are all designed to ensure national action is compatible with the scale of action required to get the Union on track for net-zero.

1. **Improving the integrity of the 2030 target.** The cumulatively achieved emissions reductions in the ESR sectors vary significantly depending on the design of the trajectory towards the ESR's 2030 target and the flexibilities allowed to member states in achieving those targets. This briefing explains the ESR's design flaws and how to improve those.

2. **Introducing a framework for binding national climate targets after 2030.** In line with the Paris Agreement's long-term dimension and the EU's own climate targets, the ESR should include a process for setting binding national ESR targets after 2030 and amend the Governance Regulation to establish a binding EU process for Member States to adopt national economy-wide climate-neutrality targets. This would align short-term action with long term

goals and ensure the collective achievement of the EU's new long-term climate neutrality objective. The ESR should also shift from 10 to 5 year compliance cycles, meaning the next ESR target would be set for 2035. Not only this is in line with the recent COP26 decision at Glasgow on 5-year common time frames, but it would also provide more regular accountability moments to keep countries on track towards the climate neutrality objective and provide opportunities to step up targets along the way.

3. **Strengthening the compliance framework**. In the previous compliance period, 3 countries failed to meet their 2013-2020 emissions budget, even after using their national flexibilities and the Covid-19 crisis. They will now need to buy surpluses from other member states. While complying over the entire period, 11 countries breached their AEAs in 2 consecutive years and had to use flexibilities to comply. This implies inconsistency of national policies with the ESR obligations. To improve planning and compliance, the quality and transparency of the corrective action plans should be improved and, if during the compliance check a country is found non-compliant, its emissions for the following year should be increased by a higher multiplier than the ESR's current one. The ESR should also include a monetary penalty for non-compliance and the explicit right of access to national courts for individuals and NGOs to seek judicial review of national non-compliance with the ESR, in line with the Union's commitment under the Aarhus Convention.

4. **Ending to the zero-rating of all biomass.** Currently all biomass is zero-rated under the ESR. At the very least, only biomass that complies with the sustainability and GHG emissions savings criteria under the RED should be rated zero and the same caps and limitations on biofuels, bioliquids and biomass used in transport as in the RED should be introduced. A similar provision is foreseen under the ETS and the ESR should follow suit.

5. **Bringing the Governance Regulation in line with the EU's new 2030 target.** While the Governance Regulation translates the ESR targets into common rules for national climate planning, it hasn't been updated since the EU adopted new and increased targets for 2030 and 2050. The inclusion of amendments to the Governance Regulation into the revised ESR (on i.a. the National Energy and Climate Plans (NECPs) for 2030 and the national Long-Term Strategies (nLTSs) for 2050 and a process to set binding national economy-wide climate neutrality targets) is therefore essential so that the Regulation is also rendered fit for zero.

This briefing focusses on area 1: the integrity of the 2030 target. Together with partners, T&E will also produce briefings on the other 4 priorities. In addition to these 5 areas for improvement, the green NGO community is also calling for **renaming the ESR to 'Climate Action Regulation for Europe' (CARE)**. This would help end the negative and inaccurate framing of national climate action as an 'effort' or burden. Therefore, the ESR is referred to as CARE from here on out.

4. How to ensure the integrity of the 2030 target?

The carbon (or emissions) budget consists of the maximum amount of cumulative GHG emissions that countries cannot exceed throughout the 10 years period in order to reach the 2030 target. This budget is defined by the linear decreasing trajectory that ends at the 2030 target and can be visualised as the area lying below the trajectory lines in Fig. 1 (below). The **design of the 2021-2030 trajectory** has an enormous impact on the EU's cumulatively achieved emissions reductions in the ten-year period. While different trajectories can allow the EU to achieve its -40% reduction goal for the CARE sectors, the impact on our climate differs in a remarkable way. The cumulatively achieved emissions reductions are given by the gap between the projected level of emissions and the trajectory: if the trajectory is set too high, the carbon budget would be large and, as a result, emissions reductions will be low. Thereby, the way the 2021-2030 trajectory is designed matters immensely.

Together with the trajectory, the **flexibilities** in the CARE system produce relevant impacts on the size of the carbon budget. While the CARE's targets tell member states that they must reduce emissions up to 2030 and the trajectory tells them by how much they must reduce their emissions to reach those targets, the flexibilities relax the stringency of the system giving countries some latitude to adapt compliance to national circumstances. The flexibilities have an impact on the emissions budget and national mitigation action insofar they allow member states to deviate from the emissions reduction trajectory and the limits set by the carbon budget. These processes include: banking, borrowing, trading, the use of the credits from the ETS and LULUCF sectors, the credits stocked in the Safety reserve and the new Additional Reserve.

In addition, the CARE contains a bubble on top of the bubble: in 2021 13 members states (BG, CZ, EE, HR, LV, LT, HU, MT, PL, PT, RO, SV, SK) with a GDP per capita below the EU27 average receive a bonus of extra AEAs that inflates their carbon budget. These adjustments and the flexibilities that inject extra emissions into the CARE's 2021-2030 carbon budget are particularly harmful to the environmental integrity of the CARE.

The following sections give a description of these fundamental elements of the CARE and present T&E analysis of their impact on the cumulative emissions reductions.

5. 2021-2030 trajectory

The travel direction towards the CARE target is set by a linear reduction trajectory. On that basis, **Annual Emissions Allocations** (AEAs) break each member state's 2030 target down into yearly emissions budgets. National emissions must remain below the allocations, but countries can resort to flexibilities to achieve their targets, including processes for banking, borrowing and trading AEAs.

The Commission's proposed trajectory consists of 3 different sections (see the orange line in Fig. 1 below):

- In 2021 and 2022 the AEA's would remain as they are under the current ESR.
- In 2023, 2024 and 2025, AEA's would be based on a new linear reduction line starting at the current CARE's AEA for 2022 and ending at the new target of -40% emissions reductions in 2030 (compared to 2005).
- From 2026 onwards, the trajectory is not yet set in stone. It will depend on the actual emissions observed in 2021, 2022 and 2023. The value of the average of emissions in those years will be moved on the time axis to 2024 and from there a linear reduction line will be drawn towards the -40% 2030 target. The Commission proposed this revision because the climate effect of the economic recovery from Covid was still unknown at the time of the proposal. As explained below, using the EEA projections, it is possible to assume that this climate effect would likely be very moderate.

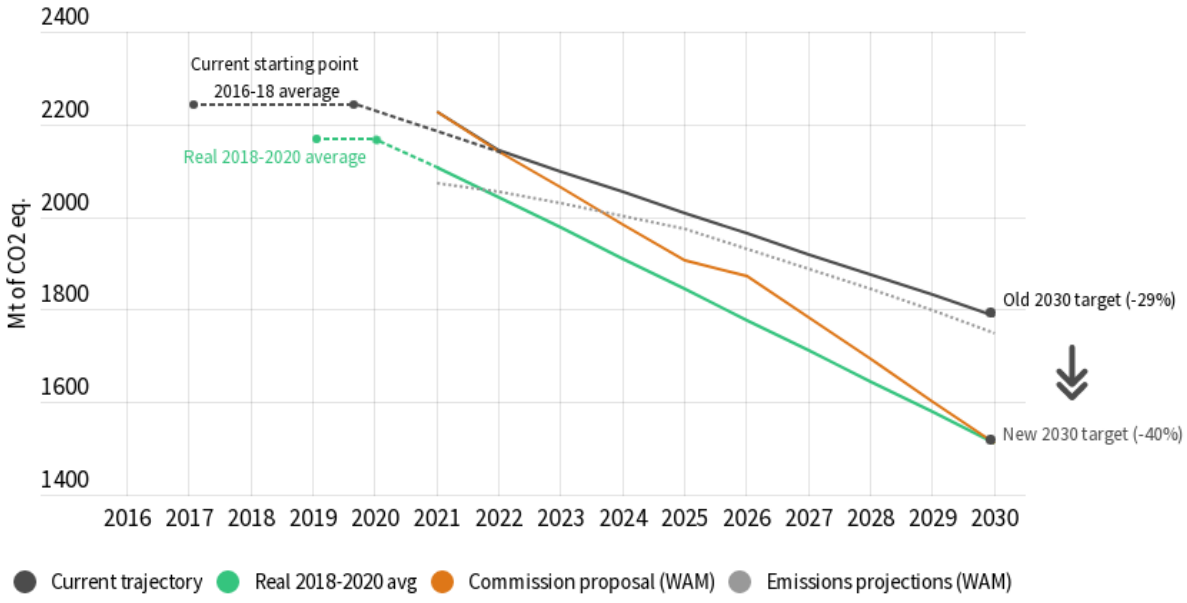
The problem with the Commission's proposal is fourfold:

- The trajectory for 2021-2025 is still based on 2016-2018 average emissions (as is the current CARE trajectory). While this was understable when the last ESR negotiations took place in 2018, today more recent data is available. Moreover, in 2021 13 member states (BG, CZ, EE, HR, LV, LT, HU, MT, PL, PT, RO, SV, SK) with a GDP per capita below the EU27 average receive a bonus of extra AEAs that increase their annual emissions budget. In total 41 Mt - the equivalent of 2019 emissions of Slovakia - will slip into the carbon budget. Considering that there is no technical reason to have them, these 2021 adjustments are a bubble on top of the bubble in the CARE. In fact, projections show that in 2021 the vast majority of all of the countries entitled to these 'adjustments', would have emissions already below the trajectory and thus would not need this extra help to comply with their Annual Emissions Allocation.
- For 2021 and 2022, projections from the European Environmental Agency (EEA) - which are based on data provided by member states - indicate that EU CARE sector emissions will be well below the proposed AEAs under a business as usual scenario.[6] Under a WAM scenario, which includes the measures promised by countries in their NECPs, this would even be the case in 2023 (See the grey dotted line in Fig. 1). This would eliminate the incentive for climate action in the first compliance years.

[6] With business as usual we refer to the EEA's WEM emissions scenario, which includes all existing national climate measures.

- In 2026 to 2030, the review would lead to a 'bump' in the trajectory even if the rebound in emissions from the post-covid economic recovery is on the lower end (which the EEA projections indicate will indeed be the case). The AEA in 2026 will be higher than it would be if there was no review and the linear trajectory was continued. This can clearly be seen in Fig. 1. Such an outcome contradicts the spirit of the Paris Agreement to increase ambition with each review. In addition, basing the emissions budget on the actual emissions reported in the first years of compliance would reward member states who miss their 2021, 2022 and/or 2023 AEAs.

- Seen over the entire period the trajectory is very complicated to understand, as it consists of three different ones. It also leads to uncertainty for member state planning processes, as their AEAs for 2026-2030 will not be known to them until 2025. As countries already need to finalise their new NECPs in 2024, this would reduce the value and quality of those plans.



Note: the WAM projections are based on NECPs measures developed to meet the old 2030 target (-29%).

Source: T&E own modelling based on EEA WAM emission data and EC proposal on the Effort Sharing Regulation

Figure 1: Starting point and new trajectory kick-off year

These four problems could however easily be resolved if the trajectory is adjusted as follows (see green line in Fig. 1):

- Instead of using the current CARE trajectory (based on 2016-2018 average emissions) as the basis for the new trajectory, the new CARE should use 2018-2020 average emissions as a basis.

This value could then be moved on the time axis to 2020 (as under the current CARE) and from there a linear trajectory could be drawn to the CARE's new -40% 2030 target.

- Member states would then be required to comply with these new AEAs already from 2021, as even with this new trajectory WAM projections will be still below the AEA for 2021.

According to T&E analysis, if all flexibilities are used to their full extent, under the Commission proposed trajectory, the actual cut[7] of emissions would be only 29% (or 243Mt) of the theoretical emissions reductions[8] envisaged by the Commission for 2021-2030.

On the other hand, **the alternative trajectory's design identified by T&E is best fit to bring down emissions in the CARE sectors**: in a scenario where flexibilities and loopholes are used to their full extent, the T&E trajectory would lead to actual emission cuts as high as 837 Mt in 10 years, against a meager 243Mt of real world emissions reductions of the Commission proposed trajectory. Such 594Mt of difference between the 2 trajectory options is as large as the emissions of France and Czech Republic in 2019.

6. Flexibilities

The CARE offers different flexibilities and trading options to member states. The idea is that these make compliance with national climate targets easier, less costly and more adaptable to national circumstances.

There are two types of flexibilities: the first type consists of processes to bank, borrow and trade AEAs. These flexibilities allow member states to deviate slightly from their linearly decreasing AEAs and to reduce emissions at a pace befitting their national circumstances. For example, if a country reduces its emissions below its AEA in a certain year, it can bank the surplus for future compliance years or sell it to another country that is underachieving. If used and designed correctly, the multiannual EU-wide emissions budget for 2021-2030 would remain unchanged regardless of the extent to which these flexibilities are being used. Unfortunately this is currently not the case. The design of the processes for banking, borrowing and trading of AEAs has some significant shortcomings that risk inflating the 2021-2030 emissions budget. If these are not dealt with, they could create a lack of action in the CARE sectors.

[7] The actual cut is the emission cut delivered by a trajectory compared to projection where the surplus built-up in early years can be carried over and where loopholes are in place.

[8] The theoretical cut refers to a scenario where the surplus built up in early years cannot be carried over and where loopholes are repealed. It is equivalent to summing the deficit of the EU as a whole as from its first year of deficit. The theoretical cut is therefore specific to a trajectory and a projection. See the methodology for more details.

The second type of flexibilities consists of credit systems that are additional to countries' allocated emissions budgets. They either come from other sectors outside of the CARE or consist of additional CARE allocations that are available to member states under certain conditions. This type of flexibilities is more problematic in nature, in the sense that they undermine the very goal of the CARE, which is to drive emissions reductions in the CARE sectors. By injecting additional emission permits into the CARE emissions budget, they decrease the incentive for member states to design sufficient emissions reduction measures to ensure the CARE sectors are on a path towards net-zero. Therefore from here onwards these flexibilities are referred to as 'loopholes'. They should be repealed to ensure all the mitigation work in the CARE sectors is not left to post-2030.

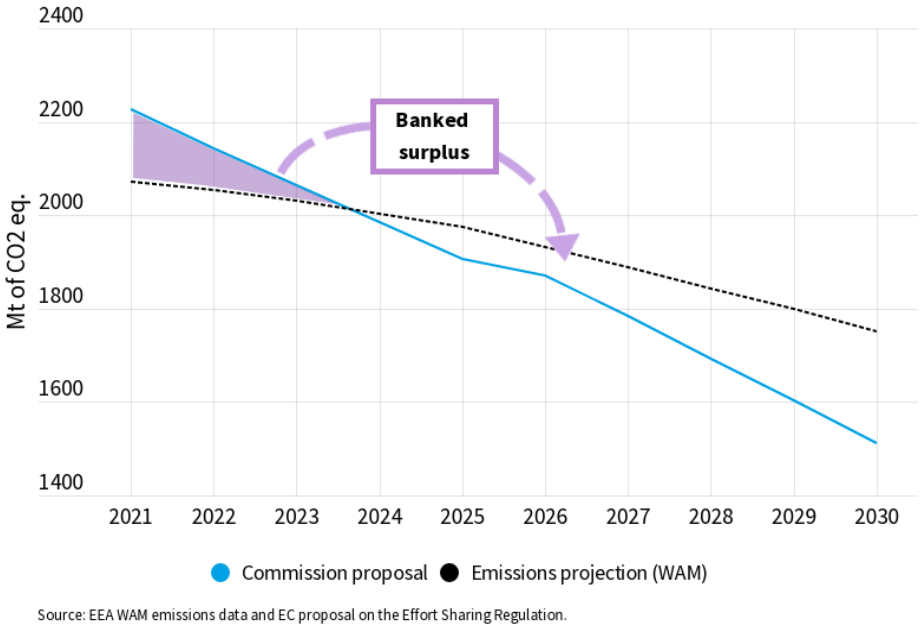
In its proposal, the Commision has not made any changes to the first category of flexibilities. It has made the rules for using the existing loophole with the land use sector slightly more stringent, but at the same time proposed a new flexibility with the LULUCF (the Additional Reserve).

6.1. Category 1: banking, borrowing and trading

6.1.1. Banking

When member states overachieve on their AEA in a certain year, the CARE allows them to bank that surplus for future compliance until 2030. That's as long as the surplus doesn't surpass the equivalent of 30% of their AEA for that year. For example, if France has an AEA of 327Mt in 2022 it can theoretically bank 30% of that, so a maximum of 98Mt. There is an exception though for 2021, when member states can bank an unlimited surplus.

This unlimited surplus in 2021 is going to be significant. Projections from the EEA show that emissions in 2021, 2022 and 2023 will be well below the CARE targets for those years (grey dotted line in Fig. 1). In those 3 years, the surplus would cumulate up to 274Mt, and in 2021 alone 25 countries are on track to produce a cumulative surplus of 154 Mt. In 2021, countries will be able to bank a surplus larger than the entire Czech Republic's 2019 emissions. Not thanks to structural climate measures but because of the economic crisis. This 'Covid dividend' can then be banked and used for compliance in later years, thereby reducing the ambition of the CARE review from the start. illustrates how the surplus of AEA is carried on putting at risk the achievement of emissions reductions in the rest of the decade.



Source: EEA WAM emissions data and EC proposal on the Effort Sharing Regulation.

Figure 2: Impact of the AEA surplus in 2021-2023 on the carbon budget

While banking in 2022-2029 might have a theoretical limit, in practice it is completely insignificant. No country will ever overachieve its allocation by more than 30%. It would make more sense to shave off the Covid dividend in 2021, 2022 and 2023 by setting the banking limit at 5% for those years and then to increase that limit to 10% for 2024-2029. After all, banking can be a useful instrument if it incentivises Member States to put in place climate measures already at an early stage. We should just ensure that member states don't build up a free ride surplus for themselves because the CARE's ambition level is below what they would have done had there been no new climate EU policy in place. From 2024 onwards though the Covid-effect disappears. If a member state overachieves on its AEA in those years by implementing structural measures, it should be allowed to reap the rewards of that. Additionally, a firewall should be introduced in 2025, whereby countries can only bank within the time periods 2021-2025 and 2026-2030. This ensures there will be no lack of climate action in the second half of the decade, while also introducing a 'soft 5 year target' within the CARE.

6.1.2. Borrowing

When finding it hard to reduce emissions sufficiently in a given year, member states can borrow from future emissions allocations. Even if in principle this could help countries to bridge the implementation phase of a big measure or face unforeseen events, the possibility to borrow should have limits. Given the choice to either borrow allocations from the future or start taking (potentially politically difficult) action now, member states might otherwise be tempted to misuse this flexibility -

certainly if a change in government is forthcoming. A high degree of borrowing also creates uncertainty as to whether the 2030 target will be met, as emissions reductions tend to become more challenging over time.

While the CARE already imposes certain limits on the quantity of allocations that can be borrowed (10% in 2021-2025 and 5% in 2026-2030), the risks of overuse are currently too high. The 10% limit in the early years of the compliance period not only disincentives early action, but can also be misused to inflate the 2026-2030 trajectory which is dependent on real emissions in those years (see section 5). Therefore the limit should be set at 5% for the entire compliance period. Additionally, a firewall should be introduced in 2025, whereby countries can only borrow within the periods 2021-2025 and 2026-2030. This ensures action is not delayed while also introducing a 'soft 5 year target' within the CARE.

6.1.3. Trading

Apart from using surpluses for their own future compliance, member states can also sell surpluses to other countries. This can incentivise emissions reductions taking place where they are most cost-efficient, i.e. in lower income countries. It can also help converge member state's ESR targets. While many observers thought the Commission would propose a smaller spread between national targets under the CARE review, the current 40 percentage point spread was maintained. The resulting trajectory between some countries' 2030 target (e.g. -10% for Bulgaria) and net-zero in 2050 thereby remains quite challenging. Politically speaking, it would be next to impossible to revise the distribution of the targets at this stage of the legislation. The Impact Assessment also doesn't provide any alternatives for that. Trading could however present an alternative way towards convergence, as low income member states might be willing to overachieve on their targets if they receive the funding to do so from richer member states that are looking to buy surpluses. Trading could help put us on a better collective path towards climate neutrality.

While that possibility for trading is already there, only two member states (Bulgaria and Malta) used the option under the previous compliance period. For the convergence potential to materialise, trading would need to be facilitated through a 'European Project Mechanism' (EPM). Under such a mechanism a third party (e.g. the European Investment Bank) would act as a broker and match host member states (where the emissions reductions would take place) with guest member states (the one claiming the emissions reductions). The projects would be presented through the platform at a price per tonne of CO2, based on project costs. While the guest member state would receive more emissions reductions at a lower price, the host member states would benefit from all the co-benefits of reducing GHG emissions, such as improved air quality, energy independence, quality of life or modernisation of its economy. The creation of such an EPM could create the right political momentum and framework

that would allow many member states to reconsider the increase in their CARE targets, having a clear understanding on where the opportunities lie and at what price.

As with all flexibilities, trading cannot be without limits though. Otherwise you would shave off all the overachievement, which would effectively take out the 'at least' in the EU's 'at least -55%' 2030 target. The current rules of the Regulation allow member states to use the purchased allocations across the entire compliance period[9]. It is necessary to limit their use to the same year of purchase, without carry-overs. Otherwise, the impact of limiting banking on the EU-wide emissions reductions could be undermined, as any surplus above the banking limit could be traded and be carried over by the purchasing member state. Thereby, through this transfer, the AEA surplus would remain inside the system and accumulate in the emissions budget of the following years, creating a disincentive for further emissions reductions. While member states should be able to trade their surplus **in a given year** to stimulate cost-effectiveness of emissions abatement, surpluses generated in the EU-27 as a whole should not add on to the accumulated emissions in the 10 years period.

6.1.4. The effects of limiting flexibilities on the emission cuts

T&E's model shows that the impact on the carbon budget of limiting the flexibilities as T&E suggests in this briefing would be substantial. As shown in Tab.1, the singled out impact of these limitations to the flexibilities would be to increase the actual emissions reductions under the Commission's proposed trajectory up to 408Mt against the actual emission cuts of 243Mt where such improvements are not adopted. The resulting additional emission cuts of 165 Mt is equivalent to the 2019 emissions of the 3 Baltic countries and Czech Republic altogether.

6.2. Category 2: loopholes

If used to their full extent, the CARE's loopholes - euphemistically called flexibilities under this Regulation - could potentially add 468Mt to the EU's 2021-2030 carbon budget. This is equivalent to the 2019 emissions of Italy and Greece combined.[10] The availability of these extra credits removes the motivation for member states to commit to their target. They can exceed their AEAs while still being compliant with their obligations under the Regulation. The Commission's proposal does not repeal any of these loopholes. On the contrary, it introduces a new loophole called the 'Additional Reserve'.

[9] Art. 5 (5) reads "The receiving Member State may use that quantity for compliance under Article 9 for that year or for subsequent years until 2030".

[10] Note that this is the legal maximum by which the carbon budget could be inflated. Looking at the credits that could realistically be available, we expect the maximal use of credits to amount to 300 Mt. It is however next to impossible to estimate the theoretical or estimated usage of the new Additional Reserve. Therefore any credits generated through this Reserve would come on top of our estimation of the total emissions impact of the ESR's loopholes.

6.2.1. Credits from the LULUCF (art. 7 and the 'Additional Reserve')

When countries have an AEA deficit but in the same year overachieve on their targets in the land use and forestry sector (LULUCF), Article 7 of the CARE allows them to use part of their LULUCF surplus for compliance with the CARE[11]. For each member state the CARE sets a cumulative maximum amount of LULUCF credits that can be used over the entire 2021-2030 period. In total, the available LULUCF credits equal 262 Mt. The Commission is proposing to split the use of the LULUCF flexibility in two: 131 Mt would be the maximum allowed usage in each of the two periods 2021-2025 and 2026-2030. With this change the Commission is attempting to limit the use of the LULUCF flexibility, but the problem remains. Net removals in the land use and forestry sector become an alternative for reducing emissions in the CARE sectors. But carbon removals in the land use sector are not only hard to measure, they are also inherently unstable and therefore reversible. These carbon removals cannot be considered directly equivalent, tonne-for-tonne, to emissions reductions in other sectors.

It is possible to estimate the impact of this loophole on the carbon budget by considering what is the practical use that member states would make of it. In fact, not all countries will be able to build up a surplus in the LULUCF sector and part of the net removals' surplus will likely be traded within the LULUCF (as envisaged by that Regulation). But even when taking this into account, the CARE carbon budget in 2030 could be increased by 128 Mt[12] as a result of this loophole.

In addition to the existing Article 7 flexibility with the LULUCF, the Commission is also creating a new loophole with the sector. This 'Additional Reserve' is only set up at the end of the compliance period and collects LULUCF credits that have remained unused over the year, on the condition that the member state who produced these credits agrees to make them available to others. As its access is conditional to the achievement of the EU 2030 target of -55% of emissions reductions and the amount of net removals surplus depends on the LULUCF target (which is still under negotiation), its impact on the CARE carbon budget is still uncertain. However its impact on the functioning of the CARE framework can be foreseen: it assures once again member states that they will be able to comply thanks to accounting expedients.

[11]A member state can make use of this loophole only if it is compliant with the LULUCF Regulation and has not acquired more net removals from other countries that it has transferred under that Regulation.

[12]This is the total amount for the 2021-2030 period. The Commission is splitting the LULUCF use into two periods, thus 60 Mt of net removals would realistically be used in 2021-2025 (Commission's Impact Assessment of the old ESR: SWD(2016) 247 final) and 68 Mt in 2026-2030 (Commission' Impact Assessment of the ESR proposal presented in July 2021: SWD(2021) 611 final).

6.2.2. Credits from the ETS

Nine countries (BE, DK, IE, LU, MT, NL, AT, FI, SE) are given the opportunity to use a limited amount of their ETS allowances as credits for compliance under the CARE.[13] If they decide to use these credits, these allowances are cancelled from their ETS auctioning volume and no longer available to their industry and power sector. In 2019, all eligible countries except for Sweden and the Netherlands expressed their intention to use this flexibility.[14] The ETS flexibility would thus add 67Mt to the carbon budget for the CARE sectors, slightly less than the legal maximum of 100 Mt.[15]

But since 2019 the situation has changed. Member states now have higher national targets, which increases the incentive to use ETS credits for compliance. However, the ETS allowance price has also increased significantly. This makes the ETS flexibility very expensive as member states would relinquish part of their emissions trading revenues by using it. When failing to meet their obligations, paying low income member states to generate a surplus would likely be more cost-efficient. It is thus possible that the eligible countries will communicate to the Commission that they don't intend to use their legal maximum after all.

The ETS flexibility essentially gives eligible countries a choice between additional climate action in the ETS sectors and further decarbonisation in the CARE sectors. But **the** CARE **sectors already lag behind in climate action.** While emissions in the ETS sectors had fallen by 43% in 2020 (compared to 2005), CARE sectors fell only by 16%.[16] **This provision should therefore be repealed.**

6.2.3. The deus ex machina: credits from the Safety Reserve

The 'Safety Reserve' consists of 105Mt that can be accessed by some member states[17] when their emissions exceed their AEA in the period 2026-2030. Even if the access to the Reserve is possible only after having used other flexibilities and loopholes, those are additional allocations that inflate the carbon budget and disincentive countries to cut emissions or resort to trading when falling short.

[13] The maximum limit that can be used annually in 2021-2030 is set at 2% of each country's CARE emissions in 2005, except for Ireland and Luxembourg that are allowed up to a limit of 4% and Malta that is proposed to use up to 7%.

[14] Belgium communicated to the Commission that it intends to use slightly less of its ETS flexibility than its legal maximum: 1.89% instead of 2%.

[15] Note that we are assuming here that Malta will fully use its increased ETS flexibility as proposed by the Commission.

[16] European Commission. (2021) EU Climate Action Progress Report. Retrieved from https://ec.europa.eu/clima/system/files/2021-11/policy_strategies_progress_com_2021_960_en.pdf

[17] These are member states that have GDP per capita below the Union average, are compliant with the ESD and have exhausted the use of all other available flexibilities under the CARE.

Thus, the Safety Reserve is a loophole and as such is in opposition with the main goal of the CARE: be a driver of national decarbonising policies.

Moreover, the formula for distributing national targets already takes into account countries' specific national circumstances, making the provision of the Safety Reserve superfluous and redundant. After all, the Safety Reserve would also deepen the disparity between countries engaging in modernising their economy and countries that, getting away with not cleaning up theirs, are left behind. Repealing the Safety Reserve would constitute another effective and impactful way for achieving greater convergence of national climate action instead of revising the distribution of the targets, which is next to impossible at this stage of the legislation.

6.2.4. The effects of repealing loopholes on the emission budget

Data from T&E analysis show that by repealing the loopholes from the CARE, all other things being equal[18], the actual emission cuts that could be achieved would go up to 559Mt, from 243Mt actual emission cuts when all loopholes are in place. The impressive difference of 316Mt - the equivalent of all road transport emissions in 2019 - points to the necessity of getting rid of these harmful loopholes. Specifically, the greatest improvement in the real world emissions reductions would be brought about by the repeal of the LULUCF loophole and would amount to additional emissions cuts of 118 Mt[19]. The repeal of the Safety Reserve would spare the climate an additional 105Mt of harmful emissions, while the repeal of the flexibility with the ETS sector will drive down emissions in the CARE sectors by an additional 99Mt compared to a scenario where these loopholes are in place.

7. Stimulus for overachievement

To be able to adhere to the EU's commitment to reduce emissions by 'at least' -55%, the CARE framework should stimulate member states to overachieve on their targets. While trading already provides such a (monetary) incentive at member state level, it does not help the EU to overachieve as a whole as a surplus in one country would be used to compensate for a deficit in another country. We would therefore propose that a pot of revenues from the EU's new carbon market for road transport and buildings (ETS2) is set aside and used to reward member states that overachieve on their AEAs in the second part of the compliance cycle. Therefore, member states would receive a clear signal: if they overachieve their CARE targets, they would not depend on other member states underachieving in order to make a financial profit. Member states would want to overachieve not only for their commitment towards fighting climate change, but also to have additional financial gains from such overachievement.

[18] Under this scenario the trajectory in place is the one proposed by the Commission and no other changes are introduced to other elements of the CARE (banking, borrowing and trading).
[19] See Tab.1 below for an overview of the impact on the actual emissions reductions of each loophole.

8. Conclusion and overview of the impacts

The design of the 2021-2030 trajectory and the flexibilities allowed to member states have an enormous impact on the EU's cumulatively achieved emissions reductions (and the emissions budget) in 2030. While everyone is focussing on the 2030 headline emissions reduction targets, this fine print matters gravely.

The Commission's proposed trajectory towards the 2030 target doesn't change anything until 2023. While we understand that the compliance period has already started, countries' own projections clearly indicate that they will largely overachieve their targets in 2021, 2022 and 2023. That means they get a 3 year bonus where they can build up surpluses

While T&E recognises the added value of flexibilities such as banking, borrowing and trading to optimize the path towards the 2030 target to national circumstances, these flexibilities must remain within an acceptable scale. Once these flexibilities start rewarding countries not for taking brave and forward looking climate measures, but for the effect of a drop in economic activity beyond a country's control, the ESR/CARE is no longer true to its goals. Therefore the unlimited banking in 2021 and the loose limits on banking in 2022 and 2023 need to be revised.

Then there are those 'flexibilities' that prevent action from taking place in the ESR/CARE sectors and shift the pressure to the ETS and land use sectors. Together with Safety Reserve and 2021 bonus, these flexibilities are in fact loopholes in the Regulation and should be repealed.

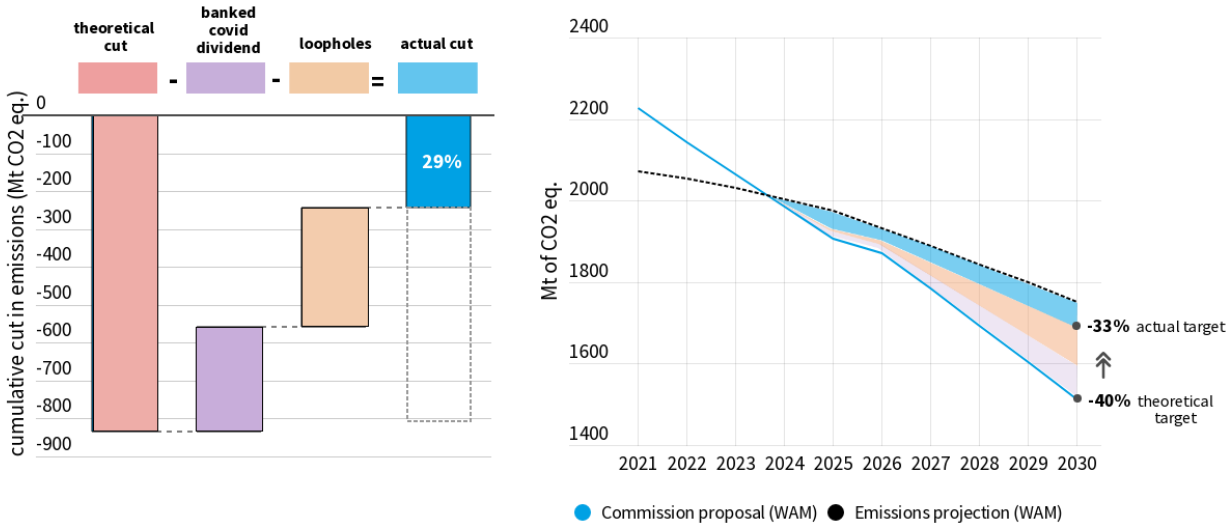
As illustrated in this briefing, having a more ambitious emissions reduction trajectory as T&E is proposing would, all other things being equal, increase the 10 years real world emission cuts in the CARE sectors by 594 Mt (See Fig. 4 below). As if countries such as France and Czech Republic did not emit any ton of CO2eq in 2019.

However, in order to sufficiently abate emissions in the CARE sectors and put member states on track towards the Union's at least -55% net emissions target for 2030, greater emissions reductions must be sought. This is why it is essential to adopt an ambitious emissions trajectory and, at the same time, adopt stricter limits on flexibilities and get rid of the loopholes.

The analysis reveals that in the early years of the compliance period, member states will be able to bank a consistent surplus of emissions allocations in 2021-2023 and use it in the later part of the decade to comply with their 2030 targets while doing the minimum. The emissions budget in 2024-2030 is therefore inflated by 274Mt. However, if limits on banking and trading are adopted, the

actual emission cut will be higher by 165Mt compared to a scenario where the Commission proposed trajectory is in place but these much needed limits are not.

The harmful impact of the loopholes on the level of actual emissions reductions that can be achieved with the Commission's trajectory is even greater: without repealing the loopholes we would lose the opportunity to reduce emissions by an additional 559Mt in the next 10 years.

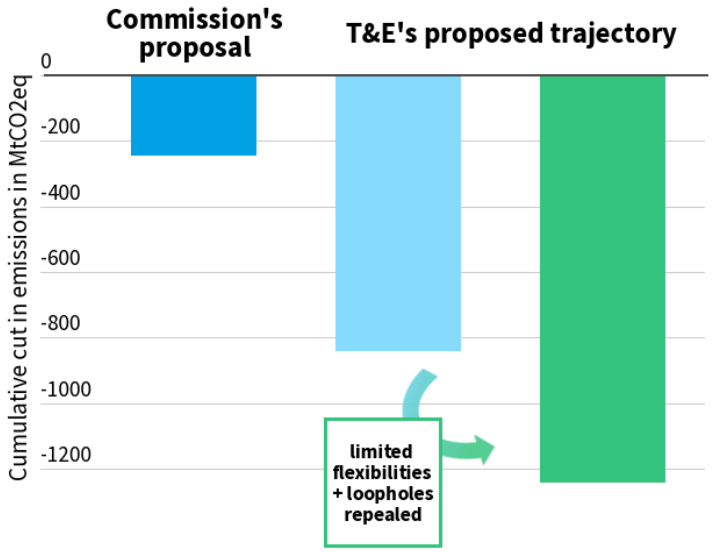


Source: T&E own modelling based on EEA WAM emissions data and the EC proposal.
Note: On the second graph, it is assumed that banked surplus and flexibilities would be used lineary from the first year of deficit toward the last year of compliance. It aims at illustrating how an inflated carbon budget leads to a weaker final target and does not represent the reality of expected emissions.

Figure 3: Impact of the flexibilities and the loopholes on the emission cuts and final target in the ESR

As shown in Fig. 3, if flexibilities and loopholes are used to their full extent member states would only need to realise 29% of the theoretical emissions abatement envisaged by the Commission for 2021-2030. Translated to the EU's CARE target for 2030, emissions in the road transport, buildings, agriculture, small industry and waste sector would not be cut by -40% in 2030, but only by -33.2% compared to 2005 level.

On the other hand, T&E analysis shows that if the change the trajectory to the one that T&E identified, the use of flexibilities is carefully restricted and harmful loopholes are repealed, the improvements for our climate would be substantial: the CARE would then lead to 1241Mt of emissions reductions in 2021-2030 (See Fig. 4). This is a whopping difference with the meager 243 Mt of actual emission cuts that the analysis envisages by leaving the Commission's proposal as it is and would put member states on track towards achieving our climate goals for 2030 and beyond.



Source: T&E own modelling based on EEA WAM emissions data and the EC proposal

Figure 4: Actual emission cuts under the Commission's proposal and T&E's proposal

9. Annex

This section shows a more detailed overview of the singled out effect of different improvements.

Table 1: Commission proposal: impact of limiting the flexibilities and repealing the loopholes on the actual cuts

Singled out effects of: *(all other things being equal)*	**Actual emission cuts**	**Equivalent to the entire emissions of (2019 UNFCCC data)**
AEA trajectory proposed by the European Commission	243Mt	BE and CZ emissions
Loopholes		
LULUCF credits repealed (262 Mt)[20]	361Mt	~PL emissions
- Estimated availability (128Mt)	301Mt	~ES emissions

[20] Note that the repeal of LULUCF credits (262Mt) does not achieve an additional 262Mt cut. This is due to the fact that in the first place, some member states are not projected to need any (or only partially) of their available credits in the first 5 years of compliance, and therefore are not (or only partially) affected by their repeal.

ETS credits repealed (100 Mt)	333Mt	~ Emissions of all road transport
- ETS committed opt-outs (67Mt)	277Mt	~NL and RO emissions
Safety reserve repealed (105 Mt)	348Mt	~ES and HR emissions
All of the above	559Mt	RO and FR emissions
Flexibilities		
Limit on banking: - 5% in 2021-2023 - 10% in 2022-2019 Banking firewall in 2025 Use of traded AEA only in the year of purchase	408 Mt	~IT emissions
Limit on banking: - 5% in 2021-2023 - 10% in 2022-2019	242 Mt	BE and CZ emissions
Banking firewall in 2025	220 Mt	~EL and CZ emissions
Use of traded AEA only in the year of purchase	243 Mt	BE and CZ emissions
All of the above combined	748Mt	~IT and ES emissions

Table 2: T&E proposal. Impact of limiting the flexibilities and repealing the loopholes on the actual cuts

Singled out effects of: *(all other things being equal)*	**Actual emission cuts**	**Equivalent to the entire emissions of(2019 UNFCCC data)**
AEA trajectory proposed by T&E	837Mt	~ emissions of all transport
Loopholes		
LULUCF credits repealed (262 Mt)	1039 Mt	~DE and ES emissions
- Estimated availability (128Mt)	940Mt	~DE and CZ emissions

ETS credits repealed (100 Mt)	934Mt	~DE and CZ emissions
- ETS committed opt-outs (67Mt)	871Mt	DE and HU emissions
Safety reserve repealed (105 Mt)	942Mt	~DE and CZ emissions
All of the above	1241Mt	DE and FR emissions
Flexibilities		
Limit on banking: - 5% in 2021-2023 - 10% in 2022-2019 Banking firewall in 2025 Use of traded AEA only in the year of purchase	*826Mt*	~DE emissions
Limit on banking: - 5% in 2021-2023 - 10% in 2022-2019	*837Mt*	~ emissions of all transport
Banking firewall in 2025	*826Mt*	~DE emissions
Use of traded AEA only in the year of purchase	*837Mt*	~ emissions of all transport
All of the above combined	1241Mt	DE and FR emissions

For the figures in italic, see further details below[21]

The results were calculated using a tool that was developed in order to estimate the impact of the features of the reviewed CARE on the delivery of the reduction goal. The actual cut is defined as the emission cuts delivered by a trajectory compared to a projection, including the use of the

[21] As T&E's proposed trajectory allows member states to build only very few surplus in early years, the effect of the banking limit alone (without repealing the loopholes) cannot be seen when perfect trading is assumed. Any allocation that cannot be banked because of a limit or a firewall will be traded that same year to a country in deficit. In some cases, while those unbankable allocation remains in the system via trading, some member states individually might require to use more of their LULUCF than in a case where their banked surplus could have been used for compliance. This process leads to overall smaller cuts at the EU level (826Mt against 837Mt). See section 3.1 of the methodology for more details. If we assume that countries trade only 70% of their AEA surplus, then the impact of the banking limits on the emissions reductions under T&E trajectory increase to 893Mt.

available loopholes and flexibilities. We assume perfect trading between member states. This implies that any surplus that cannot be banked is made available to be traded to other member states in deficit. See the detailed methodology here.

Further information

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