

Four magic potions to turn the EU ETS into an effective climate mitigation tool

Carbon Market Watch Policy Briefing
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Executive summary

In July 2015, the European Commission presented a legislative proposal to revise the EU's Emissions Trading System (ETS) in order to implement the EU's 2030 target of at least 40% domestic emission reductions. Although the proposal suggests a few improvements, it fails to introduce much needed provisions that improve the mitigation potential of the EU ETS.

It is now up to Members of the European Parliament and the EU Member States to turn the EU ETS into an effective climate mitigation tool as part of the negotiations on the ETS revision proposal.

The following suggestions can help make the EU ETS fit for purpose again:

- **Disappearing spell: Remove poisonous pollution permits**

The EU's inadequate climate target has resulted in a large oversupply of pollution permits, which is more than twice the amount that companies need to keep emitting business-as-usual, and a carbon price that is too low to promote climate action. To avoid the large surplus of pollution permits to dilute the necessary efforts in the 2030 package, the Market Stability Reserve needs to be emptied in 2020 to remove at least two billion surplus pollution permits.

- **Linear reduction booster: Adopt a steeper trajectory to inject early mitigation action**

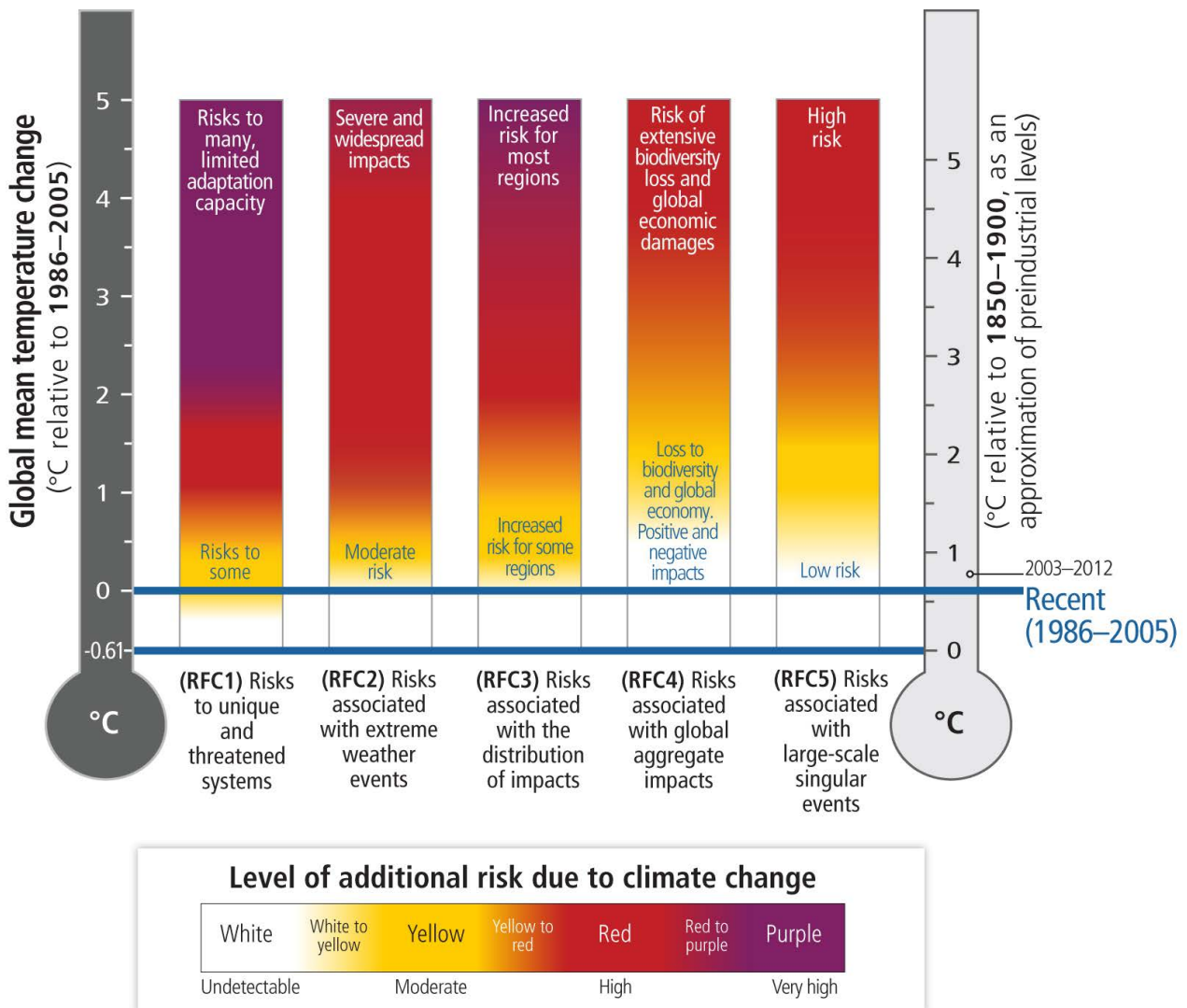
By agreeing on "at least" 40% GHG emission reductions for the year 2030, EU leaders decided to keep the door open to a higher 2030 climate target. This provision now needs to be operationalized by adjusting the reduction trajectory and increasing the so called linear reduction factor to at least 2.6%. This is necessary to reap the benefits of early action to reach the 2050 decarbonisation objective cost-effectively and avoid delaying efforts until after 2030.

- **Shrinking tonic: Limit the surplus in the reserve to account for technological progress**

The rapid decline in costs has resulted in a faster uptake of renewables than expected, which meant that the EU ETS targets have been outpaced by actual emission reductions. However, there is currently no mechanism to bring the EU ETS in line with technological progress. To adjust the EU ETS functioning as new and cheaper low-carbon technologies become available, an upper limit on the number of emissions allowances that the Market Stability Reserve (MSR) can hold, combined with an automatic removal of allowances when the ceiling is reached, should be introduced.

- **Review elixir: Revise EU's climate targets every 5 years**

The proposed length of the ETS trading period means that the EU's ambition level is carved in stone until 2030, locking down ambition for the next fifteen years. The adoption of 5-year trading periods would instead make the EU ETS more responsive to market developments, such as technological and economic changes. It would also allow the EU to be in synch with a likely 5 year cycle in the UN Paris climate agreement.



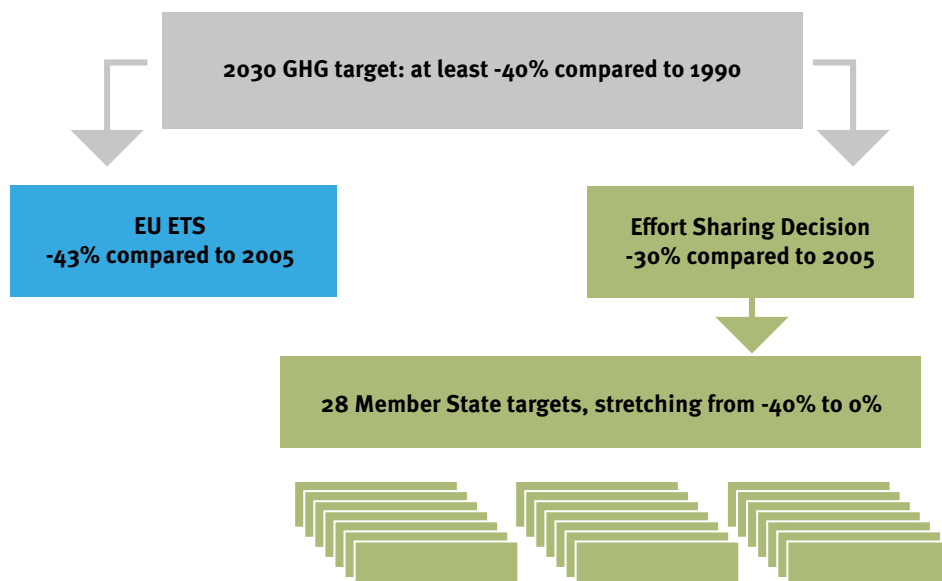
Limiting dangerous climate change

Climate change, if not halted, will have severe consequences. The warming of oceans is expected to increase hurricane activity, expansion of desert areas and the extinction of many animal species because of drought and changing habitats. Global warming also leads to the melting of ice at the North and South Poles as well as alpine glaciers, which will result in a rise in sea levels. People will suffer as their living environment deteriorates, including their food production. The objective to limit global warming to below 2°C compared to pre-industrial levels is hoped to prevent climate change becoming irreversible in which these processes will become unstoppable. The scientific evidence shows that urgent action to tackle climate change is imperative, but still manageable since the solutions are readily available as long as governments adopt policies to implement them. Although limiting dangerous rises in global temperatures will require a substantial reduction in greenhouse gas (GHG) emissions by all countries, developed regions such as the EU will need to take the lead.

Intro to the ETS – the EU’s most popular climate mitigation tool

The EU has set a target to achieve a 40% cut in greenhouse gas emissions by 2030 from 1990 levels, which is divided into specific targets for the EU’s two main climate policy instruments: the EU ETS and the Effort Sharing Decision. The EU Emissions Trading System (EU ETS) covers just over 40% of the EU’s greenhouse gas emissions and puts a limit on the amount of emissions that power stations, industrial plants and aircraft operators can emit. In order to implement EU’s 2030 target, the cap on the total number of CO₂ allowances needs to decline faster than it does at the moment. The linear reduction factor by which the cap on the total number of allowances is reduced each year needs to be higher than the current

1.74%. In the EU ETS revision, the Commission proposes to change the linear factor to 2.2% from 2021 onwards, which means that by the year 2030 the ETS emissions are 43% lower than in the year 2005¹. The increase in the linear factor from 1.74% to 2.2% reduces the supply of total allowances by around 556 million in the 2021-2030 period.



Explaining the Market Stability Reserve

In the first half of 2015, the European Parliament and the Council decided that surplus emission allowances will be gradually withdrawn from the oversupplied carbon market and placed into a new Market Stability Reserve from 2019 onwards. The Market Stability Reserve acts as a temporary storage for these surplus allowances; in times of oversupply the surplus is transferred into the reserve but the allowances can be released from the reserve again in times of scarcity. It was furthermore agreed that around 1.6 billion emission allowances would be directly transferred into the Market Stability Reserve in 2020, so they don’t enter the carbon market as pollution permits first. This includes 900 million backloaded allowances and around 700 million allowances that remain unused from phase 3 (2013-2020). These unused allowances are allowances that are left-over due to companies that have (partially) ceased their operations and because fewer new companies have entered the market than what was expected.

Why the EU ETS fails as an effective climate mitigation tool

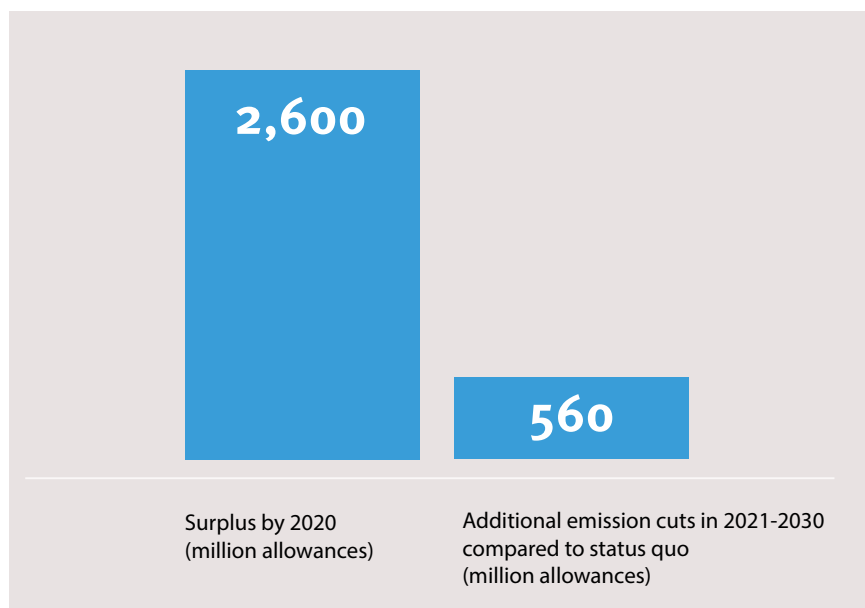
The objective of the EU’s carbon market is to put a price on CO₂ so that there is an economic cost to emitting greenhouse gas emissions to the atmosphere. The EU ETS currently fails to put in practice the polluter-pays-principle, as the carbon price of around €8/tCO₂ is too low to internalize all the societal costs associated with CO₂ pollution. The price for emitting carbon is also not high enough to promote investments in low-carbon technologies or give carbon efficient companies a financial advantage over their more polluting competitors.

Below our recommendations to help make the EU ETS an effective climate mitigation instrument, which are explained in more detail in the sections below:

Recommendations

1. Remove weight from the heavily oversupplied EU ETS.
2. Incentivize early mitigation action through adopting a steeper reduction pathway.
3. Account for technological progress by limiting the surplus in the Market Stability Reserve.
4. Revise EU’s climate targets every 5 years.

1. Remove weight from the heavily oversupplied EU ETS



By the year 2020, the oversupply of pollution permits in the EU ETS will be equal to 2.6 up to 4.4 Mt CO₂-eq. This oversupply is the result of the EU's low ambitious level, which meant that too many pollution permits were handed out, and the large inflow of international carbon offsets. The economic crisis has moreover reduced demand for these permits. The problem is that this large surplus of pollution permits can be banked forward to dilute efforts in the 2030 package. The figure on the left shows that the surplus of pollution permits in 2020 could cancel out the environmental impact of the EU ETS revision, in terms of the additional emission cuts in the 2021-2030 period.

There are currently no provisions that prevents surplus permits from being released from the Market Stability Reserve and used as pollution permits in the future. This could undermine

EU's post-2020 climate targets as it allows future targets to be met with surplus permits rather than through emission reductions.

The EU should instead ensure that its post-2020 climate targets are met by new and additional climate actions. Cancelling all the surplus allowances in the Market Stability Reserve in the year 2020 will help to achieve this. The approximately 2.1 billion allowances in the Market Stability Reserve in 2020 should hence not be valid for use in the fourth trading period and thereafter.

Moreover, the ETS revision proposal suggests to make 400 million of the unused allowances available for new and growing industries in the post-2020 period (the "new entrants reserve"). This could increase the total amount of EU ETS allowances in the 2021-2030 period, and hence the associated CO₂ emissions, by up to 3%. This is a weakening of the current rules that ensure that allowances that remain unused in the current trading period are directly transferred to the Market Stability Reserve in 2020. To maintain the environmental integrity of the 2030 climate target, the new entrants reserve should instead be filled with allowances from the post-2020 period.

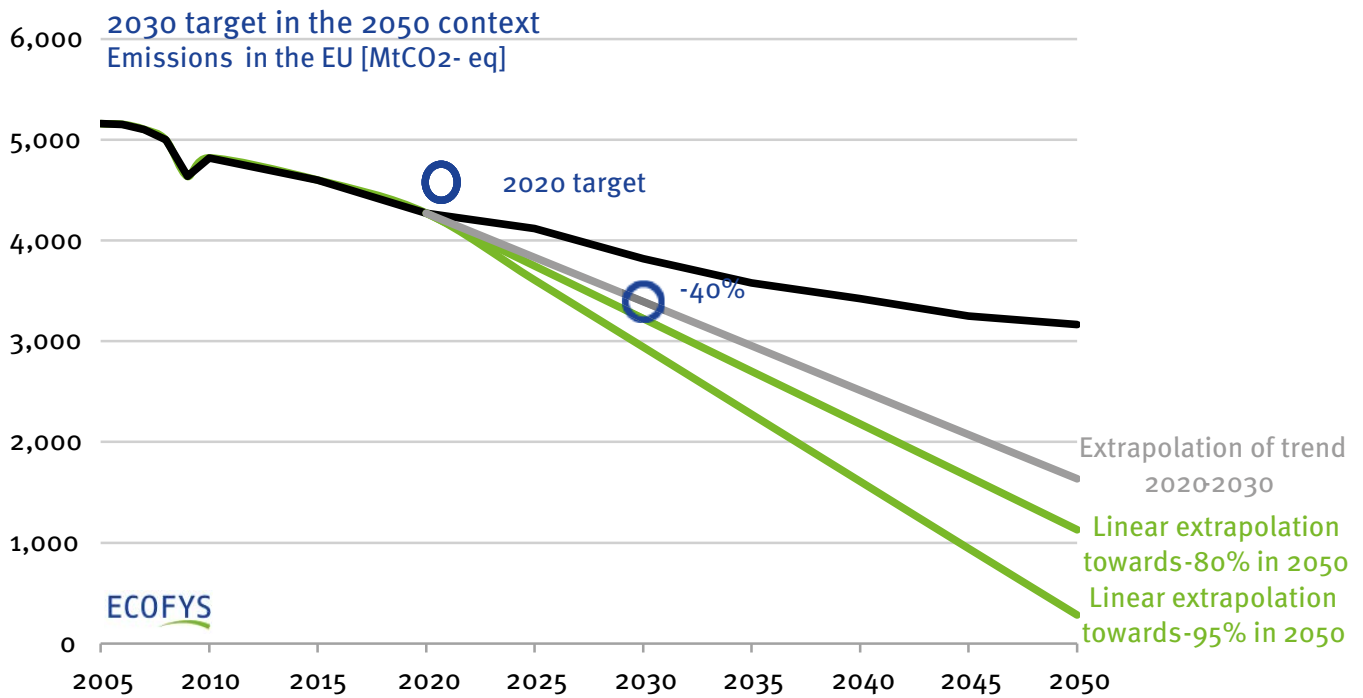
Recommendations to remove weight from the heavily oversupplied EU ETS:

- Empty the Market Stability Reserve in 2020 and thereby remove at least 2 billion surplus emission allowances, by not allowing the surplus allowances in the reserve by 2020 to be used in the post-2020 period. This will help to ensure that the oversupply of pollution permits does not undermine EU's future climate targets
- Ensure that only allowances from the phase 4 cap are used to fill the post-2020 new entrants reserve

2. Incentivize early mitigation action through adopting a steeper reduction pathway

In the EU ETS revision the linear reduction factor by which the EU ETS cap is reduced each year is set at 2.2%, but this is too low to reap the benefits of early action to reach the 2050 decarbonisation objective cost-effectively. Such a delayed reduction path would require a considerable acceleration of growth in renewables and energy efficiency after 2030 in order to still achieve the 2050 objective. It could also risk locking the EU into high-carbon energy systems and infrastructure.

The EU has set a long-term objective of reducing greenhouse gas emissions by 80% to 95% by 2050 compared to 1990. The EU's 2030 target is however not on a linear path to achieving this 2050 objective as the figure below² shows. The EU ETS is also not on a linear trajectory to achieve the EU's target of 80-95% emissions reductions in 2050 compared to 1990.



Analysis by the Commission³ shows that the linear reduction factor should be at least 2.4% to achieve an 80% emissions reduction in 2050 in the most cost-effective manner. A linear reduction factor of at least 2.6% would be in line with the upper range of EU's long-term target of reducing emissions by up to 95% by 2050. Such a steeper path operationalizes the "at least" part of EU's 2030 climate target and reduces the total supply of allowances by an additional 1 billion allowances during 2021-2030⁴.

Recommendation to incentivize early action:

- Increase the linear factor by which the EU ETS caps are reduced each year to at least 2.6% at the earliest possible date to bring the EU ETS in line with the 2050 objective

3. Account for technological progress by limiting the surplus in the reserve

The EU ETS targets have been outpaced by actual emission reductions, as the rapid decline in the cost of low-carbon technologies has led to a faster uptake of these technologies than expected. While it is good news that EU's emissions have decreased beyond what is required by the EU ETS targets, it has at the same time made the EU ETS an irrelevant and ineffective instrument in cutting EU's emissions. In the last couple of years, the carbon price in the EU ETS dropped from €30 in 2008 to an all-time low of €5 last year.

The EU ETS is hence in need of a mechanism that irreversibly ramps up climate ambition when new and cheaper low-carbon technologies become available. Such a mechanism to dynamically increase ambition over time also helps to narrow the global climate ambition gap, given that the commitments submitted for the Paris climate agreement to date will not keep global temperature rise below 2°C.

Surplus emission allowances are currently transferred to the Market Stability Reserve and temporarily kept there as long as the carbon market is oversupplied. That means that all the surplus allowances in the Market Stability Reserve can still re-enter the EU ETS, and increase pollution, in the future. The availability and use of new and cheaper low-carbon technologies in the future will lead to additional emission reductions, and more surplus allowances being transferred to the Market Stability Reserve.

A ceiling on the Market Stability Reserve, representing an upper limit on the number of emissions allowances that the reserve can hold, should be introduced to ensure that the EU ETS' ambition level is automatically increased over time as new technologies enter the market. If the ceiling is reached, additional surplus allowances are removed instead of being transferred to the Market Stability Reserve. A limit of one billion allowances still ensures that there is a 10- year backup before the reserve is emptied⁵.

Recommendation to account for technological progress:

- Set a ceiling of one billion emission allowances that the Market Stability Reserve can hold at any time

4. Revise EU's climate targets every 5 years

The length of the trading periods defines how responsive the EU ETS is to new findings in climate science, as well as to technological and economic changes. Several provisions in the EU ETS directive are only relevant for a specific trading period. Although in theory adjustments to the EU ETS, regarding its ambition level for example, can be made within any trading period, this has so-far been very difficult to achieve.

The EU ETS is currently in its third trading period, after a trial period from 2005 to 2007 and a second phase from 2008 to 2012. The EU ETS directive specifies that from 2013 onwards the trading periods will last eight years, e.g. the third trading period is from 2013 to 2020. In the EU ETS revision, the Commission proposes to increase the length of ETS trading period from eight to ten years. This means that the fourth trading period will last from 2021 to 2030.

The experience with the EU ETS shows that long trading periods do not benefit the ability of regulators to adapt the system to changing circumstances and ensure the EU ETS is in pace with fundamental market developments. Ten year trading periods imply that policymakers have only one opportunity every decade to review the adequacy of the EU's climate ambition or adjust the parameters of the EU ETS to improve its functioning.

The best tool for regular reviewing and adapting the system is the implementation of five year trading periods. This will also synchronize the EU ETS with the likely mitigation cycles timeframe in the UN Paris climate agreement.

Recommendation to regularly revise EU's climate targets:

- Adopt five year trading periods in the EU ETS



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1. The 2.2% linear factor ensures that the EU ETS cap is annually reduced by 48 million allowances.
2. Ecofys (2014), Assessing the EU 2030 climate and energy targets see [here](#)
3. SWD (2014) 15, EC's 2030 Impact Assessment [here](#) (p.45 footnote 55)
4. When compared to the 1.74% LRF. In this scenario, the EU ETS cap is annually reduced by at least 57 million allowances
5. When there is scarcity in the EU ETS, allowances are released from the reserve at a rate of 100 million allowances per year