sandbag

Responding to the ETS Revision

Initial feedback to the Commission's draft proposal **September 2015**

Introduction

This document represents Sandbag's official feedback to the Commission's proposal to revise the ETS Directive.

Sandbag published two reports over July and August providing our main recommendations for the ETS Revision: '*Harder, Better, Faster, Stronger*' and '*Discharging a Political Storm*'. In this document, we aim to summarise the most important of these recommendations, and update them in light of the published proposal.

Both reports are attached in full as appendices to this document.

About Sandbag

Sandbag is a UK-based not-for-profit think tank conducting research and campaigning for environmentally effective climate policies.

Our research focus includes the phase-out of old coal in Europe; deep decarbonisation of industry through technologies including Carbon Capture Utilisation & Storage; reform of the EU Emissions Trading Scheme; and increasing ambition in the EU 2020 and 2030 climate & energy packages.

For more information visit www.sandbag.org.uk or email us at info@sandbag.org.uk

We divide our recommendations into three themes: environmental ambition, competitiveness, and modernisation/innovation

1. Environmental ambition

1.1 The ambition of the ETS cap

The Commission's draft legislation proposes revising the Linear Reduction Factor governing stationary sectors of the ETS from 1.74% (or 38Mt a year[1]) currently, to 2.2% (or 48Mt a year) from 2021. The Impact Assessment explains that this will deliver the equivalent of 556 million tonnes of saved CO2e over the decade 2021-2030. This cap is in line with the ETS delivering emissions reductions of 43% below 2005 levels by 2030, which the Commission has calculated is the cost-effective burden for the ETS to bear compared with the non-traded sector under the pledge to cut economy-wide emissions by at least 40% domestic compared with 1990 levels.

While we welcome this progress, we find that it is inadequate in two key respects. We contend that the proposed cap:

- **Fails to keep pace with emissions reductions on the ground, and**
- **Remains incompatible with Europe's long-term climate goals.**

That the proposed cap is failing to keep pace with emissions reductions on the ground is demonstrated by the fact that stationary emissions in 2014 were already below their cap for 2020. Under Sandbag's emissions forecast for stationary EU ETS sectors this trend will continue. We expect emissions of around 1,443 million tonnes in 2020. The ETS cap is not due to reach this level until 2028. Worse, by 2020 we expect the ETS to have accumulated some 4.4 billion surplus allowances, a volume dwarfing the 556 million tonnes of additional ambition proposed. Assuming

[1] Under current scope of the EU ETS.

emissions in the non-traded sector evolve as the European Environment Agency predicts, this would imply Europe's domestic emissions economy wide would be 29% below 1990 levels by 2020.[2]

This is not the product of Europe over-delivering against its fair and cost-effective contribution, but rather a symptom of inadequate targets. The long-term goal agreed by European Council as the fair and scientific contribution from Europe is to cut emissions by 80-95% by 2050. That goal is derived from Box 13.7 in the 4th IPCC report. That same report specifies rich countries should reduce emissions by 25-40% in 2020. This has not been reflected in our 2020 target or in the Phase III ETS budget. Moreover, when the Low Carbon Roadmap calculated the cost-effective trajectory to that long term goal, a -25% *domestic* target by 2020 was deemed the appropriate milestone. The failure to enshrine a -25% domestic 2020 target in law has contributed billions of additional allowances in the ETS. This has been outpaced by emission reductions on the ground leading to large surpluses.

Finally, irrespective of the question of ambition, it remains unclear that a -43%/-30% split between the traded/non-traded sectors remains the cost-effective division in light of the large (and growing) surpluses in the EU ETS. The ETS might be better placed to take up more of the burden.

We recommend that an additional paragraph should be written into the ETS directive to execute a one-off cancellation of allowances from the Market Stability Reserve. Cancelling 1.5 billion allowances from the MSR would be equivalent to upgrading the 2020 target to 25% below 1990 levels: a target more compatible with equity, cost-effectiveness and emissions reductions on the ground. This would increase the ambition of Europe's carbon budgets with minimal effect on the carbon price, minimal cost to ETS sectors and to EU consumers.

1.2 Creating opportunities to ratchet up ambition over time

1.2.1 Preparing for and responding to Paris

The legislative timetable should provide sufficient opportunity to revise the ETS (and the ESD) budget in light of a strengthened EU offer coming out of the Paris negotiations. **Our ambition report explores how a stronger 50% EU target (45% domestic/5% international) could be adopted for 2030 through a stronger Linear Reduction Factor in combination with a centralised purchase of high quality offsets.** We propose an important safety valve by which additional *domestic* effort could be scaled back if it proves too costly.

1.2.2 Increasing ambition beyond Paris

The proposed revision fails to introduce clear measures to increase ambition in light of new scientific or political developments subsequent to Paris. Indeed the ETS revision *reduces* the opportunities for policymakers to review the ambition of the scheme by lengthening the budget periods from eight years to ten years.

- **We propose that the ETS revision revert to 5-year budgets, providing more opportunities to review ambition in light of new scientific, political, technological and economic developments.**

- **We also propose introducing automatic ratchets which cancel allowances from the MSR after they have stayed in the reserve beyond a certain period, or if a certain volumetric threshold is exceeded.**

- **We also recommend introducing measures which better enable EU Member States to unilaterally increase ambition by cancelling their auctionable allowances**.

1.3 Promoting scarcity of supply within the cap

1.3.1 Maintaining the integrity of the Market Stability Reserve

[2] https://sandbag.org.uk/site_media/pdfs/reports/Press_briefing_on_EEA_release.pdf

Independent of the question of headline ambition in the ETS budgets there is the question of maintaining scarcity of supply to ensure long term cost-effectiveness and intertemporal efficiency beneath the cap. We have just emerged from a protracted debate concerning a market stability reserve designed to regulate the supply of allowances on the market. It is worrying that allowances due to enter the Market Stability Reserve are *already* being proposed for release back into the market or re-assignment to other purposes. This sets a dangerous precedent, which could damage the market's confidence in the integrity of the reserve.

The Commission proposal looks to remove 50 million from the reserve to bridge a gap in innovation funding. It also proposes to remove 250 million more allowances to populate the Phase IV New Entrants Reserve. Finally, around 150 million unallocated allowances will be placed in the New Entrants Reserve which we previously believed had been captured by the MSR. **This would leave approximately 450 million fewer allowances in the Market Stability Reserve than we had counted on. This increase in supply cancels out much of the additional scarcity promised by the proposed change to the linear reduction factor.**

A proposed change to Article 10a(8) regarding innovation funding reads: "In addition, 50 million unallocated allowances from the market stability reserve established by Decision (EU) 2015/… shall supplement any existing resources remaining under this paragraph for projects referred to above, with projects in all". Moreover sweeping change are introduced to Article 10(7) concerning the New Entrants Reserve:

Proposed revision to Article 10a(7). First subparagraph	
Current text	**Text proposed by the Commission**
7. ~~Five percent of the Community-wide quantity of allowances determined in accordance with Articles 9 and 9a over the period from 2013 to 2020 shall be set aside for new entrants, as the maximum that may be allocated to new entrants in accordance with the rules adopted pursuant to paragraph 1 of this Article. Allowances in this Community-wide reserve that are neither allocated to new entrants nor used pursuant to paragraph 8, 9 or 10 of this Article over the period from 2013 to 2020 shall be auctioned by the Member States, taking into account the level to which installations in Member States have benefited from this reserve, in accordance with Article 10(2) and, for detailed arrangements and timing, Article 10(4), and the relevant implementing provisions.~~	7. Allowances from the maximum amount referred to Article 10a(5) of this Directive which were not allocated for free up to 2020 shall be set aside for new entrants and significant production increases, together with 250 million allowances placed in the market stability reserve pursuant to Article 1(3) of Decision (EU) 2015/… of the European Parliament and of the Council(*). From 2021, allowances not allocated to installations because of the application of paragraphs 19 and 20 shall be added to the reserve.

While some 400 million of these unallocated allowances will remain off the market in a reserve for New Entrants, if left unchanged the ETS Directive would have seen the New Entrants Reserve populated with *new* allowances from the Phase IV cap. The aspect of the proposal therefore represents a step backwards in terms of addressing scarcity.

We recommend that all of these unallocated allowances should either be cancelled or should stay in the Market Stability Reserve. Moreover, 400 million new allowances from the Phase IV cap should be dedicated to the Phase IV New Entrants Reserve.

1.3.2 Preventing the NER from flooding the market at the end of Phase IV

Under the proposed changes to Article 10a(7) cited above, the Commission proposes to divert any unallocated allowances returned by facilities that have reduced their activity towards the New Entrants Reserve. This helps to

keep excess allowances off the market in a clearly defined location, where they can later be drawn on to fund growth in activity levels.

The new proposal also appears to terminate the current provision to automatically release unused New Entrants Reserve allowances to the market at auction at the end of each period, suggesting that allowances in the New Entrants Reserve will stay there indefinitely. **This is an important measure to prevent unallocated allowances from flooding the market at the end of each trading period, and is therefore welcomed. However, we would prefer that some or all of the New Entrants Reserve was cancelled at the end of each period as a means of ratcheting up the ambition of the ETS cap over time.**

1.3.3 Driving more allowances into the New Entrants Reserve

Under current legislation if industry's benchmarked free allowances are less than the maximum free allowances available, any spare allowances are divided between Member States for auction. This is captured under Article 10(1) of the ETS Directive which states "From 2013 onwards, Member States shall auction all allowances which are not allocated free of charge in accordance with Article 10a and 10c." This rule is carried over unchanged in the current ETS revision.

We propose instead that in the event that industry applies for fewer allowances than are available, any spare allowances should be diverted towards the New Entrants Reserve and/or used to top up innovation funding rather than being redistributed to Member States at auction. This would help maintain scarcity of supply while maintaining a fund to protect industrial competitiveness as the cap progressively tightens or in case industrial output surges. This change should be possible to introduce via a change to Article10 (7) and/or Article 10(8) concerning the New Entrant's Reserve and the Innovation Fund respectively.

2. Competitiveness

The measures in the ETS to protect competitiveness underwent significant improvements between Phase II and Phase III and the new Revision offers an important opportunity for further reforms.

To date the ETS directive has suffered from some inelegant political compromises. Weak bottom-up criteria for free allocation (carbon leakage criteria, production baselines, benchmarks) have required a top-down backstop in the form of an aggressive cross sectoral correction factor to limit over-allocation to many industries. This has potentially led to an unfair distribution of allowances between industries, generating windfalls for many and potentially risking under-allocation to best performers who might be genuinely exposed to carbon leakage. Meanwhile, widespread drops in production against relatively fixed free allocation has also led to over-allocation.

We see this ETS revision as an important opportunity to make the legislation more balanced and more elegant by strengthening the bottom up criteria for issuing free allowances while relaxing the top-down criteria, and making free allocation more responsive to output. The ~~Commission~~ proposal includes several welcome advances in this direction:

In terms of relaxing top-down criteria, the enforcement of the correction factor has been revised to carry any headroom in the free allowances budget early in the period to offset any shortages earlier in the period:

Proposed revision to Article 10a(5)	
Current text	**Text proposed by the Commission**
5. ~~The maximum annual amount of allowances that is the basis for calculating allocations to installations which are not covered by paragraph 3 and are not new entrants shall not exceed the sum of:~~ ~~(a) the annual Community-wide total quantity, as determined pursuant to Article 9, multiplied by the share of emissions from installations not covered by paragraph 3 in the total average verified emissions, in the period from 2005 to 2007, from installations covered by the Community scheme in the period from 2008 to 2012; and~~ ~~(b) the total average annual verified emissions from installations in the period from 2005 to 2007 which are only included in the Community scheme from 2013 onwards and are not covered by paragraph 3, adjusted by the linear factor, as referred to in Article 9.~~ ~~A uniform cross-sectoral correction factor shall be applied if necessary.~~	5. In order to respect the auctioning share set out in Article 10, the sum of free allocations in every year where the sum of free allocations does not reach the maximum level that respects the Member State auctioning share, the remaining allowances up to that level shall be used to prevent or limit reduction of free allocations to respect the Member State auctioning share in later years. Where, nonetheless, the maximum level is reached, free allocations shall be adjusted accordingly. Any such adjustment shall be done in a uniform manner.

In terms of strengthening bottom up criteria Article 10b has been substantially revised so that the Carbon Leakage criteria target fewer sectors, and are less dependent on the vagaries of the CO_2 price:

Proposed revision to Article 10b (1)	
Current text	**Text proposed by the Commission**
Measures to support certain energy-intensive industries in the event of carbon leakage 1. ~~By 30 June 2010, the Commission shall, in the light of the outcome of the international negotiations and the extent to which these lead to global greenhouse gas emission reductions, and after consulting with all relevant social partners, submit to the European Parliament and to the Council an analytical report assessing the situation with regard to energy-intensive sectors or subsectors that have been determined to be exposed to significant risks of carbon leakage. This shal be accompanied by any appropriate proposals [...]~~	**Measures to support certain energy-intensive industries in the event of carbon leakage** 1. Sectors and sub-sectors where the product exceeds 0.2 from multiplying their intensity of trade with third countries, defined as the ratio between the total value of exports to third countries plus the value of imports from third countries and the total market size for the European Economic Area (annual turnover plus total imports from third countries), by their emission intensity, measured in kgCO2 divided by their gross value added (in €), shall be deemed to be at risk of carbon leakage. Such sectors and sub-sectors shall be allocated allowances free of charge for the period up to 2030 at 100% of the quantity determined in accordance with the measures adopted pursuant to Article 10a.

Benchmarks will steadily improve over time subject to a standard improvement rate, informed by real data on a five year cycle:

Proposed revision to Article 10a(2)	
Current text	**Text proposed by the Commission**
	New: The benchmark values for free allocation shall be adjusted in order to avoid windfall profits and reflect technological progress in the period between 2007-8 and each later period for which free allocations are determined in accordance with Article 11(1). This adjustment shall reduce the benchmark values set by the act adopted pursuant to Article 10a by 1% of the value that was set based on 2007-8 data in respect of each year between 2008 and the middle of the relevant period of free allocation […]

Proposed revision to Article 11(1) Second subparagraph	
Current text	**Text proposed by the Commission**
	New: A list of installations covered by this Directive for the five years beginning on 1 January 2021 shall be submitted by 30 September 2018, and lists for the subsequent five years shall be submitted every five years thereafter. Each list shall include information on production activity, transfers of heat and gases, electricity production and emissions at sub-installation level over the five calendar years preceding its submission. Free allocations shall only be given to installations where such information is provided.

Finally, ex-post adjustments to free allocation will be improved to better accommodate increases as well as decreases in production, with specific activity thresholds to be determined in secondary legislation:

Proposed revision to Article 10a(1) Second subparagraph	
Current text	**Text proposed by the Commission**
~~Those measures, designed to amend non-essential elements of this Directive by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 23(3).~~	The Commission shall be empowered to adopt a delegated act in accordance with Article 23. This act shall also provide for additional allocation from the new entrants reserve for significant production increases by applying the same thresholds and allocation adjustments as apply in respect of partial cessations of operation.

We welcome all of these advances, but suggest two specific improvements to the correction factor.

- **First, the correction factor should only correct for allowances industry actually applies for.**
- **Second, highly-exposed best-performers should be exempted from the correction factor with other sectors making up the difference.**

Under existing legislation, the correction factor treats all facilities as if they were due to receive 100% of their benchmarked allocation for free, irrespective of their ultimate carbon leakage status. This both increases the likelihood that the correction factor is triggered and leads to an over-correction. Under existing rules, all sectors are incentivised to pursue carbon leakage protections for themselves and are indifferent to the carbon leakage status of other sectors because it does not affect them. **Changing the way the correction factor is applied would have the virtuous effect of pitting different industrial lobby groups against each other on the issue of carbon leakage exposure, as any sectors offered excessive protections risk pushing down the allocation to other sectors.** The new proposal determines carbon leakage status on the same timeframe as the carbon budget and the ceiling on free allowances (ten years), so there should be no logical barrier to implementing this measure (though, again, a five-year timeframe for both would be far preferable)

Exempting highly-exposed best performers would confer an additional advantage on industry leaders, and provides a guarantee they will not face undue costs. It is very important, however, that "best performers" continue to be narrowly defined.

We also recommend two changes to the carbon leakage criteria.

- **Adopt a multi-tiered approach to leakage exposure**
- **Phase out free-allocation to non-exposed sectors**

While the proposal reduces the number of sectors eligible for full carbon leakage protections to around 50, these sectors still represent roughly 90% of emissions in 2014, which still seems excessive. We therefore encourage the Commission to adopt a tiered approach to carbon leakage that better differentiates sectors with very high, high, medium and low (or no) exposure as proposed in the Impact Assessment (where it was highly scored against other alternatives). This will mitigate over-compensation of limited, financially valuable resources (EUAs) to sectors that do not really require it. Moreover, if combined with our recommended reforms to the correction factor, this would greatly reduce the likelihood that a cross-sectoral correction factor will be triggered and also ensure a fairer distribution of limited allowances to all sectors.

We question the need to confer a minimum of 30% of benchmarked allocations for free across the Phase, to sectors which show little or no risk of carbon leakage. In Article 10a(11) the current legislation specifies that free allocation to these sectors would be phased out by 2027, but the new revision proposes to delete this line. We propose reversing this deletion.

Finally, we are exploring the impact of different thresholds for the list of sectors captured by different levels of protection.

3. Modernisation and Innovation

Sandbag welcomes the Commission's proposals to increase the scale of the innovation fund to 400 million allowances, and to introduce a complimentary Modernisation Fund to support lower-income Member States. We also salute the explicit language seeking to ensure that Fund's investments "shall be consistent with the aims of this Directive and the European Fund for Strategic Investments", as proposed under Art. 10d(1). As the Fund is carved

out of the auctioning pot of all Member States, we agree that having robust, environmentally-minded guidance principles for project eligibility enforced at the EU-level by the Commission, the EIB and a cross-representation of Member States constitutes a sensible policy line.

We hope that policymakers will take advantage of some of the helpful suggestions the Impact Assessment suggests for the Innovation Fund. For instance, the proposal to raise the maximum funding rate under the Innovation Fund to 75% of project costs should make it easier to fund projects in CCS or many first-of-a-kind industrial abatement technologies. We are also agree that projects with challenging upfront capital costs could also benefit if they received funding once pre-defined milestones (e.g. final investment decision, critical construction stages, etc.) had been reached instead of only once 75% of the targeted performance has been demonstrated, as was the case under the NER300 programme.

We still feel, however, that the Commission proposal directs too many allowances towards Member State auctions and free allowances at the expense of innovation funding, and argue that a greater proportion of allowances could be diverted to funding breakthrough technologies. Furthermore, we believe that the use of transitional free allocation for the modernisation of the energy sector under Article 10c should, like the Modernisation Fund, be prevented from runing counter to the aims of the ETS Directive. Admittedly, as 10c allowances come from Member States' own auctioning pots, entrusting the final funding decisions to individual Member States would respect individual government's sovereignty in energy matters. Nevertheless, these allowances are created as a result of the ETS Directive, and therefore it would be counter-productive to allow EUAs to be used to fund climate damaging technologies.

Furthermore, given the small volume of allowances available to some Member States through the Modernisation Fund, as well as potentially very low carbon price resulting from the ETS's chronic oversupply, we recommend allowing Member States to add Article 10c allowances to their pool of EUAs from the Modernisation Fund, as suggested in the Impact Assessment. In this case the funding decision ought to be taken at the EU-level, in accordance with stricter guidelines. This merging of two different sources of aid need not necessarily be an inefficient use of public resources, as many modernisation investments may be too expensive for these less wealthy Member States to fund by means of a single source of aid. Furthermore, multiple Member States should be allowed to pool their Modernisation allowances for given years to fund Projects of Common Interest.

Finally, noting the role of the EIB and the Commission in the NER300 mechanism, as well as their proposed role in the Modernisation Fund, we propose that a single harmonised board, composed of these two bodies and a cross-representation of Member States, run both the Innovation and Modernisation Fund in parallel, awarding funding in accordance to the same transparent eligibility principles. The body should select new projects either once or twice during the two 5-year phases that we propose, ensuring a steady support for innovation and modernisation throughout the 2021-2030 period.

We therefore recommend:

- The Innovation Fund must be increased, and, in particular for expensive technologies, funding streams should be sensitive to project lifecycles.
- Highly GHG-polluting technologies should not be eligible for funding under Article 10c, so that highest abatement technologies receive more support.
- Greater flexibility should be introduced for pooling large sums of money for technology projects, in particular: the pooling of allowances across all three low-carbon funding mechanisms, as well as across multiple countries. Funding pools should only be made available to projects under the strictest of all eligibility criteria.
- The governance of these mechanisms must be transparent and ensure a steady stream of support for low-carbon technology all the way to 2030.

About this briefing

We are grateful to the European Climate Fund for helping to fund this work. Full information on Sandbag and our funding is available on our website (www.sandbag.org.uk).

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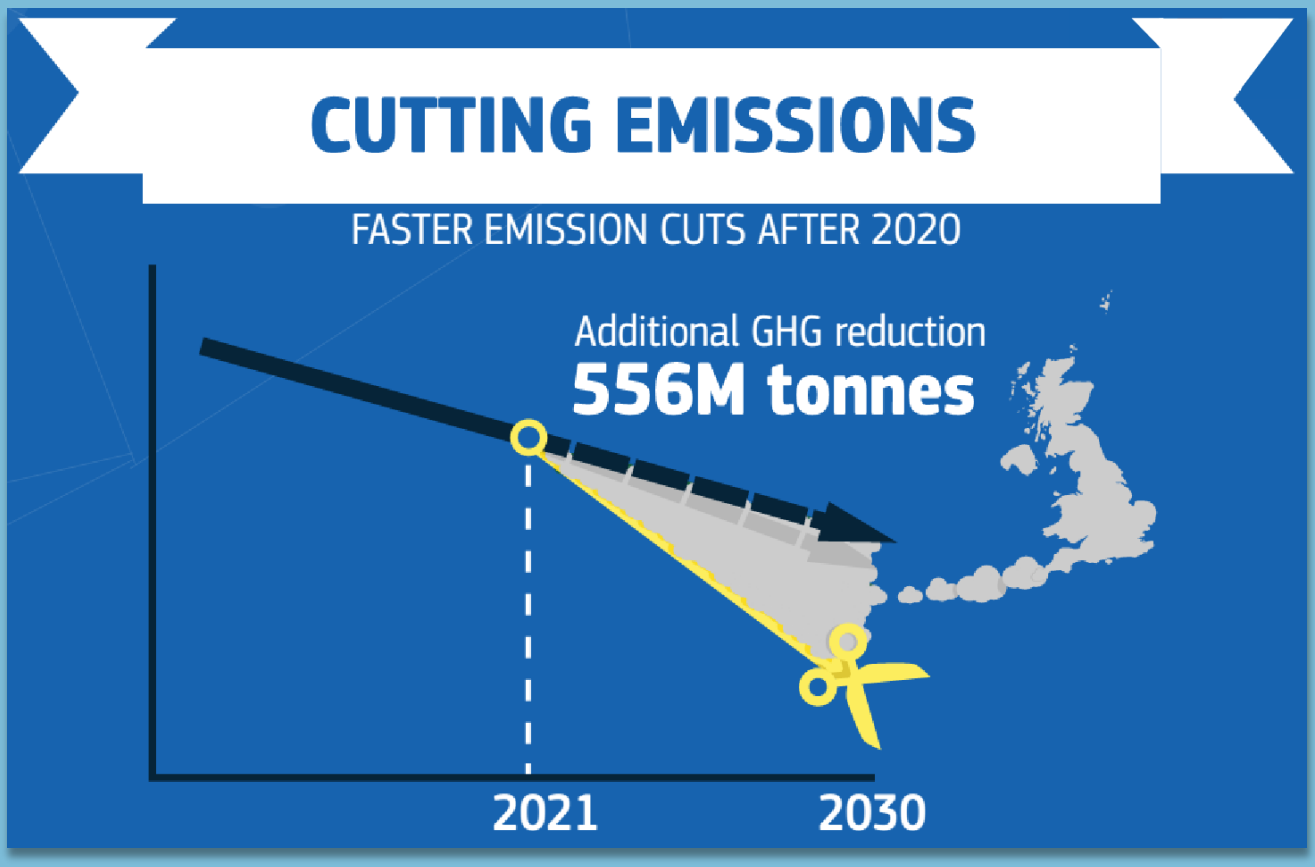
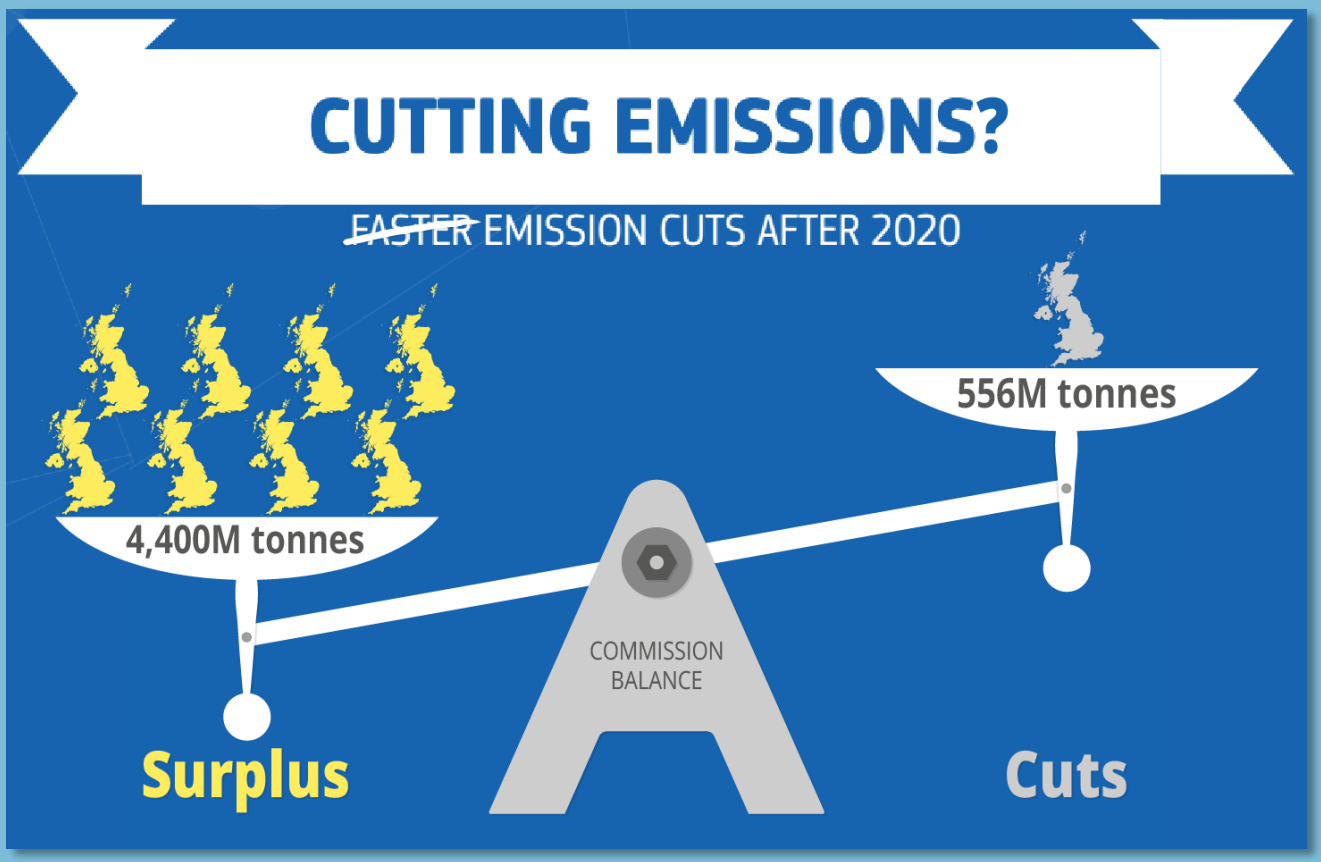
Harder, better, faster, stronger





August 2015

About Sandbag

Sandbag is a UK based not-for-profit research and campaigning organisation focused on effective European climate policy. We recognise that if emissions trading can be implemented correctly it has the potential to help affordably deliver the deep cuts in carbon emissions the world requires to prevent the worst impacts of climate change.

Through rigorous but accessible analysis we make emissions trading more transparent and understandable to a wider audience. In particular, we hope to shed light on the challenges the EU Emissions Trading System (ETS) faces in becoming a truly effective system for cutting emissions, and to advocate for the solutions that can help it to work better.

We are grateful for funding for this research from the **European Climate Foundation,** the **Esmée Fairbairn Foundation,** and for donations from members of the public.

About this Report

Author:
Damien Morris

The findings from this report are based primarily around information publically available from the European Commission supplemented with our own research.

Cover image by European Commission and adapted by Sandbag. Original Commission image can be found here: http://europa.eu/rapid/attachment/MEMO-15-5352/en/ETS%20revision.pdf

The Commission's ETS proposal reduces emissions by 556 million tonnes across 2030, but this will be outweighed by the 4.4 billion tonnes surplus Sandbag estimates will accumulate by 2020 and be banked into the new trading period.

Report title with apologies to Daft Punk.

We invite questions and feedback on this report over the summer. Please send queries and comments to damien@sandbag.org.uk and alex@sandbag.org.uk or call us on (+44) 0207 1486377.

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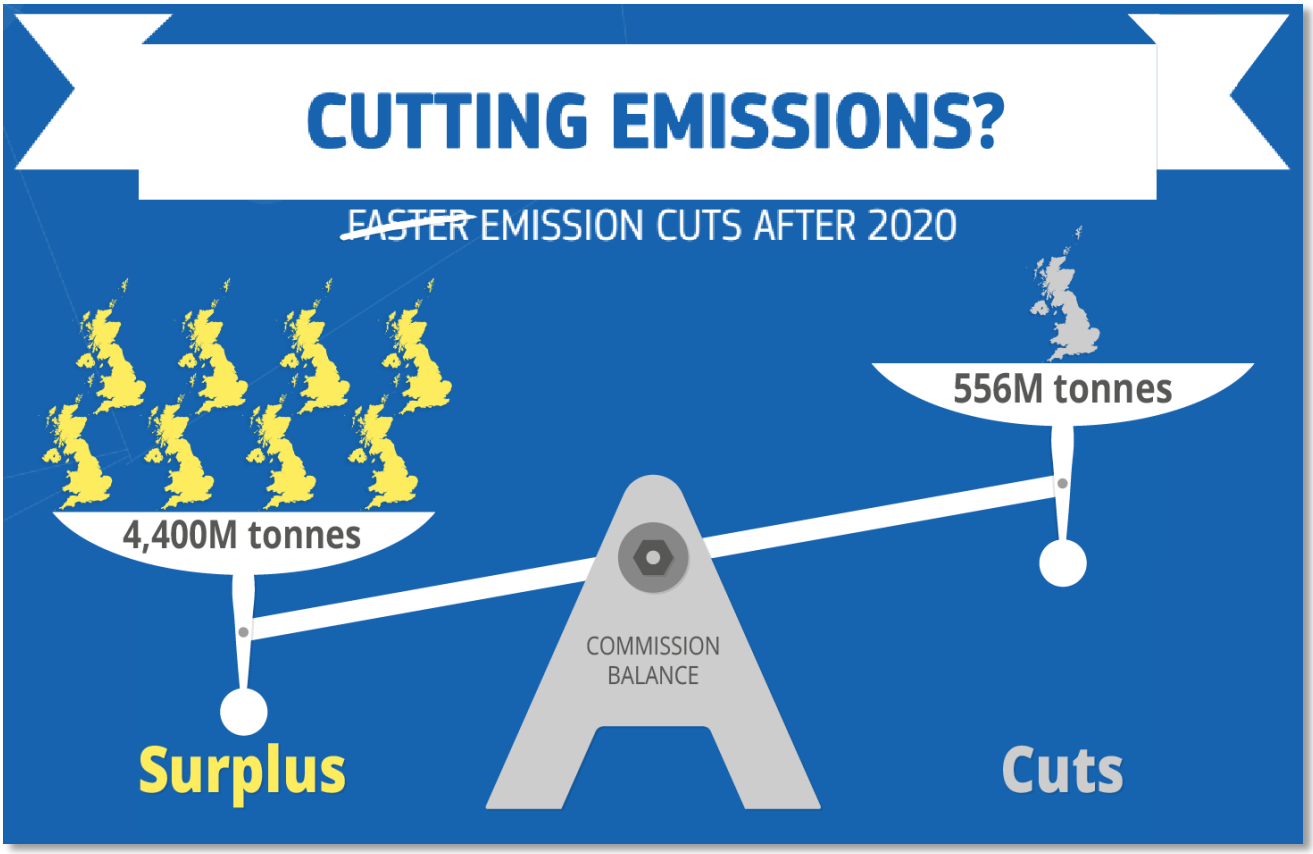
Introduction



In some quarters there is a sense that the question of environmental ambition in the 2030 climate and energy package has already been answered. It most definitively has not been. With the eyes of the world on Paris, looking to see if rich nations' will shoulder their responsibility to avoid dangerous climate change, there can and there should still be an active debate about how the EU can make good on its climate commitments.

Last October the European Council endorsed "a binding EU target of at least 40% domestic reductions by 2030" in line with the Commission's recommendations. The "at least" part of Europe's climate offer was an important inclusion – there must now be an open debate about what it means and how to operationalize it.

Claims by Commissioner Cañete and others that the 40% target in 2030 represents the cost-effective trajectory to Europe's long term goal are not strictly accurate or complete.[3] The Commission's official Low Carbon Roadmap specifies that a 25% domestic target in 2020 is also required, and independent analysis suggests that even more aggressive reductions are required in both 2020 and 2030.[4]

In this context the two implementing Directives that enforce Europe's climate targets – the Effort Sharing Decision (ESD) and the Emissions Trading Scheme (ETS) – are under review. Both of the carbon budgets created by these Directives are significantly over-allocated but with different rules applying in each. Thankfully, there is currently no provision to bank forward the spare allowances accumulated in the ESD. By contrast, the ETS is carrying forward substantial volumes of 'hot air' which it can use to meet future targets. 2.1 billion surplus allowances have accumulated in the ETS to date, and we forecast that this will grow to 4.4 billion by 2020 with around 2.1 billion of this stored in the Market Stability Reserve.[5] This surplus will reduce the effort required to meet the 2030 target and stall progress towards Europe's long term climate goals. The modelling being used by the Commission to determine

[3] See http://ec.europa.eu/clima/news/articles/news_2015030601_en.htm
[4] https://www.pik-potsdam.de/members/knopf/publications/Knopf_EMF28_overview_final.pdf
[5] See Sandbag's 2020 surplus forecast (October 2014): https://sandbag.org.uk/reports/2020-surplus-projection/
We have since issued a short update in April 2015: https://sandbag.org.uk/reports/the-eternal-surplus-of-the-spineless-market/ and will be issuing a new update shortly.

future targets and cap trajectories is in our view completely out of step with reality, creating a false impression and obscuring the ease with which tighter carbon budgets can now be met. EU decision makers can and must use the process of review of both Directives to revisit the degree of climate ambition and the means of complying with that ambition. Sandbag's recommendations on how to integrate both carbon budgets to achieve more ambition under the 2030 package are given in our response to the Commission's consultation on the EU Effort Sharing Decision.[6] A more harmonised system of overall carbon budget management that protects environmental integrity but allows for more flexibility is needed to enable higher levels of ambition to be adopted with confidence.

Important changes will also needed to protect economic competitiveness in the EU and we have issued specific recommendations on this in our recent report 'Discharging a political storm'.[7] With the caps progressively tightening over Europe's industrial sectors we must see a fairer approach to carbon leakage adopted. A far more comprehensive and effective strategy also needs to be devised for delivering investment in deep decarbonisation of industrial sectors.

These important changes must, however, be viewed in the context of increasing ambition. In this pivotal year, when we hope for a new global climate agreement to be reached, we cannot afford to let the debate over policy revision get bogged down in a petty turf war between industry and Member States over the allocation of free allowances.

In this briefing we propose several options by which the EU could step up its economy-wide climate targets through increased effort primarily in the ETS. We note that increased ambition should not be purchased at any price, and have sought to make pragmatic proposals that limit costs and are responsive to changing circumstances.

We have three main recommendations:

- Adopt a 25% target in 2020 target by cancelling allowances from the Market Stability Reserve
- Adopt a 50% target in 2030 through a tighter ETS cap and state-level offsets with a special safety-valve mechanism
- Keep all unallocated allowances in the Market Stability Reserve

We also recommend three additional measures to help EU increase its ambition over time:

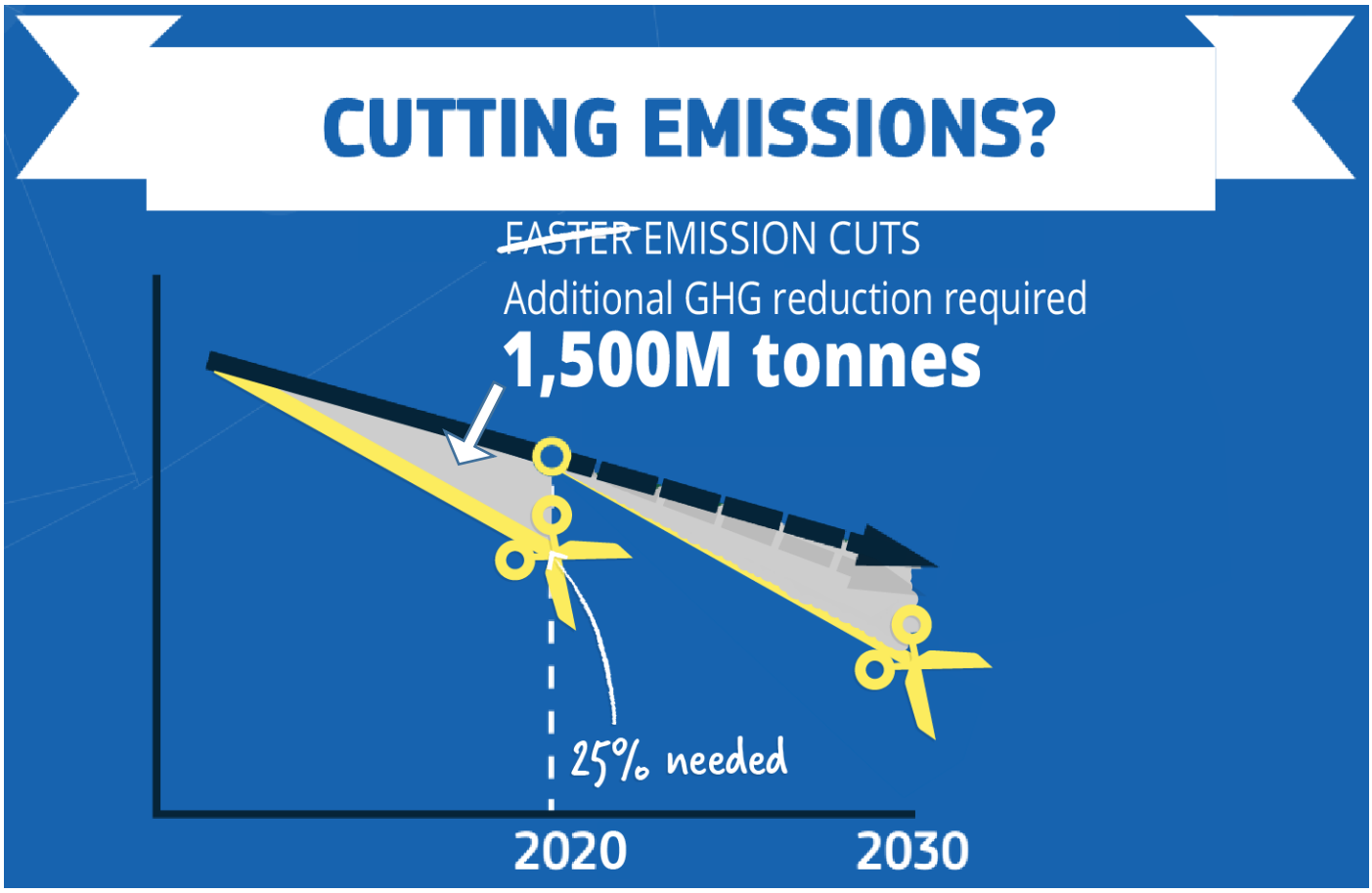
- Introduce five year budget periods for the ETS (and the ESD)
- Introducing an automatic ratchet on ambition over time by establishing an expiry date on EUAs in the MSR
- Granting Member States the ability to cancel their own allowances from auction

We discuss these in more detail below.

[6] https://sandbag.org.uk/reports/consultation-response-the-esd-the-2030-package/
[7] https://sandbag.org.uk/reports/discharging-a-political-storm-supporting-eu-competitiveness-and-innovation-in-the-ets/

Increasing Europe's climate ambition via the EU ETS

1. Adopt a 25% target in 2020 by cancelling allowances from the MSR



Europe's current 20% target in 2020 is neither an equitable contribution from Europe nor a cost-effective milestone to its long term climate goals:

- **In terms of equity:** Europe's long term goal of cutting emissions by 80-95% in 2050 relative to 1990 levels was taken from Box 13.7 in the IPCC's 4th Assessment Report.[8] The same box specifies that emissions reductions of 25-40% were required in 2020.
- **In terms of cost-effectiveness:** Europe has failed to adjust its 2020 targets in line with the milestones of the Low Carbon Roadmap, which required domestic emissions to be cut by 25% relative to 1990 levels. Third party, studies find that even larger emissions reductions are needed by 2020 to affordably meet the long term goal. [9]

Clearly, then, the current 2020 target is not consistent with the official sources used by the Community to determine a trajectory compatible with science. Article 1 of the ETS Directive mentions provisions to increase the caps in line with what is considered "scientifically necessary to avoid dangerous climate change", but these are not currently fleshed out.

Furthermore, Europe's climate targets have been outpaced by actual emissions reductions. As of 2014, emissions from Europe's power stations and factories have already fallen below their 2020 target in the traded sector.[10] Economy wide, Europe's emissions had already fallen 18% below 1990 levels in 2012, before the 2020 package had even come into force.[11] We project that, under current policies, domestic economy-wide emissions could easily fall

[8] p.776 of the IPCC 4AR WG3 report http://www.ipcc.ch/pdf/assessment-report/ar4/wg3/ar4_wg3_full_report.pdf
[9] p.26 https://www.pik-potsdam.de/members/knopf/publications/Knopf_EMF28_overview_final.pdf
[10] https://sandbag.org.uk/blog/2015/apr/1/emissions-europes-carbon-market-reach-2020-target-/
[11] p.7 http://ec.europa.eu/clima/policies/g-gas/docs/kyoto_progress_2014_en.pdf

as much as 29% below 1990 levels by 2020, largely driven by falls in electricity consumption.[12] In the ETS this overachievement will lead to large surpluses that could potentially stall progress in the 2020s and keep Europe off the cost-effective path, despite the adoption of a Market Stability Reserve.

In its 2010 Communication "Analysis of Options for Moving Beyond 20%"[13] the Commission examined how a 30% "flexible" target (25% domestic and 5% offsets) could be most painlessly achieved. The main option explored to increase the ambition in the traded sector was to cancel a significant volume of allowances from auction over the Phase III budget. The advantage of cancelling allowances rather than changing the overall trajectory of the cap, was that a change to the Linear Reduction Factor had several knock on effects that needless disrupted the regulatory framework in the middle of the period (e.g. would change the supply of free allowances available to industry, and reduce the allowances in the New Entrants Reserve).

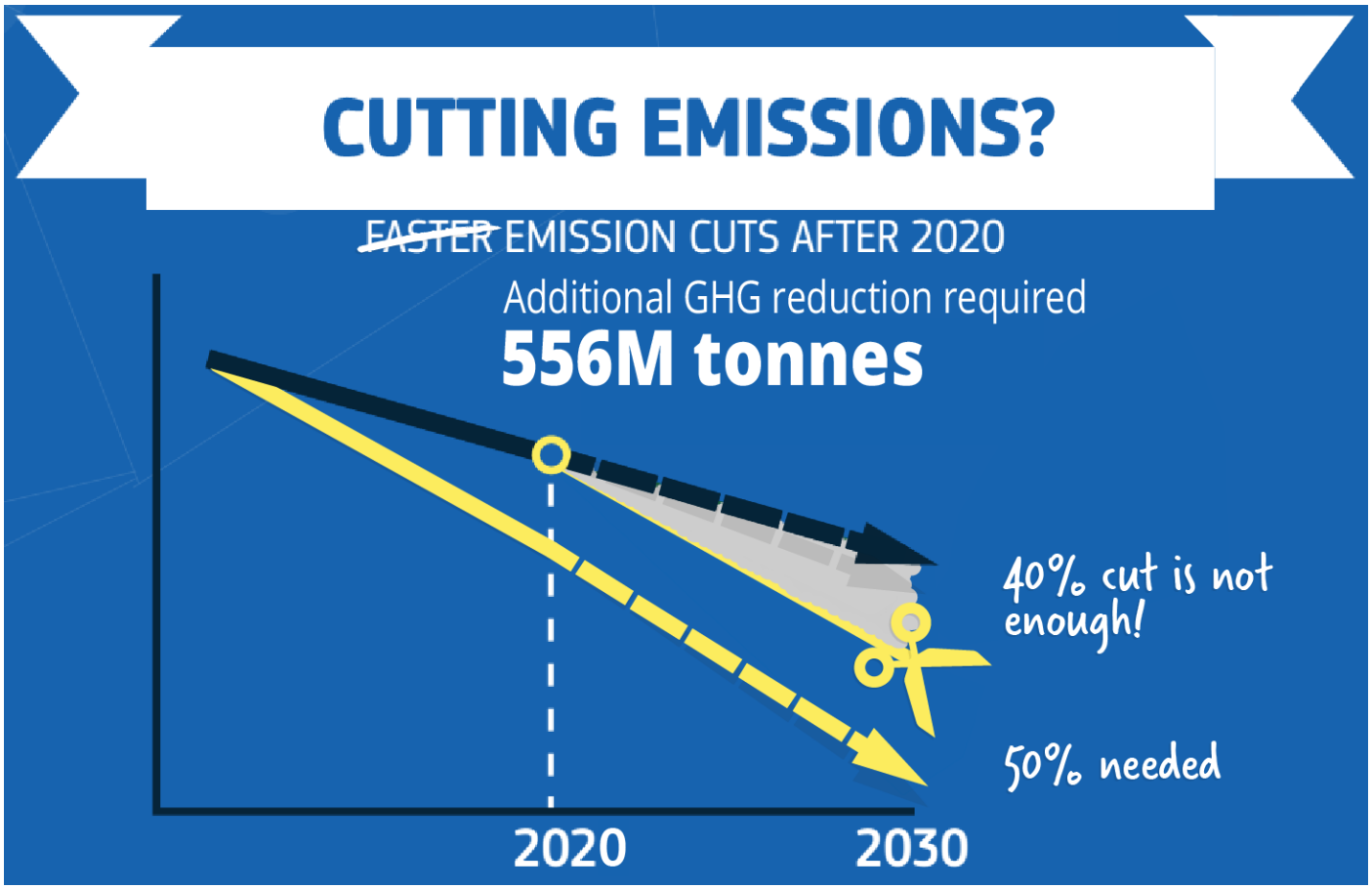
While policymakers have so far been slow to take up this suggestion from the Commission, the adoption of a Market Stability Reserve has made this option even more attractive. When first suggested, cancelling allowances direct from auction represented a more or less immediate forfeiture of revenues by governments. By contrast, allowances placed into the Market Stability Reserve represent a distant and uncertain prospect of future revenue, and cancellation of these should therefore be a more appealing prospect to Member States.

Sandbag calculates that 1.5 billion allowances would need to be cancelled from Phase III to deliver 5% of additional effort, bringing the EU to a 25% target. [14] While this would not be sufficient in itself to deliver the 25% *domestic* target required by the Low Carbon Roadmap, significant over-delivery of emissions reductions in the non-traded sector is expected against the Effort Sharing Decision budgets[15]. So long as spare allowances in the Effort Sharing Decision are allowed to expire (rather than being banked forward), this might be sufficient to ensure a 25% domestic target is reached, and could also bring Europe within reach of a 30% *overall* target after international offset use is taken into consideration.

Sandbag currently expects over 2.1 billion allowances to have accumulated in the ETS by 2020 under the MSR agreed in Trialogue and expect the MSR to continue accumulate allowances through most if not all of Phase IV. Retiring 1.5 billion in 2020 would still leave a buffer of roughly 600 million allowances to return to market if allowances on the market started to become scarce. The 1.5 billion Phase III allowances cancelled from the Market Stability Reserve should be divided between Member States based on their share of Phase III auctions.

[12] https://sandbag.org.uk/blog/2014/oct/28/europes-new-climate-target-walk-park/
[13] http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52010DC0265
[14] We calculate the EU's 1990 emissions baseline as 5.8 billion after adjusting latest UNFCCC data for the global warming potentials in the 2006 IPPC Guidelines (where possible). A 5% increase in the 2020 target would therefore require a reduction of 290 million tonnes in 2020. This would require removing a wedge of 1.6 billion allowances over the decade. While the Phase 3 cap is drawn from 2010, it only commences in 2013. This leaves just 1.5 billion to correct.
[15] The European Environment Agency estimates that the cumulative surplus in the ESD could reach between 700 and 1,200 million allowances. (See p.49 http://www.eea.europa.eu/publications/trends-and-projections-in-europe-2014)

2. Adopt a 50% target for 2030 via the ETS and offsets with a safety valve mechanism



As well as increasing our 2020 target, lawmakers should also increase Europe's 2030 offer in Paris as its contribution to closing the gap between the existing pledges and what is considered necessary to have a chance of meeting the 2 degree goal.

We recommend that Europe cut emissions a further 10% by 2030 relative to 1990 levels. Effort sharing analysis published by both Ecofys and the UK government[16] indicate that a 50% target would be a more equitable contribution from Europe towards a 2 degree climate target. Independent analysis from the Potsdam Institute also suggest that domestic emissions reductions of 47% by 2030 would be a more cost-effective milestone to Europe's long term climate goal of cutting emissions by 80-95% by 2050 than the 40% domestic target proposed by the Commission.[17]

To deliver a 10% increase in ambition at lowest cost we recommend that

- **5% of additional effort be delivered *domestically* by changing the trajectory of the ETS cap,**
- **5% be delivered through a centrally co-ordinated purchases of *international* offset credits by EU Member States, and that**
- **Offsets be used as a cost containment measure in the ETS if the MSR is emptied before 2030, reducing the level of domestic abatement if necessary.**

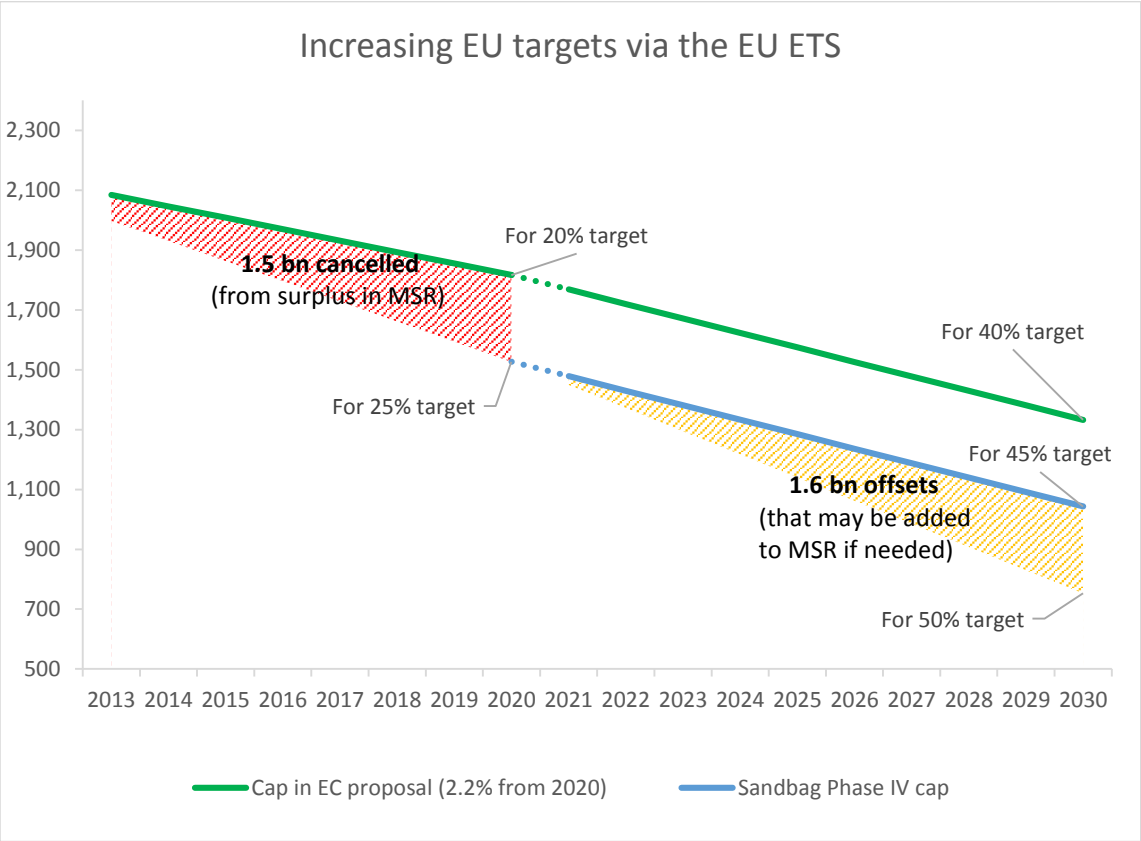
If, as we propose, a -25% target is adopted in 2020, this should also be reflected by starting the Phase IV cap some 290 million tonnes lower in 2021. If the Commission's proposed 2.2% Linear Reduction Factor (48 million tonnes p.a.)

[16] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/253209/UK_Analysis_of_EU_2030_GHG_Targets_FINAL_TO_WEBSITE.pdf and http://www.ecofys.com/en/blog/what-is-a-fair-contribution-of-the-eu-to-the-2c-limit

[17] p.26 https://www.pik-potsdam.de/members/knopf/publications/Knopf_EMF28_overview_final.pdf

continues from this lower starting point it would automatically lead to a 2030 target that is 45% below 1990 levels on a completely domestic basis. [18]

In addition, we recommend that the EU achieve an additional 5% emissions reductions by purchasing international offset credits. We estimate that this would require the purchase of 1.6 billion credits over 2021-2030.[19] This purchase should be centrally co-ordinated on behalf of EU Member States in ten instalments of 160 million offsets spread across the ten years of the trading period. We advise that the burden share for purchasing these offsets should be the same as the division of Member State's Phase IV auctions.



In addition to contributing an additional 5% of ambition, these international offsets could also act as a cost-containment measure if the additional 5% domestic effort results in high carbon costs. For example, if high demand for ETS allowances forces the Market Stability Reserve to empty before 2030 and prices start to rise, a central repository of international offsets could be used to supplement the reserve and step in to supply allowances for auction. In times of low market supply, 100 million offsets could be exchanged for ETS allowances and directly top up annual Member State auctions. This provision would terminate in 2030.

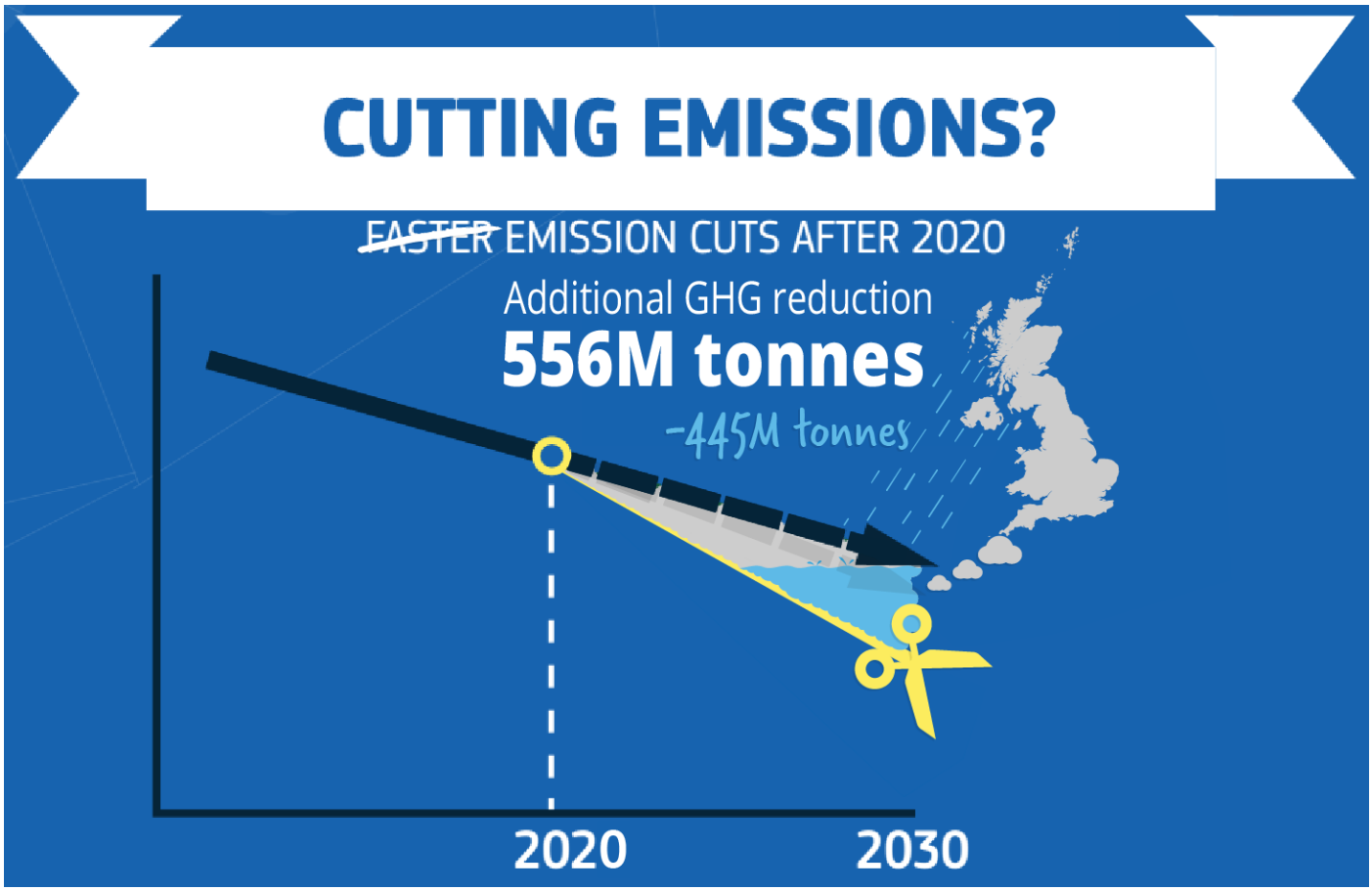
If all 1.6 billion offsets were required to "refuel" the market for use against domestic emissions, this would negate the 5% additional domestic reductions contributed by cancelling EUAs, leading to a 45% target for 2030 (40% domestic/5% international).[20] Sandbag's emissions forecasts suggest that such a demand for allowances is unlikely to take place, and that 50% reductions can be achieved at very limited cost to private entities covered by the EU ETS.

Learning the lessons from the use of offsets in Phases II and III we strongly recommend that any future use of offsets uses a positive list of countries and methodologies that may be purchased. We also recommend exploring the use of discounting credits (e.g. by 50%) so that some of the abatement delivered by such investments remains with the host country and counts towards its INDC. The cost of purchasing any discounted offsets should count towards the

[18] Alternatively, if a -25% target is not adopted, a stronger Linear Reduction Factor would need to be agreed to deliver a 5% deeper 2030 target domestically. By our calculations that would require an LRF of 3.52% (i.e. 77 million p.a.)
[19] The 1990 baseline is 5.8 billion. A 5% reduction in the 2020 carbon budget implies lowering the carbon budget by roughly 290 million in 2030. This implies a wedge of cumulative increments of 29 million across the ten year period (1.6 billion altogether).
[20] Note that Member States would effectively be topping up their own auctions with offsets they purchased themselves.

EU's contribution to the $100bn in climate finance agreed in Copenhagen, as they would constitute additional contribution to global abatement.

3. Keep unallocated allowances in the MSR



When the European Commission published its ETS Revision, it proudly announced that a stronger new trajectory for the EU ETS would cut emissions by 556 million tonne, an amount roughly equivalent to the annual emissions of the UK. Unfortunately, in the same proposal, the Commission has undermined 80% of this emissions cut by introducing 445 million in additional supply via other routes.

This 445 million consists of unallocated allowances that should have been captured by the Market Stability Reserve and be safely off the market. These include:

- 50 million unallocated allowances released from the MSR to provide additional innovation funding.
- 250 million unallocated allowances removed from the MSR to fund the Phase IV New Entrants Reserve.
- 145 million other unallocated Phase III allowances used to also fund the Phase IV New Entrants Reserve.

Like many participants in the Market Stability Reserve debate, we were shocked to discover that a third category of unallocated allowances had escaped capture by the Market Stability Reserve under the specific legislation of the Trialogue agreement. Environmentally progressive stakeholders have a right to feel cheated in this regard.

While we support the need for additional innovation funding and a well-stocked New Entrants Reserve, we believe dedicated allowances from the Phase IV cap should have been dedicated to this purpose, rather than substituting in unallocated allowances from the previous period.

Measures to increase Europe's environmental ambition over time

1. Five year budget periods

A recurring and fundamental threat to the integrity of the EU ETS carbon budgets has been the obsolescence of the cap. Ten years and three budget periods into the policy, lawmakers have repeatedly misjudged business-as-usual emissions and over-estimated the cost of emissions reductions. This has led to loose carbon budgets that fail to confine emissions and instead lead to the accumulation of vast surpluses of spare carbon allowances. The ETS is currently in surplus by roughly 2.1 billion allowances, and by 2020 Sandbag forecasts there will be 4.4 billion spare allowances under the ETS cap.[21]

Instead of learning from past mistakes the EU has taken longer and longer gambles on the accuracy of official emissions forecasts, increasing the length of trading periods from 3 years to 5 years to 8 years, and now potentially to 10 years. While the Market Stability Reserve will partly serve to maintain some scarcity in the market despite a lack of appropriate scarcity in the actual cap, lawmakers need to take responsibility for making the total legal supply of allowances credible again.

It is unacceptable that policymakers have only one opportunity each decade to review the level of environmental ambition in the policy or adjust its design to deal with new information and circumstances. This is especially true, given the hostility industrial sectors have expressed to regulatory change *within* budget periods.

We therefore strongly recommend the EU ETS should return to the 5 year budget periods as last seen in Phase II.

In a recent set of draft Council Conclusions the European Council proposes "that the Paris Agreement […] contain a dynamic five-yearly ambition review mechanism starting in 2020 in order to stay below 2°C", and "contain simplified procedures for the renewal and upward adjustment of mitigation commitments".[22] It would be hypocritical for the European Union to demand this of other parties to the UNFCCC and not maintain similar provisions within the Community.

Finally, the ETS directive contains explicit provisions to increase the ambition of the ETS cap in order to "contribute to the levels of reductions that are considered scientifically necessary to avoid dangerous climate change" (Article 1) or in the event of an ambitious international climate agreement (Article 1, Article 28). These review provisions should be updated, extended and enhanced as part of the ETS revision, to ensure that the ETS can respond to new developments in science, technology, or international politics. In particular, the provisions in Article 28 should be updated to express the procedure by which the Commission not only increase its 2020 climate target under an international agreement, but also how it might increase its 2030 offer in light of an ambitious global deal.

2. Introducing an automatic ratchet on ambition going forward

While one of the advantages of the EU ETS is that it creates temporal flexibility for the EU to achieve its climate targets, the current banking rules risk stretching this flexibility beyond credibility. It is unacceptable that billions of spare carbon allowances accumulated over 2008-2012 as a result of unambitious caps, unnecessary offset use, and economic downturn, should return to weaken Europe's emissions reductions obligations in the 2030s or 2040s.

There are several ways in which the Market Stability Reserve can be modified to prevent excess carbon allowances from providing an unlimited right to pollute in the future.

- **Prevent more than a full year's worth of spare ETS allowances from accumulating in the reserve.** It is neither credible nor appropriate that the traded sector should need to hold more allowance in reserve than are needed to cover a full year's worth of emissions. The size of the MSR should be limited to the volume of stationary emissions reported in the previous compliance year, with any volumes beyond that ceiling to be

[21] Roughly 2.1 billion of these will be in the MSR by that time.
[22] Brussels, 15 June 2015 (OR. en) 9888/15 LIMITE

retired permanently. In 2014 emissions for stationary installations stood at 1,815 Mt.[23] It would take at least eighteen years for an equivalent volume of emissions allowances to exit the Market Stability Reserve.[24] Eighteen years of back up supply seems more than sufficient as a buffer against future scarcity. Hitching the ceiling to stationary emissions allows it to ratchet down over time, as the ETS approaches its longer term carbon targets.

- **Introducing expiry dates for ETS allowances placed in the Market Stability Reserve.** An alternative means of limiting the validity of ETS allowances placed in the reserve is to time-limit them. Different burden shares for auctions between trading phases imply that the ETS allowances placed into the Market Stability Reserve will be tagged with an assigned national owner and a phase of origin. Any allowances not used by the trading period after their original submission could be removed permanently, while ensuring a fair division between Member State allowances in the reserve.[25]

3. Granting Member States more autonomy to increase their climate ambition

Currently, the ETS Directive specifies that all allowances that are not issued as free allowances must be auctioned. This obliges Member States to auction allowances they may otherwise wish to cancel. Cancelling national allowances held in the market stability reserve, which represent a distant and uncertain revenue prospect, is a clear way for Member States to go further in terms of climate mitigation effort. **A small change (highlighted below) to the Article 10 (1) of the ETS directive (highlighted below) would make this possible:**

Current text	Proposed change
1. From 2013 onwards, Member States ***shall*** auction all allowances which are not allocated free of charge in accordance with Article 10a and 10c. By 31 December 2010, the Commission shall determine and publish the estimated amount of allowances ***to be*** auctioned.	1. From 2013 onwards, Member States ***may*** auction all allowances which are not allocated free of charge in accordance with Article 10a and 10c. By 31 December 2010, the Commission shall determine and publish the estimated amount of allowances ***that may be*** auctioned.

Conclusion

The Commission's own sources indicate that a stronger 2020 target is necessary, and rapidly falling emissions combined with a huge and growing surpluses in the ETS mean that we can readily go further in 2020 and 2030 without incurring huge costs.

The provisions outlined above demonstrate options for how we can get back on track to an equitable and cost-effective emissions pathway with minimum pain to companies under the ETS, e.g. by cancelling surplus allowances that are already out of circulation, or allowing offset credits to flow back into the market if a tighter cap proves unexpectedly costly.

We hope that these suggestions will re-ignite the debate on Europe's contribution in Paris and help put ambition at the front and centre of the debate on the ETS review.

[23] EUTL accessed on 28/4/2015. By contrast, Sandbag expects 2.1 billion allowances to accumulate in the MSR by 2020 and to continue growing for several years.
[24] The MSR is designed to reissue allowances at 100 Mt year if supply on the market falls below 400 million
[25] This assumes trading periods of ten year's length. If five year trading periods were introduced as we propose, allowances could reasonably remain valid for two successive periods.

sandbag

Sandbag is a UK-based not-for-profit think tank conducting research and campaigning for environmentally effective climate policies.

Our research focus includes the phase-out of old coal in Europe; deep decarbonisation of industry through technologies including Carbon Capture Utilisation & Storage; reform of the EU Emissions Trading Scheme; and increasing ambition in the EU 2020 and 2030 climate & energy packages.

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Discharging a political storm

Supporting EU competitiveness and innovation in the ETS

July 2015

About Sandbag

Sandbag is a UK based not-for-profit research and campaigning organisation focused on effective European climate policy. We recognise that if emissions trading can be implemented correctly it has the potential to help affordably deliver the deep cuts in carbon emissions the world requires to prevent the worst impacts of climate change.

Through rigorous but accessible analysis we make emissions trading more transparent and understandable to a wider audience. In particular, we hope to shed light on the challenges the EU Emissions Trading System (ETS) faces in becoming a truly effective system for cutting emissions, and to advocate for the solutions that can help it to work better.

We are grateful for funding for this research from the **European Climate Foundation,** the **Esmée Fairbairn Foundation,** and for donations from members of the public.

About this Report

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The findings from this report are based primarily around information publically available from the European Commission supplemented with our own research.

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Introduction

The EU's Emissions Trading Scheme (ETS) aims to usher in zero domestic emissions in the traded sector by the second half of the 21st century. Policymakers face a number of important challenges when designing the rules of the ETS for the post-2020 period. One is to include measures on competitiveness that can help participants adapt to a progressively tightening cap on European industrial emissions. A second challenge is to create more bankable support mechanisms for technological innovation than the narrow and weak framework currently in place. This is especially needed in the case of industrial decarbonisation, support for which has until today been significantly less than the assistance channelled into decarbonising the power sector through legally binding renewables targets and other policies. Not all industries are able to incorporate renewables in order to cut their carbon emissions and although carbon constraints have encouraged investments in increased efficiency, incremental efficiency gains will not deliver the deep emissions reductions required in the long term.

To address these twin challenges, and in anticipation of the Commission's official draft legislation, Sandbag presents a set of recommendations for the post-2020 period based on our published reports and recent analysis. First we argue for more targeted carbon leakage provisions, which deliver protection to the industries that are genuinely at risk. At the same time, we propose channelling more resources into industrial innovation to unleash the development and deployment of technologies indispensable for deep decarbonisation. As caps tighten and carbon leakage provisions are reformed, bankable policies to support investment in the transition to a low carbon economy become much more important.

A. Protecting industrial competitiveness under the EU ETS

Cutting European emissions to 80-95% of 1990 levels by 2050 should not come at the price of relocating industrial production outside of Europe. To prevent undue international competitive distortions, the EU has sought to include compensating measures within its carbon pricing policy.

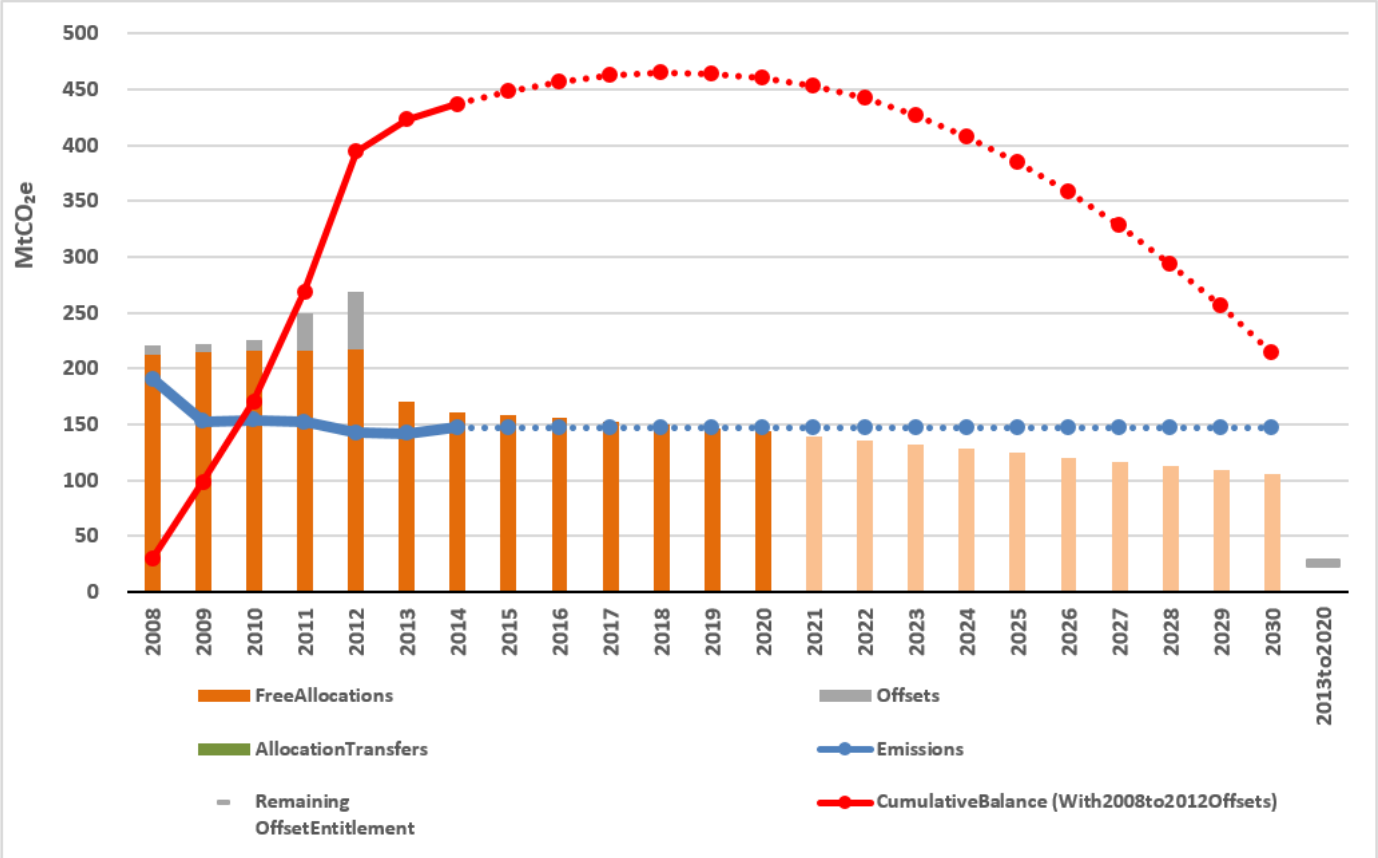
The main tool to address competitiveness concerns to date has been to award free allowances to the manufacturing sectors. In previous trading periods, free allowances were allocated by Member States largely based on optimistic forecasts of industrial demand for allowances. This successfully shielded ETS industries from the carbon price, but also gave rise to large windfall profits, as fixed ex-ante allocations failed to respond to unexpectedly low demand – especially following the recession.

In the current trading period (Phase 3) free allowances are allocated on the basis of Community-wide carbon leakage criteria; however, these criteria remain both overly generous and inflexible. This has led to over-compensation of most industries, while under-compensating others. Over 2013-2020 the ETS allocates free allowances to industrial participants based on their historic activity levels together with carbon-intensity benchmarks for their product category. A correction factor is applied equally across all sectors, to prevent the requested free allocations exceeding the total pool of allowances made available for free allocation. Installations considered exposed to carbon leakage qualify to receive 100% of their corrected benchmark allocation for free throughout Phase 3. In this phase almost all industrial activity qualified for special leakage protections. The tiny share of sub-

installations not considered to be exposed to carbon leakage receive diminishing amounts of free allocations. However, the prior application of the cross-sectoral correction factor means that no installations receive free allocation to cover 100% of their emissions, leading to criticism that not even highly exposed best-performers are adequately shielded from any effects of a carbon price.

In the chart below, we illustrate the extent to which the cement sector has been oversupplied by carbon allowances to date. Cumulative surpluses currently stand at about 450 million allowances.[26] If current carbon leakage rules are carried forward and emissions continued at 2014 levels, the sector would likely remain in surplus until beyond 2030. This chart is taken from our new industrial supply forecast tool[27], published in parallel with this briefing (follow link for full sources and assumptions).

***Figure 1**: Projected carbon allowance surpluses for the ETS cement sector in all countries*



With reform, free allocation can become a reliable and transparent transitional mechanism to protect industrial competitiveness. Sandbag welcomes many elements of the October Council Conclusions[28] on competitiveness, which support several of Sandbag's recommendations as

[26] Sandbag has recently become aware that the Commission's application of the cross-sectoral correction factor differs from our approach. We think this affects our projections by approximately 100 million tonnes at the total ETS level. We strive to make our forward projections as accurate as possible and will update our modelling as more clarification becomes available.

[27] Use our new Industrial Supply Projections tool: https://sandbag.org.uk/site_media/uploads/Sandbag_-_Industrial_Supply_Projections.xlsm.

[28] See October Council Conclusions: http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/145356.pdf.

published in our 2014 report Slaying the Dragon[29]. Sandbag proposes the following list of specific measures in the spirit of the Council Conclusions:

1. Changing the application method of the cross-sectoral correction factor so that it is applied after the carbon leakage assessment adjusts free allowances;
2. Updating the system of ex-ante free allocation every five years to reflect latest information on carbon efficiency product benchmarks and historic production activity levels;
3. Refining the carbon leakage criteria so they better reflect the ability of sectors to pass on carbon costs and are resilient against unexpected changes in the carbon price;
4. Refining existing ex-post allocation adjustments to make free allocation more responsive to changes in production;
5. Rejecting the use of free allowances to compensate for indirect ETS cost arising from electricity consumption.

Changing the way the cross-sectoral correction factor is currently applied, along with the other measures presented above, would reduce the likelihood of the correction factor being triggered at all. This could potentially unlock hundreds of millions of allowances which, under current rules, are lost in overcompensation to some ETS facilities. Policymakers could re-allocate any unused free allowances for increased industrial production, or for other purposes, such as support for modernisation and innovation.

1. Application of the cross-sectoral correction factor

The current way the cross sectoral correction factor is applied needlessly harms the competitiveness of European industry by over-correcting free allowances. Phase 3 installs a legal ceiling on the volume of benchmarked free allowances that manufacturers can receive. This accounts for just under 40% of the total Phase 3 cap. If benchmarked free allowances exceed this ceiling in any given year, a cross sectoral correction factor uniformly reduces allocations to all installations to bring them back to this ceiling. However, the current design of the correction factor leads to an *over*-correction which brings free allocation significantly below the legal ceiling.

This over-correction takes place because the correction factor is applied before accounting for whether facilities belong on the carbon leakage list. The correction factor treats all facilities as if they were due to receive 100% of their free allocation across the period. In reality, facilities that are not exposed to carbon leakage receive only 80% of their allocation in 2013 declining steadily to 30% in 2020. In effect, non-leakage exposed industries are treated as though they were applying for nearly double the ETS allowances they actually expect to receive. This artificially inflates the overall number of free allowances being applied for, leading to a more aggressive correction factor to all facilities.

To date this over-correction from the correction factor has been small because almost all industrial activity in Europe has been defined as leakage exposed, but this effect could be heightened if carbon leakage list becomes more targeted as we recommend.

[29] See "Slaying the Dragon" Report: https://sandbag.org.uk/site_media/pdfs/reports/Sandbag-ETS2014-SlayingTheDragon.pdf.

Sandbag proposes the cross-sectoral correction factor should only be applied *after* adjustments to free allocation on the basis of carbon leakage status are determined. This would ensure the correction factor was only applied to real applications, reducing the aggressiveness of any correction factor triggered, or perhaps avoiding a correction factor altogether. This is especially true if production baselines are updated and carbon leakage protections are better targeted as we recommend.

Additionally, the best performers in each of the sectors deemed at significant risk of carbon leakage should be exempt from any correction factor. The 10% most efficient facilities in any of the product categories that are deemed at risk of carbon leakage (or at "medium" or higher risk under a tiered system) will continue to receive their benchmarked free allowances, while other sectors would face a more aggressive correction factor to compensate. This would help ensure that "the most efficient installations in these sectors should not face undue carbon costs leading to carbon leakage" as specified in the October Council Conclusions (¶ 2.4). They also provide an additional incentive for facilities in leakage exposed sectors to adopt best available technologies and invest in innovation.

2. Five year budget and review periods

Sandbag calls for the re-instatement of five-year budget periods, as last seen in Phase 2.[30] Long budget periods provide insufficient opportunities to review environmental ambition and regulatory parameters in light of emerging developments. We propose that two consecutive budgets should be set in advance on a five year rolling basis, in a similar fashion to the carbon budgets under the UK Climate Change Act.[31] We propose that production baselines and carbon efficiency benchmarks are reviewed every five years on the basis of actual data.

a) *Carbon-efficiency benchmarks*

To preserve incentives for carbon efficient production under the EU ETS the benchmarks need to be reviewed regularly, taking into account best available technologies. All benchmarks should be based on real performance data. The 10% most carbon efficient facilities in each product category should be identified based on updated industrial efficiency, instead of referring to a pre-crisis value that will by 2021 be outdated by more than a decade. A new benchmarking exercise should take place every five years to capture new developments in industry. A leaked draft of the 2015 Commission's Impact Assessment[32] (p. 22) found that five yearly updates to the benchmarks were the strongest of four options explored. Nevertheless, a leaked draft of the amendments to the EU ETS Directive[33] (¶ 11) suggests the Commission is planning to propose adjusting the benchmarks just once every ten years, based on a uniform 1% annual decline from 2008 through to the middle of each future trading period. This reduction will be fixed against benchmark data collected for the original benchmarking exercise.

[30] See our submission to the Consultation on the ETS Revision (March 2015): https://sandbag.org.uk/site_media/pdfs/reports/Collected_Responses-_EC_Phase_IV_consultation.pdf, and also our Consultation on the Effort Sharing Decision (June 2015): https://sandbag.org.uk/site_media/pdfs/reports/ESD_Consultation_response_June_2015_1.pdf.
[31] The UK climate budgets have an even longer time horizon, set three budgets in advance.
[32] See the leaked draft of the 2015 Commission's Impact Assessment: http://www.changepartnership.org/wp-content/uploads/2014/03/150524-IA-ETS.pdf.
[33] See the leaked draft of the amendments to the EU ETS Directive: http://www.changepartnership.org/wp-content/uploads/2014/03/2030-ETS-reform-leaked-30.6.15.pdf.

This administratively simpler approach provides more predictability for installations, but fails to accurately reflect the actual rate of technological progress in each sector, or adequately differentiate between sectors with different rates of progress. It may therefore lead to windfall profits in some sectors and potentially disproportionate stringency in others. This also fails to correct for potential inaccuracies in the original benchmarks, one fifth of which were estimated rather than being based on real data. In these respects, the leaked draft legislation does not appear fully consistent with the October Council Conclusions which call for periodic review of the benchmarks *"in line with technological progress in the respective industry sectors"*, and to avoid regulation which leads to *"windfall profits"* or imposes *"undue carbon costs leading to carbon leakage" (¶2.4).*

b) *Production baselines*

Allocations are calculated by multiplying a carbon-efficiency benchmark against a historic production baseline which is determined for each sub-installation. In order to address the problem of out-dated production baselines and to limit the windfall profits from the free allocation, Sandbag recommends updating the historic activity baseline every five years. Frequent baseline updates would allow for better alignment of free allocation with production levels, as well as for avoidance of windfall profits and undue carbon costs.

We also recommend using a single baseline period for each update, using latest production data. According to the leaked draft of the 2015 Commission's Impact Assessment (p. 23) an option of using single baseline period for all installations could drastically reduce the likelihood of triggering a cross-sectoral correction factor.

The leaked draft of the amendments to the EU ETS Directive (¶ 13) propose a single new baseline calculation be conducted ahead of 2020, using production data from the three most recent years for which data is available. We welcome this progress, but stress that these production baselines risk growing rapidly obsolete unless this exercise is repeated for the second half of the following decade.

3. Targeted carbon leakage assessment

In Phase 3 admission to the carbon leakage list entitles installations to receive 100% of their benchmarked free allowances across the period, while non-exposed sectors receive 80% of their benchmarked allowances in 2013 declining to 30% in 2020. This means leakage protected facilities receive almost twice as many Phase 3 allowances as they would have received if they had not been considered exposed. Our analysis finds that virtually all of manufacturing activity has been defined as leakage exposed in Phase 3. This seems an unrealistically high proportion of EU industry highlighting weaknesses in the methodology employed to make the assessment leading to overcompensation to many European industries. We suggest the following reforms:

a) *Replacing estimated carbon-cost criteria with actual carbon-intensity criteria*

For calculating leakage exposure the Commission assumed an estimated carbon price of €30 a tonne for most of Phase 3, a parameter completely out of step with reality. The actual price is today only

€7.46.[34] A Commission Impact Assessment underlined this point suggesting the use of €16.50 price for the 2015-2018 period. It estimated that using a more realistic €16.50 carbon price in the carbon leakage assessment the Commission would unlock 500 million more allowances for Member States to auction with a total estimated value of €5 billion. The Commission's bullish price forecasts have led to unnecessarily wide capture of sectors on the carbon leakage list, but there will always be large degrees of error involved in price modelling. We therefore recommend replacing the current price criterion for assessing carbon leakage with a carbon intensity criterion based on actual rather than estimated data (e.g. kg CO_2 / EUR GVA). We stress, however, that the effectiveness of this criterion will depend on the specific carbon intensity values used to determine the threshold for being genuinely at risk of carbon leakage.

b) *Using a single combined carbon-efficiency and trade intensity criteria*

In the ETS Directive carbon leakage exposure is defined as the extent to which different sectors are able to pass through any carbon costs they might face. The current list primarily relies on carbon cost criteria and trade intensity criteria to determine the potential for cost pass through. Unfortunately, the current rules assume each or these criteria can determine leakage exposure independently of each other (e.g. if carbon costs are higher than 30% of GVA or trade intensity is higher than 30%). Neither criteria is sufficient on its own to show a risk of carbon leakage. Only combined criteria of trade intensity and carbon cost (or better still carbon intensity) should be used.

c) *Introducing degrees of carbon leakage exposure*

The binary approach of placing sectors either on or off the carbon leakage list used in Phase 3 does not take into account the differing extent to which sectors can pass through their carbon costs. Moreover, this all or nothing approach prompted manufacturers to lobby aggressively to ensure the carbon leakage thresholds were relaxed to ensure they were protected. To remedy this, instead of the two carbon leakage categories in Phase 3, we propose there should be four categories in Phase 4: very high, high, medium and low/no exposure. The most acute danger under a binary system is that facilities that would only qualify for "medium" level support under a graded system would receive the level of compensation that should be reserved for facilities with "very high" leakage exposure leading to significant over-allocation. The leaked Impact Assessment states tiered levels of leakage exposure would only involve moderately more administrative complexity.

4. Dynamic allocation

a) *Refining ex-post allocation adjustments*

Sandbag recommends transforming the current ex-post allocation method into a more dynamic system to take better account of changing production levels. Under current rules governing what happens to allowances in the event of closure of significant decreases in production, free allocation to installations is not adjusted down until their production drops by 50% relative to an historic production baseline. More sensitivity to smaller changes in production are needed to prevent overcompensation of free allowances. Second, facilities which increase their production should also

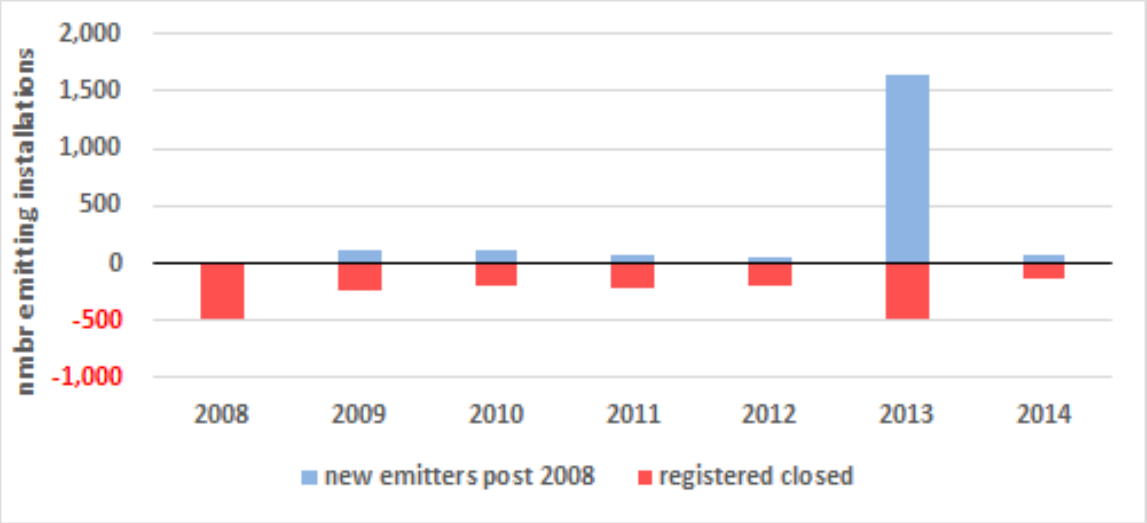
[34]See The ICE, Market Reports, EUA Indices, Dec 15 strip price, as listed on 3rd July 2015: https://www.theice.com/marketdata/reports/82.

be eligible for increased free allocation. Current provisions only award free allowances to brand new facilities, or to facilities which have been enlarged or enhanced to increase their maximum capacity by 10% or more. This fails to capture increased production within existing and unmodified facilities which may have been underutilised when production baselines were established.

We propose a 10% fall in free allowances for every 10% drop in activity, and also a 10% rise in free allowances for every 10% increase in output.[35] This way, installations will be able to avoid both shortage and over-allocation of allowances against a particularly low or high production baseline. Installations that are returning to higher production levels will no longer be penalised for increased industrial production. The use of performance data as a base for both decrease and increase in free allocation would eliminate the need to calculate changes in installed capacity under current rules, and will therefore reduce the administrative burden.

The October Council Conclusions call for free allocation to have "better alignment with changing production levels in different sectors" (¶ 2.4). Sandbag first proposed a dynamic allocation system based on modified partial cessation thresholds in our 2014 report 'Slaying the Dragon' (p. 71-72). We are encouraged to see this approach featured in the leaked draft of the 2015 Impact Assessment (25), where it scored highly against alternative options. The same proposal appears in the leaked draft amendments to the EU ETS Directive (¶ 11), however, rather than using the 10% activity intervals we've recommended, or the 15% activity intervals tested in the Impact Assessment, the current crude activity thresholds appear to be maintained. This would remain too unresponsive to changes in activity level.

An allocation system that reacts more sensitively to production changes will help increase the importance of carbon efficiency, incentivising low carbon production and discouraging low carbon production in each product category. A strong incentive system for new clean production in Europe is sorely needed.



[35] Indicatively, if partial cessation thresholds were narrowed to 10% intervals as we advise, Sandbag estimates that in 2014 alone, 70% more allowances would have been withheld under partial cessation rules than is currently the case – even where we assume an increase in allowances to those sub-installations that had increased their emissions relative to baseline levels (NB: this calculation uses emissions in installations as a proxy for production in sub-installations).

Figure 2: *Number of installations first emitting in each year since 2008 and number of installations registered as closed in each year; all sectors and all countries except Croatia and Iceland*

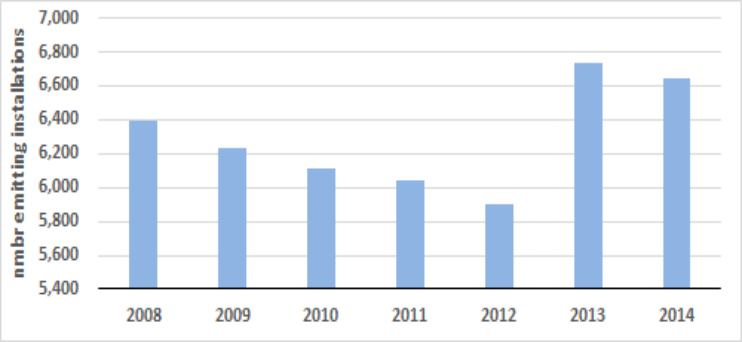


Figure 3: *Number of installations emitting in each year; all sectors and all countries except Croatia and Iceland*

Figures 2 and **3** above illustrate how installations have been joining and leaving the scheme between 2008 and 2014. In total, just under 2,000 installations have registered as closed between 2008 and 2014. The number of emitting installations significantly declined during Phase 2. The uptick in emitting installations in 2013 is principally an artefact of scope change (more sectors and gases included).

b) *Broadening the function of the New Entrants Reserve*

Allowances allocated for increased production should come from the New Entrants Reserve, which should bear the name New Activity Reserve to reflect a broader function. Allowances withheld through the new rules on partial cessation and closures should flow back into the New Activity Reserve rather than re-appearing abruptly at auctions at the end of each period. This way, they would remain available for allocation both to new entrants and for installation whose production grows. In addition, if the volume of free allowances applied for at the start of Phase 4 is less than the maximum volume available, a large share of these should flow into the New Entrants Reserve, with the remaining fraction used to top up the Innovation Fund. If the more targeted competitiveness protections we recommend are applied, hundreds of millions of allowances from across Phase 4 could potentially become available for these alternative purposes.

A New Activity Reserve, flexibly allocating and withholding allowances to and from industrial installations in response to changes in production, would insulate the carbon market from the shocks brought on by the swing in business cycles and would better insulate best performers who are carbon leakage exposed when they increase their production.

It has been agreed that the new Market Stability Reserve will absorb unused allowances from the NER and from partial cessations and closures at the end of Phase 3. Similarly, if there are allowances left in the New Activity Reserve at the end of future Phases they should be channelled into the Market Stability Reserve (MSR). There is scant evidence that unallocated allowances from Phase 3, will be needed to top up a New Activity Reserve. If it remains 5% of the total Phase 4 cap, the NAR will still contain some 375 million allowances after the NER400 is removed, and if carbon leakage rules are more targeted, substantial volumes of spare free allowances under the ceiling could flow into the NAR from the outset of Phase 4.

Sandbag strongly opposes the proposal in leaked draft amendments to the EU ETS Directive (Art. 7) to channel 250 million allowances from the MSR and other unassigned Phase 3 allowances towards the New Entrants Reserve. All allowances in the MSR should remain there until the agreed thresholds are triggered for releasing them. Any other unallocated allowances that escaped capture in the MSR under the Trialogue agreement should be moved to the MSR or cancelled under the ETS Revision.

Firstly, we argue that a share of allowances under the Phase 4 cap should be held in reserve for New Entrants. Secondly, we reject the need for any ex ante re-assignment of allowances from the MSR to the NER when no demand for these allowances has been demonstrated. Only as a last resort, in the event that the EU experiences a significant increase in new investment that reduces the New Activity Reserve to zero, should the option to use allowances from the MSR be explored, and only then on a strictly limited basis.

5. Indirect costs compensation

Sandbag opposes the use of free allowances for compensating indirect costs to energy intensive industries. Free allocation alone cannot be expected to solve all the challenges the EU ETS poses for industry if it fails to adapt and invest.[36] Sandbag opposes accounting for indirect emissions in the allocation methodology because by counting emissions downstream and upstream it breaches the principle upon which the ETS is founded (one allowance to cover one tonne) and risks double-counting. It also counteracts price signals that should incentivise efficiency improvements. Finally, from a practical perspective, allocating allowances as compensations for indirect costs would also involve potentially large volumes of free allowances. It is not clear where these might be expected to come from without reducing Member States auction volumes or further diminishing access to free allocations for direct emissions to installations genuinely exposed to carbon leakage.[37]

If necessary, Member States should mitigate the problem of indirect costs on the national level through better use of auctioning revenues and appropriate policies to stimulate energy efficiency and investment in low carbon power generation. Member States should be encouraged to pay particular attention to providing support for electricity intensive sectors to take advantage of fluctuating wholesale electricity prices and storage technologies as varying renewables make up an increasing portion of electrical generation. Governments should continue to have the option of compensating indirect costs in accordance with existing State Aid guidelines. Sandbag endorses the leaked draft amendments to the EU ETS Directive (¶ 6) in this respect.

B. Modernisation and Innovation for decarbonising Europe

A key challenge of the 2030 package will be to drive new investment in to the breakthrough technologies that can enable deep-decarbonisation of the traded sector. The current 2020 package introduced several important measures that had not existed previously. Within the EU ETS, the

[36] Centre for European Policy Studies (2014): "Addressing Competitiveness and Carbon Leakage in ETS": https://www.iea.org/media/workshops/2014/61MARCUAddressingCompetitivenessandCarbonLeakageinETs.pdf

[37] The conclusions of the Council of the EU from October 2014 expressly specify that the share of auctions relative to the cap should not diminish (¶2.9). If these suggestions are to be respected, allowances for indirect costs can only be procured by diminishing the volumes reserved for free allocation or the NER (i.e. Sandbag's proposed source for ex-post allocation).

receipts from 300 million allowances in the New Entrants Reserve were hypothecated for transformative low-carbon projects. Several transitional European Economies that were allowed to give some of their national ETS allowances to projects that helped them modernise their energy system. A new EU-wide benchmarking system for allocating carbon allowances to industry also helped to establish a level playing field and provided a competitive advantage to low carbon manufacturers. However, two and a half years into Phase 3, the track record of these measures is patchy. On the one hand, energy modernisation in transition economies proceeds in a haphazard and sometimes non-transparent manner; on the other hand, carbon price crashes and insufficient state support hurt the bankability of projects in much needed breakthrough technologies, e.g. Carbon Capture and Storage (CCS) and other deep decarbonisation technologies in industrial sectors.

By contrast, measures outside of the EU ETS have proved far more effective at driving technological innovation in the traded sector. National renewables targets agreed under the EU Renewable Energy Supply Directive have successfully attracted enormous levels of private investment, supported through national financing mechanisms largely unsupported by central EU funds. Similarly, EU regulations such as the Ecodesign Directive, have led to significant improvements in the carbon efficiency of end-use electronics leading to significant reductions in ETS emissions arising from the electricity sector.

Going forward, the support for innovation in the traded sector needs to become more balanced, with a greater emphasis on CCS and industrial low carbon technologies. Support from within the ETS Directive itself also need to be informed by the early lessons of Phase 3.

In October 2014, Council proposed the following changes to current policy for the post-2020 period:

- Continuing the provisions based on Article 10c of the ETS Directive, which permits certain lower-income Member States to allocate allowances for free to power installations for the purpose of offsetting modernisation costs, (¶2.5);
- Upgrading the NER300 facility, meant to fund first-of-a-kind projects in CCS and renewable energy during phase 3, to an NER400, providing 400million allowances and extending its scope to finance other forms of industrial abatement (¶2.6);
- Setting up a Modernisation Fund to address the particularly high additional investment needs of low-income Member States (¶2.7).

Sandbag believes these measures still constitute insufficient support for development and deployment of deep decarbonisation technologies across Europe. To correct for these shortcomings, we propose three centralised financing measures to be introduced for the post-2020 period:

1. Establishing strong policies outside of the EU ETS which drive investment in deep decarbonisation technologies for the traded sector;
2. Enlarging and co-ordinating the Innovation and Modernisation Funds financed by auctioning ETS allowances
3. Improving the governance, transparency and flexibility of the 10c mechanism.

1. Funding from outside the ETS

In the current trading period the sale of 300 million allowances set aside from the New Entrants Reserve (NER300) was supposed to inject significant financial support into important new technologies. Unfortunately, the structural oversupply in the ETS triggered a collapse in the carbon price, slashing the amount of money available to support investors' projects.[38] Europe must look beyond the ETS framework if the technological innovation is not to be jeopardised by the volatility of the carbon price. Despite the introduction of the Market Stability Reserve, Sandbag does not foresee the carbon price rising significantly above current levels without more radical reforms.[39] External investment could potentially be secured through the Investment Plan proposed by the Juncker Commission[40] and the framework for Projects of Common Interest under the Connecting Europe Facility, and ensuring the continuation of similar provisions post-2020.

Investment in strategic energy infrastructure is one of the priorities for the Investment Plan, which proposes to funnel € 315 billion through a European Strategic Investment Fund (ESIF) over 2015-2017. Parliament and Council should ensure that a similar facility will be made available post-2020 and that a provision is introduced to cover the gap. The successor to ESIF should fund deep decarbonisation in industry including Carbon Capture, Utilisation and Storage (CCUS) projects and industrial electrification. In addition to the EU budget, further contributions from Member State budgets can further shore up the private sector's confidence in the role of the ESIF. Moreover, the climate policy of the European Investment Bank (EIB) – another major contributor to the ESIF – should be revised to reflect the special need to promote deep decarbonisation technologies in industry.

EU institutions should also seek to raise Member States' awareness of financial instruments (loans, guarantees, refinancing, etc.) that can be made available to project developers through channels such as the Risk-Sharing Finance Facility (RSFF). This facility was founded with funding from the EU budget and EIB in response to the Council's 2005 request to foster additional investment into European R&D. Funding technological development through support for prototypes and pilot projects is explicitly one of the goals of the RSFF, yet no Member States have made use of it in combination with NER300 during Phase 3. Europe needs a similar facility post-2020 whose activities can be seamlessly integrated with the functioning of financing schemes available under the ETS. (See the following sub-section for details.)

Creating these funds is necessary but not sufficient. For new projects to come forward, bankable policies will also need to be created at Member State level creating investor confidence. Sandbag has produced a briefing[41] on one potential such policy: the use of auction revenues to underpin Contracts for Difference, offering developers a guaranteed elevated carbon price over a fixed period.

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[38] This is particularly egregious in the case of Carbon Capture and Storage (CCS), which only received funding for one project. Industrial abatement was not even considered as a project type eligible for funding under the phase 3 arrangement.

[39] The Eternal Surplus of the Spineless Market (March 2015): https://sandbag.org.uk/site_media/pdfs/reports/The_Eternal_Surplus.pdf.

[40] See Investment Plan proposed by the Juncker Commission: http://ec.europa.eu/priorities/jobs-growth-investment/plan/index_en.htm.

[41] See Financing Deep Decarbonisation in Industry (June 2015): https://sandbag.org.uk/site_media/pdfs/reports/Financing_deep_decarbonisation_in_industry.pdf.

At EU level, State Aid rules should be produced to guide Member State policy making in relation to supporting innovation and deployment of deep decarbonisation projects in industrial sectors.

2. Enlarging and co-ordinating Innovation and Modernisation Funds

In this phase the main sources of support for investment in non-renewable deep decarbonisation in in the traded sector has been through the New Entrants Reserve. The NER provides support in two forms: first, it provides free allocation to new projects using a carbon-efficiency benchmark that rewards investment in reduced emissions. Second, 300 million allowances from this reserve are auctioned with the resulting revenues being allocated to support first-of-a-kind investments. These measures however have proved insufficient to attract adequate levels of investment towards innovation in industrial sectors, especially in Eastern Europe.

Recognising that more financial support is needed, the European Council proposed that a Modernisation Fund should be created, reserving 2% of the Phase 4 auction volumes to finance the upgrade of Eastern European Member States' energy infrastructure (¶2.7). It also recommended a continuation of the NER300 program, enlarged to 400 million allowances (¶2.6). Though these proposals are welcome, Sandbag does not believe they will be sufficient and we propose the following additional measures in keeping with the spirit of the Council conclusions:

a) Co-ordinated governance of the Modernisation and Innovation Funds

Sandbag believes the proposed NER400 and the Modernisation Fund should be managed under a single governance structure with consistent investment and financing guidelines.[42] The Modernisation Fund should still be reserved for expenditure in the relevant low-income countries, but a central project selection process is likely to be more consistent and transparent, raising the appeal of the mechanism for large private investors. Involving the EIB and EBRD in the process would also potentially provide opportunities for further funds to be leveraged than if Member States had to rely solely on their domestic financial markets, which may be smaller and less mature. This is especially likely for lower-income countries.

A more centralised and co-ordinated approach to selecting projects can also lead to greater flexibility. For example, the Modernisation Fund has been distributed across ten different Member States. As isolated funds this could severely restrict the scale and types of project undertaken, but pooling modernisation allowances would allow countries to jointly fund cross-border projects, after the manner of the 2014-2020 Projects of Common Interest. This form of flexibility would help to deepen the Energy Union. A further form of flexibility would be to allow Eastern European Member States to use allowances allotted them under the Modernisation Fund towards first-of-a-kind innovation projects that would otherwise rely exclusively on allowances from the Innovation Fund (NER400).

When assigning resources from the Modernisation and Innovation Funds, offering support through cash grants is advisable for some countries, rather than through financial instruments such as loss

[42] Especially in the case of industrial abatement projects, criteria for selecting projects should include emissions reductions per unit of production, the potential market size for such technologies, and the ease of deploying them beyond the initial demonstration projects.

guarantees or public equity. The immature markets of many Modernisation Fund recipients are not prepared for complex financing instruments, and there is also a high degree of risk associated with funding first-of-a-kind demonstration projects.

To ensure that the allowances auctioned towards the Modernisation and Innovation Fund obtain a good price, the risk should be spread by auctioning allowances in tranches spread periodically across the decade 2021-2030. Calls for projects should also be spaced across the decade to ensure a steady stream of support for novel technologies.

Finally, mirroring the Council's October proposal to ring-fence some the Modernisation Fund for projects in Eastern Europe, we believe that a significant share of both the Modernisation and Innovation Funds should be ear-marked for Carbon Capture Utilisation and Storage and industrial abatement projects.

b) Increasing the size of the Innovation Fund

As proposed under the October Conclusions of the European Council, roughly 700 million ETS allowances will be made available for the innovation and modernisation funds (400 million and 310 million respectively). It remains unclear whether these volumes will be sufficient to drive the levels of investment needed in key projects, especially if these funds are to be divided between a greater variety of projects (e.g. industrial decarbonisation projects, Carbon Capture and Storage, Carbon Capture and Utilisation, etc.). Below we propose two methods of increasing the size of the Innovation fund, one of them an *ex-ante* increase to the size of the fund and one *ex-post*. We focus on expanding the Innovation Fund here because it is a general European fund rather than being specific to lower-income countries.

Ex-ante increase to innovation funding

The size of the Innovation Fund could be increased *ex-ante* by carving out a larger share of the Phase 4 cap for this purpose. We propose that an additional 5% of the cap could be taken from the portion currently reserved for Member State auctions and re-assigned to the Innovation Fund. This would be equivalent to just over 700 million more allowances, essentially doubling the amount of innovation allowances that would be available compared to the current Modernisation and Innovation Funds.

The October Council Conclusions specify that Phase 4 allowances that are not specifically assigned for other purposes, "will be distributed among all Member States on the basis of verified emissions, without reducing the share of allowances to be auctioned." (¶2.9). This has widely been taken to mean that Member States will continue to receive the same share of allowances at auction that they received in Phase 3. The leaked Impact Assessment and leaked draft legislation both indicate that the Commission plans to assign **57%** of the Phase 4 cap to Member State auctions, however we note that this significantly exceeds the *original* share of auctions awarded to Member States in Phase 3, which was actually **52.4%**. The Commission arrives at a number nearly 5% larger only by including unallocated Phase 3 allowances in the calculated auction share, i.e. they include free allowances returned by manufacturers who reduced their activity levels, and unused allowances from the New Entrants Reserve. This number is, moreover, just an estimate, and has already been partly

invalidated by new data.[43] Member States have too tenuous claim on these allowances to factor these into their auction share. In Sandbag's view it is in keeping with the spirit of the Council Conclusions to reclaim 5% to use towards a central Innovation Fund.

Ex-post increase

Additional allowances could also top-up the Innovation Fund *ex-post*. In the Competitiveness section of this briefing, we outlined several methods by which competitiveness protections to industries in the EU ETS could be better targeted, e.g. by updating production baselines and technology benchmarks, and by improving the carbon leakage criteria. These measures should reduce the volume of free allowances initially applied for by ETS manufacturers in Phase 4. If installations apply for fewer allowances than are available for free allocation, this could potentially free up hundreds of millions of allowances for other purposes. We have discussed how some of these allowances could top up the New Entrants Reserve to help it supply allowances to facilities that increase their production. A significant share of any of these "spare" allowances should also be funnelled towards the Innovation Fund.

Both the *ex-ante* and *ex-post* approaches outlined above provide a potential additional sources of innovation funding without reducing the supply of free allowance available to manufacturers in advance. It thereby avoids the risk of accidentally triggering a cross-sectoral correction factor if initial applications for free allowances proved larger than estimated.

Under Phase 3 rules, no more than 15% of the NER300 was made available to any one project. Similar provisions will be needed in Phase 4 if the Innovation Fund is to finance a portfolio of different technologies, but this could limit the scale and kinds of projects invested in. Increasing the overall volume of allowances in the Innovation Fund alleviates this risk allowing larger projects to be supported.

Sandbag also welcomes moves from the Commission to raise the financing ceiling to cover up to 60% of the relevant costs of a project, up from 50% before. Promisingly, they also propose releasing funds once intermediate project thresholds have been achieved, with up to 40% available before abatement has started (See the leaked draft for the ETS revision (¶ 9).

We note that the Trialogue Agreement on the Market Stability Reserve[44] calls for the Commission to consider removing 50 million allowances from the MSR to auction towards innovation projects. The leaked draft for the ETS revision (¶ 9) indicates that the Commission is considering to legislate to this effect. In our view, much larger sources of innovation funding can be secured through the proposals outlined above, without re-opening the MSR or exacerbating the current market oversupply.

[43] For example, the leaked Impact Assessment states that 69.6 million allowances from the NER have been issued (13) As of May 2015 the EUTL showed 83 million had been issued, indicating less of the NER will be available for auction.

44 See the Trialogue Agreement on the Market Stability Reserve: http://www.changepartnership.org/wp-content/uploads/2014/10/20150511-MSR-Decision-after-trilogue-5-May.pdf.

3. Refining rules on the use of free allocation to power generation in Eastern Europe

Although in Phase 3 no free allocation is normally granted for electricity generating installations, Article 10c of the ETS Directive permits certain Member States to allocate some of their auctionable allowances to these installations. The purpose of this measure is to shield consumers in these poorer Member States from the cost of bringing electricity infrastructure in line with EU regulations. In the Impact Assessment of the 2030 climate and energy package the Commission estimates that the financing needs for replacing aging energy infrastructure in these economies will still amount to around € 200 billion during 2021-2030. The Council Conclusions from October 2014 recommend that the 10c mechanism should not come to an end in 2020 (¶2.5). Sandbag welcomes this proposal, however, in order to maximise the climate benefits of this mechanism we recommend that it be reformed to enhance its efficiency, transparency and flexibility.

a) Ensuring the environmental effectiveness of the Article 10c mechanism

Any future 10c mechanism must be in line with Europe's climate objectives. Member States should continue to exercise their sovereign right to determine their energy policy and, by extension, the projects they choose to fund. Nevertheless, as this mechanism is part of European climate architecture, all Member States must be prohibited from using 10c allowances to fund projects that risk long term lock-in to high carbon infrastructure, e.g. investments in unabated coal generating technology.

b) Making funding decisions more transparent

We support the recommendation from the Commission's leaked Impact Assessment that the projects should be selected in a transparent manner according to pre-defined and publically available criteria (p. 77). This would enable companies to market advanced technologies to governments and/or utilities in a targeted fashion.

We also recommend establishing more harmonised methodologies across eligible Member States determining how many allowances can be allocated for a particular investment project.[45] Moreover, allocation decisions should ideally take place through a transparent tendering process, allowing commercial, rather than political, considerations to play a more important role in the selection process. Finally, comprehensive information about projects receiving allocations should be published on a unified EU-wide platform that integrates smoothly with the ETS's Transaction Log.

c) Using limited financial resources as flexibly as possible

The ability of the 10c mechanism to decarbonise less wealthy Member States' energy systems can be enhanced by granting greater flexibility in terms of the timing of allocations and co-funding requirements. Conferring allowances only after all investments have been made has been a deterrent to investors. Also the current rules on the use of 10c allowances prevent projects receiving aid from two different public sources. Relaxing rules around co-financing and disbursing allowances

[45] More consistent approaches should be developed for calculating fuel mix benchmarks, determining a reference carbon price, etc.

so that allowances are gradually released as projects reach pre-defined thresholds could unlock significantly more investment.

The Commission's leaked Impact Assessment (p. 88) suggests a further way to enhance flexibility: given the small volume of allowances available to some Member States under the Modernisation Fund, they ought to be permitted to divert some or all of their 10c allowances into this Fund. Sandbag welcomes this idea. Article 10c restricts the use of allowances to electricity-related projects, but funnelling them into the Modernisation and Innovation Fund would create a larger fund available to the wider energy sector, e.g. facilitating combined heat and power projects, grid investments, etc. However, when adding 10c allowances to the Modernisation and Innovation Fund, the harmonised EU-level criteria covering that Fund should continue to determine project selections and allocations.

Recommendations

The forthcoming review of the ETS provides an opportunity to refine the rules that have been introduced to protect the EU's industrial competitiveness. This can be achieved through introducing a much more targeted approach to the granting of carbon leakage compensations, coupled with more effective policies to support investment in the deep decarbonisation projects.

The proposals we suggest above build on the conclusions of the October 2014 Council. While attractive in principle, full-auctioning of ETS allowances to all sectors under the cap will remain infeasible so long as there are real and perceived inequalities of opportunity to invest in different sectors. Therefore, supporting policies are still needed. The challenge is to ensure these policies are simple, fair and effective.

When agreeing on the rules going forward we must critically assess the performance of the policies adopted to date and apply the lessons learned. We should also recognise that given the uncertainties involved in managing the transition to a low carbon future, fixing the rules governing such supporting policies for long periods is unwise and we must plan for reviews to take place at least every 5 years.

Sandbag remains confident that the ETS can be reformed so as to perform an essential role in stimulating action to reduce Europe's carbon emissions cost effectively. It should not, however, be viewed in isolation or be expected to be the only policy necessary to drive the transition to a zero carbon economy. Reform of the ETS rules coupled with supplementary policies, particularly in industrial sectors, is essential and we look forward to engaging in the legal process that is about to start.

Sandbag recommendations

- ☑ Changing the application method of the cross-sectoral correction factor so that it is applied after the carbon leakage assessment adjusts free allowances;
- ☑ Updating the system of ex-ante free allocation every five years to reflect latest - information on carbon efficiency product benchmarks and historic production activity levels;
- ☑ Refining the carbon leakage criteria so they better reflect the ability of sectors to pass on carbon costs, and are resilient against unexpected changes in the carbon price;
- ☑ Refining existing ex-post allocation adjustments to make free allocation more responsive to changes in production;
- ☑ Rejecting the use of free allowances to compensate for indirect ETS costs arising from electricity consumption;
- ☑ Establishing strong policies outside of the EU ETS which drive investment in deep decarbonisation technologies for the traded sector;
- ☑ Enlarging and co-ordinating the Innovation and Modernisation Funds financed by auctioning ETS allowances;
- ☑ Improving the governance, transparency and flexibility of the 10c mechanism.

sandbag

Sandbag is a UK based not-for-profit research and campaigning organisation focused on effective European climate policy. We recognise that if emissions trading can be implemented correctly it has the potential to help affordably deliver the deep cuts in carbon emissions the world requires to prevent the worst impacts of climate change.

www.sandbag.org.uk