

Discharging a political storm

Supporting EU competitiveness and innovation in the ETS



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.

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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.

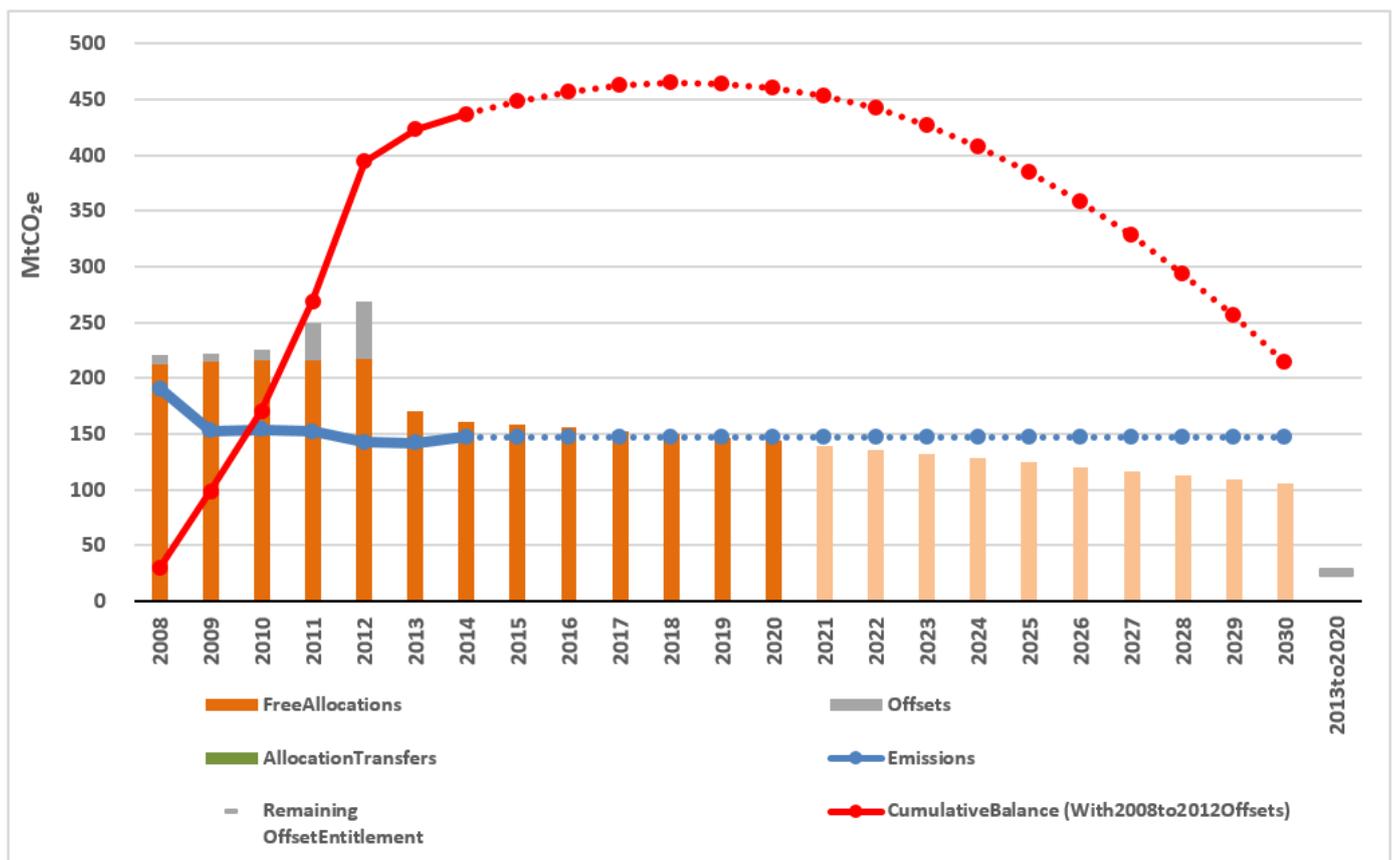
The main tool to address competitiveness concerns to date has been to award free allowances to the manufacturing sectors. In previous trading periods, free allowances were allocated by Member States largely based on optimistic forecasts of industrial demand for allowances. This successfully shielded 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.¹ 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 tool², 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 Conclusions³ on competitiveness, which support several of Sandbag’s recommendations as

¹ 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.

² Use [our new Industrial Supply Projections tool](https://sandbag.org.uk/site_media/uploads/Sandbag_-_Industrial_Supply_Projections.xlsm): https://sandbag.org.uk/site_media/uploads/Sandbag_-_Industrial_Supply_Projections.xlsm.

³ See [October Council Conclusions](http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/145356.pdf): http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/ec/145356.pdf.

published in our 2014 report *Slaying the Dragon*⁴. 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.

⁴ See "[Slaying the Dragon](https://sandbag.org.uk/site_media/pdfs/reports/Sandbag-ETS2014-SlayingTheDragon.pdf)" 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 2.⁵ 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.⁶ 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 Assessment⁷ (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 Directive⁸ (¶ 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.

⁵ 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.

⁶ The UK climate budgets have an even longer time horizon, set three budgets in advance.

⁷ See the [leaked draft of the 2015 Commission’s Impact Assessment](#): <http://www.changepartnership.org/wp-content/uploads/2014/03/150524-IA-ETS.pdf>.

⁸ 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” (¶12.4).

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 €7.46.⁹ A Commission Impact Assessment underlined this point suggesting the use of €16.50 price

⁹See [The ICE, Market Reports, EUA Indices](https://www.theice.com/marketdata/reports/82), Dec 15 strip price, as listed on 3rd July 2015: <https://www.theice.com/marketdata/reports/82>.

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 CO₂ / 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 of 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 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.¹⁰ 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.



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

¹⁰ 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).

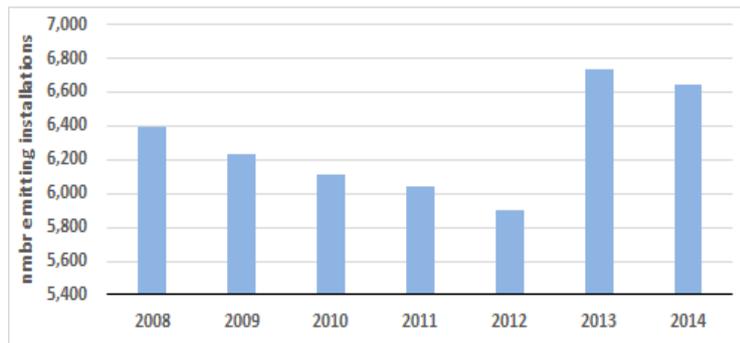


Figure 3: Number of installations emitting in each year; all sectors and all countries except Croatia and Iceland

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.¹¹ 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.¹²

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 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

¹¹ Centre for European Policy Studies (2014): "[Addressing Competitiveness and Carbon Leakage in ETS](https://www.iea.org/media/workshops/2014/61MARC/AddressingCompetitivenessandCarbonLeakageinETS.pdf)": <https://www.iea.org/media/workshops/2014/61MARC/AddressingCompetitivenessandCarbonLeakageinETS.pdf>

¹² 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).

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.¹³ 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.¹⁴ External investment could potentially be secured through the Investment Plan proposed by the Juncker Commission¹⁵ 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 briefing¹⁶ 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.

¹³ 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.

¹⁴ [The Eternal Surplus of the Spineless Market](https://sandbag.org.uk/site_media/pdfs/reports/The_Eternal_Surplus.pdf) (March 2015): https://sandbag.org.uk/site_media/pdfs/reports/The_Eternal_Surplus.pdf.

¹⁵ See [Investment Plan proposed by the Juncker Commission](http://ec.europa.eu/priorities/jobs-growth-investment/plan/index_en.htm): http://ec.europa.eu/priorities/jobs-growth-investment/plan/index_en.htm.

¹⁶ See [Financing Deep Decarbonisation in Industry](https://sandbag.org.uk/site_media/pdfs/reports/Financing_deep_decarbonisation_in_industry.pdf) (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 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.¹⁷ 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 guarantees or public equity. The immature markets of many Modernisation Fund recipients are not

¹⁷ 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.

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." (¶12.9). 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.¹⁸ 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 Reserve¹⁹ 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.

¹⁸ 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.

¹⁹ 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): <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 (¶12.5). 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.²⁰ 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

²⁰ 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.

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