

Drifting toward disaster?

The ETS adrift in Europe's climate efforts



The 2013 Environmental Outlook for the EU ETS

About Sandbag

Sandbag is a UK based not-for-profit campaigning organisation dedicated to achieving real action to tackle climate change and focused on the issue of emissions trading. Our view is that if emissions trading can be implemented correctly, it has the potential to help affordably deliver the deep cuts in carbon emissions the world so badly needs to prevent the worst impacts of climate change.

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

About this report

Drifting Towards Disaster is Sandbag's 5th annual report on the Environmental Outlook for the EU ETS – following on from *ETS S.O.S.* (2009), *Cap or Trap?* (2010) *Buckle Up!* (2011) and *Losing the lead* (2012). This report again looks in detail at how the ETS is performing on the ground and makes recommendations for urgent reforms. The report uses official 2012 emissions and compliance data updated in May 2013. This data provides a complete picture of how the scheme performed over the second trading Phase. Back in *Cap or Trap?* (2010) we highlighted the danger that the recession might make Phase 2 accumulate hot air allowances that would cancel out effort in Phase 3 and beyond. Now at the end of Phase 2 we identify a much greater danger, that over 2008-2020 the ETS cap might deliver negative net emissions reductions, cancelling out abatement from other policies in the Climate and Energy package and damaging Europe's credibility as it seeks to negotiate a new climate agreement.

We are always interested to receive feedback on our work and would welcome any reactions, comments or corrections. Please email us at info@sandbag.org.uk.

25 June 2013 (this version updated on 30 June)

Lead author:

Damien Morris

Supporting research:

Louise Crow, Rob Elsworth, Phil MacDonald and Laurence Watson

Cover image:

Kerry Hyndman www.kerryhyndman.co.uk

The numbers

2.8 billion

The tonnes of carbon dioxide emissions the EU ETS was originally expected to reduce in Europe's power stations and factories

-0.7 billion

The *negative* tonnes of abatement the ETS is now delivering, cancelling out emissions reductions achieved by other policies in the Climate and Energy package.

-27%

The estimated distance Europe's net emissions fell below 1990 levels in 2012 as offsets flooded into the market before a ban on environmentally questionable credits took effect.

2033 AD

The year from which Europe's domestic emissions must be 100% offset as its equitable emissions budget is used up under the current 2020 package and the milestones in the 2050 Roadmap.

Abstract

The climate change conference in 2015, might well be the world's last chance to strike a deal that can avert dangerous climate change. This is precisely the time that Europe should be seen to be pulling hardest on the oars of climate ambition, but instead it plans to comfortably sail under the 2020 target it set itself back in 2008. If this idleness weren't bad enough, it also currently intends to use the EU ETS to smuggle forward around a year's worth of emissions rights into the post-2020 climate framework to weaken its commitments there.

The pioneering policy instrument that was supposed to be the single largest driver of emissions reductions under the EU Climate Package is now its weakest link: catastrophically damaged by the recession, the EU ETS now finds itself *cancelling out* nearly 700 million tonnes of abatement from other European policies by storing this as banked carbon allowances. It also finds itself the global dumping ground for nearly a billion of the most dubious offsets projects under the Kyoto protocol.

At this juncture European politicians find themselves caught between their desire to rescue the policy before it capsizes completely under the weight of these surpluses, and the claims from industry that the scheme already presents an impossible burden. But European manufacturing lobbies have been disingenuous, for it is precisely in their sectors where the surplus allowances are accumulating, not just in Phase 2, but in some cases right out to 2020.

As politicians grapple over whether to temporarily stave off the arrival of new allowances through a "backloading" decision, we invite them to look up and remind themselves of what the policy was supposed to achieve: the EU ETS was meant to help Europe cost-effectively *reduce emissions* to help fight global warming. The ingredient missing from the policy's design was a provision to ensure that some minimum level of ambition was maintained in the scheme if economic or other factors compromised the cap.

They still have the opportunity to redress that oversight. A backloading decision must serve as the stepping stone to a separate political decision to remove Phase 3 allowances accumulated against other climate policies after the recession, and also correct for the non-additional offset credits that have been surrendered into the scheme, further compromising its environmental integrity.

This cancellation in turn should be reflected in a deepening of Europe's climate targets in time to leverage the international ambition critical for a successful climate deal in 2015.

Director's introduction: Baroness Worthington

Time for EU to pick up the oars of ambition and regain leadership position on climate change

The EU has traditionally been one of the leading proponents of ambitious action to tackle climate change. It has led the world in terms of developing policies to reduce emissions and helped to stimulate the development of a valuable world-wide market in low carbon technologies and services.

In recent years, however, its leadership has been failing. A deep economic recession, brought about not by environmental regulation, but by a collapse in the poorly regulated financial markets, has meant different priorities have dominated. With the very future of the EU under question as a result of severe economic circumstances in a number of Member States, has, unsurprisingly, pushed concerns about climate change further down the agenda.

However, our global climate is not subservient to the economy – in fact the opposite is true – our economy is dependent on a stable climate. Despite the unfortunately timed difficulties now facing Europe, there is still an urgent need to tackle climate change. Done the right way this need not damage the economy but can actually help boost economic growth through investment in improved efficiency, reduced dependency on imported fuels and the development of a positive balance of trade in new goods and services for which there will be a growing future market.

Even in the absence of a global deal it is clear countries are waking up to the reality of climate change and taking action. In total 33 countries have so far passed legislation on climate change with more being added to the list.

The use of emissions trading to price carbon emissions is expanding even as the EU scheme falters, raising the possibility that the centre of the global carbon market will move to the Far East or US. Talks between California and China about linking of their schemes should make EU policymakers nervous. Excessive, timidity, brought on by the undue influence of self-interested lobbying, has prevented the EU from moving to introduce the kind of safeguards against over-supply that both California and China have introduced from the start. Trading and investment jobs now being lost in Europe are being created in other countries.

Those who oppose increased EU effort to tackle climate change, on the grounds that the recession is already putting companies under pressure and therefore environmental concerns must be relaxed, have consistently failed to mention that the ETS, unlike more restrictive regulations or taxes, provides a way for well-run companies to make money. Those who invest in increasing efficiency, gain from lower fuel bills and generate spare allowances for sale. Sandbag's analysis of the surplus EU allowances being accrued in companies across Europe has helped to counter the cries that 'the sky is falling in' due to the ETS. So the tune has changed: we are now told 'it will fall in in the future'. A prophecy for which of course there can be no evidence since it is impossible to predict the future.

It is, however, possible to describe the present. And the facts are stark. Caps that were supposed to drive investment are now sitting comfortably above emissions. Surpluses have accrued to such an extent that they will cushion firms against having to actually act for many years to come. Offsets have proven to be easier to generate at such huge volumes that prices have crashed to almost zero, even as demand has dried up. The 'success' of offsetting is that if any policy makers should have the courage to increase the EU's climate offer, it can rest assured that if domestic action should ever

prove more expensive than might be comfortable, there will be a no shortage of offsets to keep prices low.

This 5th Annual report on the State of the ETS argues more forcibly than ever that the problem facing the ETS is one of political ambition. With investments in low carbon alternatives growing around the globe, mitigation costs are falling and economic growth is slowly being decoupled from emissions. There is no longer any need for a choice between jobs and growth and environmental ambition. The two clearly go hand in hand.

It is now clear, as this report shows, the EU has awarded itself far too generous carbon budgets in the ETS and under Kyoto – but the potential is clearly there to painlessly reduce the excess and retake the moral high ground in international discussions. Unless and until the EU is seen to be undertaking its fair share of action to mitigate climate change, why should anyone else be expected to do likewise? The huge surfeit of unneeded allowances washing around Europe at the moment, offer a quick and easy way to step up Europe's efforts. The continued drift of the ETS towards irrelevance, or worse, towards counterproductive effects on other policies and the undermining of future investment decisions, cannot be allowed to continue.

It is inconceivable, given the state of the science, that action to tackle climate change will do anything other than increase in the near future. The longer the EU tries to resist that fact the more its credibility will be reduced and its preparedness for the future weakened.

Once again we call on Europe's policy makers to take decisive action and to take up the oars of ambition and restore the ETS to its rightful place in the centre of climate policy.

Foreword from non-executive director: Jill Duggan

It's Groundhog Day for the ETS. Oversupply and lack of ambition again threaten the centrepiece policy to reduce greenhouse gas emissions in Europe. Again the spectres of high energy prices and loss of European competitiveness are laid at the door of the trading system.

But it seems that our MEPs have forgotten that the hardest (and most important) things to get into an emissions trading system are ambition and demand. Everyone wants to sell into a system or receive free allowances, and the more states and companies look at narrow self-interest the more they lose sight of what working together with a European wide instrument such as the ETS can bring. Without demand we don't have a trading system at all.

So let's remind ourselves of what it can do for us and what has caused the current problems. A European wide ETS provides a level playing field within the European Union where all participants face a single price. Progress has been made over the eight and half years of its operation to increase transparency and reduce the discrepancies between implementation in Member States.

- The sheer size of the ETS – with 11,000 participating facilities – and its huge geographical scope - provides liquidity and a surprising degree of price stability. Droughts in the southern part of Europe that would, in a smaller system, lead to price hikes, are mitigated by, for example, high rainfall and a resulting increase in hydro in Northern Europe.
- It is responsive to changes in circumstance – when the price fell in the 3rd quarter of 2008 in response to the economic crisis in Europe it meant that it was cheaper to comply with the system at a time of financial hardship – that's as it should be. It's the lack of ambition overall and the continuation of that low price that is a problem.
- Companies can choose their mitigation strategy and its timescale to fit their business planning cycle in a way that is not possible with taxes or regulation.

We know that the impact on electricity prices, even when prices have been higher, has not been as pronounced as from other external factors such as gas and oil prices. The measures that Member States are putting in place, such as the price floor in the UK, will increase the costs to operators significantly but will do nothing to reduce emissions in Europe overall and will drive the price of the ETS allowances down further. A fragmentation of policy across Europe will lead to a loss of transparency, competitive distortions within the European Union and higher prices.

But here we are in Groundhog Day, trying to deal with the consequences of a lack of ambition by Member States in agreeing the cap with yet more caution – belying the ease with which we could increase our international offer of action. The problem with the ETS has not been significantly in the structure but in the politics – it has been in lack of demand created by political nervousness. Self-interest and lobbying have always undermined the system when they have been allowed to dominate and the amended proposals for backloading look likely to exacerbate the problem of oversupply rather than deal with it.

The EU ETS will, naturally, have to work alongside other policies and measures that will drive particular short term changes and technological innovation. But we should not forget that the reason we have too many allowances in the market is not just the recession but also the changes in investment and behaviour that climate policies as a whole have driven. We now know that we can make these changes at far lower costs than anticipated.

It would be ironic if, at the moment when China and others who have learned from Europe's leadership, move to control their emissions of greenhouse gases, that Europe backs away from its most effective measure, leading to more fragmented, more expensive policies. We need to get a grip.

Is all lost? – well not yet. There are the opportunities to look at structural reform of the ETS and to try and get some demand back in the system. And the Directive does allow for revision of the 2020 targets in 2014. But both these require that all concerned remember that the failings of the ETS are caused by lack of ambition, lack of demand and low prices – not by high prices. The costs of the alternatives to the ETS will be very much higher than the ETS itself.

Table of Contents

Executive Summary	10
1: The problem with European climate ambition	16
The closing window to avoid dangerous climate change.	16
Europe’s international credibility at risk	16
Europe’s dwindling share of the 2°C carbon space.....	17
Europe needs to revise its 2020 target and its Kyoto pledge to leverage international ambition	19
2: What’s wrong with the level of the ETS cap?	20
Introduction.....	20
Surpluses are a symptom, not the problem	20
Price is a symptom, not the problem	21
The real problem: 2013-2020 caps were set against inflated emissions projections.....	22
Compounding factors:	25
a) Increased delivery of emissions reductions by other polices affecting the traded sector	25
b) Offsets	26
Section conclusion	27
3: Problems with the distribution of allowances under the cap	28
Starting assumptions in the National Allocation Plans	28
The sectoral distribution over Phase 2	29
Manufacturing sectors in Phase 3	32
Deserving and undeserving losers under the Phase 3 benchmarks.....	34
4: The trouble with offsets	36
The question of supplemental action.....	36
The question of additionality	38
Additionality issues under the Clean Development Mechanism ..	39
Additionality issues relating to Joint Implementation projects	41
5. The decoupling of growth and emissions	44
6. Recommendations.....	46
Bibliography	52

Tables

Table 1: Indicative national budgets under the Sovereign Emissions Rights Framework	18
Table 2 : Length or shortage of allowances against verified emissions for different sectors	30
Table 3: Total flexible mechanisms used towards EU Kyoto compliance over 2008-2012 (Mt CO ₂ e)	37
Table 4: CDM credits surrendered into the EU ETS with additionality concerns	40

Figures

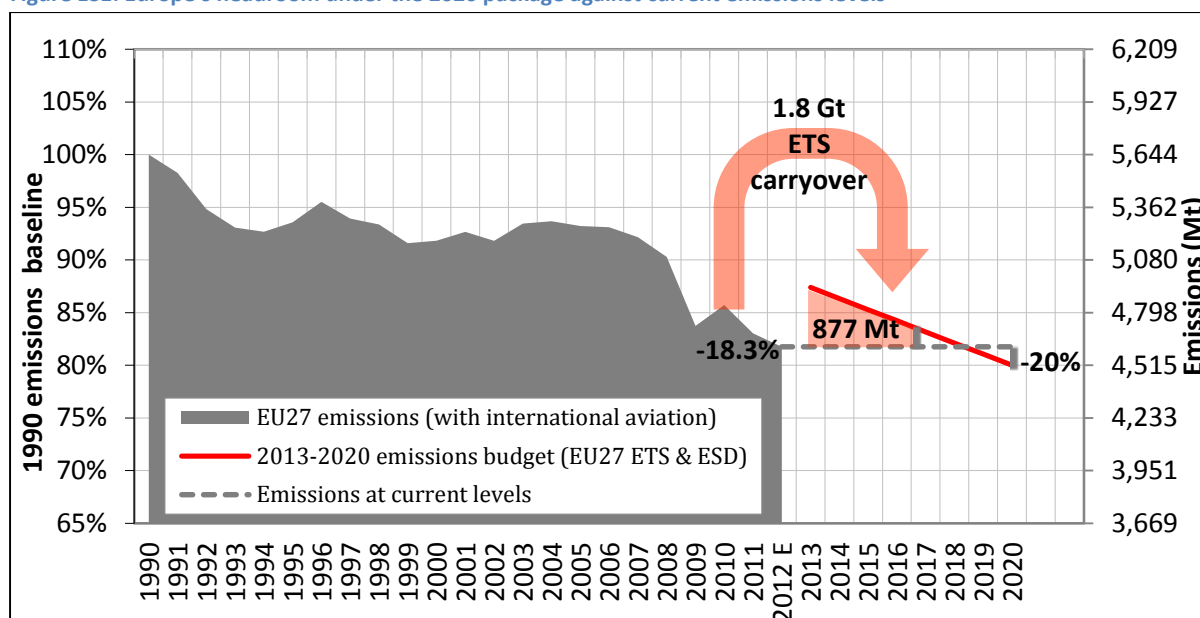
Figure 1 The UNEP emissions gap.....	16
Figure 2: Europe's headroom under the 2020 package against current emissions levels.....	17
Figure 3: International effort required to equitably deliver the 2050 Roadmap emissions pathway	Error! Bookmark not defined.
Figure 4: Excess allowances awarded under the Phase 2 ETS cap.....	20
Figure 5: Surpluses from Phase 2 after offsets are included.....	21
Figure 6: 2005-2013 spot price for EUA carbon allowances.....	22
Figure 7: Comparison of 2008 and 2013 traded emissions under a €0 t/CO ₂ carbon price	23
Figure 8: Surpluses for stationary ETS installations under 2013 base case-case (Phase 2 scope only)	24
Figure 9: Lost abatement under the EU ETS following the recession	25
Figure 10 : Effects on offsets under the new base case emissions	26
Figure 11 : 2008 base case vs actual developments in Phase 2 (stationary installations).....	29
Figure 12: Distribution of allowances across three sector categories	30
Figure 13: Phase 2 surpluses in the individual manufacturing sectors.....	31
Figure 14: Phase 2 allowances as a proportion of Phase 2 emissions by individual sector.....	32
Figure 15: Manufacturing surpluses free allowances in Phase 3 (non-electricity sectors).....	33
Figure 16: EU27 progress towards 2020 targets (with ETS offsets)	36
Figure 17: CDM credits surrendered into the EU ETS with additionality concerns	41
Figure 18: Russian and Ukrainian Track 1 ERUs surrendered vs. other ERUs.....	42
Figure 19: Phase 2 offsets with additionality concerns	43
Figure 20: Falling carbon intensity in the China, the EU27 and Poland.....	44
Figure 21: Emissions reductions cancelled out by the EU Emissions Trading Scheme over 2008-2020	46
Figure 22: Emissions reductions needed to move from 20% to 30% in 2020	47
Figure 23: Cancellation decision masked by allowances returning to market	48

Executive Summary

As Europe prepares its 2030 framework and its negotiating position for a new international agreement in 2015, it must do so conscious that the window is rapidly closing to avoid dangerous levels of global warming, and closing even faster on the opportunity to avoid it cost-effectively. The latest Emissions Gap report from the United Nations Environment Programme finds an **8-13 billion tonne** gap between current pledges in 2020 and the cost-effective global pathway for staying under 2°C of global warming.¹

Presently, instead of helping to bridge that emissions gap, Europe is leaving itself billions of tonnes of headroom in the budgets it set itself to meet that target. Even if emissions stayed flat (i.e. at current levels) for the next eight years, Europe would still have **877 million tonnes** of headroom under the 2013-2020 economy wide carbon budgets apportioned between the Effort Sharing Decision and the EU Emissions Trading Scheme (ETS). On top of this it can draw from a further 1.8 billion surplus allowances banked forward from Phase 2 (2008-2012) of the EU ETS.

Figure ES1: Europe's headroom under the 2020 package against current emissions levels



Worst of all, the surpluses accruing in the in the EU ETS don't simply increase the headroom to reach our 2020 target, any that are unused by then will be banked forward to weaken our commitments under any *future* climate framework. Given the manner in which they arose, these ETS surpluses risk damaging Europe's credibility in the international negotiations.

The surpluses that have accrued under the EU ETS are essentially the product of two things:

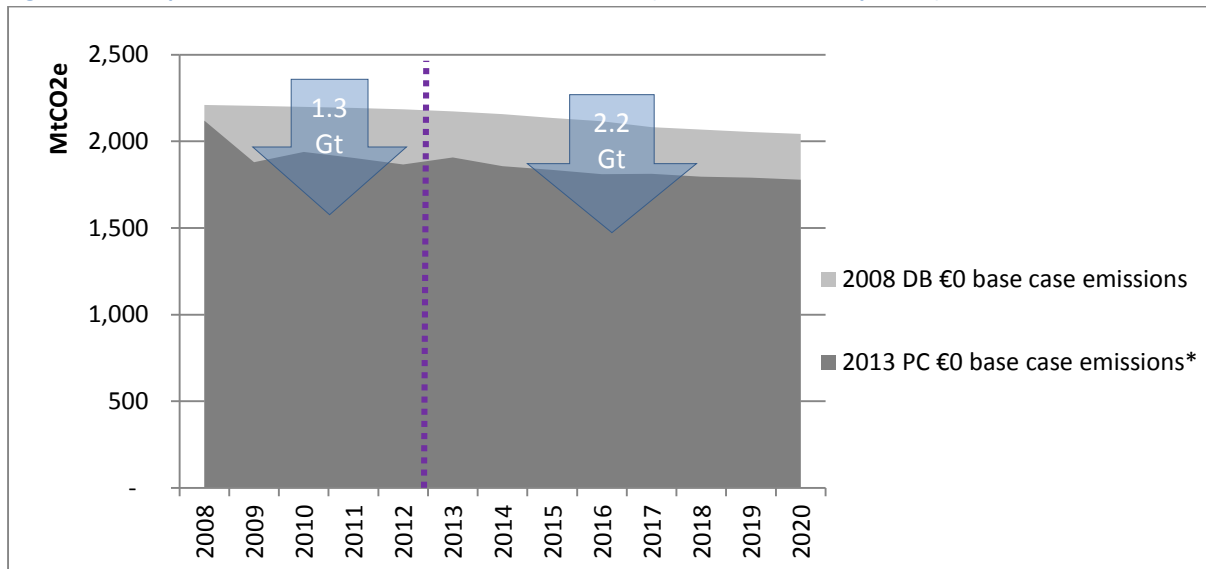
- Firstly, following the recession, the ETS cap is now set too high to deliver emissions *reductions* and is instead *cancelling out* the abatement that is being delivered by other policies such as the Renewable Energy Supply Directive and the Energy Efficiency Directive.
- Secondly, despite the lack of demand for *domestic* allowances, the ETS has become the biggest market for cheap carbon offset credits under the Kyoto Protocol and has essentially

¹ UNEP Emissions Gap report 2012 UNEP 2012 Emissions Gap report
<http://www.unep.org/publications/ebooks/emissionsgap2012/> (Accessed 23rd June 2013)

become the dumping ground for the most environmentally questionable credits generated by projects under the UN framework.

When the Phase 3 caps were being devised, the EU ETS was originally expected to deliver some **2.8 billion tonnes** of emission reductions against business-as-usual emissions over and above the abatement delivered by the renewables and energy efficiency targets. This would have made it the single biggest driver of emissions reductions over the thirteen years of the 2020 climate package (2008-2020). But now, following the recession, emissions in the power stations and factories policed by the scheme have fallen by as much as **3.5 billion tonnes** across this thirteen year horizon, driving emissions below the level set by the ETS cap. This now threatens to make the EU ETS an anti-climate policy, cancelling out nearly 700 million tonnes of emissions reductions delivered by other climate policies over this thirteen year time horizon.

Figure ES2: Comparison of 2008 and 2013 “base case” emissions (BAU minus non-ETS policies)²



Europe could potentially justify banking this slack in its carbon budgets if it was pulling its weight on climate change, but it is currently very far from doing so. Our effort sharing model, outlined in Section 1 of this report, finds the EU nearly 60% of the way through its fair share of the global 1990-2050 carbon space already.³ Indicatively, without extensive international effort, Europe will exhaust the remainder of this nominal budget by 2033 even if it adopts it the post 2020 milestones under the Low Carbon Roadmap.

Meanwhile, as the EU ETS banks forward emissions reductions delivered by other parts of the climate package, the environmental integrity of the scheme has been further compromised by the huge volume of potentially environmentally non-additional offset credits surrendered into it. Despite being oversupplied with domestic allowances, ETS installations have rushed to exploit the cheapest international credits on the market and have specifically *prioritised* surrendering those credits facing bans over additionality concerns.

² Taken from Deutsche Bank “It takes CO₂ to contango” (2008) and April 2013 analysis from Point Carbon. Note that the Point Carbon analysis uses verified emissions for 2008-2012 which may contain some trace emissions reductions prompted by the carbon price.

³ In summary we divide the 1990-2050 CO₂e compatible with a >66% chance of avoiding 2°C between nations based on their 1990 population. Similar to the “Budgets Approach” proposed by the WBGU in 2009.

Figure ES3: Offset additionally concerns

1.1 billion offsets have been surrendered over Phase 2 (2008-2012). 85% of those are from projects that have been since been blocked from the scheme on the basis of environmental concerns. A further 7% of these are facing close ongoing scrutiny.

Indeed, so desperate were ETS installations to beat a 2013 ban on industrial gas credits and Russian and Ukrainian joint implementation projects, that in 2012 they surrendered enough offsets to take Europe’s net emissions **27% below 1990 levels**.⁴ This frontloading of the offsetting budget is so extreme that it jeopardises some EU Member States’ compliance with the First Commitment Period of the Kyoto Protocol (also running from 2008-12). The Protocol specifies that flexible mechanisms must be supplemental to domestic action to reduce emissions (i.e. deliver less than half of the reductions to meet the Kyoto targets), yet some 633 million offsets surrendered by the EU15, Poland and Slovenia exceed that supplementarity threshold.

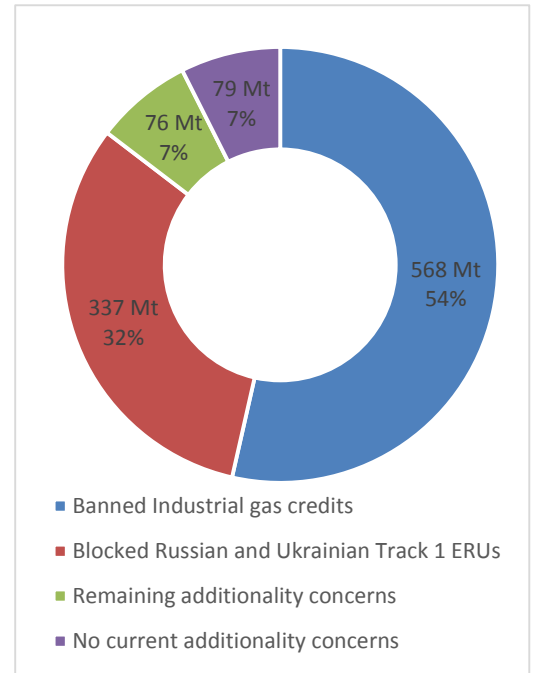


Table ES1: Total flexible mechanisms used towards EU Kyoto compliance over 2008-2012 (Mt CO₂e)

Country/Region	ETS offsets In Phase 2	Intended state use of CDM, JI and IET	Total intended flex-mechs	Gap between KP baseline and CP1 target	Supplementarity threshold for flex mechs (½ of Kyoto gap x 5)	Offsets exceeding supplementarity threshold
EU15	1,049	419	1,468	341.2	853	615
Poland	96	0	96	33.8	84.5	12
Slovenia	6	5	11	1.7	4.25	7

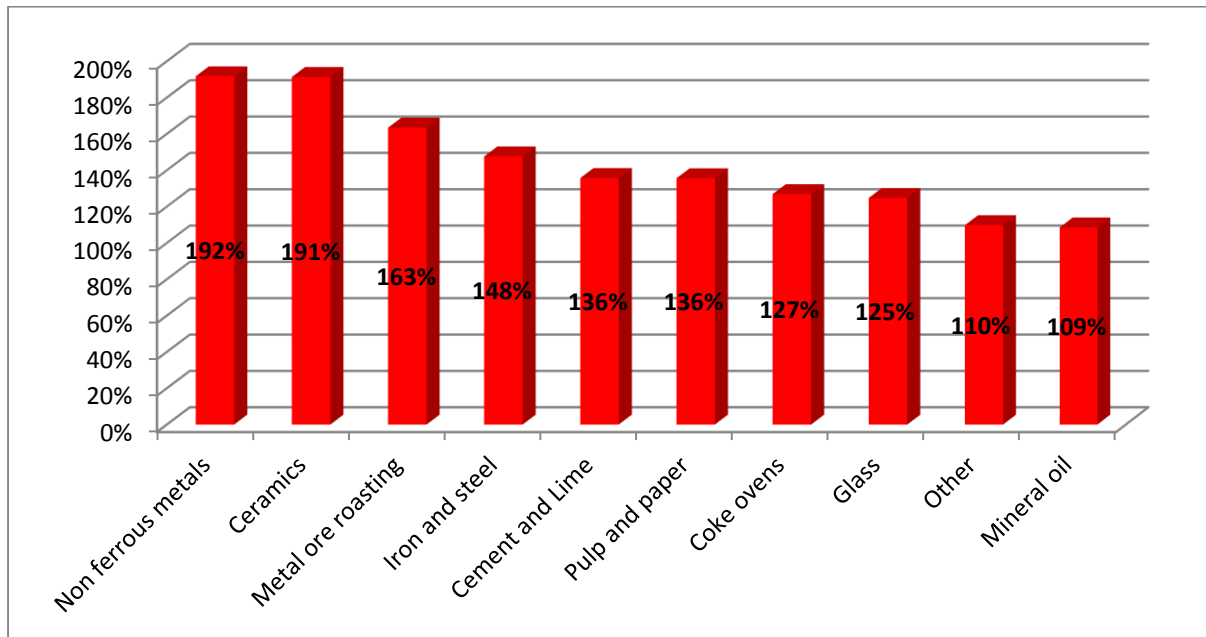
- ETS offsets from EUTL
 - Intended state units are taken from the EEA’s 2012 Greenhouse Gas Emissions Trends report
 - KP baseline and 1990-2011 emissions from EEA. 2012 emissions estimates apply Eurostat estimates to 2011 EEA data

Within Europe, the large surpluses and low carbon prices under the scheme are putting its political credibility at stake, threatening to destroy a policy that could, in principle be Europe’s most affordable means of reducing its emissions. Yet policymakers remain loathe to return even a minimum level of ambition to the EU ETS for fear of putting additional pressure on their struggling manufacturing sectors. These fears are misplaced. It is precisely in these sectors that spare carbon allowances are accumulating both in Phase 2 and in Phase 3.

Firstly, we note that *without exception* each of the manufacturing sectors are oversupplied allowances in Phase 2. This should immediately put to bed claims by each of the European manufacturing sector lobbies that, the EU ETS has *on the whole*, harmed their industries over 2008-2012. On the contrary, it has afforded them spare allowances to be sold as a potential revenue stream or to afford them additional protections going into Phase 3.

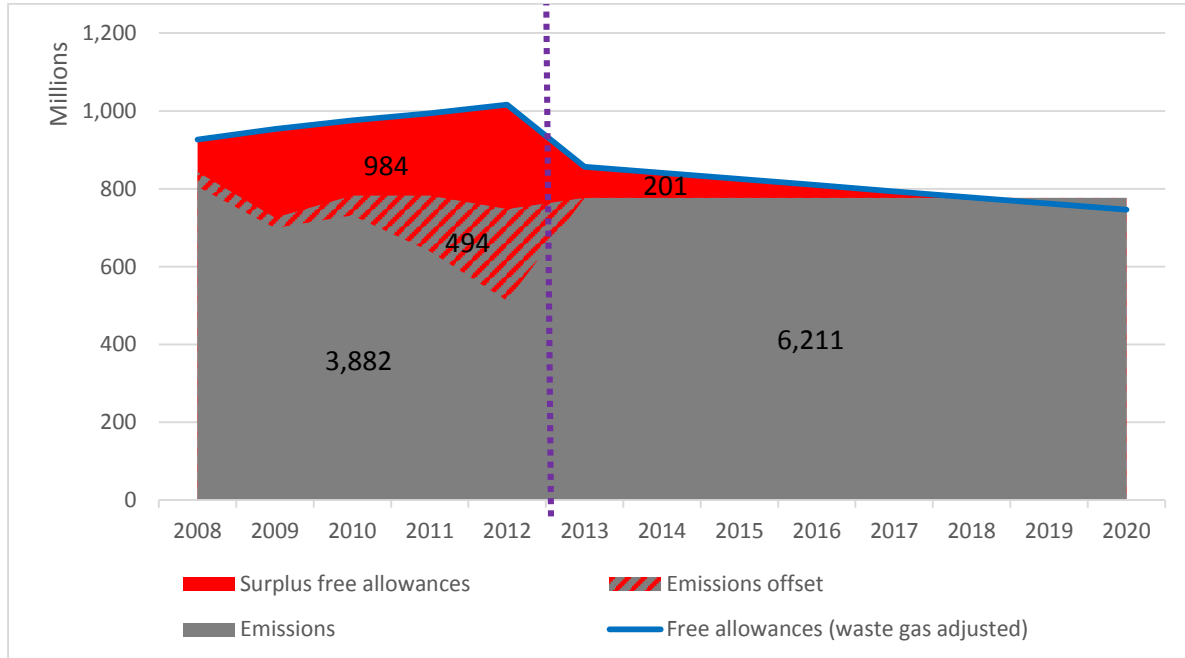
⁴ Using data submitted by the European Environment Agency to the UNFCCC (May 29, 2013). 2012 emissions are early estimates based on Eurostat figures (May 29). ETS offsets taken from the EU transaction log (May 15).

Figure ES4: Free allowances compared against verified emissions by sector (2008-2012)



Secondly, we note that, as a group, manufacturing sectors are likely to continue accruing surpluses across Phase 3. If manufacturing emissions stayed at average Phase 2 levels across 2013-2020, not only will they fail to exhaust their accumulated Phase 2 surpluses, they will accrue *new* surpluses that can be sold on to electricity generators at a profit or can be banked against their obligations in a future climate framework.

Figure ES5: Surpluses for stationary ETS installations under 2013 base case-case (Phase 2 scope)



With manufacturer’s holding more free allowances than they are collectively likely to need to cover their emission out to 2020, policymakers should be sceptical of their claims that a reduction in the supply of auctioned Phase 3 allowances would be unacceptably punishing to them over that timeframe. They should also be sceptical of industries requests to appropriate more of government’s dwindling ETS auction receipts as part of a “low carbon transition fund”. Industry already has a low

carbon transition fund in the form of excess Phase 2 and Phase 3 free allowances already awarded them by governments.

Reducing the supply of allowances in the Phase 3 auctions will increase the value of these allowances, which can then be sold on to electricity generators in order to fund new industrial abatement technologies. It should not be forgotten that the free allowances awarded industry are public assets and represent forfeited revenues that were gifted to manufacturers. Politicians should not be tempted to forfeit yet more government revenues so that industry can increase its profits while continuing to defer abatement.

Finally, we note that some commentators are predicting that as the European economy returns to growth in the latter half the decade, emissions will once again rise, re-introducing demand to the ETS. This is by no means certain, as we show, economic growth has already decoupled from emissions at an EU and Member State level. Emissions are very unlikely to climb back to pre-recession levels but instead are expected to continue to fall throughout the decade, further exacerbating the structural imbalance in the ETS.

Recommendations

In light of the above findings, we argue that at least **1.7 billion allowances** should be permanently removed from auctions in Phase 3 of the EU ETS. This cancellation is advised on the basis of the following two recommendations:

- **Recommendation 1: Cancel at least 700 million allowances from Phase 3 auctions to ensure the ETS delivers a minimum level of domestic emissions reductions in each of the sectors that it covers**

Given the new business-as-usual emissions after the recession, the ETS risks cancelling out emissions reductions delivered by other policies in the climate package and storing them up to waylay Europe's future climate efforts. A significant share of the surpluses the ETS will accrue are likely to be a result of this cancelling effect, beyond any contributed by surrendered offsets. While the ETS is expected to deliver some shortfalls to the aviation sector over 2012-2020, we note that for stationary installations the cap is currently poised to cancel out up to **700 million** tonnes of emissions reductions delivered by the Renewables and Energy Efficiency targets, and that this volume should be removed from the scheme as an absolute minimum.

- **Recommendation 2: Cancel 1 billion allowances from Phase 3 auctions to prevent non-additional Phase 2 offsets from damaging the environmental integrity of the scheme.**

Establishing a fixed ETS offset budget against projected business as usual emissions that did not materialise was, with hindsight, a very bad idea. Instead of providing a cost adjustment mechanism to guard against high prices the flood of offsets into the ETS has further exacerbated the lack of demand for domestic abatement driven by the ETS. The ban on industrial gas offsets was too late to stop **550 million** of these credits from entering Phase 2. Similarly the block on Track 1 ERUs was too late to stop **340 million** hot air allowances from Russia and the Ukraine from entering into the system. A further **80 million** offsets surrendered are from project types that have serious additionality questions hanging over them. The offsets surrendered by ETS installations need to be honoured under the existing rules, therefore the only way to correct for this questionable abatement is to remove equivalent allowances from the Phase 3 auctions

We emphasise that any allowances thus cancelled from Phase 3 auctions should be used to strengthen Europe's 2020 target and leverage maximum international ambition ahead of the 2015 climate conference. Any allowances removed from Phase 3 should be reflected in a change to Europe's carbon budget under the Second Commitment Period of the Kyoto Protocol rather than freeing up more space for the non-traded sectors of the economy under the Effort Sharing Decision budgets (ESD). We note that the ESD budgets are already carrying 1.1 to 2.2 billion tonnes of headroom and do not need to be further enlarged.⁵To move from its current 20% target in 2020 to a 30% target, Europe only needs to lower its economy wide emissions by 560Mt in the year 2020. Any allowances removed from the Phase 3 cap, should therefore be removed as a deepening wedge from the final years of the trading period, so that Europe can declare it has achieved a higher target in the international negotiations.

Finally, we make a recommendation regarding future cap setting to ensure that the ETS does not face a repeat of the difficulties it has currently experienced.

- **Recommendation 3: Protect Europe's post 2020 framework by ensuring future ETS caps automatically self-adjust to deliver a minimum level of abatement**

Until such a time as the ETS caps are set within economy-wide commitments that reflect an equitable share of the "safe" global carbon space, Europe cannot afford for its most cost-effective tool for reducing emissions to lie idle, or worse, to cancel out its other climate policies. Going forward, we propose that, independently of the political decision about the level of each cap, policymakers should agree a minimum level of abatement that will be driven by each trading period, and install mechanisms within the scheme to ensure it self-adjusts to deliver this. We argue that the minimum volume of abatement under each cap should be in the billions of tonnes. A politically fixed minimum level of guaranteed abatement under the EU ETS will ensure that it does not again serve to cancel out the effects of other climate policies. In the recommendations section at the end of this report, we tentatively propose some design elements for a strategic reserve of allowances which might partially serve this purpose.

⁵ Höhne, N., et al. (May 2013) The next step in Europe's climate action: Setting targets for 2030 *Ecofys* http://www.greenpeace.org/eu-unit/Global/eu-unit/reports-briefings/2013/ecofys_PolicyPaper.pdf

1: The problem with European climate ambition

The closing window to avoid dangerous climate change.

As Europe prepares its 2030 framework and its negotiating position for a new international agreement in 2015, it must do so conscious that the window is rapidly closing to avoid dangerous levels of global warming. Firstly, it must recognise that a 2015 agreement that only enters into force in 2020 is already too late to do this cost-effectively and that immediate action on 2020 targets is needed to achieve this.

Figure 1 The UNEP emissions gap

The latest edition of the Emissions Gap report prepared by the United Nations Environment Programme shows that in aggregate, global emissions need to peak this decade, and reach a point **8-13 billion tonnes** lower than current 2020 pledges if we are to realistically avoid 2 degrees of global warming against pre-industrial levels in a cost-effective manner. UNEP also note that, with only **1,250 billion tonnes** of emissions space remaining, the window for feasibly avoiding dangerous climate change is rapidly closing altogether.⁶

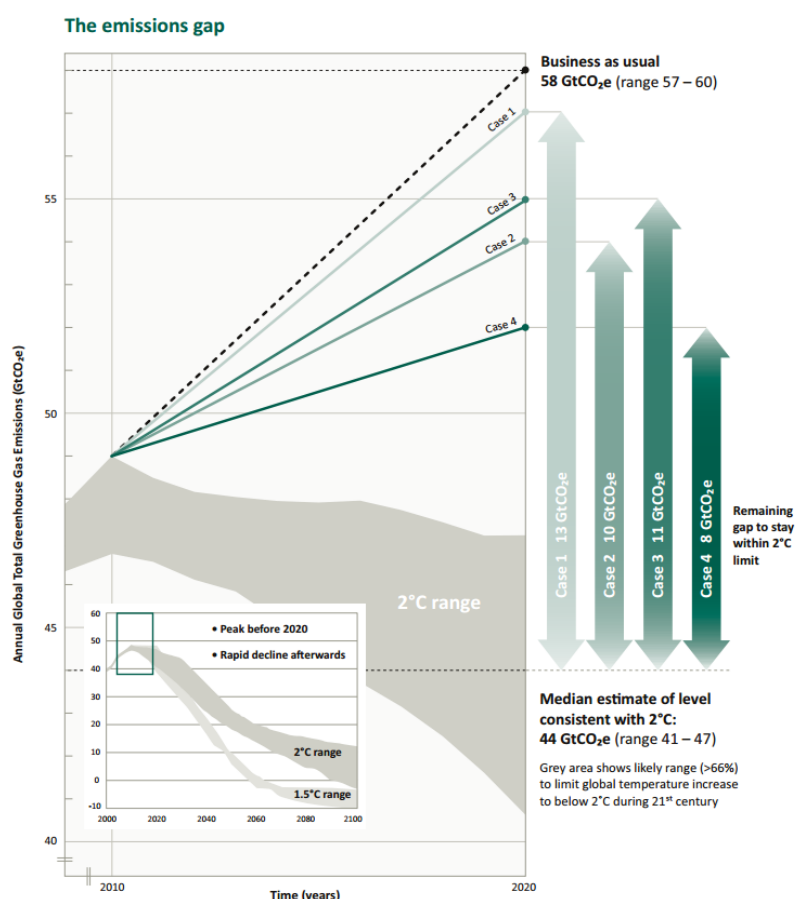
In the run-up to the Paris climate conference Europe urgently needs to do more to bridge this gap and to encourage other major emitters to do the same.

Europe's international credibility at risk

In this context, it is alarming to note that Europe's Energy and Climate package currently affords it extremely generous headroom to meet its current 2020 targets which it can currently beat by standing still.

Even if emissions stayed fixed at their current levels over the next eight years, the carbon budgets set under the EU Emissions Trading Scheme and the Effort Sharing Decision would afford Europe **877 million tonnes** of headroom. Alarmingly, this grows to **2.6 billion tonnes** once nearly **1.8 billion** allowances carried forward from Phase 2 of the EU ETS are factored in (see Figure 2 below).⁷

Of course European emissions are *not* expected to stand still out to 2020, but to continue to decline under the force of new business-as-usual emissions, the Renewable Energy Supply Directive, the Energy Efficiency Directive and national policies (note the conspicuous absence of the EU ETS from

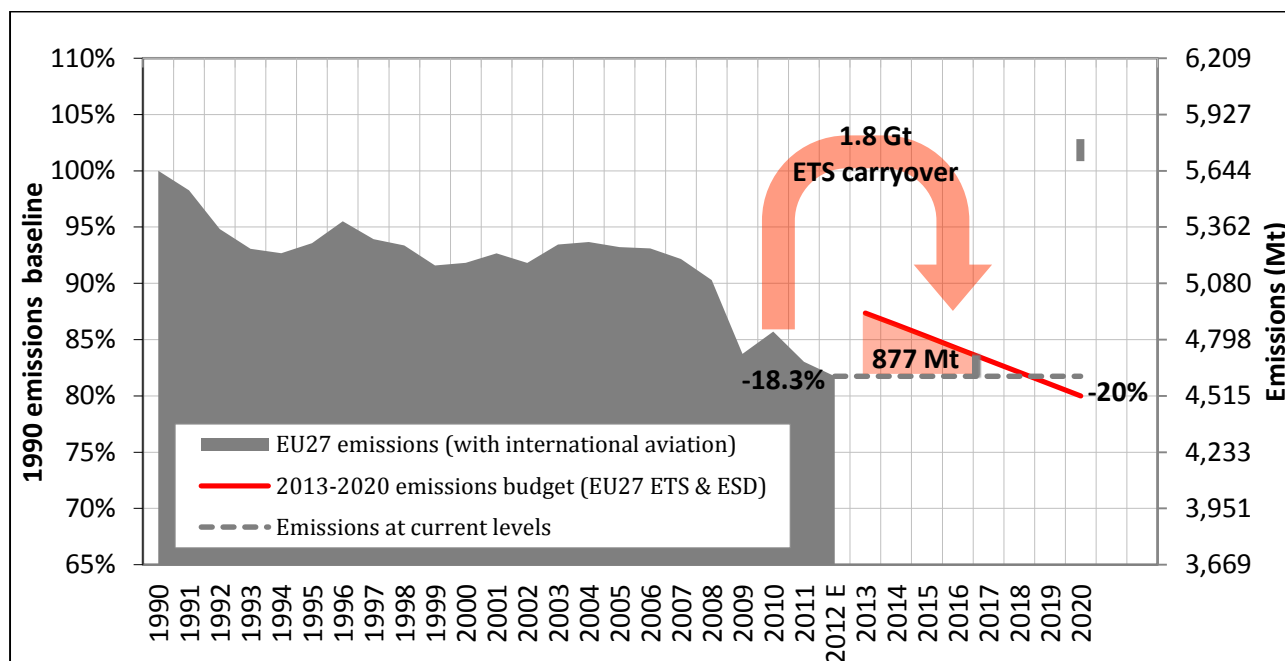


⁶ Here, “realistically” and “feasibly” corresponds to a “likely” or >66% chance of avoiding 2°C. See <http://www.unep.org/pdf/2012gapreport.pdf>)

⁷ These calculations use EU27 emissions data submitted by the EEA to the UNFCCC. EU27 emissions budgets have been disaggregated from the total budgets under the ETS and the ESD. Note that the EU27 surplus is larger than the whole community owing to shortfalls in Norway.

this list: the policy that was supposed to be the single largest driver of European emissions reductions).

Figure 2: Europe's headroom under the 2020 package against current emissions levels



Analysis by Ecofys suggests that declining emissions in the non-traded sector will leave between **1.1** and **2.2 billion tonnes** of headroom in carbon budgets under the Effort Sharing Decision⁸. This cannot be banked forward beyond 2020 and is needlessly weakening our climate targets and our international ambition.

Meanwhile in the traded sector, surpluses are expected to grow as high as **2 billion** by 2020, consisting both of surrendered offsets and other policies *cancelled out* by the ETS as a result of the recession.⁹ As ETS allowances can be banked forward indefinitely, these surpluses not only provide unnecessary headroom out to 2020, they will contaminate and weaken Europe's climate efforts under the 2030 framework and beyond, undermining any offer Europe presents under an international agreement.

Europe's dwindling share of the 2°C carbon space

If Europe were keeping comfortably within its equitable share of the global 2°C carbon space it could perhaps afford the luxury of these headroom allowances, but it is currently very far from doing so. Our effort-sharing model finds that Europe is entitled to emit less than **90 billion tonnes** between now and 2050.

Identifying the publication of the first IPCC report in 1990 as an historic watershed, our method calculates the 1990-2050 carbon space compatible with a "likely" (>66% chance) of exceeding 2°C

⁸ Höhne, N., et al. (May 2013) *The next step in Europe's climate action: Setting targets for 2030* http://www.greenpeace.org/eu-unit/Global/eu-unit/reports-briefings/2013/ecofys_PolicyPaper.pdf Ecofys

⁹ Based on verified emissions data for 2008-2012 and Point Carbon forecasts for 2013-2020 at €2.89/tCO₂e. Owing to uncertainties about the nature of aviation, only stationary emissions have been included in forward estimates. This figure is for all ETS countries and does not disaggregate EU27 as we do for calculations above. This figure includes offsets conservatively estimated at 1.6 billion

and divides it between countries based on their share of global 1990 population. We develop and defend this effort-sharing approach in a parallel publication that will be submitted to the European Commission consultation on the 2015 International Climate Agreement.¹⁰ The calculations used to determine Europe's share of this budget are provided in Table 1 below.

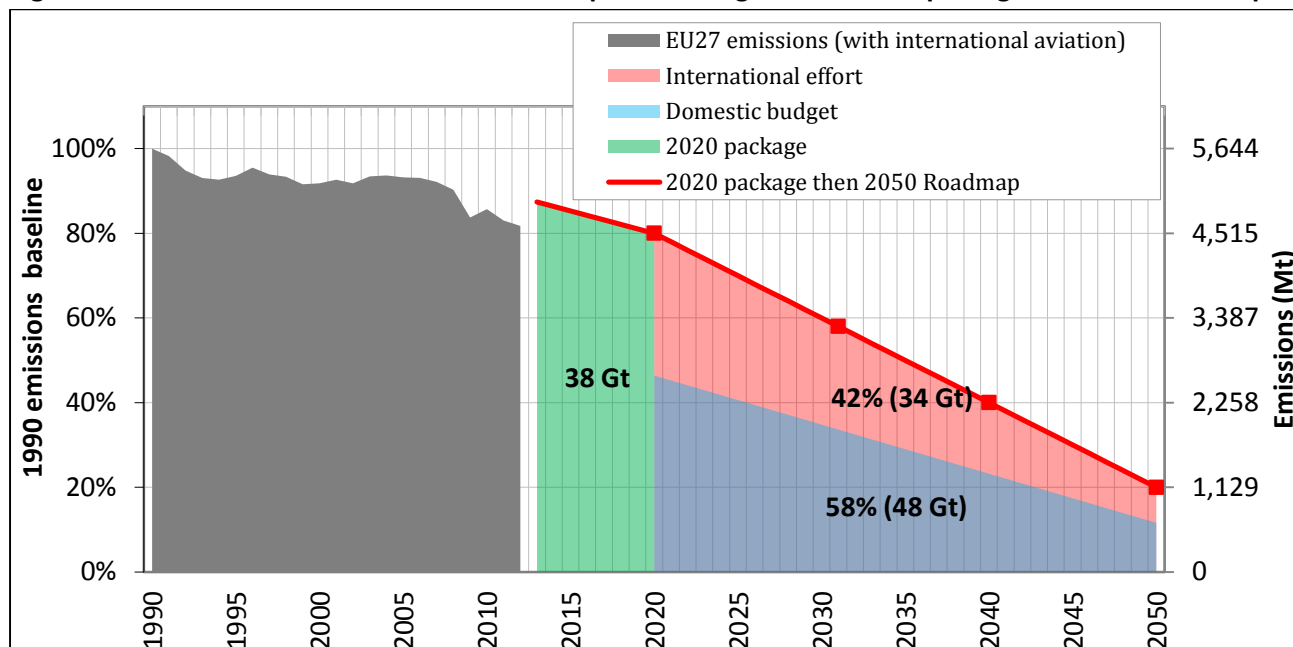
Table 1: Indicative national budgets under the Sovereign Emissions Rights Framework

Country/region	Share of 1990 global pop ⁿ	1990-2050 emissions budget (Gt CO ₂ e)	Emissions produced 1990-2012E (Gt CO ₂ e)	Share of budget already used	Volume of emissions remaining
Global budget	100%	2,274	1,024	45%	1,250
EU27 budget	9%	204	116	57%	88

Sources: UNEP 2012 Emissions Gap report gives a 1,890Gt budget for 2000-2050 of which 640 is estimated to have been used by 2012. To both figures we have added in 384Mt of estimated 1990-1999 emissions from Stockholm Environment Institute.
 EU emissions for 1990-2012 taken from the European Environment Agency as reported to the UNFCCC (includes net emissions including LULUCF and bunker fuels and early 2012 estimates from Eurostat).
 Figures are approximate and have been rounded

Indicatively, if Europe failed to increase its pre-2020 ambition and then adopted the domestic milestones in the 2050 Roadmap, it would be obliged to cover **42%** of its emissions after 2020 (around 34 billion tonnes) via emissions rights purchased in from other countries. Without international effort, the Roadmap trajectory would exhaust Europe's carbon space as early as 2033.¹¹

Figure 3: International effort needed to meet equitable budget under 2020 package and 2050 Roadmap



¹⁰ The Sovereign Emissions Rights Framework (June 2013)

¹¹ EU27 Effort Sharing Decision budget (20.9Gt) plus EU27 share of Phase 3 ETS budget (16.8Gt) plus EU27 carryover of length in the Phase 2 ETS budget carried over (0.7 Gt). 2021-2033 Roadmap pathway implies 48.4Gt. Past flex mechs and future land use emissions/sinks are not included in this calculation.

Europe needs to revise its 2020 target and its Kyoto pledge to leverage international ambition

With European emissions failing to track a pathway compatible with its international responsibilities, and the world on the brink of an inexorable climate crisis, Europe must do all it can to ensure that fair and adequate climate agreement is reached in Paris in December 2015. It risks sabotaging its credibility under that deal by hoarding superfluous permits under the EU ETS and the ESD to count towards its 2020 targets and its post 2020 commitments.

Some will argue that the offsets surrendered into the ETS should be considered “early international effort”, as we explore in detail below, much of this “effort” is likely to be non-additional, but even leaving these aside, the EU could afford to relinquish the remaining **1.4-2.5 billion** superfluous allowances expected under the climate package and revise its pledge under the second commitment period of the Kyoto Protocol in line with this. An official Kyoto pledge review date has been scheduled to take place by the end of 2014¹². Were Europe to increase its pledge, this would be a powerful gesture in the run-up to 2015 that could start to mobilise other countries to bridge the 2020 emissions gap, and prepare ambitious post-2020 pledges.

As an absolute minimum, we argue that Europe should aim to increase its 2020 target to 30% below 1990 levels. As we shall explore in our recommendations, this can be readily achieved just by removing the **700 million tonnes** from the EU ETS to prevent it from cancelling out emissions reductions delivered by other policies in the climate package. A standalone decision to cancel this volume of allowances from the Phase 3 auctions would be sufficient to deliver a 30% 2020 target.

The impact of a decision to cancel allowances in this way, towards the end of the phase, would be reduced if a decision to backload allowances is agreed, since allowances set aside under this proposal would be returning to the market then, helping to soften the impact of any permanent removal.

At this historical juncture, European policymakers cannot afford to kick the discussion about climate ambition into the long grass of 2030 targets. Nor can it allow fundamental need for structural reform of the EU ETS to be forgotten in the heat of the debate to temporarily withhold allowances. Backloading should be the first step towards a structural reform of the EU ETS, which leads to a step up in 2020 ambition, which is a prelude to a strong international climate pledge in the 2015 international agreement.

¹² UN FCCC/KP/CMP/2012/13/Add.1 Decision 1/CMP.8 paragraph 7

2: What's wrong with the level of the ETS cap?

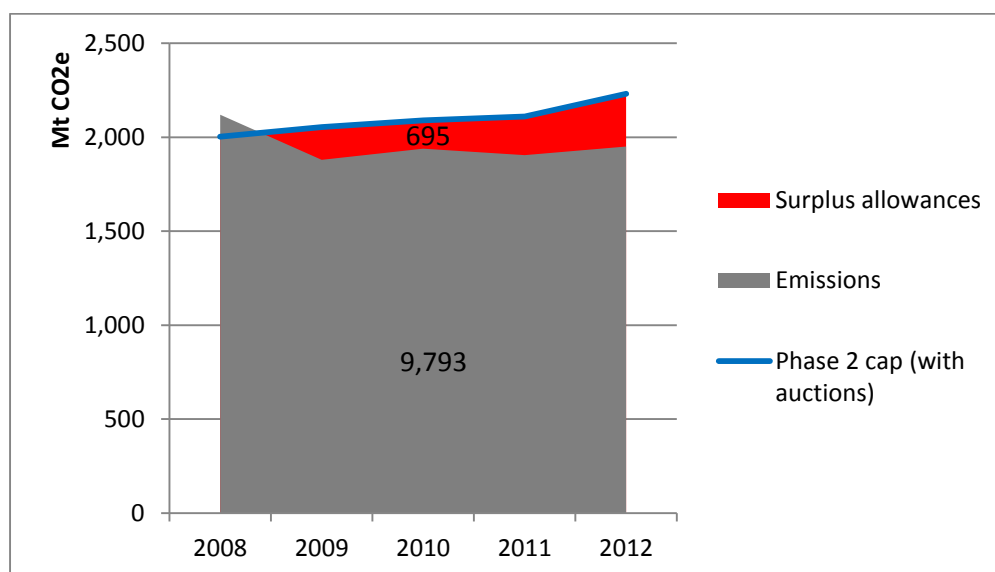
Introduction

In the ongoing debate about reforming the EU ETS the wrong yardsticks have been invoked to assess what is wrong with the cap and to determine what interventions are required, if any, to fix it. While surpluses and low prices are “canaries in the coalmine”, they are imperfect measures of what ails the scheme, and proposals to correct surpluses or adjust the carbon price risk negative unintended consequences. We argue that the fundamental problem facing the scheme at present is that the budgets set to meet the 2020 target assumed much higher business-as-usual emissions, and therefore expected a much larger volume of abatement to be driven by the scheme. We propose that, **until the carbon budgets Europe sets for itself keep it within its fair share of the global carbon space, the EU ETS cap should be ratcheted down to ensure that a fixed minimum volume of abatement is delivered by the policy. At present without this fixed minimum, the EU ETS cap is set to deliver negative emissions reductions and is merely cancelling out emissions reductions by other policies within the package.**

Surpluses are a symptom, not the problem

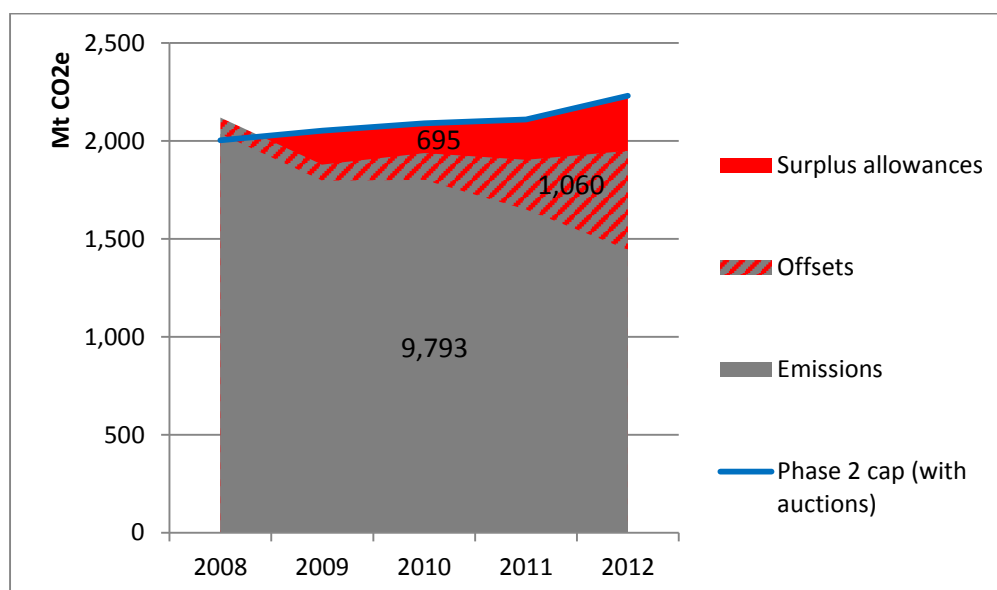
The EU ETS was set to help Europe meet its 2020 targets cost-effectively, setting a carbon budget that ratcheted down emissions gradually over the period. The ETS was not intended merely as an environmental backstop, it was supposed to be one of the primary mechanisms by which abatement was delivered in Europe, i.e. it was not just meant to *limit* emissions it was meant to actively *reduce* them. But now after the recession has caused the background emissions to fall against those expected when the budget was set, the policy has become worse than a “fifth wheel”. Not only is it failing to actively deliver abatement, it is *accumulating* emissions rights to count against and weaken Europe’s future climate efforts. While emissions have fallen in the traded sector, there has been little evidence that the EU ETS as a policy has had a significant role in this, implying that over the course of Phase 2, around 700 million more allowances were distributed than were needed to cover emissions, as we show in Figure 4 below:

Figure 3: Excess allowances awarded under the Phase 2 ETS cap



These surplus Phase 2 allowances have grown to **1.75 billion**, as installations have also surrendered over a billion Kyoto offset credits into the scheme.

Figure 4: Surpluses from Phase 2 after offsets are included



While, we maintain deep reservations about both the environmental integrity and the supplementarity of most of these offsets, it is important to note that in principle, they can represent real emissions reductions. Offsets in this instance are a fairly unambiguous example of “early effort”: compliance installations frontloaded this abatement to take advantage of the cheapest offset credits before they were banned under new regulations.

While there are many reasons to be concerned about the volume of offsets entering the system, it is a sign that something is profoundly amiss with the ETS debate that this represents a problem with the *cap*. As we sought to highlight in our 2012 report *Losing the Lead*, **while surpluses are a symptom of the problem, they are an imprecise yardstick to assess whether the Emissions Trading Scheme requires a supply recalibration, or by how much.**

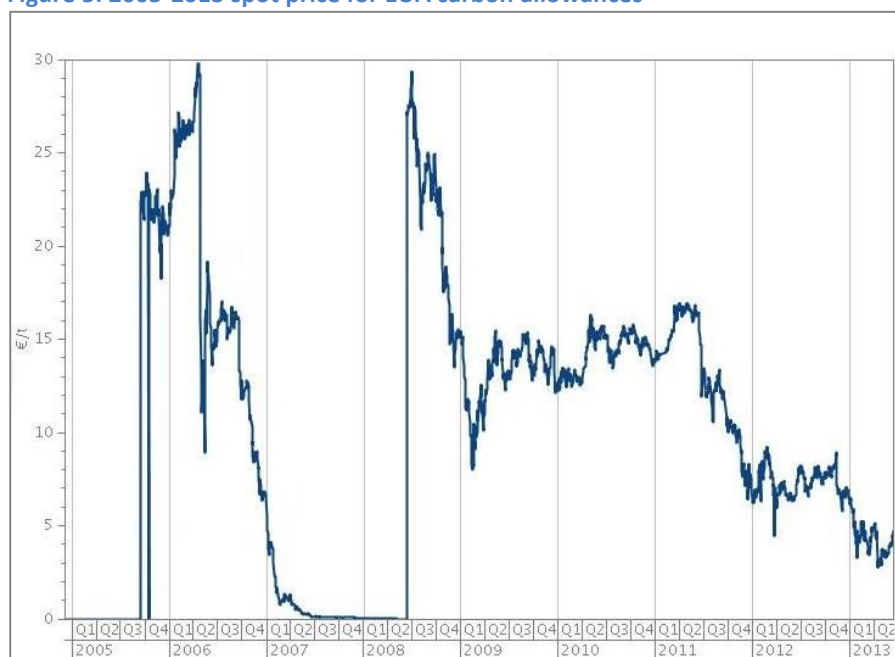
The inadequacy of global efforts to combat climate change, and of Europe’s efforts within them are sound bases for Europe to tighten its carbon budgets. This is especially true if abatement proves cheaper and easier than expected. But policy interventions which seek only to adjust the scheme to correct for surplus allowances risk creating a dangerous feedback loop where early effort from compliance installations is “rewarded” with ever tightening constraints.

Price is a symptom, not the problem

Another barometer that has widely been invoked as a measure of the emissions trading scheme’s ill health is the weak EU carbon price, which currently at around €4, is too low to trigger any form of domestic abatement or low carbon investment. This is especially true now that one of the cheapest forms of abatement – fuel switching between existing coal and gas-fired power stations – has become more expensive owing to coal dumping from the U.S. and regional competition for gas. Bloomberg New Energy Finance now estimates that a carbon price of €40 is needed to realise even this, the lowest of the “low hanging fruit”¹³.

¹³ Presentation by Guy Turner of Bloomberg NEF at Structural Reforms Consultation event in March 2013.

Figure 5: 2005-2013 spot price for EUA carbon allowances



It is a clear indicator that something is fundamentally awry when a policy designed to discover and realise lowest cost abatement is failing to drive any form of domestic abatement whatsoever. But once again, **the carbon price is an imprecise measure of what is wrong with the scheme given that this signal reflects changes in the cost of abatement as well as changes in the volume of abatement required.**

While, as we note above, the cost of even the cheapest forms of *domestic* abatement (i.e. fuel switching) have gone up, EU carbon prices have also partly been depressed because during a recession more emphasis is placed on increasing efficiency and also because the cost of *international* abatement (i.e. offsets) has gone down and compliance installations have taken advantage of this. Any policy intervention that seeks to fix the scheme by installing a floor price or reserve price risks preventing the scheme from uncovering the low-cost abatement options it was specifically designed to discover and deliver.

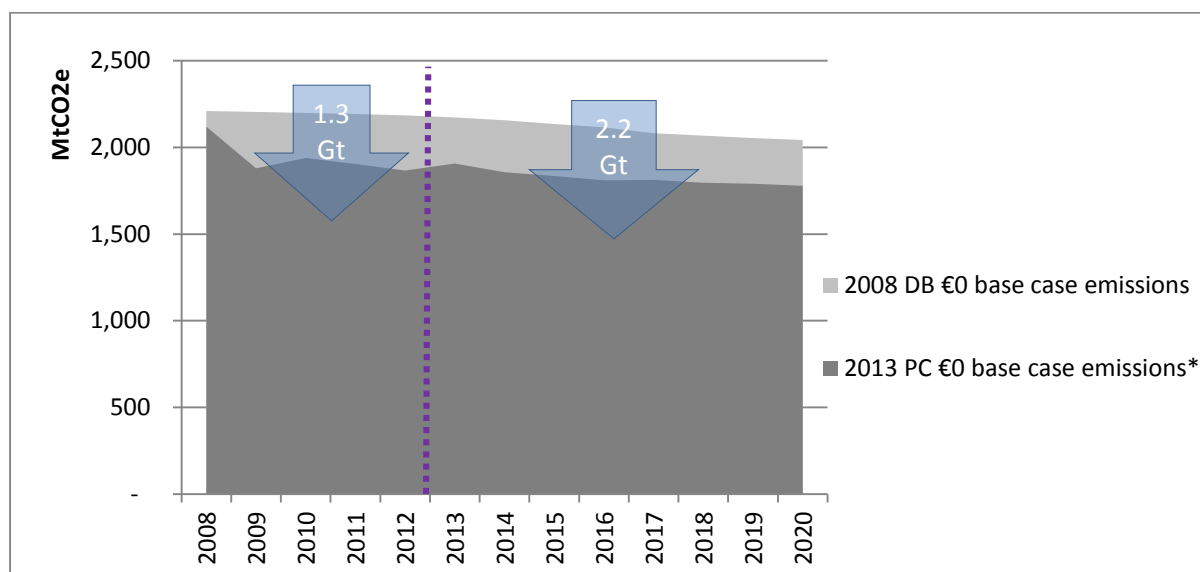
The real problem: 2013-2020 caps were set against inflated emissions projections

We propose that the real problem affecting the scheme is twofold: firstly that it was set to reach targets that were too easy to meet, and secondly that policy was implicitly designed to drive a certain volume of abatement, and this volume has since been compromised by the recession as well as new policy developments.

When forming an assessment of how much volume of abatement is required under the EU ETS, analysts prepare a “base case” scenario which examines what emissions in the traded sector would look like if the carbon price was €0. This effectively gives a picture of what the traded sector emissions would look like if the EU ETS policy did not exist. By comparing the changes in base case estimates performed in early 2008 against those performed today, we will have an indication of how much emissions have been reduced *independently* of the EU ETS. In Figure 7 below, we compare a

2008 base case prepared by Deutsche Bank in its report “It Takes CO₂ to Contango” against a 2013 analysis performed by Point Carbon.¹⁴

Figure 6: Comparison of 2008 and 2013 traded emissions under a €0 t/CO₂ carbon price



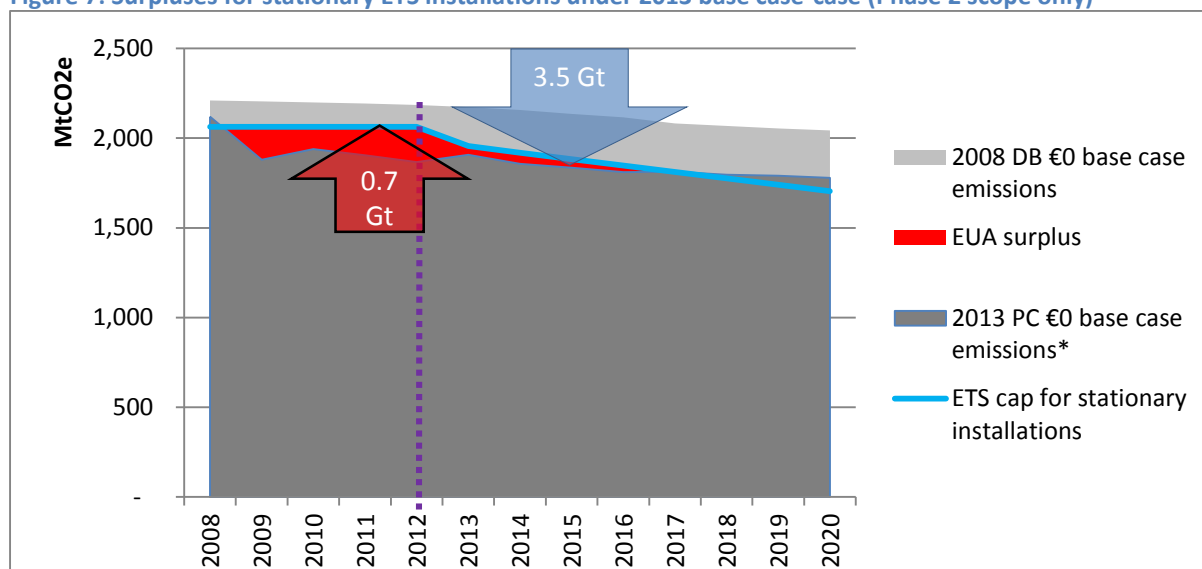
This comparison not only finds emissions down **1.3 billion** tonnes over Phase 2, but lowers the *forward* emissions outlook by a further **2.2 billion**. This leaves the ETS doing **3.5 billion tonnes** less work than originally intended. **This second, larger element is routinely neglected when accounting for the lost abatement incentives within the EU ETS, causing the scale of the problem to be profoundly underestimated.**¹⁵

Note again that while this change in the residual abatement required by the ETS cap affects the price of carbon, it is not all reflected as *surpluses*, which only highlight how far net ETS emissions fall *below the cap*. As the cap was originally set lower than business-as-usual emissions, this will be a significantly smaller volume. To demonstrate, in the graph below we show the surpluses that would accrue under the Point Carbon base case before taking offsets into account.

¹⁴ Note that the Point Carbon base case here uses verified 2008-2012 emissions and therefore might capture some emissions reductions delivered by the ETS carbon price in Phase 2, though these are generally understood to be quite modest. For consistency, these calculations assess changes to stationary installations that were in Phase 2 only, and do not include new sectors or activities.

¹⁵ See for example CDC Climat, who compare the same Deutsche Bank report against verified emissions to 2011 and therefore only find abatement incentives lost by 1 Gt. http://www.cdclimat.com/IMG/pdf/12-09-14_climate_brief_no18_-ec_climate_energy_coordination.pdf

Figure 7: Surpluses for stationary ETS installations under 2013 base case-case (Phase 2 scope only)

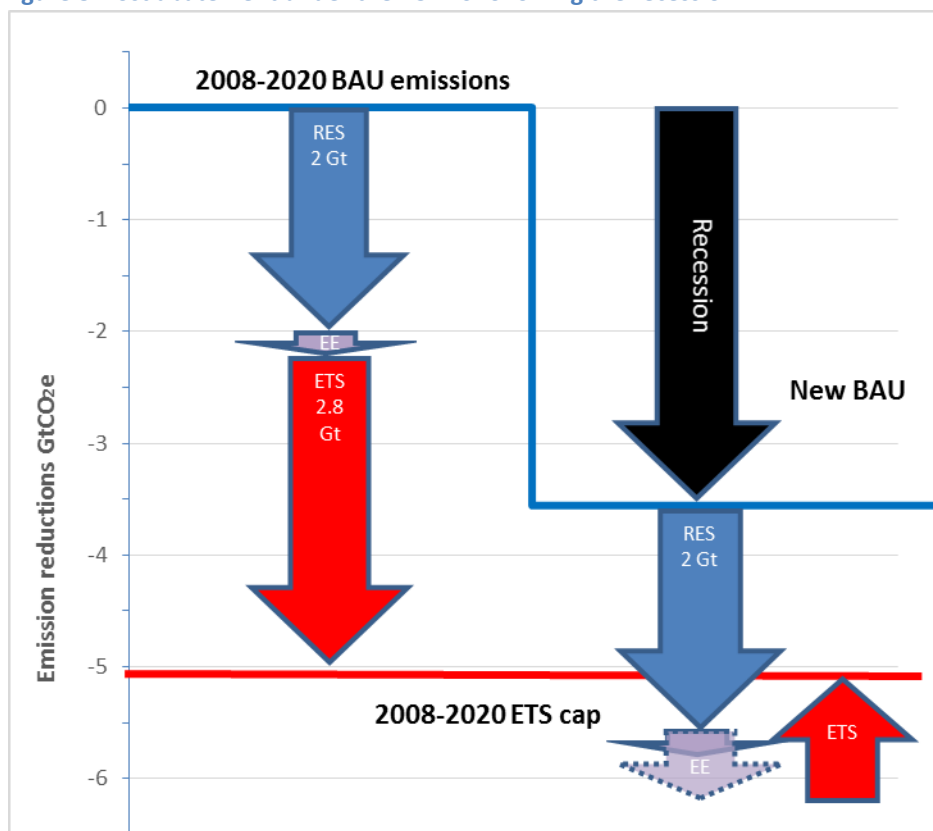


As we observe in Figure 8 above, The implications of these surpluses under a €0 carbon price profound, they suggest that, following the recession the ETS cap is not only failing to drive emissions reductions, it is cancelling out nearly 700 million tonnes of emissions reductions delivered by other policies under the Energy and Climate package.

To help illustrate the implications of this drop against the base case emissions we have adapted the following chart from the International Energy Agency’s report *Summing Up the Parts*. Applying figures derived from our two base case scenarios, and also from CDC Climat.¹⁶

¹⁶ Christina Hood, *Summing Up the Parts*, International Energy Association (2012)

Figure 8: Lost abatement under the EU ETS following the recession



The figures we use here are imprecise, but are used to illustrate how different policies interact after business as usual emissions drop. Indicatively, CDC Climat calculates that the ETS cap required 5 billion tonnes of emissions reductions in the traded sector with 2 billion of this delivered under the Renewable Energy Supply Directive. We have used the 2.8 billion tonne shortfall in Deutsche Bank’s 2008 report for the residual abatement required under the ETS, leaving less than 0.2 billion for Energy Efficiency.

However, as we have described above, after the recession caused business-as-usual emissions to fall, the volume of emissions reductions under other climate policies remained more-or-less constant but those in the EU ETS fell by 3.5 billion. **As a result, the ETS cap now finds itself driving *negative abatement*, capturing nearly 700 million tonnes of emissions reductions delivered by other policies and storing them up to waylay Europe’s future climate efforts.**

It is a sad irony, that the policy tool that was designed to deliver the single largest volume of emission reductions in the climate package is now damaging the effectiveness of other policies. Sadder still, this was the policy instrument we could least afford to weaken: it was specifically designed to uncover the cheapest abatement options and it is precisely in these times of economic hardship that climate policy needs to be most affordable. At present the ETS delivers “cost-effective” abatement only by cancelling out the work of other policies in the traded sector.

Compounding factors:

a) Increased delivery of emissions reductions by other polices affecting the traded sector

As we have explored above, the recession has decreased the volume of emissions reductions required by the traded sector by around 3.5 billion, removing all obligation to abate under the EU ETS, and cancelling out the abatement delivered by other policies.

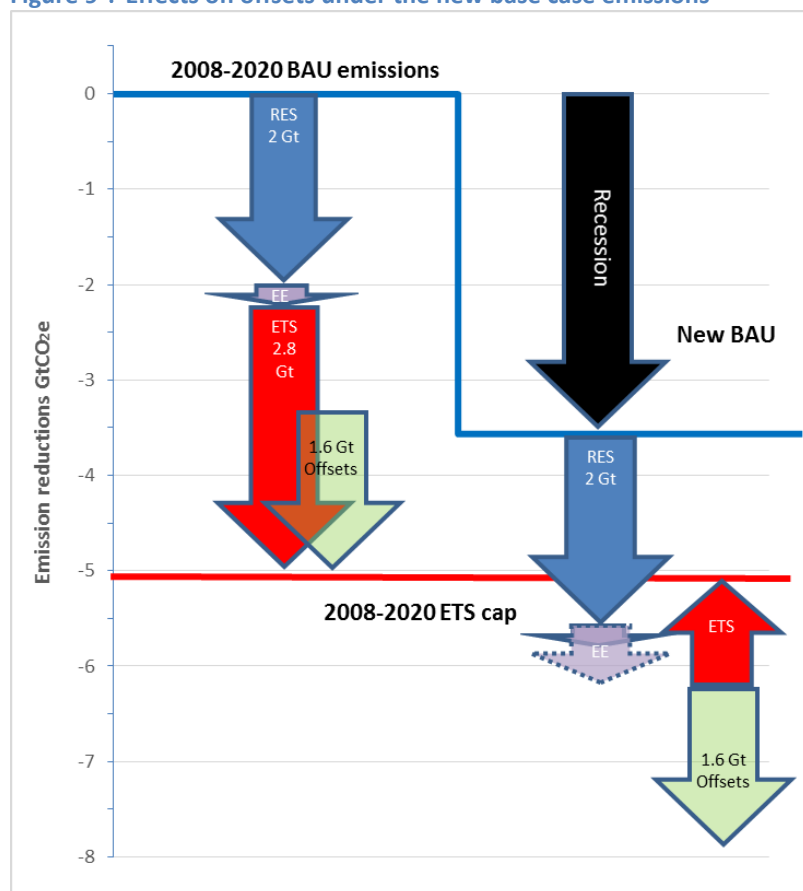
It is important to note that this negative abatement under the ETS cap will be mitigated if other policies underperform, or – which is more likely, will be exacerbated further if these policies overperform. This is a key point stressed in the International Energy Agency's *Summing Up the Parts* report.

There is some evidence that the emissions reductions delivered by Renewable Deployment under the RES targets is slightly larger than envisaged under the package,¹⁷ but larger uncertainties remain about the volume of emissions reductions that will be delivered under the Energy Efficiency Directive. CDC Climat estimates these could now fall anywhere between 450 and 650 billion tonnes.

b) Offsets

Conservatively estimated, the offset budget allows installations in the traded sector to surrender as many as 1.6 billion international credits to meet their ETS obligations over 2008-2020. Once again, this volume was set to help deliver ETS reductions originally totalling 2.8 billion tonnes. With that volume now diminished by the recession, as well as by new policy developments, that offsetting budget should be largely superfluous. However, because offsets continue to be cheaper than ETS allowances, compliance entities have still been incentivised to surrender them, and are expected to exploit most of the offsetting budget available to them. This takes emissions a further 1.6 billion below the cap, and will be the chief driver of the surpluses building up in the scheme over the 2008-2020 period.

Figure 9 : Effects on offsets under the new base case emissions



¹⁷ Oko institute finds that, the National Renewable Energy Plans submitted to the Commission in 2011 indicated 40Mt more reductions in the year 2020 than envisaged in the 2008 Impact Assessment. This could indicate a substantially larger volume of emissions reductions over the full 2008-2020 time horizon.

Section conclusion

In summary, the scheme was expected to deliver 2.8 billion tonnes of emissions reductions over 2008-2020 with important secondary decisions made on that basis: firstly, the offsetting budget would have partly been set with reference to this volume. Secondly, this balance of domestic and international effort was used to estimate the €30 /tCO₂e carbon price which was later to use to determine which industrial sectors were exposed to carbon leakage and therefore entitled to extra free allowances.

Now that the EU ETS will not only fail to drive emissions reductions but will drive negative emissions reductions over 2008-2020, these secondary decisions have also been fundamentally compromised. As we shall explore below, the EU ETS offset budget now threatens to place EU member states in breach of the supplementarity restrictions of the Kyoto Protocol. At the same time, the scheme now threatens to award free allowances to manufacturing companies that do not really need them, depriving governments of much needed revenues as well as leaving fewer free allowances for the manufacturers that need them most.

A key element missing from the scheme's design was to create a provision to ensure the policy delivered a minimum volume of abatement. We propose that the Phase 3 cap should be corrected to ensure that such a minimum volume takes place, and new automated mechanisms should be agreed so that this also takes place in future trading periods. It is unacceptable that the ETS caps currently serve to cancel out the emissions reductions delivered by other climate policies. This needs to be redressed in both the Phase 3 cap and in future caps.

If a minimum volume of abatement was built into the scheme, the carbon prices would more closely reflect the actual price of abatement, and be driven less by fluctuations in demand caused by the economy and the weather.

3: Problems with the distribution of allowances under the cap

As well as problems with the overall ambition of the scheme, we also observe that there have been serious issues with the way allowances have been distributed under the overarching carbon budget.

While this does not immediately present itself as an environmental issue, the claims of key industries to face impossible burdens under the scheme have been a central consideration preventing the adoption of greater climate ambition.

In the section that follows we shall seek to show that these claims have been profoundly exaggerated, and that these industries have, for the most part, been afforded extensive protections from the carbon price. Furthermore these protections were awarded at a time when the ETS cap was expected to be stringent, and are now totally disproportionate to the low levels of abatement demanded under the scheme.

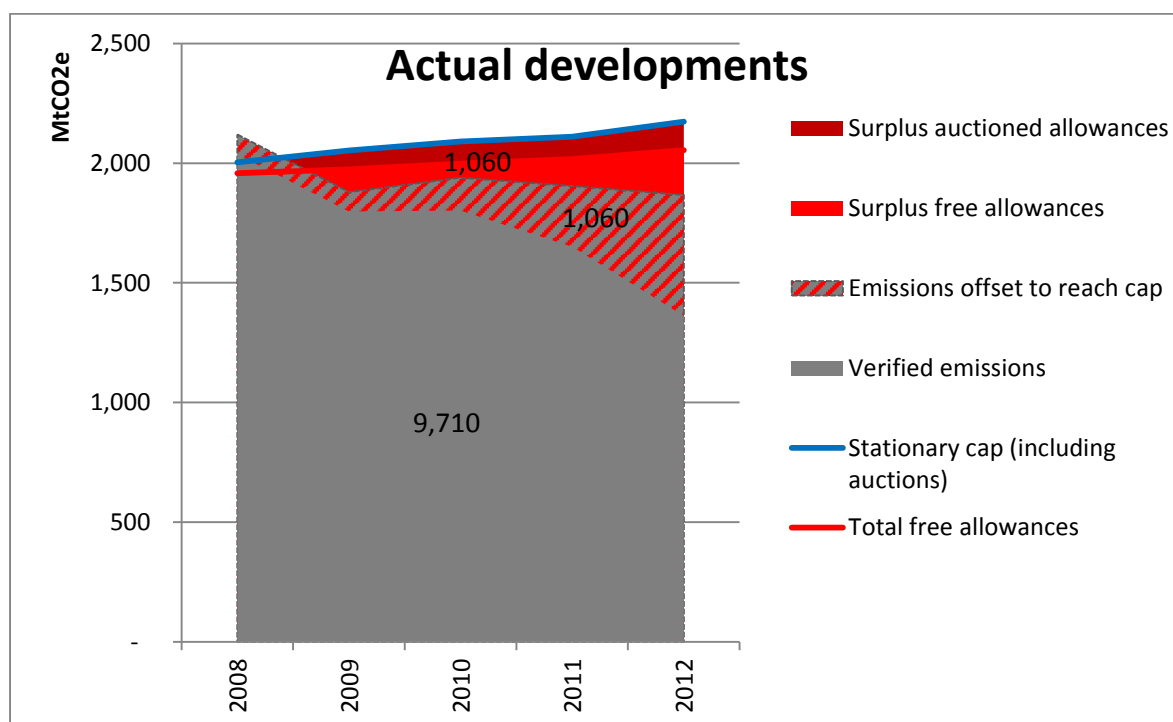
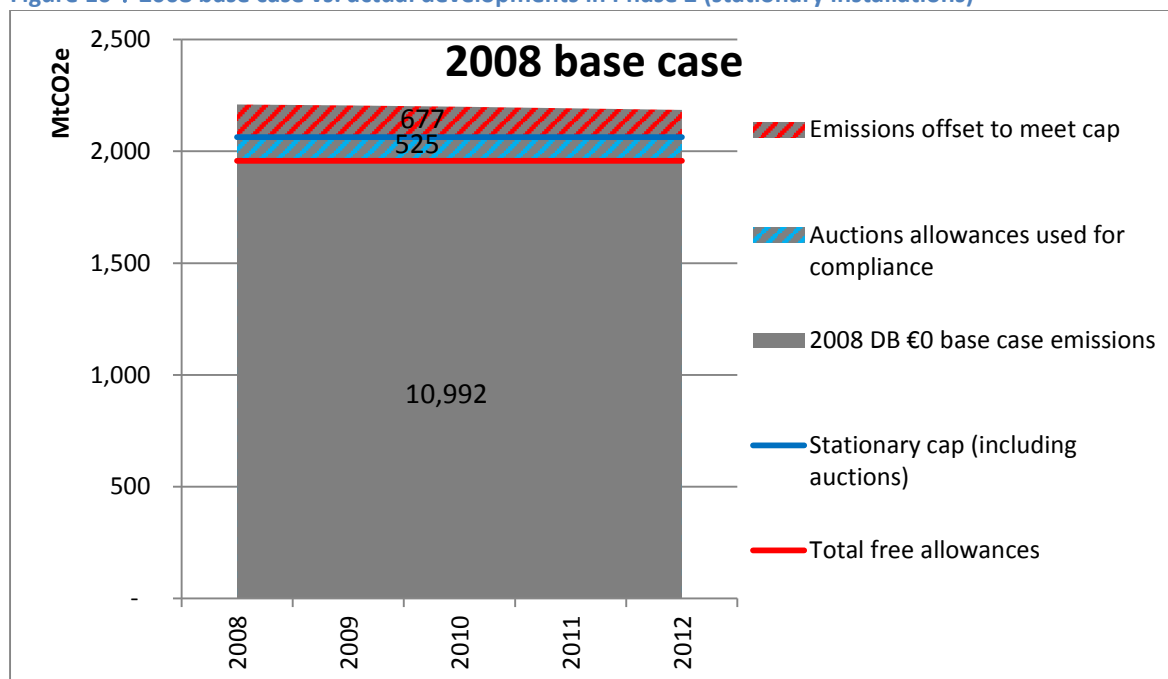
Starting assumptions in the National Allocation Plans

When the Phase 2 National Allocation Plans (NAPs) were being agreed, the expectation was that the caps would be far more stringent than they are now. Recalling our comparison of base case analyses done in 2008 and 2013, we find that the Phase 2 was expected to be **1.3 billion tonnes more stringent** than it is now for stationary installations. The allocation plans Member States submitted to and agreed by the Commission were prepared on this basis of this expectation.

The starting assumption was that, under that total Phase 2 cap there would be no European allowances to spare and that nearly **500 million tonnes of abatement** would have to be found either domestically or overseas to meet the cap. In order to minimise the extent to which these reductions would impose costs on competitively exposed industries, several Member States elected to assign a disproportionate share of their national allowances to manufacturers in order to cover most or all of their emissions for the Phase. This largesse was afforded by awarding electricity generators far less allowances than would be required to cover their emissions on the understanding that they could pass through costs to their consumers without the risk of losing market share (whether these costs arose through offsets, purchased allowances or direct abatement).

We have already seen in the previous sections what has come to pass: emissions have well below the cap, leaving surplus allowances of nearly **700 million in the Phase 2 cap**, with the difference accounted for by about 80 million allowances in new supply. This seems to be the net result of early auctions of Phase 3 allowances for the NER300 and power sector hedging, contradicted by delayed sales of Phase 2 Member State allowances.

Figure 10 : 2008 base case vs. actual developments in Phase 2 (stationary installations)



The sectoral distribution over Phase 2

Under these new conditions, the combustion sector still finds itself short, but by **500 million** allowances, far less short than it expected to be, while the manufacturing sector has amassed a vast **800 million** surplus free allowances that were awarded for use against emissions that never eventuated. The aviation sector is also short by **30 million**, with the balance made up by **430 million** auctioned allowances.

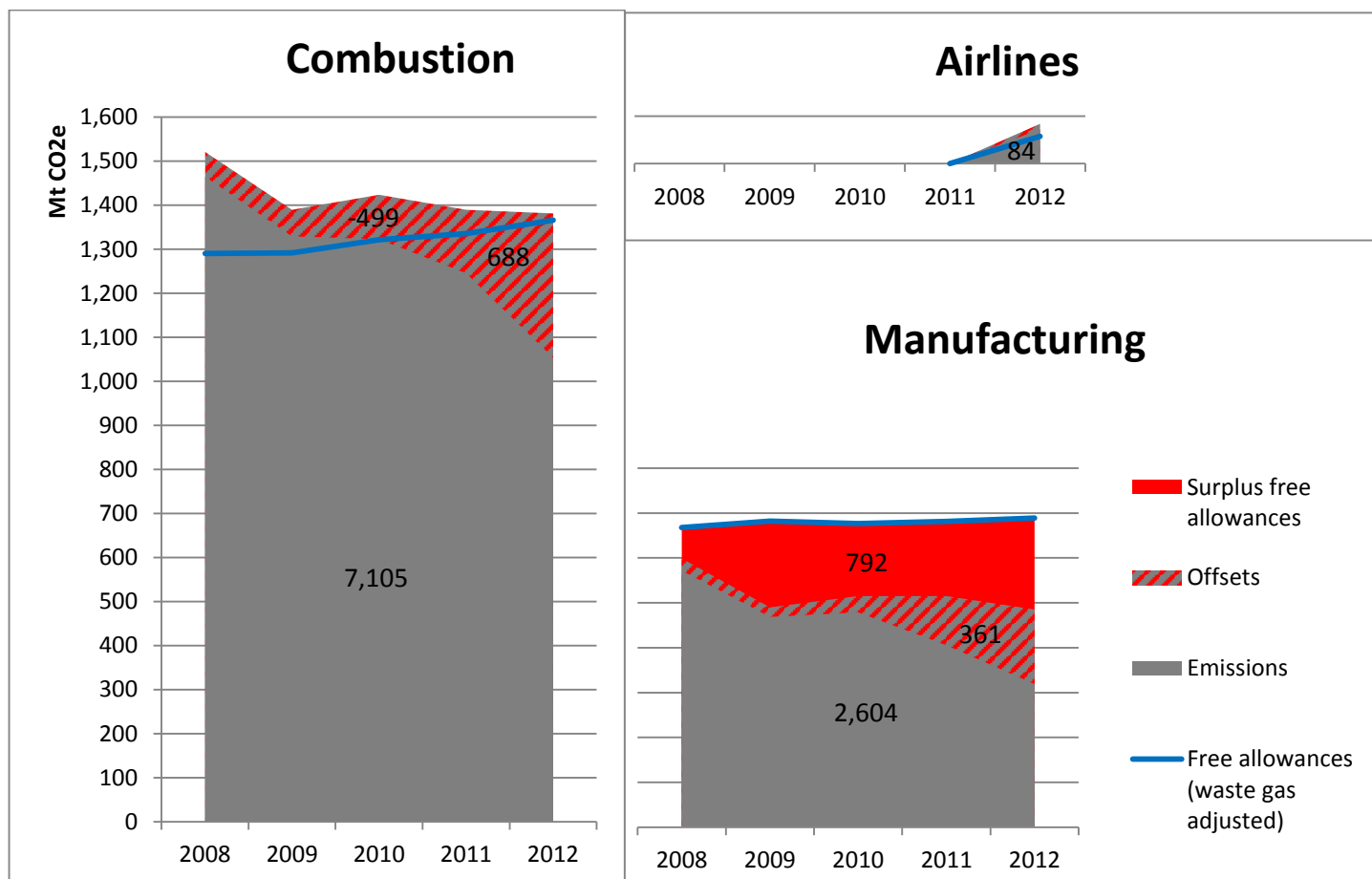
A full breakdown is provided in Table 2 below and Figure 12 below.

Table 2 : Length or shortage of allowances against verified emissions for different sectors

Year	2008	2009	2010	2011	2012	SUM
Auctions	45	79	92	93	119	428
Manufacturing long	69	192	161	166	204	792
Combustion short	-231	-98	-102	-54	-15	-499
Aviation short	0	0	0	0	-26	-26
Total/Net surplus	-116	174	151	205	282	695

Source: EUTL with Sandbag calculations
 Allocations are adjusted for known process gas transfers
 We have assumed 2/3rds of 2012 aviation allowances have been returned under the “stop the clock” decision
 Totals may not add up exactly due to rounding

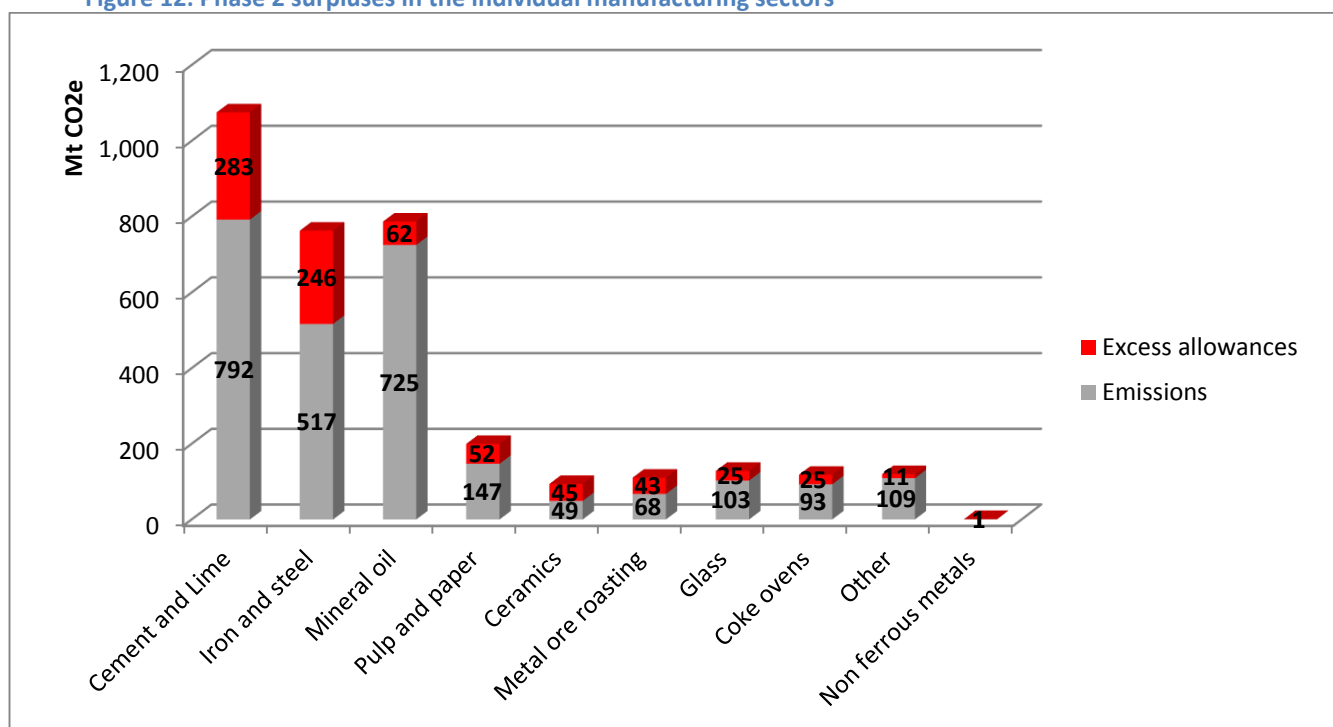
Figure 11: Distribution of allowances across three sector categories



We can rapidly observe that the combustion sector has met most of its total compliance obligations through surrendering offsets, but will have relied heavily on purchasing allowances from auctions and from manufacturers at the start of the phase. Meanwhile, manufacturing installations have further engorged their glut of allowances by surrendering 360 million offsets. This collectively leaves them with enough allowances to cover their total emissions for another two years. This is before taking into account the new free allowances arriving in Phase 3, which as we will explore further below can sustain them until the end of the decade.

Let us look closer at the individual manufacturing sectors to see where these surpluses are currently concentrated. These are pictured in Figure 13 below.¹⁸

Figure 12: Phase 2 surpluses in the individual manufacturing sectors



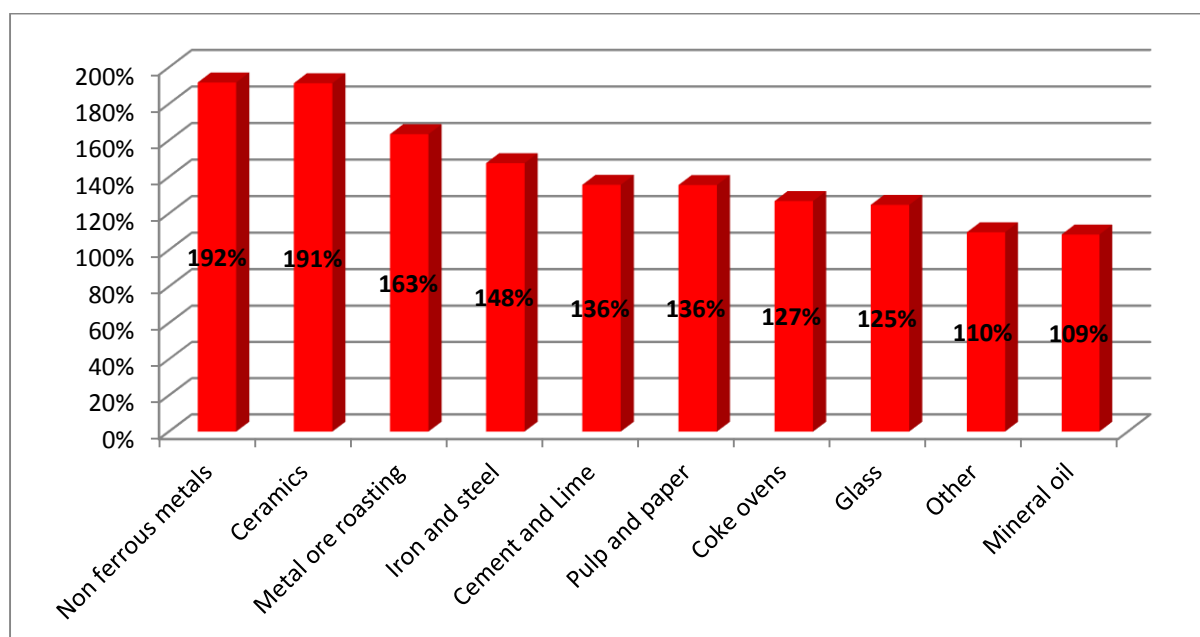
Firstly, we note that *without exception* all of the manufacturing sectors are oversupplied allowances in Phase 2. This should immediately put to bed claims by the individual European manufacturing sector lobbies that the EU ETS has, on the whole, harmed their industry in Phase 2. While there have been some losers *within* each sector, these have been problems for individual installations or companies, and not for the manufacturing sectors as a whole. Arguments from the European manufacturing lobbies that the ETS is *already* causing carbon leakage are misleading and misplaced. On the contrary, it has afforded them spare allowances to be sold as a potential revenue stream.

Only 16% of all manufacturing installations from across these sectors were awarded fewer allowances than were needed to cover their emissions, with their shortfalls averaging 15%. These shortfalls were readily covered through the use of cheap offsets. The overwhelming majority of installations (84%) received far more allowances than they needed over the Phase.

As in past years, we see the lion’s share of manufacturing surpluses are associated with installations in the cement and steel sectors which account for **530 million**, or two thirds of the total manufacturing surplus. While these sectors are responsible for the largest absolute volume of manufacturing surpluses, they are by no means the sectors that are most protected from the scheme.

¹⁸ This year the number of sector codes in the EU transaction log has proliferated. Here we aggregate them back into recognisable manufacturing clusters. These breakdown as follows: Cement and Lime (6,29,30), Iron and Steel (5,24,25), Mineral Oil (2,21), Pulp and Paper (9,34,35,36), Ceramics (8,32), Metal Ore Roasting (4,23), Glass (7,31), Coke Ovens (3,22), Other (37,99), Non-Ferrous Metals (26,27,28).

Figure 13: Phase 2 allowances as a proportion of Phase 2 emissions by individual sector



By comparing the extent to which the other sectors are oversupplied relative to their Phase 2 emissions, we get a clearer sense of which European sectors are most insulated from the scheme. Indicatively, each 20% of oversupply indicates a year's worth of emissions for the sector at average Phase 2 levels, implying that non-ferrous metals and ceramics have enough allowances to cover them for more than four years before drawing on any of their new allowances in Phase 3.

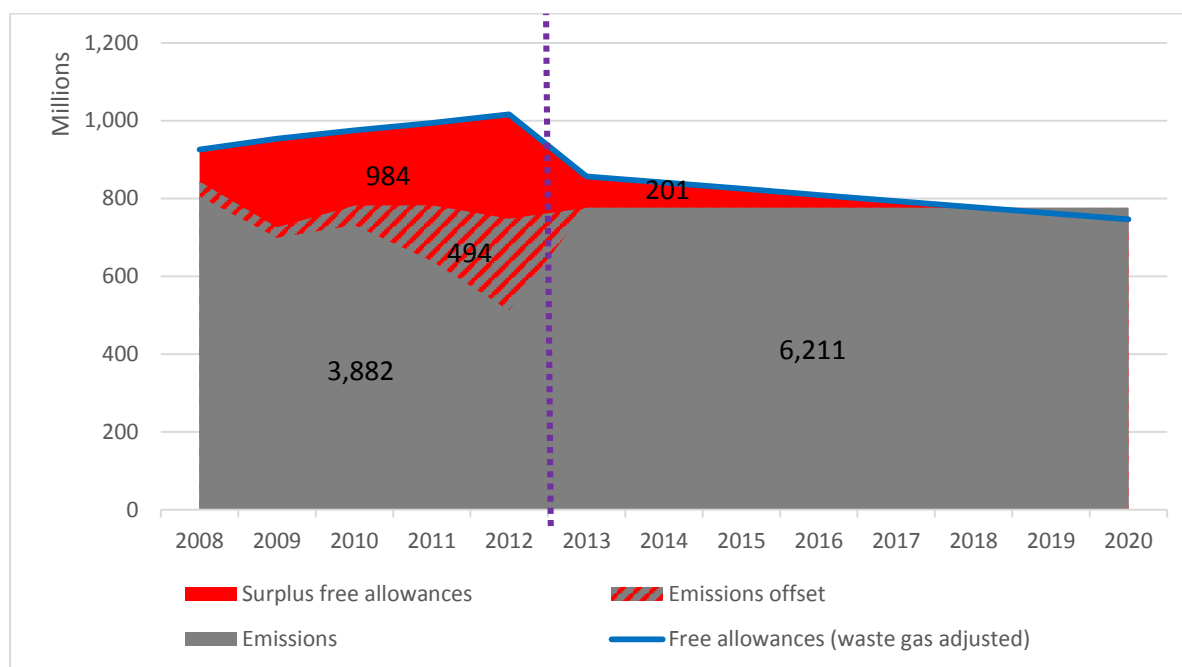
Manufacturing sectors in Phase 3

Despite being midway through the first year of Phase 3, the Commission has not yet published the Phase 3 allocations to the EU Transaction Log. This means we cannot yet perform a sector by sector analysis of how manufacturers are likely to fare in Phase 3. We can however get an indication of how manufacturing sectors will fare as a whole, by seeing how they stand against the *maximum* volume of benchmarked allowances possible under the Directive.

As the maximum benchmarks are determined by the volume of all installations which are not *electricity* generators, for the purposes of this analysis we must broaden our definition of manufacturers to fit this category. As this broadened definition encompasses many large industrial combustion installations, the values for Phase 2 emissions, allowances and offsets are also significantly enlarged.

These benchmarked sectors account for some 42% of 2005-2007 emissions, and this determines their maximum possible share of the Phase 3 cap they can access as free allowances. In the graph below we observe how they would fare against their maximum collective Phase 3 benchmarks if their emissions stayed at their average levels over Phase 2, which is 4% above 2012 levels.

Figure 14: Manufacturing surpluses free allowances in Phase 3 (non-electricity sectors)



	Phase 2	Phase 3	Total
Allowances (wg adjusted)	4,866	6,411	11,277
Emissions	3,882	6,211	10,093
Surplus free allowances	984	201	11,85
Offsets	494	50+ remaining	544+
Surpluses with offsets	1,478	251+	1,729+

Startlingly, on this emissions pathway, not only will manufacturers in aggregate fail to exhaust their accumulated Phase 2 surpluses, they are likely to accrue *new* surpluses that can be sold on at a profit or can be banked against a future climate agreement. **Far from facing shortages under the scheme, the manufacturing sectors are, in aggregate, hoarding up to 1.7 billion in free allowances and substituted offsets to bank beyond the 2020 framework.** The manufacturing sectors are hoarding up allowances arising from the emission reductions that are occurring in the power sector as a result of other policies in the energy and climate package. The demand the power sector was intended to create has not materialised leaving allowances in the hands of the manufacturing industry, cushioning them in to the future.

Industry does not need a new “low-carbon transition fund”, it already has one in the form of excess Phase 2 and Phase 3 allowances. Reducing the supply of allowances in the Phase 3 auctions will increase the value of these allowances, which can then be sold on to electricity generators in order to fund new industrial abatement technologies. The allowances awarded industry are public assets, and represent forfeited revenues that were gifted to manufacturers on the premise that they would need them to protect them from the costs of the EU ETS. Governments should not be obliged to forfeit yet more revenues so that industry can profit further while continuing to defer abatement.

Box 1: Methodology for calculating the Phase 3 benchmarks

It is difficult to disaggregate electricity from non-electricity generators based on current public information, however as a proxy we have used installation level NACE codes put together by DG Enterprise when assessing carbon leakage risks. For the purposes of our analysis here we define “electricity” as all ETS installations with a NACE code 40 by DG enterprise which, encompasses “electricity, steam or hot water supply”. Thus defined non-electricity generators account for 42% of 2005-2007 emissions over Phase 3. We note that *prima facie* these NACE descriptors seem to capture more sectors than electricity alone, and therefore these numbers are likely to return a conservative assessment of how many allowances are available under the Phase 3 benchmarks to *non-electricity* installations. We also note that the maximum volume of benchmarked allowances also includes an additional quantity for new sectors entering the scheme in Phase 3, but we have excluded these to more accurately reflect the share of Phase 3 benchmarks available to Phase 2 manufacturers.

Deserving and undeserving losers under the Phase 3 benchmarks

We note again that, while in aggregate the manufacturing sectors are not threatened by Phase 3 at all, there will of course, be some installations and companies that are facing steep shortfalls.

Some will be those companies that are the least carbon efficient in their product category, and therefore face particularly punishing benchmarks. The cheapest and most productive form of abatement in Europe will be to raise the efficiency of all of Europe’s manufacturing companies to match the most efficient. This is a necessary aspect of a low carbon transition, and the renewal it requires should strengthen Europe’s economy.

Under financial duress during the recession, some companies may have sold off all of their surplus free allowances for cash flow. To these we can only say that, if the EU ETS allowed them to survive the recession they have already been amply rewarded by the scheme. The EU ETS was intended as an environmental policy, not an industrial rescue package, and it should not be incumbent on that policy to ensure their continued survival.

In fact, the real losers under the Phase 3 benchmarks are the 40% of sectors which have not been defined as at risk of carbon leakage.¹⁹ This is not because they failed to make the list themselves, but rather because their free allowances are likely to get cut because too many free allowances have been given to sectors inappropriately captured under that definition.

It is now widely expected that the draft National Implementation Measures (NIMs) that Member States submitted to the Commission, applying its benchmarking rules, will request more free allowances than the maximum level allowed under the ETS Directive. This means a “cross-sectoral correction factor” will be applied, reducing the free allowances available to all installations.²⁰

It is important that the manufacturing sectors excluded from this list make their voices heard in the run-up to the mid-term review of the carbon leakage list next year if they are to protect their allotment of 2015-2019 allowances.

¹⁹ Figure taken from CE Delft, Carbon Leakage and the Future of the EU ETS market, http://www.cedelft.eu/?go=home.downloadPub&id=1361&file=CE_Delft_7917_Political_brief_and_summery.pdf

²⁰ ETS Directive 2003/87/EC Article 10a paragraph 5.

For our part, we note that that a large degree of this problem is caused by the obsolete assumptions in the impact assessment that guided the carbon leakage assessment, most notably, the presumption of a €30/tCO₂ price in 2020. At the time of writing the carbon price is around €4.

A report on the carbon leakage list recently prepared by CE Delft finds that updating the assumptions in the Impact Assessment using a conservatively high price estimate of €12/tCO₂ in 2020, reduces the sectors at risk of carbon leakage from 60% of sectors representing 95% of emissions, down to 33% of sectors representing only 10% of emissions.

We concur with CE Delft and others that unless structural measures are taken to reduce the supply of allowances and restore the carbon price to the levels foreseen in the 2008 impact assessment, the sectors deemed at risk of carbon leakage should be redefined, and the volume of free allowances awarded these sectors should be reduced. This would return more auctioning receipts to Member States, and would diminish the risks of a cross-sectoral correction factor again reducing the supply of allowances to non-leakage exposed sectors.

4: The trouble with offsets

As we highlight in Section 1 on Europe’s climate ambition, Europe will be obliged to heavily rely on international effort if it is to keep within its fair share of the 2°C carbon space. This is not just a matter of cost-effectiveness, but a matter of technical feasibility. Meeting some of our emissions reductions internationally, in either the traded or the non-traded sector, is perfectly acceptable, but only if a few key criteria are met.

Chief among these must be whether these emissions reductions are in fact real, and would not have taken place otherwise. Secondly, we must ensure that Europe is not using international effort to put off its obligations at home, which should be at a minimum, to realise all of the cost-effective *global* abatement under a 2°C pathway that can be found *domestically*.²¹

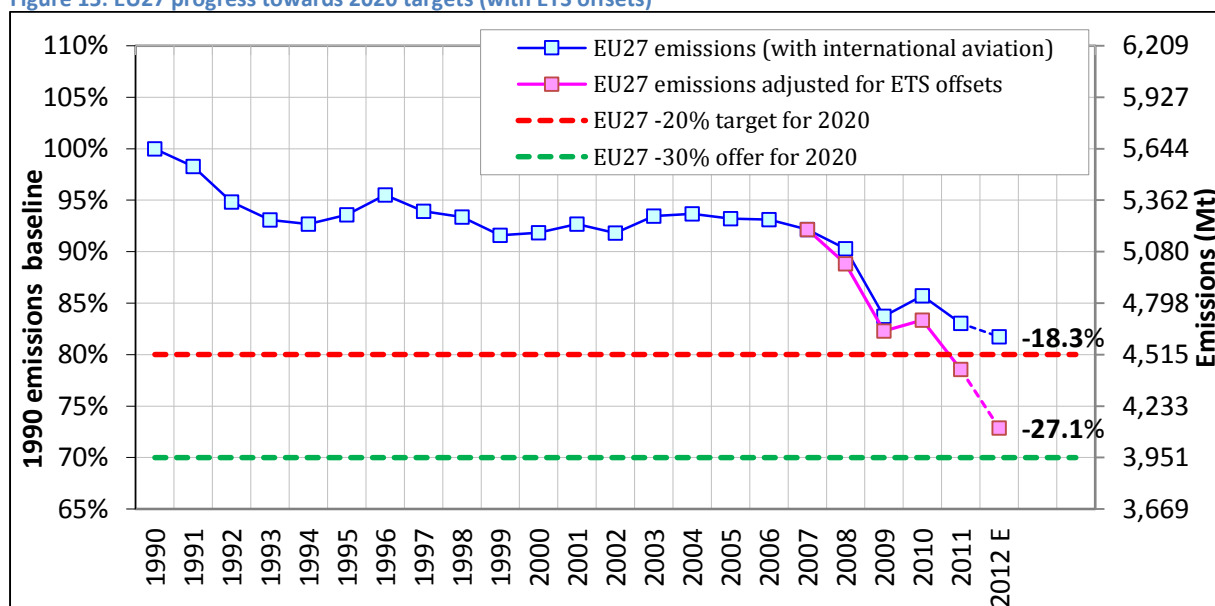
The question of supplemental action

Tackling the issue of supplementarity first, it seems that the offsets allowed under the EU ETS were never supposed to be supplementary to emissions reductions driven domestically by the ETS policy, with the scheme expected to deliver in the region of 2.8 billion tonnes of CO₂ abatement over 2008-2020 with 1.6 billion of that allowed to be delivered internationally – considerably more than half.

On the other hand, in terms of the traded sectors as a whole, there seems little danger of offsets exceeding the volume of abatement that will be delivered by the Renewable Energy Supply Directive (2 billion tonnes) and the Energy Efficiency Directive (0.4-0.6Gt) combined across the 2008-2020 offset budget.

The problem of supplementarity does, however, arise as a problem at national and EU level, over the shorter window of 2008-2012. The frontloading of ETS offsets for compliance in Phase 2 risks making flexible mechanisms the major contributor of Member State’s *economy-wide* abatement reductions during that timeframe and therefore risks breaching the rules of the Kyoto Protocol. The rush to surrender offsets at the end of Phase 2 was so intense, that it brought Europe’s net emissions 27% below 1990 levels in 2012.

Figure 15: EU27 progress towards 2020 targets (with ETS offsets)



²¹ While we do not explore this in detail here, it is also essential these projects paid for by Europe are meeting minimum *ethical* standards in terms of their effects on the local environment and local peoples.

In Table 3 we present the EU27 member states with emission reduction pledges under the first Kyoto Protocol commitment period and show the Kyoto offsets that have been surrendered by their ETS installations (CERs,ERUs) and also their expected use of flexible mechanisms at national/group level (CERs, ERUs and AAUs). Summing these figures, we then compare these against the gap between the Kyoto target and the Kyoto baseline and determine a supplementarity threshold for offsets, by dividing this in half and multiplying it by the five compliance years of the Kyoto budget.

Table 3: Total flexible mechanisms used towards EU Kyoto compliance over 2008-2012 (Mt CO_{2e})

Country/region	ETS offsets used in Ph2	Intended State use of CDM, JI and IET	Total intended flex-mechs	Gap between KP baseline and CP1 target	Supplementarity threshold for flex mechs (½ of Kyoto gap x 5)	Offsets exceeding supplementarity threshold
EU15	1,049	419	1,468	341.2	853	615
Bulgaria	23	-7	16	10.6	26.5	-11
Czech Republic	39	-125	-86	15.5	38.75	-125
Estonia	3	-6	-3	3.4	8.5	-12
Hungary	10	-20	-10	6.9	17.25	-27
Latvia	2	-42	-40	2.1	5.25	-45
Lithuania	7	-71	-64	3.9	9.75	-74
Poland	96	0	96	33.8	84.5	12
Romania	32	0	32	22.2	55.5	-24
Slovakia	10	-27	-17	5.8	14.5	-32
Slovenia	6	5	11	1.7	4.25	7

- ETS offsets from EUTL

- Intended state units are taken from the EEA's 2012 Greenhouse Gas Emissions Trends report

- KP baseline and 1990-2011 emissions from EEA. 2012 emissions estimates apply Eurostat estimates to 2011 EEA data

In principle these 25 EU Member States would need to establish that they had implemented domestic policies which drove equal or greater emissions reductions than the total units they had surrendered. We note that, as these domestic policies, could have taken any place between 1990 and the 2012, it should be extremely difficult to fail these conditions, and yet, **the EU 15, Poland and Slovenia appear to have breached this supplementarity threshold.**

Furthermore, we note, that the wording of the Kyoto Protocol seems to imply that passive emission reductions experienced as a result of **economic decline might not count as domestic reductions under this condition**, with the language stressing that flexible mechanisms must be “supplemental to domestic actions”²². This language is carefully echoed in the EU’s Greenhouse Gas monitoring decision (280/2004/EC), and the ETS directive which, in article 30, obliges Member States to...

“...report to the Commission every two years on the extent to which domestic action actually constitutes a significant element of the efforts undertaken at national level, as well as the extent to which use of the project mechanisms is actually supplemental to domestic action, and the ratio between them, in accordance with the relevant provisions of the Kyoto Protocol and the decisions adopted thereunder.”

If the emissions reductions cannot be considered domestic action under this ruling, then even more of the EU member states listed above might be at risk of breaching the Protocol. We note it would

²² See Article 6 (establishing Joint Implementation) and Article 17 (establishing International Emissions Trading)

certainly seem euphemistic to count economic downturn as climate “action” or “effort” in this conjunction.

In the event, that EU Member States cannot satisfactorily prove that domestic action has driven the majority of emissions reductions the ETS Directive prompts the Commission to come forward with legislative proposals to ensure this principle of complementarity is maintained.

We note that the “truing up” period for Kyoto 2008-12 compliance is not complete until 2015, giving the **EU15, Poland, Slovenia** and other states a short remaining window to ensure that the right balance of domestic and international effort is reflected when they submit their final allowances and offset credits to the United Nations. These states will find themselves in an awkward position if they cannot achieve their Kyoto pledges without reliance on the offsets that exceed their threshold (i.e. if they do not have enough *national* Kyoto allowances to cover their remaining emissions).

While it is too late for the Commission to prevent these offsets from being surrendered into the EU ETS, it still has time to initiate a legislative proposal to attempt to rectify this situation and ensure that Member States meet their compliance obligations before the Kyoto “true up” period is complete.

The question of additionality

So long as appropriate levels of emissions reductions are taking place within Europe, complementarity is essentially a legal concern under the Kyoto Protocol rather than a moral or environmental concern. The Kyoto Protocol put these legal strictures in place to ensure that a minimum level of domestic abatement was achieved, not to put a ceiling on international effort. Again, as we note in section 1, Europe’s international effort will ultimately need to considerably exceed domestic action on climate change if it is to fulfil its climate responsibilities cost-effectively.

A more fundamental environmental question is whether these emissions reductions taking place elsewhere are real. If they are not, they risk allowing European emissions to breach the environmental limits it has set for itself and will oblige it to cover more distance later on at greater expense to stay within its fair share of the global carbon space.

All the offsets used for compliance purposes in the EU ETS are issued under the Kyoto Protocol. These take the form of Certified Emissions Reductions (CERs) generated from Clean Development Projects (CDM) in developing countries that have no legal obligation to reduce their emissions under the Kyoto Protocol. They also take the form of Joint Implementation (JI) projects, generated from projects which take place within Kyoto compliant countries, and are backed by allowances under their national carbon budgets (AAUs). These latter projects were focussed on realising cost-effective abatement in “Economies in Transition”, but are not strictly limited to these.

As with complementarity, the test of whether these credits represent real reductions or not, is enshrined in the Kyoto Protocol under which these credits are issued. This test is known as the principle of “additionality”. Under Article 6 establishing Joint Implementation, the Protocol reads:

*“Any such project provides a reduction in emissions by sources, or an enhancement of removals by sinks, that is additional to any that would otherwise occur”.*²³

While Article 12 establishing the Clean Development Mechanisms requires that:

²³ Article 6.1.b of the Kyoto Protocol <http://unfccc.int/resource/docs/convkp/kpeng.pdf>

“Reductions in emissions that are additional to any that would occur in the absence of the certified project activity”.²⁴

Additionality issues under the Clean Development Mechanism

Additionality questions are starkest under the Clean Development Mechanism because they do not take place within countries that have emissions reporting and compliance obligations under the Protocol. This makes the abatement delivered by these difficult to accurately assess because they are reductions against a counterfactual emissions baseline. Project verifiers need to be able to test whether CDM projects deliver real emissions reductions against business-as-usual emissions, and in particular whether those investments that received project funding would not have happened anyway without this financial support.

Testing additionality under the CDM has been difficult and controversial, and in spite of additionality tests being carried out to ensure the environmental integrity for each project, serious doubts remain. These tests typically take the form of:

- **Investment analyses**, carried out to demonstrate that a potential project is not financially attractive or financially viable without additional revenue from the sale of CDM credits.
- **Barrier analyses**, carried out to demonstrate that without the CDM barriers exist to implementing the potential project. Such barriers could include a lack of capital, technology or risk. Revenues generated from the sale of credits would help overcome these barriers and make the project viable; and
- **Common practice tests**, carried out to check the degree to which the technologies proposed have already been diffused through the sector and country in question. Should a technology already be common practice, the CDM project would not be additional.

In an attempt to resolve these additionality doubts as well as other concerns, the High Level Panel on the CDM Dialogue prepared a report in July 2012 entitled *Assessing the Impact of the Clean Development Mechanism*²⁵. The report, found that the “net mitigation impact of the CDM hinges on judgements regarding the additionality of projects”. Noting that in cases where the additionality criteria were not met the project in question could actually be adding to global emissions by allowing Annex I countries to exceed their Kyoto caps.

The report listed a number of projects where there were “significant additionality concerns”, and include power supply projects from both renewable and other sources. Using the concern around these project types as a guide, it’s possible to establish how many credits have been used for compliance in the EU ETS that are potentially non-additional. We list these projects, the nature of the additionality concerns affecting them and the volume of offset credits surrendered into Phase 2 of the EU ETS in the Table 4²⁶²⁷ below. We also include industrial offset credits in this list banned by the Commission on the grounds of concern about their environmental integrity.

²⁴ Article 12.5.b of the Kyoto Protocol <http://unfccc.int/resource/docs/convkp/kpeng.pdf>

²⁵ Spalding-Fecher, R. et al. (July 2012) *Assessing the impact of the Clean Development Mechanism* http://www.cdmpolicydialogue.org/research/1030_impact.pdf CDM Policy Dialogue

²⁶ Spalding-Fecher, R. et al. (July 2012)

²⁷ European Commission (Jan 2011) *Emissions trading: Commission welcomes vote to ban certain industrial gas credits* http://europa.eu/rapid/press-release_IP-11-56_en.htm

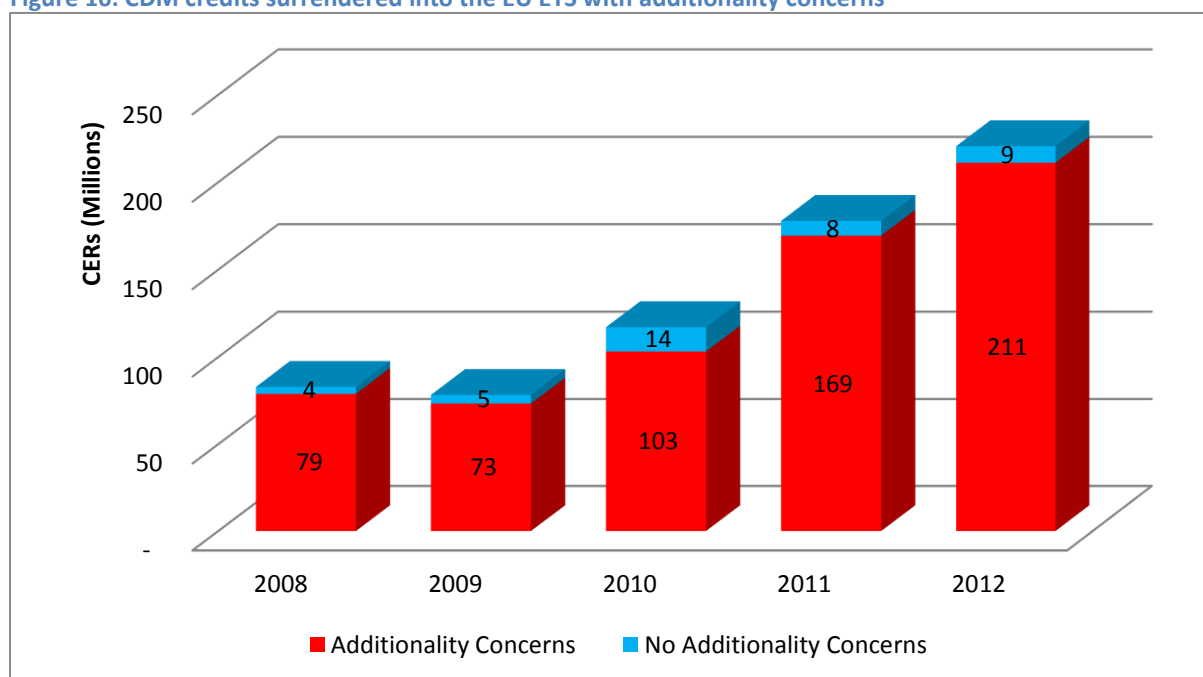
Table 4: CDM credits surrendered into the EU ETS with additionality concerns

Project types with significant additionally-related concerns	Additionality concerns	Offsets surrendered into EU ETS
Industrial Gas		
HFC-23	Concerns around perverse incentives and leakage giving rise to more credits being issued than the actual emission reductions achieved.	394,073,758
N2O – Adipic		159,384,864
Power Supply: Renewables		
Hydro	Hydroelectricity mature technology and considered common practice.	34,570,918
	Concerns around the investment analysis of projects, in particular large hydro.	
	Government provide support, in particular in China and India.	
Wind	Many wind development driven by government targets, and viable without CDM.	13,944,615
	Wind a maturing technology and now common practice.	
	China is not market oriented, state-owned power companies will routinely operate at a loss to maintain or expand market share or due to political pressure.	
Power Supply: Other		
Iron and Steel waste gas	Plants can often recover waste gases and generate electricity at lower costs than from alternative fuels (e.g. coal).	20,501,122
	Concerns regarding the use of investment and barrier analysis to claim additionality.	
Fuel switch (natural gas)	Concerns that new natural gas plants are common practice.	6,927,197
Biomass	Concerns regarding investment analyses of some projects.	4,050,654
	Other factors – namely power purchase agreements – have driven the development of bagasse.	

The numbers are stark. During Phase 2 of the ETS, 630 million²⁸ of the 677 million CERs used for compliance fall into one of the categories under concern. This means that potentially only 47 million, or 7.4%, of CERs surrendered into the EU ETS are additional, and have led to actual emissions reductions. See Figure 17 below.

²⁸ Sandbag has deducted an additional 3.6 million credits to take into account the difference between ‘large’ and ‘small’ hydro projects. This figure is taken from an internal database and may increase as 2012 data is further curated.

Figure 16: CDM credits surrendered into the EU ETS with additionality concerns



Additionality issues relating to Joint Implementation projects

As highlighted above, Joint Implementation projects differ from Clean Development Mechanism projects in one important respect. Joint Implementation Projects are delivered in countries with legally binding national emissions budgets under the Kyoto Protocol. This means that any emissions reductions delivered by these projects are backed by national Kyoto allowances (AAUs)

There are two kinds of Joint Implementation projects commonly referred to as Track 1 and Track 2. This stems from the two ways a Joint Implementation project can be verified. Track 1 allows the host country approve projects, verify and issue credits. Track two requires the verification by a third party verifier, a process similar to the CDM.

An EU commissioned study²⁹ into Joint Implementation Track 1 projects found that there are considerable problems concerning the reliability of national procedures, both in terms of a coherence between different national approaches as well as a lack of transparency and access to information. These concerns feed onto doubts about the additionality of specific projects. With little oversight it's difficult to meaningfully assess if projects represent the reduction of emissions claimed. Suspicion is further aroused by the enormous increase in the number of Track 1 ERUs entering the EU ETS. In Phase 2, some 383 million ERUs have been used for compliance, 337 million, or 88%, of which have come from Russia and Ukraine.

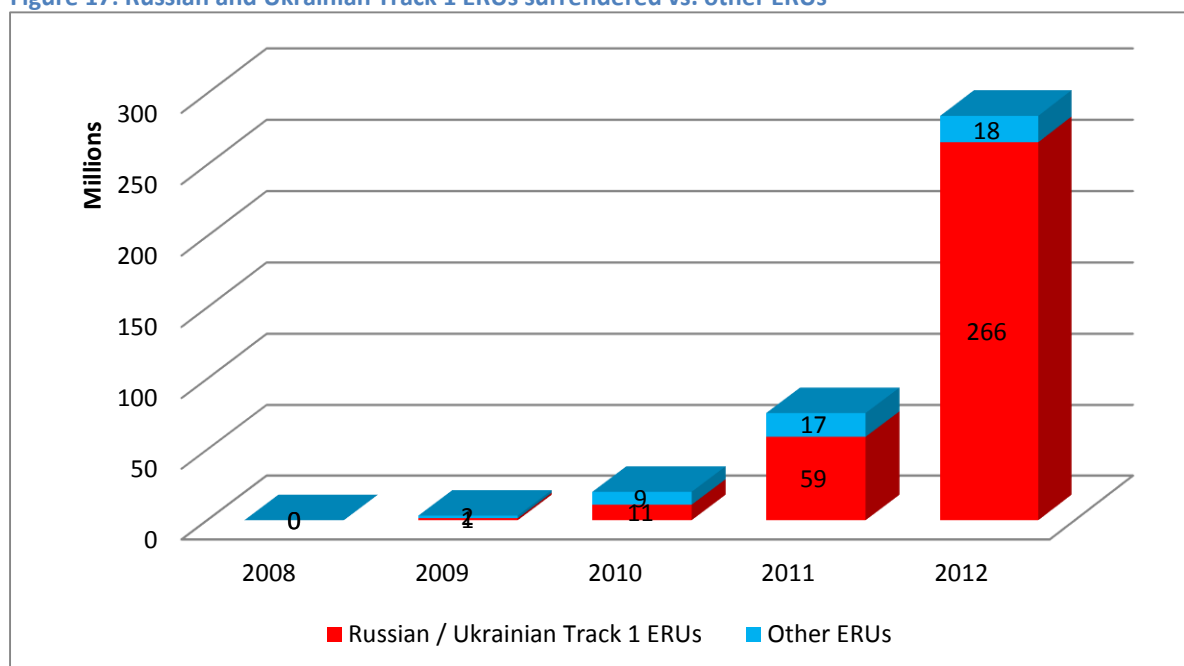
While these Joint Implementation project credits are backed by national Kyoto units, we note that the national budgets set for Russia and the Ukraine under the Kyoto protocol were famously higher than their actual emissions after the restructuring of their economies in the early 1990s following the collapse of Soviet communism. This has left Russia and the Ukraine respectively holding 5.8 and

²⁹ Alessi, M. & Fujiwara, N. (Dec 2011) *Jl Track 1 preliminary assessment*
http://ec.europa.eu/clima/policies/ets/linking/docs/ji_track_en.pdf
 Centre for European Policy Studies (CEPS)

2.6 billion tonnes of spare Kyoto emissions rights which have widely earned them the nickname of “hot air” allowances.³⁰

This stockpile of “hot air” Kyoto allowances, and concerns about their eligibility under the Second Commitment Period of the Kyoto Protocol, may go some way towards explaining why the Ukraine and Russia accelerated ERU issuance, producing 719 and 506³¹ million ERU, or 49% and 35% of all ERUs issues, respectively. This has giving rise to concerns from even those close to the mechanism: the Chair of the Joint Implementation Action Group (JIAG), Lennard de Klerk, said that credits coming from the Ukraine “raise the question about environmental integrity” and there were “serious concerns”³² around some projects. The ready abundance of Track 1 credits is reflected in the type of ERUs used for compliance in the EU ETS, as can be seen in Figure 18.

Figure 17: Russian and Ukrainian Track 1 ERUs surrendered vs. other ERUs



In January the EU agreed rules on updating the ETS registry³³. These changes were to take into account the move from Phase 2 to Phase 3 of the ETS and included provisions setting out rules for Joint Implementation credits (ERUs). The proposal bans firms from holding ERUs issued after the 31st December 2012 from countries not bound by Kyoto Protocol's second commitment period (2013-2020) unless assurance can be given that emissions reduction have been made. Assurance can be given by an accredited third party verifier, or by following Track 2 verification procedures. This change seems specifically designed to prevent further “hot air” credits arriving from Russia and the Ukraine.

³⁰ Carbon Market Watch (Accessed June 2013) *Assigned Amount Units Surplus*
<http://carbonmarketwatch.org/category/additionality-and-baselines/aau-surplus/>

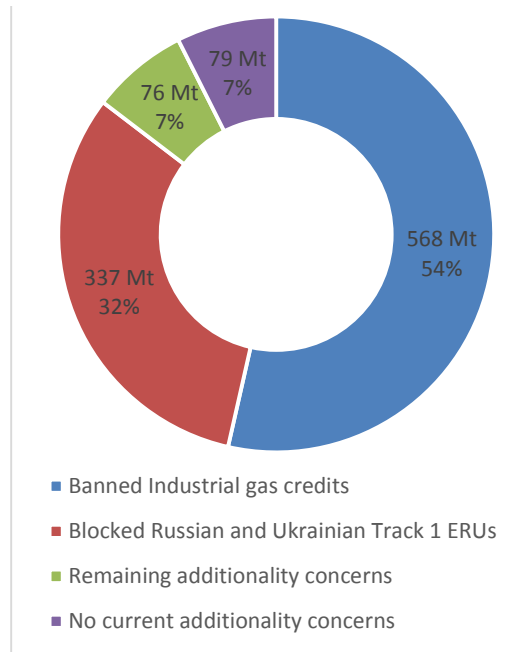
³¹ Taken from JI pipeline: 1st June 2013

³² Point Carbon (March 2013) *CO2 investors disband JI lobby on bleak prospects*
<http://www.pointcarbon.com/news/1.2232395?date=20130321&sdctc=1> Thompson Reuters

³³ EU Commission submission to the Climate Change Committee (Jan 2013) Proposal to update EU ETS registry rules submitted to Climate Change Committee
http://ec.europa.eu/clima/news/articles/news_2013011001_en.htm

In summary, a fixed volume of offsets was agreed in the ETS against an expected demand for abatement that far exceeded what was generated in reality in Phase 2. With no way to choke off supply even as emissions fell below the caps, offsets entering the market further supplanted the need for domestic abatement, freeing up even more EU allowances for future use. Nearly 967 million offsets accounting for 91% of the credits surrendered into the EU ETS were potentially non-additional. While these credits do not represent a breach of the Kyoto Protocol in law, they potentially represent nearly one billion tonnes of phantom emissions reductions that Europe will count against its future caps in the EU ETS, weakening its future commitments under the Climate Package or the post 2020 framework. This intensifies the case for cancelling out the headroom created by these carbon allowances in the 2020 package and strengthening Europe's 2020 target.

Figure 18: Phase 2 offsets with additionality concerns



In parallel, at international level, Europe should move towards further tightening of additionality criteria under the Clean Development Mechanism to maintain the future integrity of the cap.

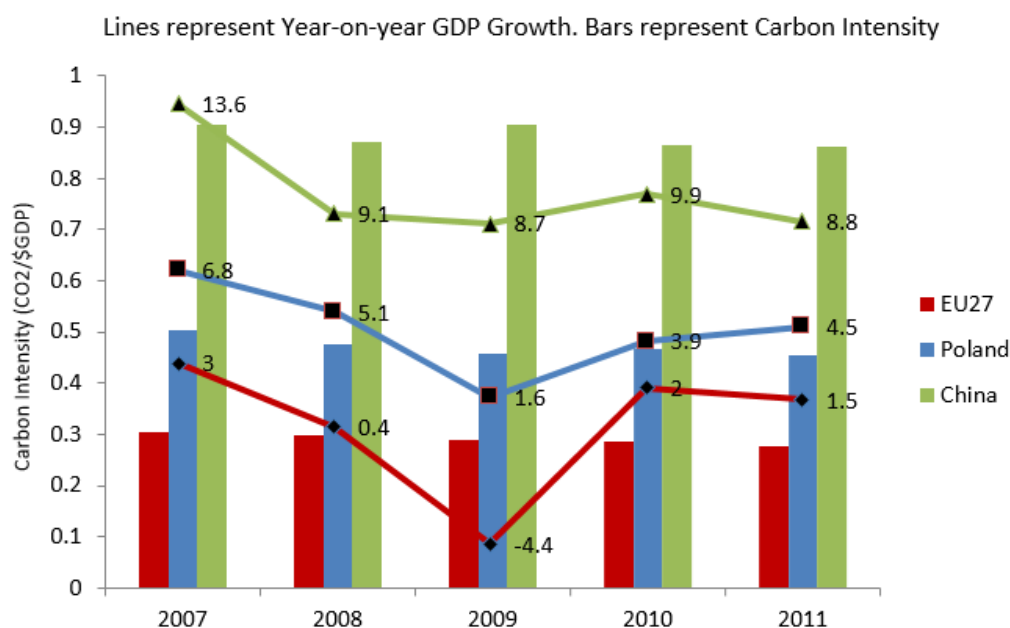
5. The decoupling of growth and emissions

Economic growth has traditionally been closely linked to increasing levels of energy usage, which has, historically, been dependent on fossil fuels. As the threat of climate change increases, so does the need to change the way economies grow. *Decoupling* economic growth from emissions is key to moving to create more sustainable economies. Some countries already talk about carbon in terms of sustainable growth, such as China who plans to see a 16% reduction in energy intensity (energy consumption per unit of GDP) and a 17% reduction in carbon intensity (carbon emissions per unit of GDP). Other, such as the EU talk about carbon reduction targets purely in terms of absolute reductions.

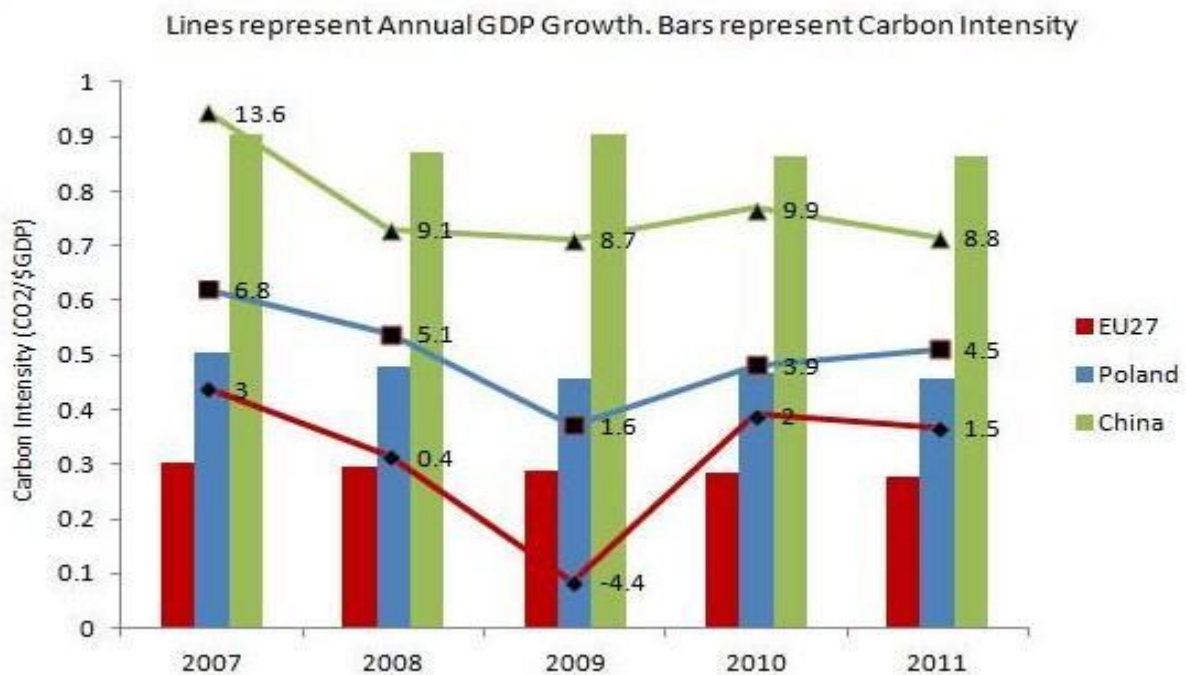
However, looking at the data it is clear that economic growth and emissions have already decoupled globally and in Europe. Global carbon intensity has been falling at around 0.8% per year since 2000, against annual world GDP growth of 2.7%. In the same period, the EU-27 average carbon intensity fell by 2% per year, whilst China averaged a 3.5% reduction.³⁴

Although the carbon intensity of the economy is not currently one of the metrics used to measure progress in EU climate policy it is an important factor in why the Emissions Trading Scheme, which relies on a prediction about future emissions to determine levels of ambition, is fatally flawed. It is clear that even if economic growth returns to pre-recession levels it is unlikely that emissions will necessarily climb back to high levels.

Figure 19: GDP growth with falling carbon intensity in the China, the EU27 and Poland



³⁴ World Bank Data <http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG>



In thinking about European examples of decoupling emissions from growth, Poland is a strong and relevant example. Under the Kyoto Protocol Poland has a target to reduce emissions its by 6% on 1988 levels, in fact Polish emissions have declined almost 30% since 1988 levels and the country's GDP has doubled. This trend is also visible by looking at the Poland's declining emissions under the EU ETS, for example, in 2012 emission fell to 197 Mt, a 3% decline on the previous year, while the economy simultaneously grew by 2%.

Even relying upon 90% coal power for its electricity supplies, each tonne of GHG emissions has reliably produced an increasing level of annual growth. Economic activity in Poland in 2011 (at 0.455 tons of CO₂/\$) required less than half the carbon emissions it did in 1990 (at 1.091 tons of CO₂/\$).

The EU, including Poland, has demonstrably decoupled growth from emissions. A return to higher levels of economic growth in the latter half of this decade will not necessarily result in higher emissions meaning that it cannot be relied upon to fix the structural imbalance in the EU's emissions trading scheme.

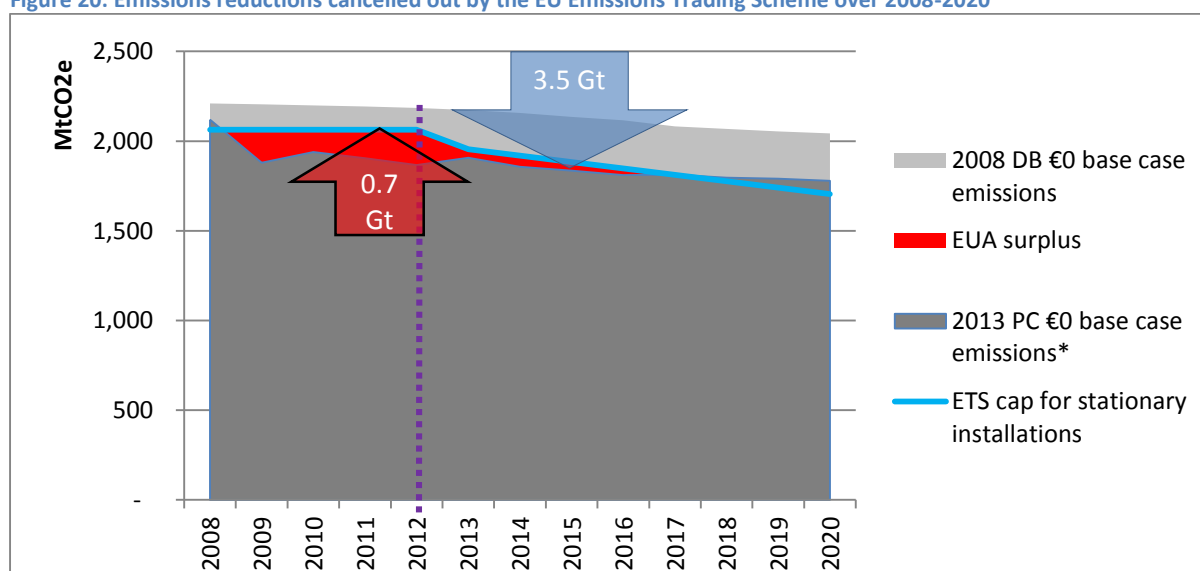
6. Recommendations

In light of the above findings, we argue that at least **1.7 billion allowances** should be permanently removed from auctions in Phase 3 of the EU ETS. This cancellation is advised on the basis of the following two recommendations:

- **Recommendation 1: Cancel at least 700 million allowances from Phase 3 auctions to ensure the ETS delivers a minimum level of domestic emissions reductions in each of the sectors that it covers**

Given the new business-as-usual emissions after the recession, the ETS risks cancelling out emissions reductions delivered by other policies in the climate package and storing them up to waylay Europe's future climate efforts. A significant share of the surpluses the ETS will accrue are likely to be a result of this cancelling effect, beyond any contributed by surrendered offsets. While the ETS is expected to deliver some shortfalls to the aviation sector over 2013-2020, we note that for stationary installations the cap is currently poised to cancel out up to 700 million tonnes of emissions reductions delivered by the Renewables and Energy Efficiency targets, and that this volume should be removed from the scheme as an absolute minimum.

Figure 20: Emissions reductions cancelled out by the EU Emissions Trading Scheme over 2008-2020



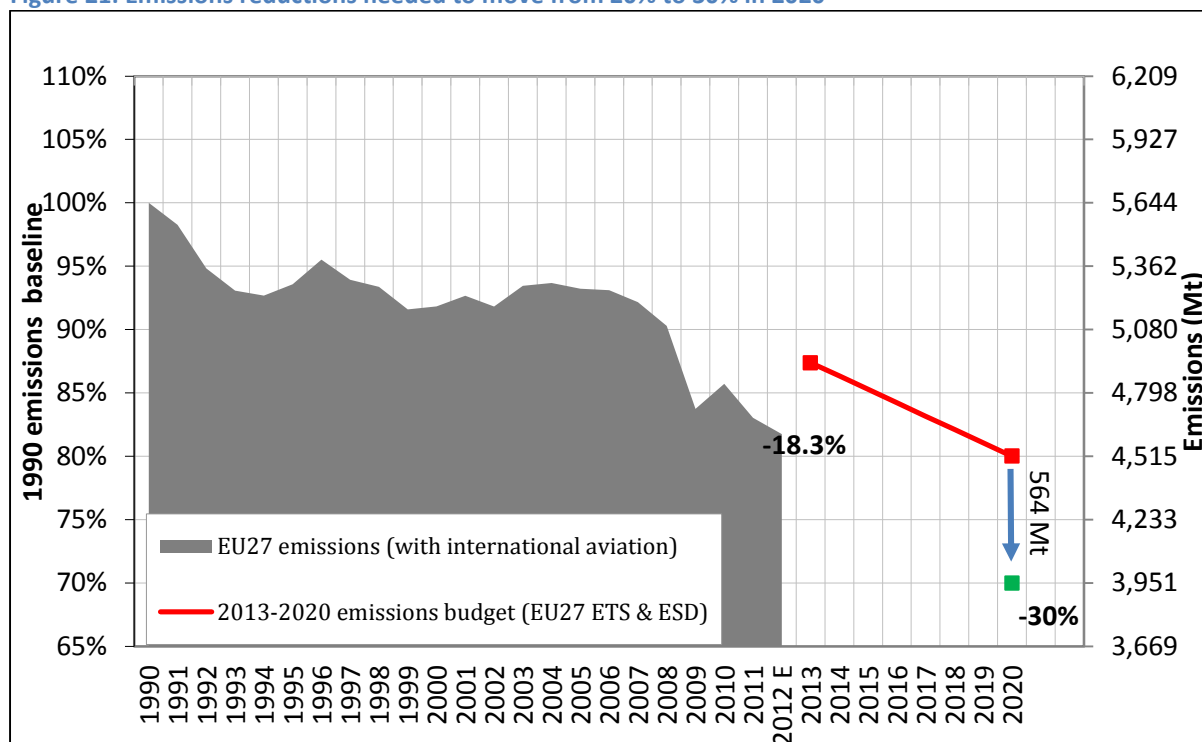
- **Recommendation 2: Cancel 1 billion allowances from Phase 3 auctions to prevent non-additional Phase 2 offsets from damaging the environmental integrity of the scheme.**

Establishing a fixed ETS offset budget against projected business as usual emissions that did not materialise was, with hindsight, a very bad idea. Instead of providing a cost adjustment mechanism to guard against high prices the flood of offsets into the ETS has further exacerbated the lack of demand for domestic abatement driven by the ETS. The ban on industrial gas offsets was too late to stop **550 million** of these credits from entering Phase 2. Similarly the block on Track 1 ERUs was too late to stop **340 million** hot air allowances from Russia and the Ukraine from entering into the system. The offsets surrendered by ETS installations need to be honoured under the existing rules, therefore the only way to correct for this questionable abatement is to remove equivalent allowances from the Phase 3 auctions

We emphasise that any allowances thus cancelled from Phase 3 auctions should be used to strengthen Europe's 2020 target and leverage maximum international ambition ahead of the 2015

climate conference. Any allowances removed from Phase 3 should be reflected in a change to Europe’s carbon budget under the Second Commitment Period of the Kyoto Protocol rather than freeing up more space for the non-traded sectors of the economy under the Effort Sharing Decision budgets (ESD). We note that the ESD budgets are already carrying 1.1 to 2.2 billion tonnes of headroom and do not need to be further enlarged.³⁵To move from its current 20% target in 2020 to a 30% target, Europe only needs to lower its economy wide emissions by 560Mt in the year 2020.

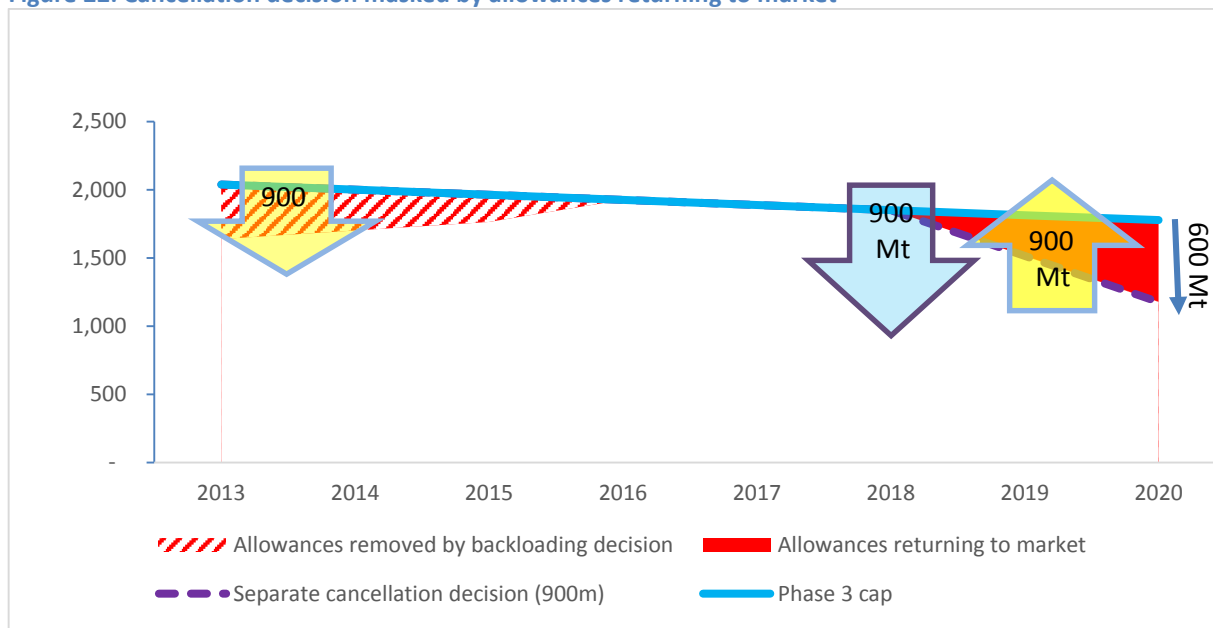
Figure 21: Emissions reductions needed to move from 20% to 30% in 2020



Any allowances removed from the Phase 3 cap, should therefore be removed as a deepening wedge from the final years of the trading period, so that Europe can declare it has achieved a higher target in the international negotiations. We note that that the effects of removing a wedge of allowances from the market would be ameliorated by allowances returning to market from the backloading decision if this proves successful. In the diagram below we illustrate how a 30% target could be delivered by removing 900 million tonnes from the last years of the scheme at the same rate they would have been returned under the Commission’s original backloading proposal.

³⁵ Höhne, N., et al. (May 2013) The next step in Europe’s climate action: Setting targets for 2030 *Ecofys* http://www.greenpeace.org/eu-unit/Global/eu-unit/reports-briefings/2013/ecofys_PolicyPaper.pdf

Figure 22: Cancellation decision masked by allowances returning to market



Finally, we make a recommendation regarding future cap setting to ensure that the ETS does not face a repeat of the difficulties it has currently experienced.

- Recommendation 3: Protect Europe’s post 2020 framework by ensuring future ETS caps automatically self-adjust to deliver a minimum level of abatement**

Until such a time as the ETS caps are set within economy-wide commitments that reflect an equitable share of the “safe” global carbon space, Europe cannot afford for its most cost-effective tool for reducing emissions to lie idle, or worse, to cancel out its other climate policies. Going forward, we propose that, independently of the political decision about the level of each cap, policymakers should agree a minimum level of abatement that will be driven by each trading period, and install mechanisms within the scheme to ensure it self-adjusts to deliver this. We argue that the minimum volume of abatement under each cap should be in the billions of tonnes. A politically fixed minimum level of guaranteed abatement under the EU ETS will ensure that it does not again serve to cancel out the effects of other climate policies. Below we suggest a mechanism that might go part of the way towards achieving that.

Guidelines for a demand shock adjustment reserve

One way to help ensure that the scheme preserves incentives following exogenous demand shocks would be to establish a dedicated strategic reserve to address this problem. This reserve would hold back a set volume of allowances from auction over the course of each future trading phase. On a routine basis over the course of the phase, an official assessment would be conducted to determine whether the “base case” emissions in the traded sector had departed from those expected when the cap was last agreed (e.g. economic slowdown, overperformance of complimentary policies), and to *quantify* these effects. This would then be reflected in a reduction of the volume of allowances returned to the market from the reserve.

This mechanism is modelled on the Voluntary Renewable Energy Reserve that was designed for the Californian cap and trade scheme³⁶, but would have a larger remit and scale, perhaps accounting

³⁶ See Sandbag’s briefing on California’s strategic reserve policies for further details: http://www.sandbag.org.uk/site_media/pdfs/reports/California_set_aside_briefing.pdf

for as much as 10% of the total budget over each period. It could also embrace the function of the Californian mechanism that inspired it and correct the supply of allowances for those exogenous emissions reductions delivered as a result of quantifiable emissions reductions performed by ethical consumers and businesses that affect the traded sector (e.g. through take up of approved green energy tariffs).

We note that the reserve model places an *upper limit* on the quantity of allowances that might be removed from the scheme. This means that if exogenous demand shocks are larger than the scale of the reserve, it will not be able to achieve this level of fixed minimum abatement agreed. The reserve therefore needs to be somewhat larger than the fixed minimum target to better account for this. For example, if politicians agreed a fixed minimum of 1 billion tonnes of abatement should be delivered, the reserve could be set at 1.5 billion tonnes.

Alternatively, much of this design could be fulfilled without a special reserve, and could instead be achieved through a direct recalibration of the cap on a rolling basis. This would have the advantage of better ensuring that minimum level of abatement was delivered by the EU ETS in the event of deep exogenous demand shocks, but without clear limits on how much the cap might be recalibrated this might, however, create uncertain conditions for investors.

7. Conclusion

This year we find that the policy that was supposed to do the heaviest lifting under the thirteen year Climate and Energy Package, driving some 2.8 billion tonnes of emissions reductions in Europe's power stations and factories, is now delivering *less than zero* net emissions reductions over 2008-2020. What do we mean by less than zero? We mean that the EU ETS is now likely to actively *cancel out* around 700 million tonnes of emissions reductions delivered by other policies in the climate package by storing this abatement up as surplus allowances to use against future emissions.

We first hinted at this danger in the title of our 2011 report *Cap or Trap?*, noting then that the ceiling on emissions provided by the ETS cap risked becoming a *floor* if factors independent of the carbon price drove emissions beneath the limit Europe had set itself. Back then we felt this was a danger facing Phase 2 alone, not something that would make the ETS less than pointless out to 2020 or beyond.

Of course, this is not the only contributor of the surpluses we are seeing under the scheme. The major contributor is offsets, with 1.6 billion of these expected to enter the system over the thirteen years of the Climate and Energy Package. In our latest report we point out that there has been a massive frontloading of that thirteen year offset budget, as companies have sought to exploit the cheapest offset credits before they are blocked by new environmental regulations.

These regulations were introduced to protect the environmental integrity of the cap against an influx of industrial gas credits and Russian and Ukrainian joint implementation credits, both of which were suspected of delivering phantom emissions reductions, i.e. of being fake offsets. Regrettably, the new bans have proved ineffective at blocking these dubious credits, instead triggering a goldrush on them, as companies race to submit these into the scheme before the shutters are pulled down in 2013. Over a billion offsets were surrendered into the ETS by 2012, almost all of which were due to be banned. These fake emission reductions add further to the stockpile of surplus ETS allowances that will enable Europe to pollute more in future.

To recap, then, while it is generally understood that Phase 2 and Phase 3 of the EU ETS will bank over 2 billion tonnes of surplus allowances into Europe's post 2020 climate regime, it is not widely recognised that most of that will consist of fake offshore abatement and cancelled out domestic abatement. The most basic test of a climate policy's effectiveness must be that it *reduces emissions*, but measured against this simple yardstick the brilliantly conceived EU Emissions Trading Scheme is currently the single worst climate change policy in history. It has become an *anti-climate* policy, a climate policy killer. It is symptomatic of how far policymakers are removed from the disarray of the EU ETS that they are struggling to agree to even *temporarily* remove some of these allowances accumulating under it.

In the detail of this debate it is easy to forget that this is ultimately an argument about environmental *ambition*. Industry's appeals for regulatory stability under the current ETS cap, only make sense if policymakers believe that Europe's current emissions pathway is consistent with its international climate responsibilities. We challenge anyone to prove this is the case.

In a second report³⁷ to be released later this week, we demonstrate that Europe's current emissions pathway fails to pass the test of even the most favourable effort sharing models described in the Fourth IPCC report. These require developed countries to deliver, as an absolute minimum,

³⁷ Sandbag, The Sovereign Emissions Rights Framework (June 2013)

emissions reductions of 25% by 2020 against 1990 levels. By our own effort-sharing model, we find that Europe will exhaust its fair share of the global emissions space by 2033 if it does not radically increase its ambition.

Until industry comes up with a convincing effort-sharing model that shows otherwise, Europe simply must go further. We cannot afford to let the emissions trading scheme ease up on those sectors of the economy where emissions reductions are most cost-effective. Nor can we risk sabotaging our chances of reaching a successful international climate change agreement in 2015 by coming to the negotiating table with a climate offer out of step with our international responsibilities, and compromised by billions of tonnes of banked ETS allowances.

It's time for Europe to step up to the plate and show we mean business. The backloading vote must be a stepping stone to a separate decision to cancel allowances from the Phase 3 budget, which in turn must be reflected in an adjustment to Europe's pledge under Kyoto Protocol. In 2009 we missed our chance to reach an adequate global climate deal in Copenhagen. After 2015 we might not get another.³⁸

³⁸ A version of this section first appeared as a Guest Commentary in the Point Carbon newsletter: <http://www.pointcarbon.com/news/cme/1.2438881>

Bibliography

- Alessi, M. & Fujiwara, N. (Dec 2011) *Jl Track 1 preliminary assessment*
http://ec.europa.eu/clima/policies/ets/linking/docs/jl_track_en.pdf Centre for European Policy Studies (CEPS)
- Carbon Market Watch (Accessed June 2013) <http://carbonmarketwatch.org/category/additionality-and-baselines/aau-surplus/>
- CDC Climat (Sept 2012) *Energy efficiency, renewable energy and CO₂ allowances in Europe: a need for coordination* http://www.cdclimat.com/IMG/pdf/12-09-14_climate_brief_no18_-_ec_climate_energy_coordination.pdf
- CE Delft (2013) *Carbon Leakage and the Future of the EU ETS market*
http://www.cedelft.eu/?go=home.downloadPub&id=1361&file=CE_Delft_7917_Political_brief_and_summery.pdf
- European Commission *Proposal to update EU ETS registry rules submitted to Climate Change Committee*
http://ec.europa.eu/clima/news/articles/news_2013011001_en.htm
- European Environment Agency (Accessed June 2013)
<http://www.eea.europa.eu/data-and-maps>
- ETS Directive 2003/87/EC (Oct 2013) *Establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC* <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:275:0032:0032:EN:PDF>
- EU27 Effort Sharing Decision (Mar 2013) http://ec.europa.eu/clima/policies/effort/index_en.htm
- European Commission (Jan 2011) *Emissions trading: Commission welcomes vote to ban certain industrial gas credits* http://europa.eu/rapid/press-release_IP-11-56_en.htm
- European Transaction Log (EUTL) <http://ec.europa.eu/environment/ets/>
- EEA (Oct 2012) *Greenhouse gas emission trends and projections in Europe 2012*
<http://www.eea.europa.eu/publications/ghg-trends-and-projections-2012>
- Höhne, N., et al. (May 2013) *The next step in Europe's climate action: Setting targets for 2030*
http://www.greenpeace.org/eu-unit/Global/eu-unit/reports-briefings/2013/ecofys_PolicyPaper.pdf
Ecofys
- Hood, C. (2012) *Summing up the parts*
http://www.iea.org/publications/freepublications/publication/Summing_Up.pdf International Energy Agency
- Kyoto Protocol (Dec 1997) <http://unfccc.int/resource/docs/convkp/kpeng.pdf>
- Lewis, M. & Curien, I. (May 2008) *It Takes CO₂ to Contango*
http://www.longfinance.net/images/reports/pdf/carbon_cotango_db_2008.pdf Deutsche Bank
- Oeko-Institut <http://www.oeko.de>

Point Carbon (March 2013) *CO₂ investors disband JI lobby on bleak prospects*
<http://www.pointcarbon.com/news/1.2232395?date=20130321&sdtc=1> Thompson Reuters

Spalding-Fecher, R. et al. (July 2012) *Assessing the impact of the Clean Development Mechanism*
http://www.cdmpolicydialogue.org/research/1030_impact.pdf CDM Policy Dialogue

The Sovereign Emissions Rights Framework (June 2013)

The Doha Amendment (Feb 2013) <http://unfccc.int/resource/docs/2012/cmp8/eng/13a01.pdf>
UNFCCC/KP/CMP/2012/13/Add.1 Decision 1/CMP.8 , paragraph 7

Turner, G. (March 2013) http://ec.europa.eu/clima/events/0070/docs/guy_turner_en.pdf
Bloomberg New Energy Finance

UNEP 2012 Emissions Gap report <http://www.unep.org/publications/ebooks/emissionsgap2012/>
(Accessed 23rd June 2013)

Other things we do



Sandbag is the NGO leading in research-led campaigning for effective emissions trading. Our informed reports, briefing papers, consultation responses and workshops have reached and influenced European policymakers at the highest levels and been widely reported in the European and international press.

Sandbag can provide your organisation with:

- **Commissioned reports:** our reports combine rigorous research with clear and targeted messaging.
- **Research and data analysis:** Sandbag has extensive experience analysing the key EU ETS data, and has developed some unique tools (such as our offset and emissions trading maps) to make these more transparent. Sandbag has also developed extensive profiles of specific sectors, companies and countries within the scheme.
- **Workshops:** We have led workshops for MEPs, UNFCCC delegates, international NGOs, journalists and businesses

For more information on our research consultancy services please contact info@sandbag.org.uk

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