sandbag

Stabilising the EU ETS' Market Stability Reserve

How to tackle the MSR's obesity problem

June 2016

Summary

If no action is taken, the EU Emission Trading System's (EU ETS) Market Stability Reserve (MSR) looks likely to grow to contain billions of allowances under a wide range of scenarios.

A provision needs to be made for limiting the size of the MSR by retiring allowances if the number in the reserve exceeds a defined threshold.

Very large volumes of allowances in the MSR risk undermining its effectiveness. There is always a risk that regulatory changes may enable allowances held in the MSR to return to the market earlier than expected. Limiting the size of the MSR reduces the scale of these risks and so creates a more stable investment environment.

Emission reduction goals set out in the Paris Agreement of close to net zero emissions in the second half of the century will be at risk if the MSR grows to billions of allowances, and these allowances are allowed to return to the market over several decades. This introduces a risk of compromising post-2050 emissions reduction goals. This can be avoided by limiting the size of the MSR.

There are large direct environmental benefits from retiring allowances from the MSR, as fewer allowances return to the market and cumulative emissions are permanently reduced.

Sandbag proposes the following:

- A provision for a cap of 1 billion allowances in the MSR (10 years' worth of the return rate) is set through the current review of the EU ETS. Any allowances above this threshold should be retired.
- Retirement of excessive allowances in the MSR should be carried out alongside a rebasing of the Phase 4 cap and/or a change to the Linear Reduction Factor (LRF) (see our accompanying paper '*EU ETS Phase 4 Cap – Aligning with Reality*') to support market stability. Retirement from the MSR is even more necessary if such reforms are not introduced, or are weaker.

About Sandbag

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

Our research focus includes reforming the EU Emissions Trading Scheme and the Effort Sharing Decision; accelerating the phase-out of old coal in Europe; and deep decarbonisation of industry through technologies including Carbon Capture Utilisation & Storage.

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

Introduction

The EU ETS has been hampered by a chronic and growing surplus of allowances ever since 2009. This has kept carbon prices low, providing no meaningful price signal for the EU's ambitious 2050 decarbonisation target. The Market Stability Reserve (MSR) is intended to address this surplus and will be introduced in 2019.

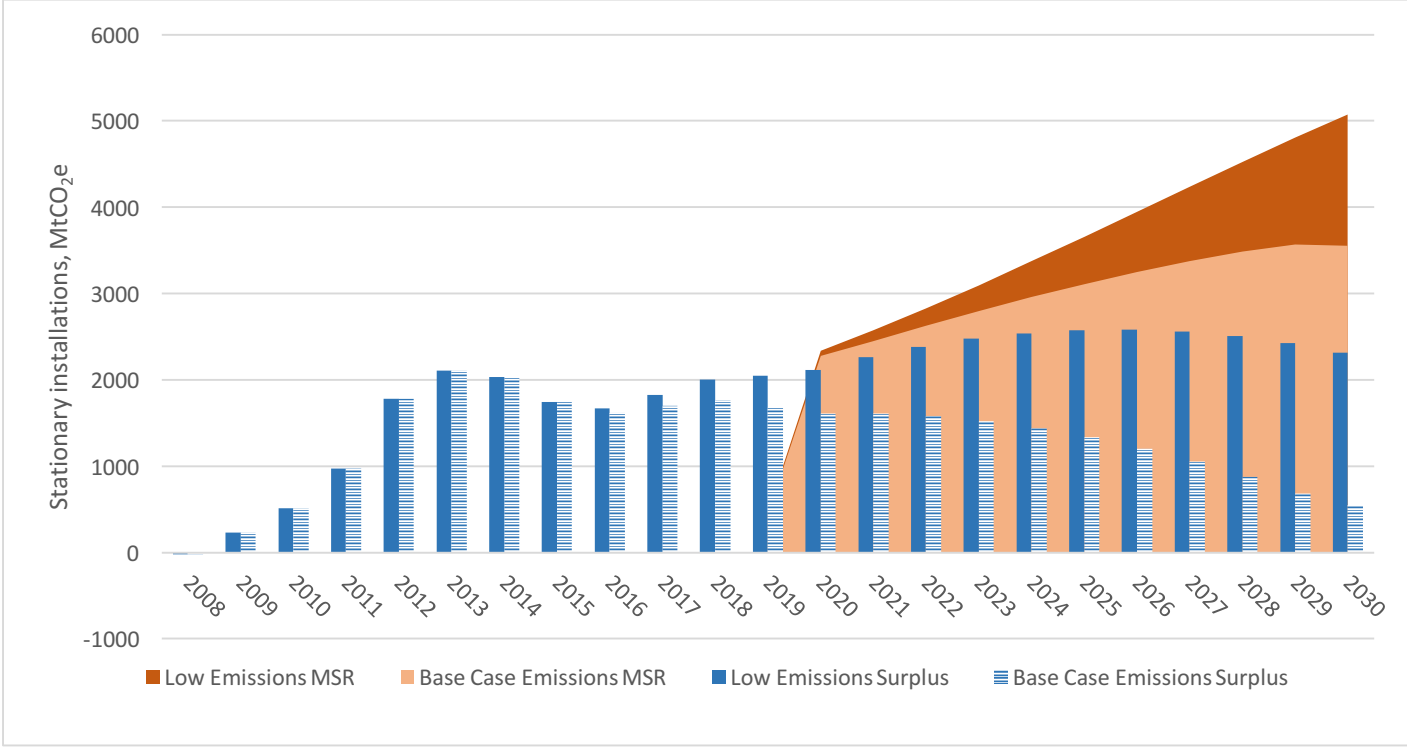
However, Sandbag projects that the MSR will quickly grow to several billion allowances even under our high emissions projections. A very large MSR introduces risks working against its function, adding additional instability to the market and compromising the environmental objects of the EU ETS.

This briefing looks at the potential to make the MSR more effective by retiring allowances when the MSR reaches a certain size.

Analysis

With the current European Commission proposals for reform of the EU ETS, Phase 4 is very likely to continue accumulating a surplus of allowances. Sandbag projects the number of allowances in the MSR will grow to between 3.5 and over 5 billion allowances (see Chart 1). These volumes are equivalent to about 2 to 4 years' worth of EU ETS emissions. At the currently specified rate of return from the MSR of 100 million tonnes per annum, they would continue to influence the market for up to another half a century or so. This would mean the last allowances will return from the MSR in the 2060s to 2080s[1].

Chart 1: Surpluses under the low and base case emissions scenarios and respective MSR volumes



Sandbag advocates rebasing the Phase 4 cap to reflect actual emissions (see our accompanying paper '*EU ETS Phase 4 Cap – Aligning with Reality*'). If the cap is not rebased, volumes in the MSR become very large in most scenarios. However, even if the cap is rebased or if the Linear Reduction Factor is substantially increased, high volumes would still remain in the MSR in the event of continuing falls in emissions, implying that a size limit on the MSR is necessary.

[1] Based on over 3 billion to over 5 billion allowances in the reserve in 2030, and the 100 million tonnes per annum rate of return being retained.

Even the possibility of additional volumes returning to the market affects market confidence…

Ironically, very large MSR volumes constitute a risk to market stability: exactly the opposite of its intended purpose. As the MSR mechanism tightens supply away from the current huge surplus and prices begin to rise as intended, there may be pressure to return allowances more rapidly to the market. The current return rate of 100 million tonnes per annum might end up being revised upwards under the scheduled reviews of the MSR. There may also be pressure for one or more additional auctions of allowances from the MSR to raise funds, for example to support innovation.

Uncertainty over the future treatment and release of allowances in the MSR reduces the confidence of investors in low-carbon technologies who rely on a predictable market and thus risks deterring investment.

Large volumes returning to the market also risks damaging environmental goals…

Large volumes returning to the market in future phases would lessen pressure to reduce emissions and would thus weaken progress towards EU climate goals. Under the Paris Agreement the EU needs to have transitioned to close to zero net emissions in the second half of the century. Without retirement, significant volumes could still be returning from the MSR after 2050 thus compromising long term environmental goals.

These risks can be reduced by imposing a limit on the size of the MSR and retiring allowances above a threshold…

Both market and environmental risks can be reduced by limiting the MSR to a certain size. A limit on size restricts the MSR's impact on the market to its intended role and prevents the risks of a very large shock to the market by sudden return of allowances, or very long term influence extending post-2050.

If the MSR is to fulfil a role of stabilising the market in the event of temporary imbalances, the most appropriate limit appears to be to restrict the MSR to a volume that would stabilise the market over a complete phase. **For the current reform for Phase 4, Sandbag suggests a limit of one billion allowances, ten times the annual 100 million return rate**.

At the very least, the MSR should not be allowed to affect the market after 2050. A less stringent approach would be to set a declining MSR volume limit over time, based on the return volume of one hundred million allowances times the number of years to 2050, until the limit was reduced to one billion. This would set the MSR maximum volume threshold before retirement to three billion allowances in 2020, reducing to two billion allowances by 2030 and one billion allowances in 2040 and thereafter. It would leave some of the above risks in place, but avoid the worst of the risks from large surplus scenarios.

An alternative would be to cancel allowances which have been in the MSR more than a certain time, for example ten years. However, this option might result in allowance cancellations when the reserve was not very large, which would restrict the effectiveness of the MSR when addressing a temporary shortage. It may also be somewhat more administratively complex. This option is therefore only suggested in the unlikely event that volume restrictions prove unworkable.

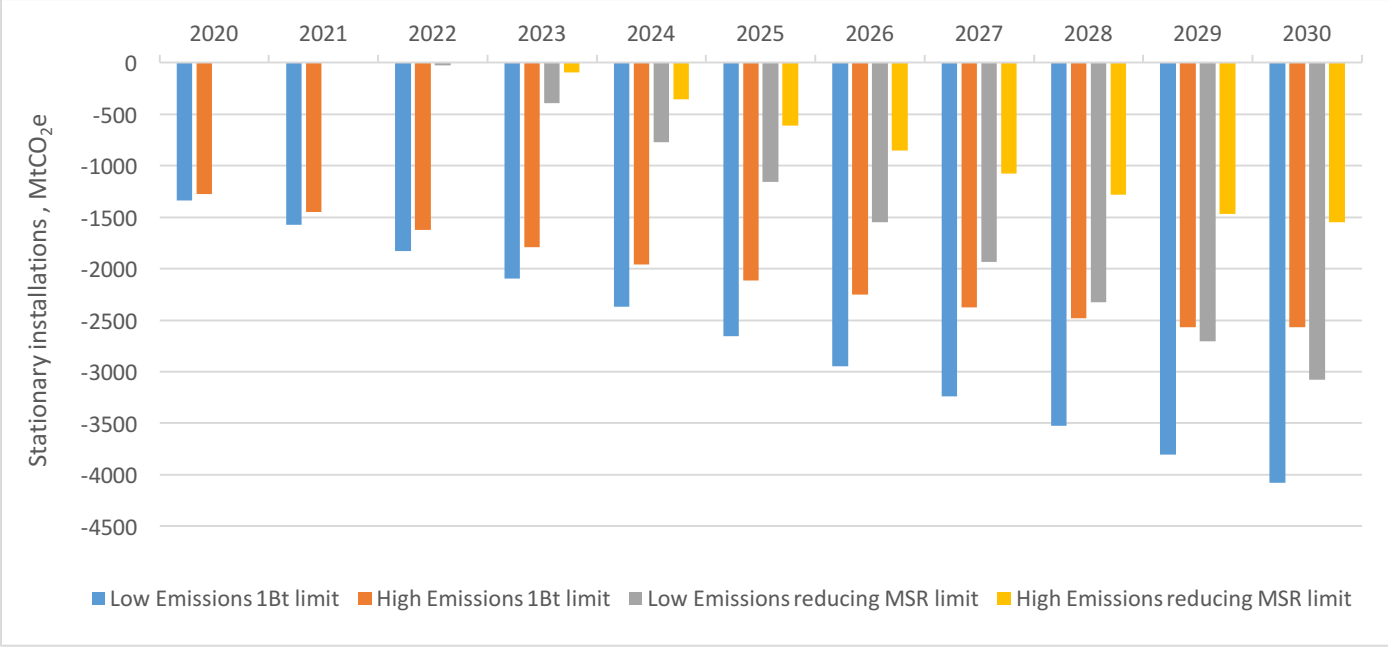
How many allowances would be retired?

Chart 2 (below) illustrates the volumes that would be cancelled under a range of scenarios.

A base case MSR limit of one billion tonnes would result in a large amount of retirement under both the low and the high emissions scenarios.

The less stringent restriction of a declining MSR limit over time to 2050 would lead to very large amounts of retirement under low emission scenarios where the overall surplus is correspondingly large. There is some retirement even with higher emissions scenarios under the declining MSR limit variant.

Chart 2: Cumulative volumes retired under different scenarios (million tonnes)



The benefits of retirement are large…

These allowance retirement mechanisms would bring substantial benefits to the EU ETS, increasing the stability of both the MSR itself and the wider market. Retirement of excessive allowances from the MSR would help secure the continuing functioning of the EU ETS as a mechanism for cost-effective emission reductions. It would also avoid 1.5 to 4.0 billion tonnes of CO_2 being emitted, by retiring allowances rather than allowing them to return to the market.

The benefits of this reduction in cumulative emissions in avoided environmental damage are estimated to be approximately €70 to €190 billion[2], with additional non-financial benefits.

Conclusion

The MSR looks likely to grow to contain billions of allowances under a wide range of scenarios if no action is taken. Limiting its size produces a number of benefits:

- Stabilising the market under the EU ETS and so reducing the risks for investors
- Avoiding the risk of compromising post 2050 goals
- Producing a large direct environmental benefit

These advantages apply even when action is taken to realign the cap at the start of Phase 4 or greatly increase the Linear Reduction Factor. They are all the more important if such cap reforms are not introduced, or are weaker.

Limiting the scale of the MSR ensures that its influence on the market is more predictable and moderate in widely differing circumstances. This makes both the MSR and the wider EU ETS more robust.

[2] *Benefit of reduced emissions estimated assuming an average cost of damages for emissions in Phase 4 (Social Cost of Carbon) of €47/tCO2 real terms in the 2020s, based on US EPA estimates at a 3% discount rate.*

Recommendations

Sandbag proposes that:

- A provision for a cap of 1 billion allowances in the MSR (10 years' worth of the return rate) is set through the current review of the EU ETS. Any allowances above this threshold should be retired.

- Retirement of excessive allowances in the MSR should be carried out alongside a rebasing of the Phase 4 cap and/or a change to the Linear Reduction Factor (LRF) (see our accompanying paper '*EU ETS Phase 4 Cap – Aligning with Reality*') to support market stability

- Retirement from the MSR is even more necessary if such reforms are not introduced, or are weaker.

About this briefing

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

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