

EU ETS: Is the Market Stability Reserve the right tool for remedying oversupply?

Andreas Arvanitakis



EU ETS: Is the Market Stability Reserve the right tool for remedying oversupply?



Andreas Arvanitakis
Independent consultant
andreas.arvanitakis@gmail.com

- The Emissions Trading Scheme (ETS) is the central plank of EU climate policy. It provides a price signal by placing a cap on emissions, and is neutral as to technology choices. While the cap will be met in 2020, the price signal is now too low, driving down the carbon market price and investment in deploying low-carbon technologies.
- The low price is a function of the economic climate since 2009. Demand for allowances has proven highly responsive to GDP, but the supply is fixed for each trading phase. The EU ETS is now oversupplied by 2 billion allowances.
- Of the options the EC put to public consultation in 2012, it has now chosen to propose a Market Stability Reserve (MSR), to start in 2021. Its function is to withhold allowances from being auctioned when the market surplus is above 833 MtCO₂, and re-inject them when the surplus is below 400 MtCO₂. It is also triggered by rapid and extreme price rises.
- The MSR is not intended to change the fundamental balance of the market, but to use the current oversupply to protect against high volatility as the market moves from surplus to shortfall. It is based on transparent rules and is to operate impartially. It is also compatible with the future decision on a 2030 target.
- The MSR might prove more effective in smoothing the transition from surplus to shortfall if it could take effect earlier and more decisively – for example, withdrawing all backloaded allowances before 2019.
- Its general efficacy could be improved if the triggers were based on more recent data than the two years currently proposed.

The Fridtjof Nansen Institute (FNI) is an independent, non-profit institution engaged in research on international environmental, energy and resource management politics. It exercises quality control and editing of the papers, but the views expressed are the sole responsibility of the authors.



EU ETS: Is the Market Stability Reserve the right tool for remedying oversupply?

Introduction

The EU Emissions Trading Scheme (EU ETS) has been an important policy instrument in Europe's efforts to reduce emissions of carbon dioxide (CO₂) since it was launched in 2005. It has had a rigid structure, with the supply of allowances set at the beginning of each phase for the length of the phase – a policy choice intended to offer some certainty to those entities covered by the mandatory scheme. However, policymakers were not able to foresee the impact of economic recession on CO₂ emissions; as a result, since 2009 there has been a surplus of allowances in the system.

Each year since then, CO₂ emissions have been lower than the number of allowances issued, so the surplus has kept increasing. By 2012, the last year in phase 2 of the scheme, there were two billion surplus allowances in the system. In 2013, taking into account new sectors joining the scheme, CO₂ emissions from entities in the market decreased for the fifth straight year. Over this period, the market price for allowances fell accordingly, from around €15 at the start of 2009 to below €3 in April 2013. This surplus will linger in the market and depress prices now, taking until after 2020 to be absorbed as emissions grow with the recovering economy.

The effects of the reduced emissions, and therefore reduced demand in the market, have been compounded by extra supply coming from unused reserves for new entrants, from the early auctioning of phase 3 allowances while still in phase 2, and from the auctioning of allowances to support RD&D in clean technologies.

The EU institutions have begun debating how to tackle the structural surplus in the EU ETS, resulting in the January 2014 proposal to create a Market Stability Reserve (MSR), intended to provide a transparent mechanism to

dampen price shocks in future. The MSR would take effect in 2021.

The case for action on the EU ETS surplus

The case against any action on the surplus is based on three tenets: Firstly, that there is no need for reform of the EU ETS because it works perfectly well; secondly, that EU climate policy should respond to developments in international climate diplomacy; finally, that such reform constitutes political intervention in a free market – which is inherently bad for the market.

As to the first tenet, such a low market price as that of today undermines the purpose of the EU ETS in the long term. While a low price does not detract from the scheme's effectiveness in limiting emissions to the 2020 cap at lowest cost, it removes incentives for investing in the deployment of energy-efficient and renewably sourced energy technologies in the longer term.

Emissions targets in 2050 are stringent for the EU as a whole. The target of an 80% reduction of 1990 levels for greenhouse gases (GHGs) implies a 90% cut in CO₂ emissions under the EU ETS compared to 2005. A weak price signal now will mean higher compliance costs further down the line. Conversely, a gradual reduction in CO₂ emissions will be more efficient for the EU economy in a longer-term perspective.

There are other reasons why a fix to this surplus is necessary. One of the great successes of the EU ETS has been to bring the issue of climate change to the attention of the Chief Financial Officers of all of Europe's largest emitters. That long-term political signal has now been weakened. Instead, the message is that climate change is a minor financial issue that management can afford to ignore for a decade. No incentives are given to

entities in the ETS to invest in low-carbon technology alternatives: they can simply continue business as usual, ignoring the external cost of their polluting activities and locking in high-carbon technologies for the longer term.

Such lock-in of high-carbon technologies now will bring about higher costs in the long run when more effective caps on GHG emissions take effect, damaging Europe's competitiveness. In other words, a gradual transition to a low-carbon economy is a least-cost solution for the long term. A misleadingly low ETS market price now will leave high-carbon assets stranded in future.

In order to achieve an orderly transition to an economy based on low-carbon technologies at lowest cost over the long term, as well as from an environmental perspective, we need continued investment in the development and deployment of low-carbon technologies in Europe's industries.

Secondly, the concept of a mechanism is still resisted in some quarters, where it is seen as unilateral action on emissions that is not being matched by Europe's trading partners – which is bad for competitiveness. The EU member-states have begun to consider the proposal, starting with how to treat it. Some member-states, mostly in Northern Europe, would like to see the proposal adopted as amended by end-2015 in order to give the market time to respond before it takes effect. Others would prefer to link a tightening of the EU ETS to separate discussions on a 2030 target, whether that should be a unilateral target or dependent on/ responsive to the international community adopting new targets and market mechanisms.

This approach of linking the structural reform of the EU ETS to international talks on climate change would be bound to delay its implementation to beyond 2015. Indeed, the over-supplied EU ETS undermines the EU's efforts to achieve its long-term climate targets and to achieve emissions reductions prior to 2020. The EU ETS in its current state has lost its pioneering status and is seen in some non-EU countries as an example of how *not* to design an emissions trading scheme.

As to the third tenet, that yet another reform would constitute market intervention, in fact governments do intervene to affect demand or supply in most markets. The EU ETS can be seen as an intervention to ensure that the environmental costs of the emitting activities

covered by the scheme are included in their respective markets. The EU ETS itself is a market that would not exist without the underlying policy. The issue is better defined as a question of what is the right level of intervention, and what is the preferred mechanism for that intervention.

In the nine years since its inception, the EU ETS has seen various regulatory interventions that were often either unplanned or one-off changes. The allocation process itself has been reformed ahead of each phase so far. The decision to auction phase 3 allowances during phase 2 was a one-off measure that has contributed to volatility. Recently, a short-term fix to reduce auctioning by 900Mt in 2014 to 2016 and re-introduce those allowances to the market in 2019 and 2020 ('back-loading') has led to supply fluctuations over the short term, with no change to the structural oversupply.

If designed well, a structural reform could provide a transparent framework that would eliminate the need for a series of one-off interventions intended as remedies, as witnessed in the EU ETS so far.

Failure to get things right the first time could add it to the list of regulatory intervention and indeed prompt further remedies down the line.

Six options for structural reform of the ETS

In November 2012, the EC published six options for structural reform aimed at tackling the surplus and re-aligning the EU ETS supply-demand dynamic with the EU's long-term climate policy. They can be summarized as follows.

There are several that provide a boost to demand in the market, by raising the level of ambition of the scheme. This category includes adopting a tougher target for 2020 that is better aligned with the EU's long-term goal of an 80% reduction in GHG emissions by 2050 in terms of 1990 levels, or increasing the annual reduction in supply from the current 1.74% after 2020. A new 2030 target has been proposed in any case, as part of the 2030 climate and energy package published in January 2014. Any of these options would see the surplus reduced more quickly, but would not offer protection against further price shocks. The supply of allowances in the EU ETS would still remain fixed, without being

responsive to reduced or increased demand, as would be expected in a 'natural' market.

A third option floated was to expand the scope of the EU ETS to include fuel use in other energy-related sectors, particularly road transport fuels. This sector is provided for in other ETSs around the world, as with New Zealand's ETS and the Western Climate Initiative in the USA, and was foreseen in some of the bills debated in the US Congress. This measure would impact demand and possibly supply, aimed at shifting the balance so that the market as a whole (including road transport) would be shorter in allowances than today. The precedent set with international transport – the inclusion of aviation in the EU ETS – has been problematic, as seen in the vehement objections from countries outside the EU whose airlines are affected by the scheme. With road transport, the international problems would be lesser, as a smaller proportion of road-related emissions come from trips in and out of the EU, compared to aviation. It would have the advantage of incentivizing a modal shift from road to other forms of transport such as rail, which is often less CO₂-intensive, or a shift to cleaner road fuels or electric vehicles.

The fundamental risk with this approach would be that the cap put on emissions from the new sector might prove to be at the wrong level, as has happened consistently in the EU ETS since its start. Furthermore, there would still be insufficient flexibility in the supply of allowances to the ETS.

There are also two proposals for reducing supply. One is to permanently cancel some of the allowances meant to be auctioned by 2020. This would certainly resolve the oversupply issue as a one-off measure, but is highly controversial and has already been rejected in the 'backloading' debate.

The second supply-based proposal involves further restricting access to international credits from 2020. One disadvantage would be the knock-on effect on the international dimension of the EU's climate policy, which includes promoting sustainable growth in developing countries, the transfer of clean technologies and multilateral cooperation through the international community.

Fundamentally, the problem is that none of these options changes the fact that demand has proven highly responsive to external economic factors, whereas supply is regulated in advance and becomes rigid.

And the last option published by the EC in 2012 involves creating a discretionary price management mechanism, as an overlay on otherwise quantity-based rules.

Two price-based mechanisms have been mooted. The first is a price floor for auctions, which would be relatively easy to implement, but would threaten to dampen the fundamental market dynamic. When the price floor is above the prevailing market price, the ETS would act as a tax, with no change to the fundamental oversupply. When the market price was above the price floor there would be flexibility, but the cost-effectiveness of a market-based scheme would still be undermined, and there would still be the risk of setting the price floor at the wrong level.

The second price-based mechanism would involve having a reserve of allowances built up from the current surplus, to be used to adjust supply in the event of price shocks. While this option raises a host of questions on how it would work in detail and how to avoid unnecessary interference in the market's ability to set the price, it would provide ongoing flexibility – which the supply-based options do not.

The MSR: summary of the new proposal

The proposal for the MSR that the EC published in January 2014 is an expansion on the discretionary price mechanism floated in the consultation, in particular the second version of building a reserve of allowances to be deployed in the event of price shocks. No auction price floor is foreseen.

The intention behind the MSR is not simply to reduce supply as a one-off measure, but also to create a non-political, stable mechanism for countering extreme volatility events in the future. Combined, these effects are expected to improve the long-term visibility of the market and thereby improve inter-phase efficiency. This means that the shortfalls that the market will eventually face can be felt sooner, allowing for a more orderly market over a longer period. This would be an effective way to ease the transition from today's oversupplied market to a fundamentally short market in the future.

The proposal is for the MSR to begin operating in 2021, at which point it would remove allowances equivalent to 12% of the accumulated surplus in the market as of 2019. The

surplus is defined as allowances issued since 2008 plus international credits surrendered since 2008, minus verified emissions since 2008. The equivalent number of allowances would be withheld from the auctioning volume in 2021. The same process would occur each year after, until the surplus falls below 833 MtCO₂. If the surplus falls below 400 MtCO₂, then the MSR would release 100MtCO₂ each year. In years when the surplus remains between 400MtCO₂ and 833 MtCO₂, the reserve would take no action.

In practical terms, the MSR would not prevent the 'backloaded' allowances from re-entering the market. The market would still be faced with allowances being withheld in 2014 to 2016, released in large quantity in 2019, then in smaller quantity in 2020, and then partially withheld again from 2021. The proposal does include averaging auction volumes across 2020, 2021 and 2022. However, this would only dampen the extremes in supply fluctuations.

There remain various questions around the details. In particular: What is the modelling behind the choice levels of surplus that trigger action by the MSR (400 Mt and 833 Mt)? Why is the withdrawal of allowances into the reserve based on a percentage of the surplus (and why 12%), while the re-injection of allowances into the market is a fixed volume (100 Mt)?

The MSR proposal also interacts with the existing Directive, according to which an undetermined amount of allowances may be injected into the market if, for six consecutive months, the carbon price is three times or more the average of the preceding two years. The MSR proposal refers to that provision in the existing Directive and presents itself as the mechanism for implementing that measure, but without clarifying whether the volume to be released is also 100 Mt.

The MSR has some distinct advantages over the other options presented during the 2012 consultation. It avoids a one-off major regulatory intervention, like the introduction of a new sector as a market-fixing measure, which might prompt further unforeseen interventions. Nor does it permanently cancel allowances, instead using them to cushion participants against future price shocks.

The MSR would operate according to transparent rules agreed at EU level before taking effect. Thus, although it is an intervention in the market as it now stands, it would provide

market participants with a stable framework for the coming decades. This is intended to be the end of unforeseen regulatory intervention in the market.

Implications of the MSR proposal

The driver for having an MSR is to help resolve the issue of oversupply. On that issue, several points should be mentioned.

Firstly, the MSR is not intended to make the market short of allowances – that is a separate political process under the 2030 climate package. The MSR would remove some surplus allowances from the market, but as they will eventually be made available to the market it does not change the fundamental oversupply. The implication for the market is that oversupply will persist into the late 2020s, when the market might become substantially short, depending on the outcome of the decision on a 2030 target. However, the MSR is compatible with a new 2030 target.

So the MSR is not intended to change the fundamentals of the market. But nor does it remove the surplus quickly or decisively at first, as it takes only a proportion (12%) of the surplus allowances on an annual basis.

The MSR re-injects 100 MtCO₂ of allowances each year when surplus allowances in circulation fall below 400 million. But why is that a suitable level of surplus? If the problem is an oversupply of 2 billion allowances, then why is 400 million not a problem? When the surplus falls below that level, the MSR releases more allowances, keeping the surplus around that level, until the reserve is depleted. For how long should that that level of surplus be maintained?

Putting aside the discussion on its impact on the surplus allowances, there are also several important considerations on how the MSR might function.

As the release or withdrawal of allowances would be major liquidity events with price implications, traders might get the opportunity to game around the upper or lower trigger levels, or in particular the price trigger. However, ongoing improvements to market oversight should bring greater transparency, helping the authorities to detect illegal trading activity.

No considerations have been made as to the quantity of allowances in the reserve when it comes to releasing them. For example, with

300 Mt held in the reserve, after three years of a small surplus (under 400Mt), the reserve would be empty. This could be mitigated if the quantity released could be tapered by using a percentage of what remains, or still volume-based but in steps. Here the counter-argument is that the MSR as currently proposed would help the transition from an oversupplied market to one that faces a shortfall; once the reserve is depleted, its transitional task would be completed.

The MSR involves a two-year delay in responsiveness to market realities, which could exacerbate market imbalances. We need only to look at 2008 and 2010. If the MSR had been operational then, in 2010 the MSR would have looked back at data two years previously, to 2008, and seen a market with a surplus below 400 Mt (in fact a small shortfall of allowances). The 2008 data would have triggered the release of 100 Mt in 2010. However, by 2010 the market was in fact oversupplied, so the 100 million allowances would have been sold into an oversupplied market, compounding the oversupply issue. Far from protecting against price shocks, it would have accelerated one.

Suggestions for amending the MSR proposal

The MSR has the potential to be a flexible, transparent mechanism that can improve market functionality, while removing political considerations and major regulatory interventions that have had unintended consequences in the past.

The MSR proposal has emerged from the need to tackle oversupply in the market. However, as it is proposed it would only dampen the effects of the current oversupply and the yo-yo in supply foreseen from now to 2020 brought about by the 'backloading' arrangement. There would still be allowances withheld in 2014 to 2016, re-released in 2019 and 2020, clawed back to some extent in 2021 and 2022 and re-released perhaps at some point when the surplus in the reserve drops below 400 MtCO₂.

The MSR could be used to mitigate this yo-yo in supply if it were applied sooner – in 2017, as proposed by Germany, or at least by 2019 when the backloaded allowances are to be released. This would make the inter-temporal effect more efficient.

As well as starting earlier than 2021, the MSR's effect could also benefit from beginning with the removal of a greater proportion of the existing oversupply, for example most or all of the 900 Mt in the 'backloading' scheme. This would reduce the oversupply significantly while also providing some depth to the reserve from the start.

The volume trigger band (between 400 Mt and 833 Mt) is quite narrow compared to the carbon budget in 2013 of 2,084 Mt, and may prove to prompt too much MSR activity in what should generally be an open market. A deeper reserve combined with a wider band, for example 200 Mt to 833 Mt, would see fewer interventions, allowances would be released only when the market was closer to being short – whereas in the current proposal the MSR would be re-injecting allowances into a market already oversupplied. The actual trigger levels are to be based on market analysis that should be made public.

How the price trigger would work in practice and the impact the MSR would have on price need further elaboration.

The two-year delay before the MSR responds to a change in market conditions could prove problematic. The MSR should be more responsive, to prevent its being activated on the basis of outdated information and compounding demand or price shocks (the 2008/2010 example).

Conclusions

The EU ETS is in need of reform. It has been failing to provide the price signal that the economy requires to keep on track in meeting its long-term targets. For the European economy it will be more expensive to have to move from an oversupplied market for another decade at least, into a shortfall situation after that.

Of the options put to consultation in 2012, the MSR has the potential to be a useful tool. It is based on transparent rules and would use the current surplus to help provide an orderly transition from an oversupplied market to one with a shortfall of allowances. It allows for the market to function freely within a band, and would also complement the outcome of more difficult political deliberations on a 2030 target.

There remain several aspects that need further examination or clarification, not least how the price-related trigger would work.

Finally, the MSR would be more effective in assisting a smooth transition if it were primed using a greater proportion of the shortfall in 2019 and 2020, combined with a wider band between the withdrawal and release trigger levels. Importantly, the two-year delay between market analysis and MSR response should be shortened, to avoid a perverse effect on the market in the event of shocks.

About the author

Andreas Arvanitakis has been involved in climate policy since 1997 and is a specialist in emissions trading policy and markets, acting as Director of Advisory Services for Thomson Reuters Point Carbon. He is now an independent consultant for various public and private sector clients.