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## YOU'D BETTER BET ON THE ETS

by **Georg Zachmann**  
Research Fellow at Bruegel  
[georg.zachmann@bruegel.org](mailto:georg.zachmann@bruegel.org)

### POLICY CHALLENGE

The ETS must be enabled by reinforcing the credibility of the emissions trading system.



**THE EUROPEAN UNION'S EMISSIONS TRADING SYSTEM (ETS)** has had a bumpy start. In particular, after a peak in May 2008, the price of tradeable emission allowances has collapsed for various reasons (see section 3). This collapse has resulted in calls from industry, civil society and policy-makers to 'fix' the ETS. But is it really broken? Despite its problems, the ETS has significantly evolved to cover more sectors, more countries and more greenhouse gases. The allocation of allowances has become less distorting. The treatment of emission rights from outside the EU has become stricter. Fraud has been made more difficult. The ETS entered its third phase, at the beginning of 2013, as a more mature system.

### 1 THE ETS WORKS

The ETS is a classical cap-and-trade system specifying a cap for annual greenhouse gas emissions and allocating a corresponding amount of allowances to companies covered by the scheme. By definition, as this cap has decreased, emissions have also been reduced. Excluding the countries that have entered the scheme since 2005 (Bulgaria and Romania joined in 2007 and Norway has participated since 2008) greenhouse gas emissions from ETS participating installations declined by about 14 percent between 2005 and 2012 (Figure 1).

Significant emission reductions were achieved by the tightening up of the system between the first and second trading periods (2005-07 and 2008-12) (Abrell *et al*

*et al*, 2011). A year-on-year emission reduction of 3.6 percent appears to be due to the tightening of the system. It is not explained by reductions in firm output caused by changing economic conditions and reduced production in Europe (Table 1).

In addition, there is evidence that significant emission reductions already took place before the start of the ETS in order to comply with the system from the beginning (Ellerman and Buchner, 2006; Brewer *et al*, 2009; Ellerman *et al*, 2010). Consequently, the ETS has been able to achieve its purpose – stimulating additional emission reductions.

The instrument of carbon trading was chosen in order to allow differentiation of carbon abatement efforts in different sectors. And indeed, different sectors exhibited different

emission-reduction strategies (Figure 2). This is good news. It is in line with the hypothesis that different sectors have different marginal abatement costs, and the ETS is able to induce the cheapest carbon reductions.

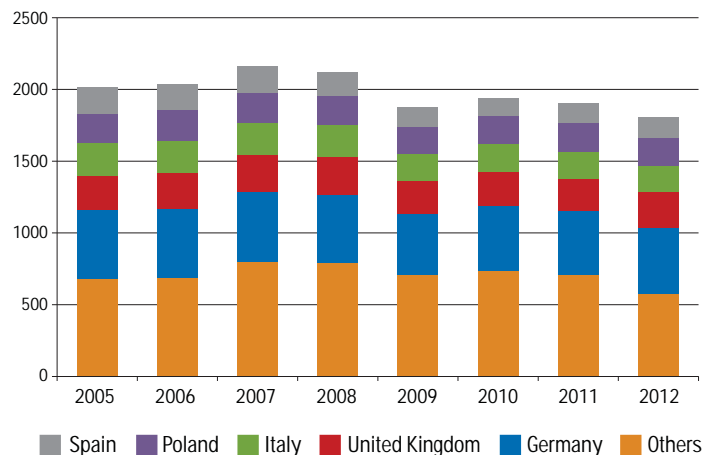
Table 2 shows that non-metallic minerals and basic metals were responsible for the main part of the emission reductions observed during the shift from the first to the second trading periods, while there has been no significant additional effect for the energy and paper sectors (Abrell *et al*, 2011).

We conclude that the ETS is achieving its aim of keeping emissions in the sectors that it covers under the cap. As the number of allocated allowances is irresistibly declining by 37 million EU allowances (EUAs) each year, emissions will have to continue to decline.

Reductions caused by the shift to the second period	-3.6%**
Control variables	
Changes in turnover	19.1%***
Changes in employment	0.07%

Source: Abrell *et al* (2011). Note: significance: \*\* at 5% and \*\*\* at 1%.

Figure 1: Core eligible ETS emission, million tonne CO<sub>2</sub>



Source: Bruegel based on CITL.





has been deferred, and ultimate failure is far from impossible.

12. See Brunner *et al* (2011) for an in-depth discussion of the carbon commitment problem.

13. This is in line with Neuhoff *et al* (2012). The authors argue that companies that intend to emit carbon in the near-to-medium-term future already acquired sufficient allowances in order to hedge against rising allowance prices. Consequently only speculators that require substantially higher risk premia will do intertemporal arbitrage.

14. Even if all excess allowances are taken out of the system to make it immediately binding and hence prices pick up in the short term, backloading will certainly not incentivise investments into low-carbon technologies with long economic lifetimes, as the prices will drop as soon as the allowances are reintroduced.



cause this would activate the  
guarantees pledged to investors.



would socialise the cost that such shifts have for locked-in low carbon investors. This will unlock low-carbon investment. In addition, the guarantees would restore credibility in the ETS. This will increase current carbon prices and hence result in more immediate abatement.

Notwithstanding this operation, the current ETS linear emission re-

duction factor is not sufficient to meet the 2050 decarbonisation target set out in the Commission's Roadmaps. Hence, a further tightening of the system – requiring a change to the directives – would be necessary to achieve the 80-95 percent decarbonisation target by 2050. In the light of the current economic situation and the uncertain state of international climate negotiations, an early and credible

European commitment to increase the reduction factor appears politically difficult. It is thus crucial to quickly stabilise the ETS in order to allow it to continue to play its important role of cost-effectively synchronising Europe's existing decarbonisation commitments.

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