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Response to the European Commission's Consultation on Structural options to strengthen the EU Emissions Trading System (EU ETS)

A robust carbon price signal is necessary to achieve the advocated long term transformations of European economies in an efficient way.

The European Union aims at reducing its greenhouse gas emissions by at least 80% compared to 1990 by 2050. The technological and organizational changes necessary over time to reach this target are yet widely unknown today, and so are the associated costs. For these transformations to be organized and economically efficient over time, the use of a carbon price signal is crucial in order to influence the operational and investment decisions of actors throughout the economy. The risk of a continuing faint price signal is that Europe will then have to engage in a more costly emission trajectory, because of carbon lock-in and uncoordinated policies. To fully play its role, the price signal must be politically robust from the short to the long term.

Current price levels highlight the weakness of EU ETS' ambition and political robustness.

The value of emissions allowances relies on the credibility of the emission constraint over time. Surplus allowances are frequently observed in allowance markets, but they can co-exist with high prices. As observed in the US SO₂ market (see Figure 1) and Phase 1 of the EU ETS, surplus allowances are used by participants for banking, and are not a flaw in the system, provided that banking is permitted and that the longer term constraints are anticipated as quantitatively ambitious and politically credible. The currently low level of the EU carbon price is due to (1) the fact that EU ETS emissions are on line with the explicit reduction target of 2020, and (2) the fact that the longer term ambition of the policy is still widely unclear, both quantitatively and politically.

Good reasons for market intervention will keep arising in the future.

The justification for any market intervention is important, as it determines the possibility and nature of future interventions, and shapes the market's expectations of such changes. It will always be difficult to determine the precise cause of declining EU ETS emissions. As acknowledged in the report, an important share of the required internal reductions can be due to external factors (economic cycles, use of carbon offsets, overlap with other European or unilateral national policies). The sectoral, geographical and temporal effects of those external factors are difficult to anticipate, and will surely keep arising in the future. As a consequence, "one-shot" intervention would not restore the robustness of the carbon signal, and a deeper reform is needed to sustainably restore the carbon price signal.

The different options listed in the EU Commission's report would not entirely solve the problems identified above.

Different options have been tested with our EU ETS simulation model, ZEPHYR-Flex. Our analysis (see summary in Figure 2) underlines that the longer term expectations are very important in determining price levels. The most attractive scenario may appear to be a sequence of “back-loading”, retirement of allowances in Phase 3, and a revision of the annual reduction factor in Phase 4. But this scenario is also the most risky, because the future of back-loaded allowances will not yet be clear at the time of intervention, and it requires a complicated political process which, if not concluded, will undermine market credibility even more. None of the options proposed in the report would enable a transparent and dynamic management of the EU ETS over time.

EU ETS principles need to be improved by the creation of an Independent Carbon Market Authority (ICMA).

The experience from eight years of market history shows that the current governance framework does not enable the coherence between the short term price and the medium to long term objectives of the policy to be maintained and to shape sound expectations over time. As experience with the monetary market has shown (see Figure 3), dealing with this perpetual tradeoff (between short-term prices and policies, and long-term objectives and market expectations) requires a dedicated and predictable intervention framework, supported by continuous and transparent market monitoring. This would be facilitated by the creation of an Independent Carbon Market Authority, which mandate is detailed below (see Figure 4).

ICMA's means of action should be based on quantitative instruments.

ICMA's mandate is to maintain the credibility and political ambition of the policy over time by a dynamic management of allowances supply, from the short term (through the timing of auctions) to the long term (through the revision of EU ETS' cap). This means of action, supported by transparent monitoring and justification, makes explicit price-based provisions such as a price collar or a price management reserve unnecessary. Such provisions could nevertheless improve the visibility of the economic signal, but should be considered very cautiously as they bear a risk of disconnecting the price signal from quantity-based market fundamentals which are meant to guide ICMA's actions.

In-depth reform must start now and be progressive.

Without an in-depth reform, it will be difficult for the EU ETS to appear durably as an ambitious and efficient instrument. Confidence and policy strength should be restored quickly, with progressive and motivating actions from the short to the long term. As shown above, backloading alone would not be a solution; nevertheless it can be a strong political signal to start with, if it is coupled with serious reform, starting quickly and taking into account more structural options than those presented in the EU Commission's report.

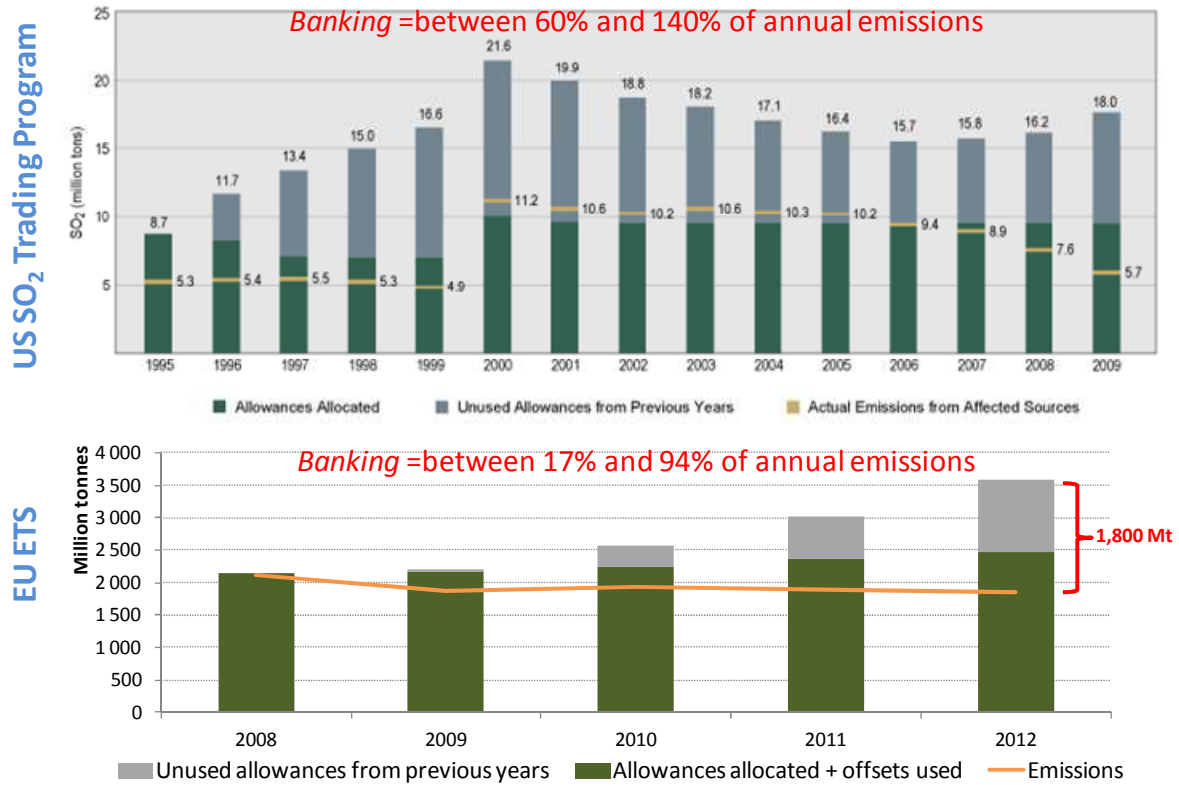
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Figures and tables

Figure 1: Comparison of allowance banking in the EU ETS with the US SO₂ market



Source: EPA, 2010 (http://www.epa.gov/airmarkets/progress/ARP09_2.html) and Climate Economics Chair from CITL, 2013 (estimates for 2012)

Figure 2: Impact of the proposed options: summary of our results

Scenario	Carbon price in 2015	Carbon price in 2020	Comment
Reference	6 €/tCO ₂	13 €/tCO ₂	Current situation (continuity of the linear reduction factor in Phase 4)
Backloading (imperfect)	16 €/tCO ₂	3 €/tCO ₂	Perfect anticipation: no effect on price (no change in Phase 3 cap) Imperfect anticipations: effect on price in the short term leading to an even lower price in the medium term
(a): -34% in 2020 for EU ETS sectors	17 €/tCO ₂	27 €/tCO ₂	Revision of the target as soon as 2013, in practice impossible. Linear trajectory too ambitious for 2050 goals. Does not allow a dynamic management of external factors.
(b)+(c): Retirement in P3 and revision of the linear reduction factor for P4, in line with Roadmap 2050 targets	16 €/tCO ₂	24 €/tCO ₂	Seems attractive but requires playing with participant's anticipations, and a difficult political process. Does not allow a dynamic management of external factors.
(d): extension to other sectors	Not tested		The only option on the demand side. Enlarging the carbon price signal to diffuse emissions. A good way to revive the market in theory; in practice probably long and complicated process. Does not allow a dynamic management of external factors; possible interactions with fuel policies (including taxes).
(e): limited access to international credits in Phase 4	Already in all scenarios: no offsets in Phase 4		The use of offsets or international allowances in Phase 4 could have a (strong) effect on prices as soon as Phase 3. Difficult to assure the shaping of expectations given the unpredictable effects of linking.
(f): Price management mechanisms			Difficult for the public authority to decide the "right" price over time (policy interactions, auctions revenues etc.) Danger of disconnecting the price signal from market fundamentals relating to achieving the reduction target at least cost.

Source: Climate Economics Chair, ZEPHYR-Flex model

Figure 3: Articulating the short term and the long term: the example of monetary policy

	Monetary Market	Carbon Market
Final target	Growth path without inflation	Emission reductions at least cost
Primary issuance	Supply of money	Supply of allowances (free allocation + auctions)
Economic signal	Interest rates	Carbon price
Arbitrage over time	Short term growth → medium term inflation	Short term carbon lock-in → high future costs
Interactions	Convertibility of money through exchange rates Reaction to external economic influences	Offsets, international allowances Reaction to external factors (policy overlap)

Source: Climate Economics Chair

Figure 4: A possible mandate for the Independent Carbon Market Authority

Function	Associated actions
Continuous monitoring and information transparency	Collect, analyze and share data on: • Market transactions and prices • Emission trajectories • Compliance behavior • Low carbon investments • Competitiveness effects Motivate and justify its decisions.
Liquidity and market functioning in the short term	Primary market: dynamic management of auctions. No need for secondary market interventions.
Credibility of the medium to long term constraint over time	The public authority determines the global EU GHG emissions target, and the policy tools to achieve this target. The ICMA implement the political target in the covered sectors and can dynamically revise the EU ETS cap to: • Ensure consistency with other policy instruments over time. • Control interactions with offsets and non-EU ETS allowances. No need for price corridors or price management reserve.
Accountability	Periodic hearings by the EU Parliament and the EU Council. Public reporting.

Source: Climate Economics Chair

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