

Preparing the review of the Market Stability Reserve

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1 On the definition of the market balance

Is there a market imbalance?

- ▶ The bankable nature of allowances: emissions are limited by the cumulative cap.
- ▶ Defining a “market balance” is, hence, not trivial & cannot be decoupled from allowance prices.
- ▶ Price today is reflection of cost to meet the cap (inter-temporal arbitrage).
- ▶ In short: as long as the price is non-zero, the market is balanced.

Questions:

- ▶ How can we define an indicator for the balance of the EU ETS without discussing prices and their impact on abatement efforts?
- ▶ Should one even care about (short-lived) surpluses in the ETS, if prices are sufficient to trigger abatement efforts?

2 On the role of the TNAC as an indicator of MSR performance and the TNAC composition

TNAC as an indicator of MSR performance:

- ▶ The TNAC is an approximation of the cumulative difference between the supply of allowances and the emissions.
- ▶ TNAC is indifferent to (1) surplus due to inter-temporal arbitrage (banking) or oversupply of allowances relative to emissions and (2) associated allowance prices.
- ▶ In isolation, the TNAC holds limited information on the “performance” of the MSR/EU ETS.

The composition of the TNAC – careful interpretation is required:

- ▶ The “supply of allowances” is not equal to the cap (e.g., auctions not tied to exact dates, not all free allowances intended for free allocation are awarded, front-loaded selling of allowances from new entrants reserve (NER), ...).
- ▶ The “demand for allowances” (i.e., emissions and cancellation) is not equal to the demand for allowances (e.g., emissions from aviation are excluded from TNAC calculation, hence, structural difference between true surplus of allowances and TNAC).

3 On the appropriateness of the identified goals & indicators

Goals:

- (1) Eliminate the historical structural supply-demand imbalance within a reasonable amount of time;
 - ▶ Should be reached with cancellation starting in 2023
 - ▶ Rather: increase allowance prices in the short term?
- (2) Bring the TNAC within a range of the MSR thresholds in case of new events within a reasonable time;
 - ▶ Are the MSR thresholds appropriate bounds for the surplus?
 - ▶ Rather: limit impact of new events on allowance prices?
- (3) Suggestion: Elevate & maintain allowance prices to meaningful & reasonable levels.
- (4) Impact on growth, jobs & competitiveness

Indicators:

- ▶ 'A reasonable amount of time (3-5 years) ↔ allowance prices which adapt on a daily basis, including expectation of MSR effects, changes in abatement costs, ...
- ▶ TNAC: how to separate surplus for inter-temporal arbitrage from 'historical structural imbalance'?
- ▶ Allowance prices could be more prominent indicators. The review could state what the MSR has done w.r.t. allowance prices, without reference to what an appropriate price level is.
- ▶ Effectiveness of overlapping policies is not included – focus on the absorption by MSR.

4 Some concluding reflections

- (1) Scholars are still working on understanding the ramifications of the MSR (long-term impact on emissions, drivers, interaction with other policies) → how are we to define 'good performance'?

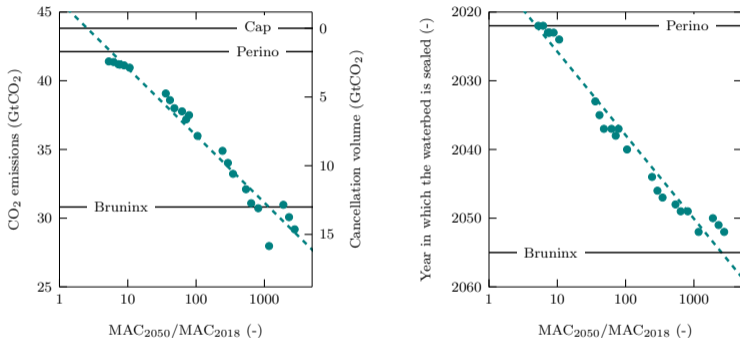


Figure: Cumulative CO₂ emissions, cancellation volumes and year in which the water bed is sealed as a function of the ratio between future and present marginal abatement costs (MAC) for a wide range of parameter settings of the MAC curve. The dots correspond to simulation results, whereas the dashed lines visualize a fitted trend line. Future marginal abatement costs are approximated as the marginal abatement cost in 2050 given emission levels in that year. The MAC in 2018 is calculated at historical emission levels.

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- (2) Should the review question the MSR itself? What if other mechanisms within the ETS (e.g., increased LRF) may achieve the same result (e.g., cumulative emissions) more cost-effectively?

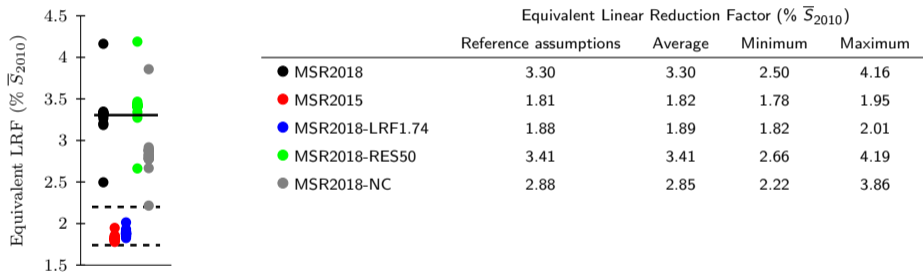


Figure: The equivalent LRF as of 2020 that allows the same cumulative CO₂ emissions over the period 2017-2061 in each of the policy scenarios, considering all parameter sets. Different colors represent the policy scenarios, whereas the solid black line indicates the equivalent LRF in policy scenario 'MSR2018' under reference assumptions. The dashed lines indicate the 1.74% and 2.2% LRF.

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- (2) Should the review question the MSR itself? What if other mechanisms within the ETS (e.g., increased LRF) may achieve the same result (e.g., cumulative emissions) more cost-effectively?
- (3) Should the review assess the uncertainty range on cumulative emissions?
- (4) Should the review look at overlapping policies and their effectiveness?

Thank you for your attention!

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Publications: www.mech.kuleuven.be/en/tme/research/energy_environment

- ▶ Bruninx, K., Ovaere, M., Delarue, E. 2019. The Long-Term Impact of the Market Stability Reserve on the EU Emission Trading System. KU Leuven Energy Institute WP EN2019-07.
- ▶ Bruninx, K., Ovaere, M., Gillingham, K., Delarue, E. 2019. The unintended consequences of the EU ETS cancellation policy. KU Leuven Energy Institute WP EN2019-11.