Task Force: EU ETS Market Stability Reserve
Understanding the Commission Proposal and its impacts
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Market Stability Reserve and interrelationship with other policies

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Have we already asked the relevant questions?

- Do we have a conceptual framework for the proposed Market Stability Reserve (MSR) mechanism?
- Are there alternatives to the MSR of the Proposal?
- (How can a market stabilisation mechanism be embedded into a structural reform of EU ETS?)

Proposal of the European Commission
COM(2014) 20
Do we have already a conceptual framework for analysing the impacts of the proposed MSR mechanism?
A conceptual framework for the basic interactions

Stringency of allowances → Carbon price → Carbon costs → Abatement activities by technological change → Abatement costs

Energy efficiency and renewables policies → Total carbon costs

Value added
Stringency is a measure of physical scarcity of allowances

- Stringency is relevant on all levels of EU ETS
  - Installations, sectors, Member States, total market

- Operational measure for stringency
  - (Relative) Net position = \((\text{allocated allowances} - \text{actual emissions}) / \text{allocated allowances}\)
Stringency by sectors

Sector Shares 2008-2012

EU ETS Net Position
Power and Heat

Power

EU ETS Net Position
NonPower and NonHeat

Non-Power
Maintaining a (long-term) stringency target is the main purpose of a market stability mechanism

- This motivation serves both the interests of installations and the targets of climate policy

- But this is not obvious in the Proposal
  - “could help address the current imbalances ”

- The main issues for designing a market stability mechanism
  
  (1) Agreeing on a stringency target path

  (2) Adding a (flexible supply) mechanism for maintaining this stringency target path
Carbon price reflects not only the stringency of the EU ETS but also the behaviour of actors on the financial markets

- We do not sufficiently understand the impact of changes in the stringency on the carbon price
- We understand even less the reactions of the financial markets
Carbon costs result both from the stringency and the carbon price.
Energy efficiency and renewables policies lower – if successful – the stringency

- There may be, however, perverse market reactions
  - The case of Germany: Renewables induce switch from gas to coal in a merit order market design
Cost impacts from carbon, abatement, efficiency, and renewables

Energy efficiency and renewables policies

Carbon costs

Total carbon costs

Abatement costs

Value added
Are there alternatives to the Market Stability Reserve mechanism of the Proposal?
Deficiencies of the MSR mechanism of the Proposal

- Will not substantially lower the market imbalances way into Phase 4

- Proposed MSR mechanism needs many parameter which are rather ad hoc quantified

- Severe current market imbalance and future unexpected demand shocks need to be treated differently
Design of a modified market stability mechanism (MSM)

- Need not be based on another reserve
- Could be implemented earlier
Element 1 of a modified MSM
Long-term stringency path

- This could be the current or a modified linear reduction path
- There is no need for fixed trading periods
Element 2 of a modified MSM
Stringency-maintaining supply mechanism

- Target path volume
- Imbalance adjustment
- Liquidity provision
- Supply for auctioning
Stringency-maintaining supply mechanism
Formula-based implementation

- Allowances auctioned in year \( x \) = Target path volume in year \( x \) minus Imbalance adjustment plus Liquidity provision

- Imbalance adjustment = (imbalance adjustment factor) * (cumulated imbalances)

- Liquidity adjustment = (liquidity provision factor) * (market volume in year \( x-1 \))
What do we know about the impact of overlapping policies on emissions?
The impact of energy intensity
Emissions reductions from increased energy efficiency

EU-28

GHG Emissions
EU-28
Impact of energy intensity (Energy/GDP)
The impact of emissions intensity
Emissions reductions from increased share of renewables

Impact of energy intensity (Energy/GDP) and of emissions intensity (Emissions/Energy)

EU-28

GHG Emissions

Energy intensity

Emissions intensity

Total intensity
The impact of economic activity
Emissions expansions from increased GDP

GHG Emissions
EU-28
Impact of total emissions intensity (Emissions/GDP) and of GDP

Index 1990=100


EU-28
Impact of other policies as energy efficiency and renewables policies

- These policies – if successful – reduce the stringency for installations, sectors, and the total market

- This will create imbalances in the market

- Depending on the imbalance adjustment factor these imbalances will be compensated and thus will have only limited impact on the carbon price
Some advantages of the proposed modified market supply mechanism

- No need for an additional reserve
- Transparent because of fewer parameters
- Flexible implementation possible starting in Period 3 depending on the choice of the imbalance adjustment factor
- Encompasses and extends the current fixed supply mechanism
Thank you.

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