

Free allocation in the EU ETS How to model the different options?

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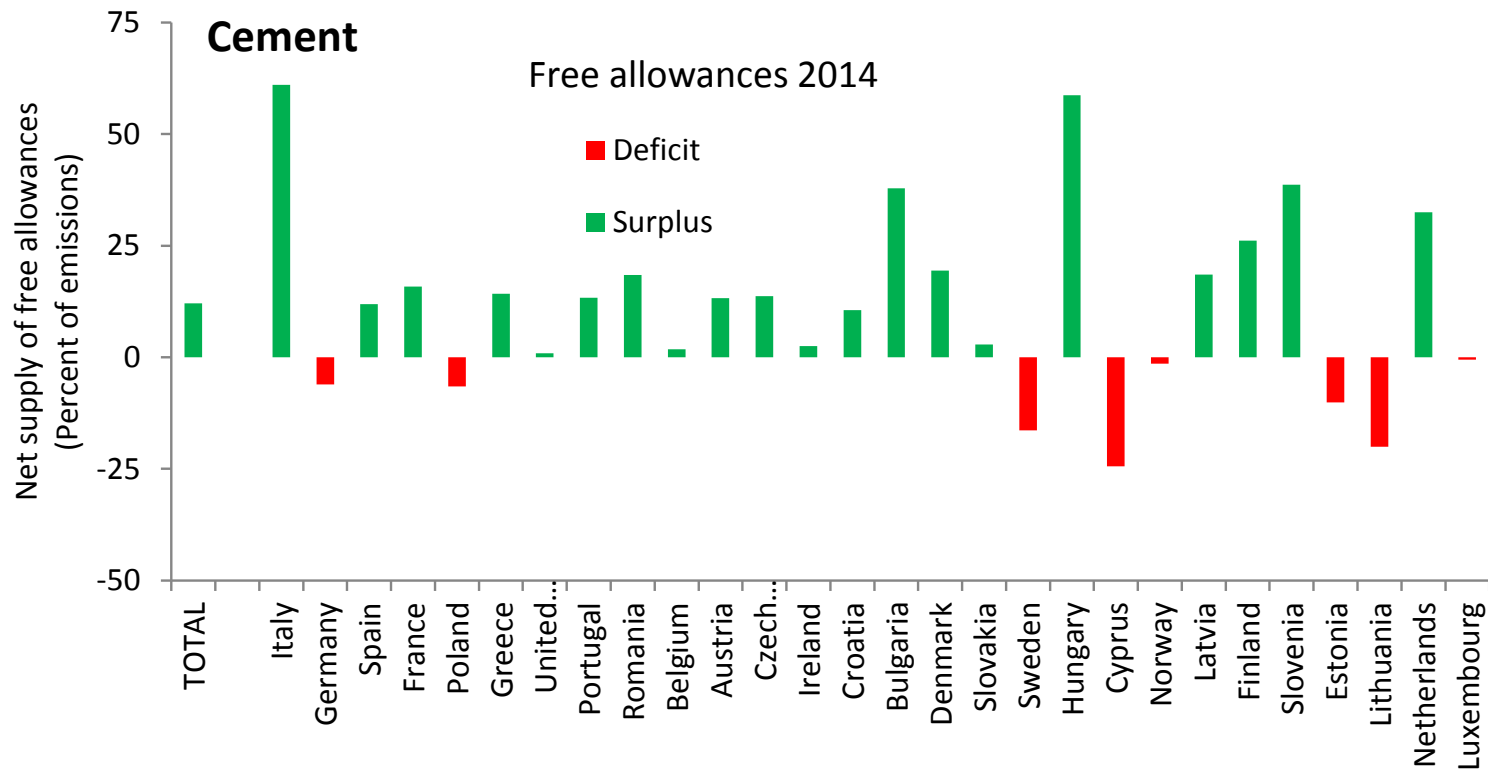
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Before modeling: Understanding the current state of free allocation

Cement

Free allowances 2014

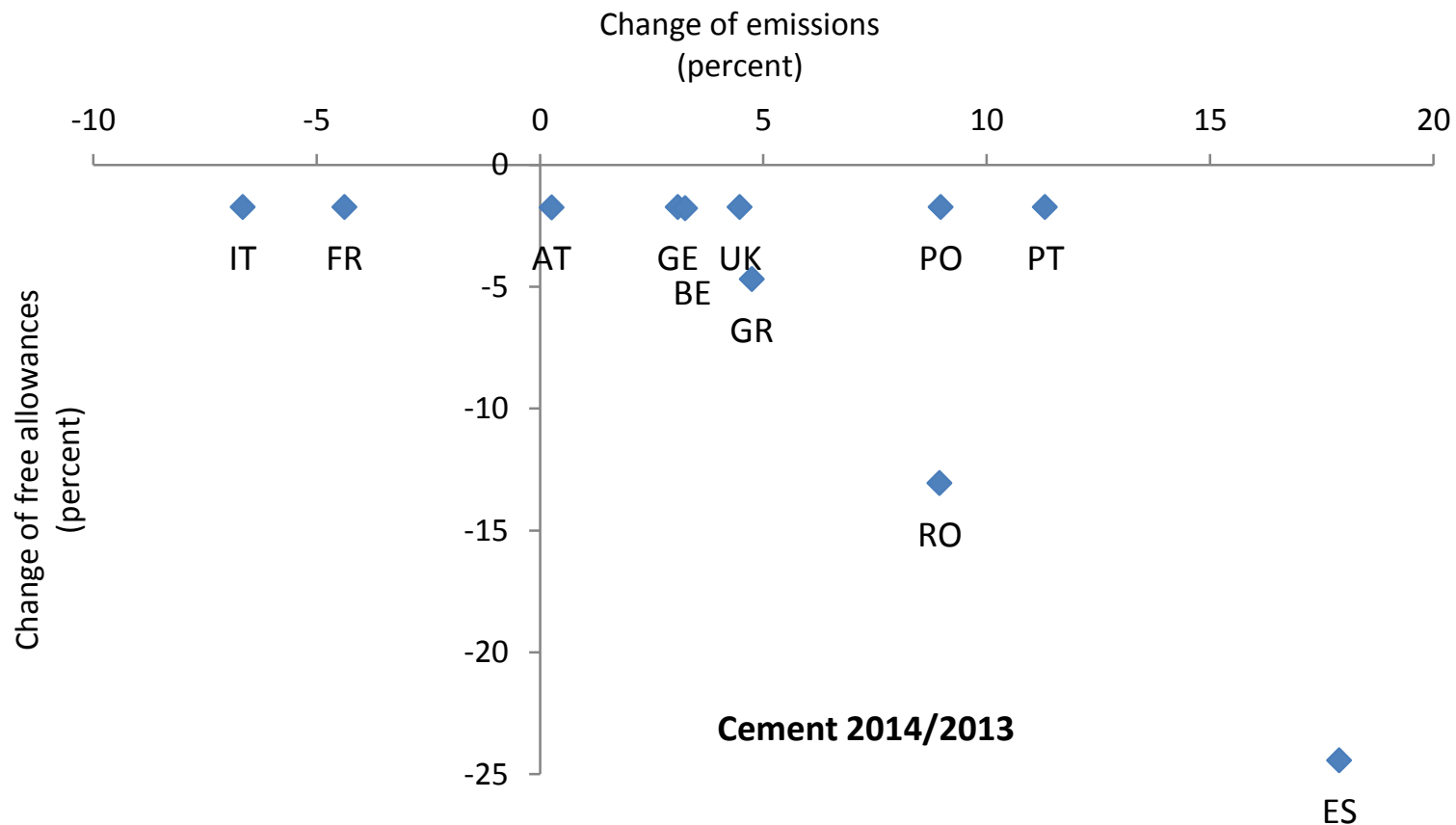
Net supply



Cement

Change of free allowances vs. change of emissions

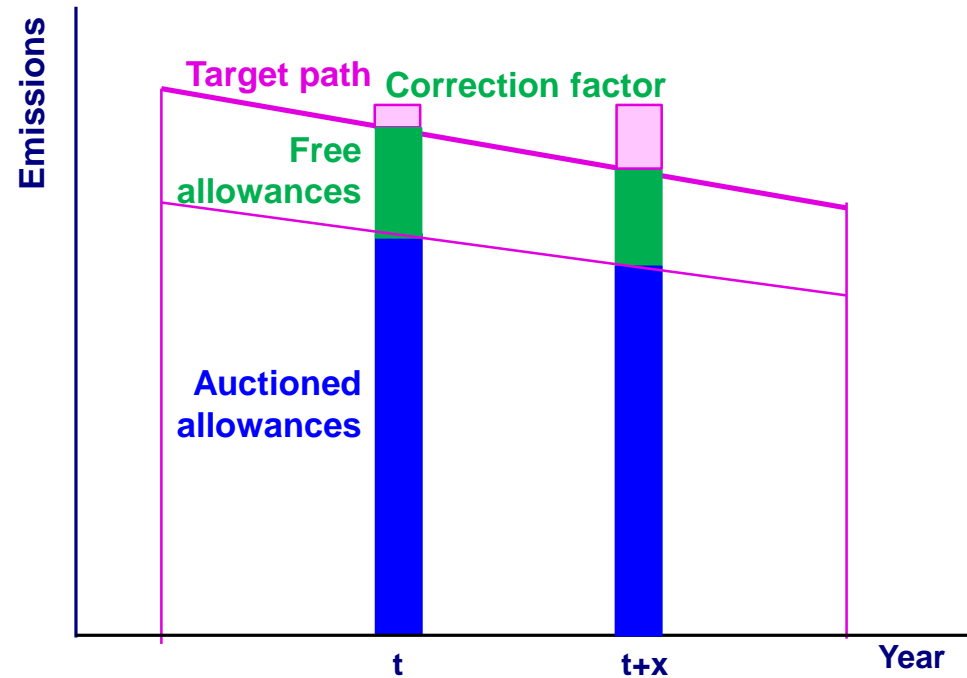
Net supply



What are the options for free allocation?

The current rigid scheme for free allocation

- Volumes of free and auctioned allowances are (mainly) predetermined



free allocation = historic benchmark x historic activity level x cross-sectoral correction factor

Switching to a flexible scheme for free allocation

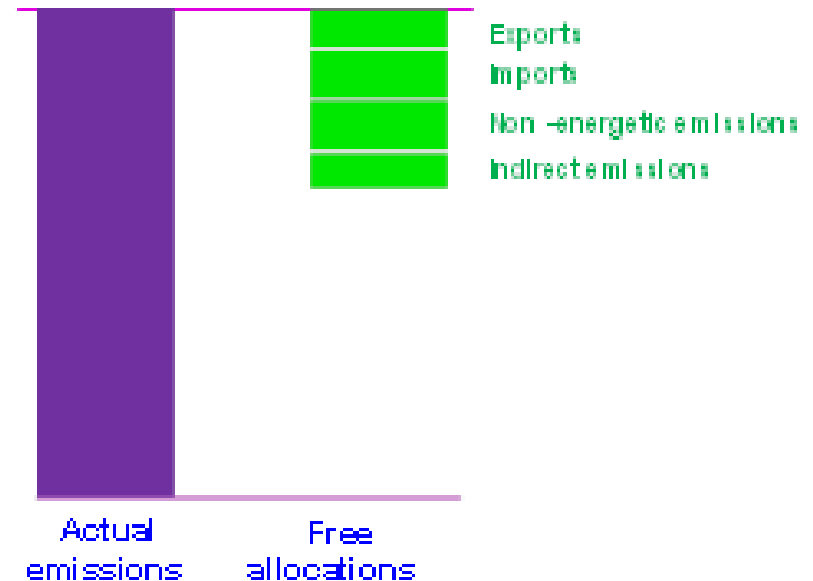
- Volumes of free allowances are ex post adjusted to activity levels

free allocation = recent benchmark x recent activity level

- This requires compensating actions for maintaining the emissions cap that is defined by the target path
- We identify three options for these compensating actions

Targeted benchmarks

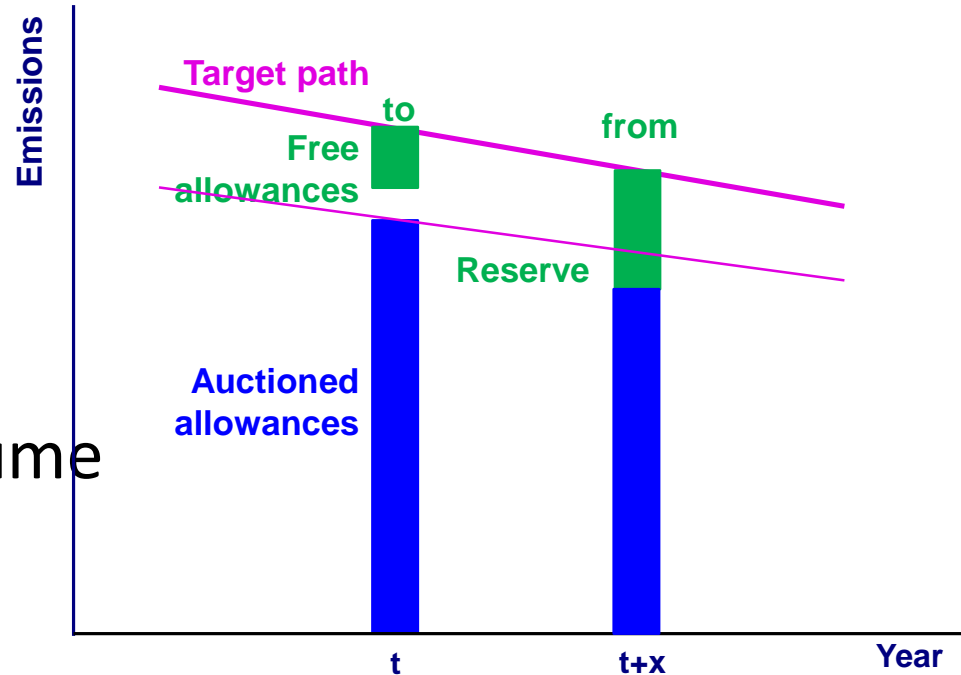
- Free allocation for sectors or installations, based on transparent criteria:
 - exposure to export and import competition
 - non-energetic emissions
 - indirect emissions
- This would ensure a risk-based assessment which moves beyond the current in/out-system, to a more gradual, targeted approach to free allocation



Compensating actions for maintaining the overall cap defined by the target path

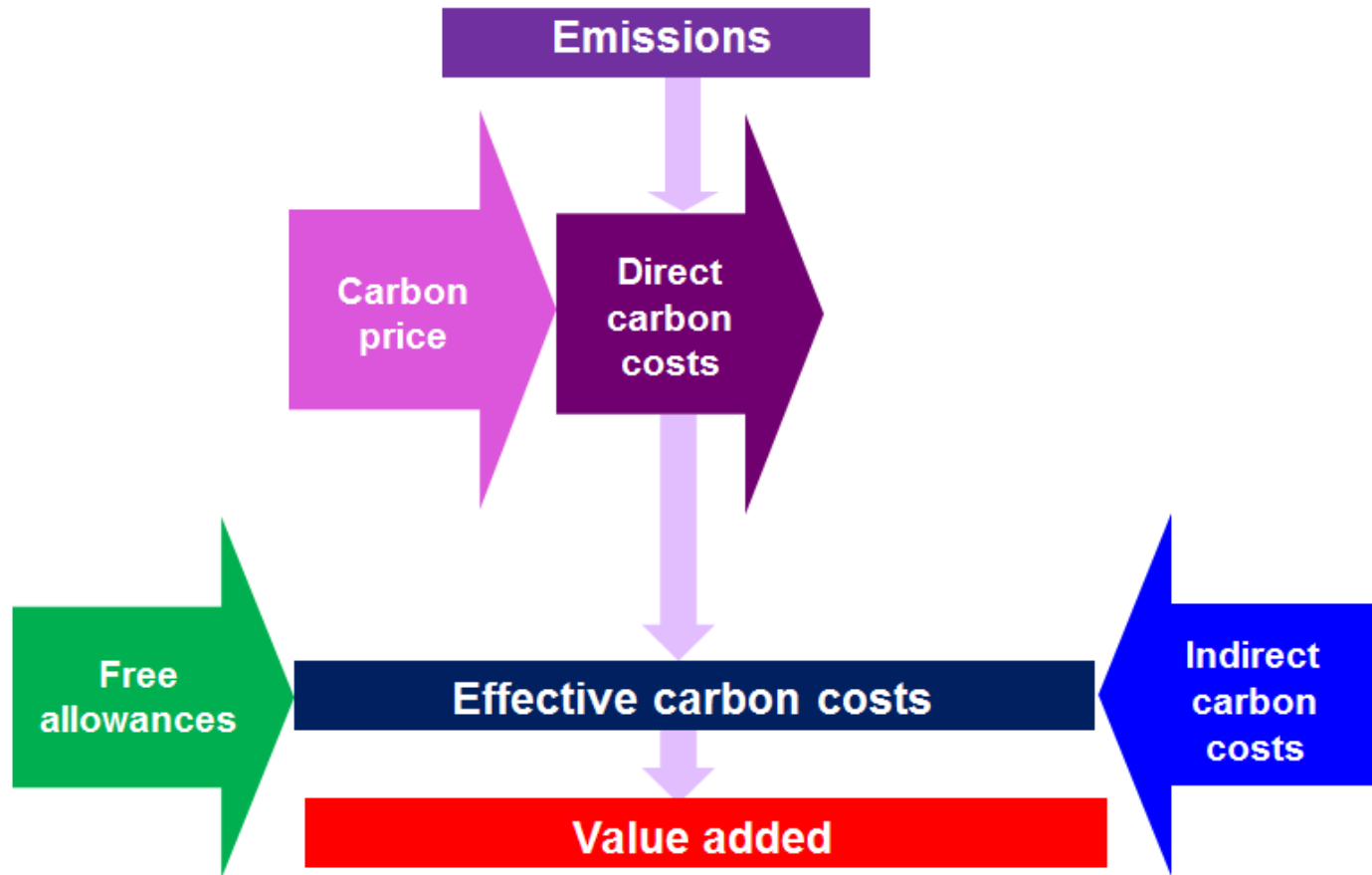
Adjusting deviations from targeted free allowances

- without a reserve
- with a reserve
- with the auctioning volume and a reserve



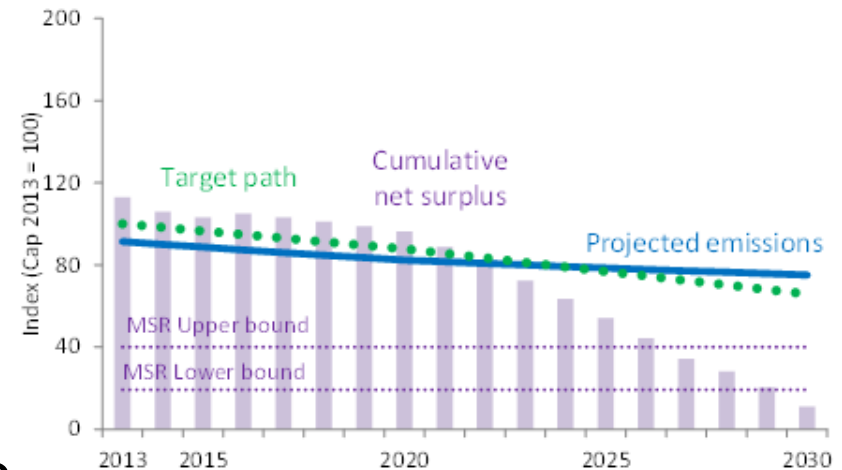
How to define and measure the “success” of options for free allocation?

For installations the “success” of free allocation is measured by the impact on value added and operating surplus



Will these different options for free allocations have different impacts on the carbon market?

- Probably not, since the scarcity (stringency) of allowances remains unchanged
- For a long time there will be plenty of surplus allowances in the market



How to model the different options for free allocation?

Simulating schemes for free allocations

Non-metallic minerals

Carbon price [€/ton CO2e]	20	20
Share of free allooc. in emiss. [%]	0	80
Share of cost path-through [%]	0	10
Change of Operating Surplus (net)	28,4%	2,8%

Evaluating the impact of schemes for free allocations

- For installations finally the effective carbon costs are relevant that have an impact on the operating surplus
- The effective carbon costs are the result of
 - Carbon price
 - Share of free allowances in verified emissions
 - Pass-through coefficient
- The relation of effective carbon costs to operating surplus triggers changes in operating and investment decisions

References

Schleicher, S. A. Marcu, A. Köppl et al. (2015). Scanning the Options for a Structural Reform of the EU Emissions Trading System. CEPS Special Report.

<http://www.ceps.eu/publications/scanning-options-structural-reform-eu-emissions-trading-system>