

Climate Integrate Symposium, Akasaka Intercity, Tokyo, 19.3.2026

European ETS developments:

What did we learn from phase 1 and 2?

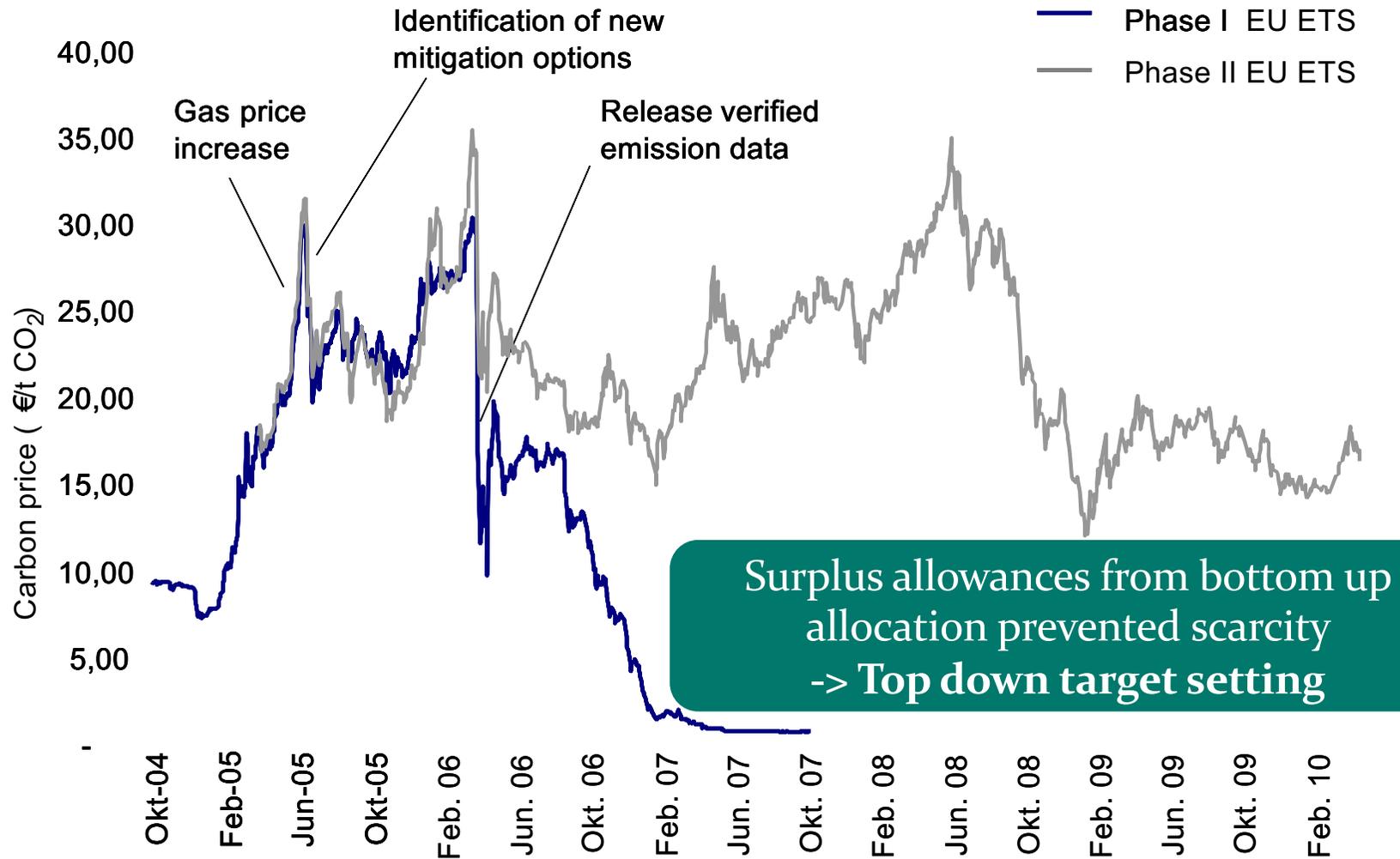
Professor Karsten Neuhoff

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German Institute for Economic Research (DIW Berlin)

Learnings from EU ETS experience

- 
- 1 Defining targets - bottom up or top down?
 - 2 Price stability?
 - 3 Effects of free allocation?
 - 4 Role of ETS in national policy?

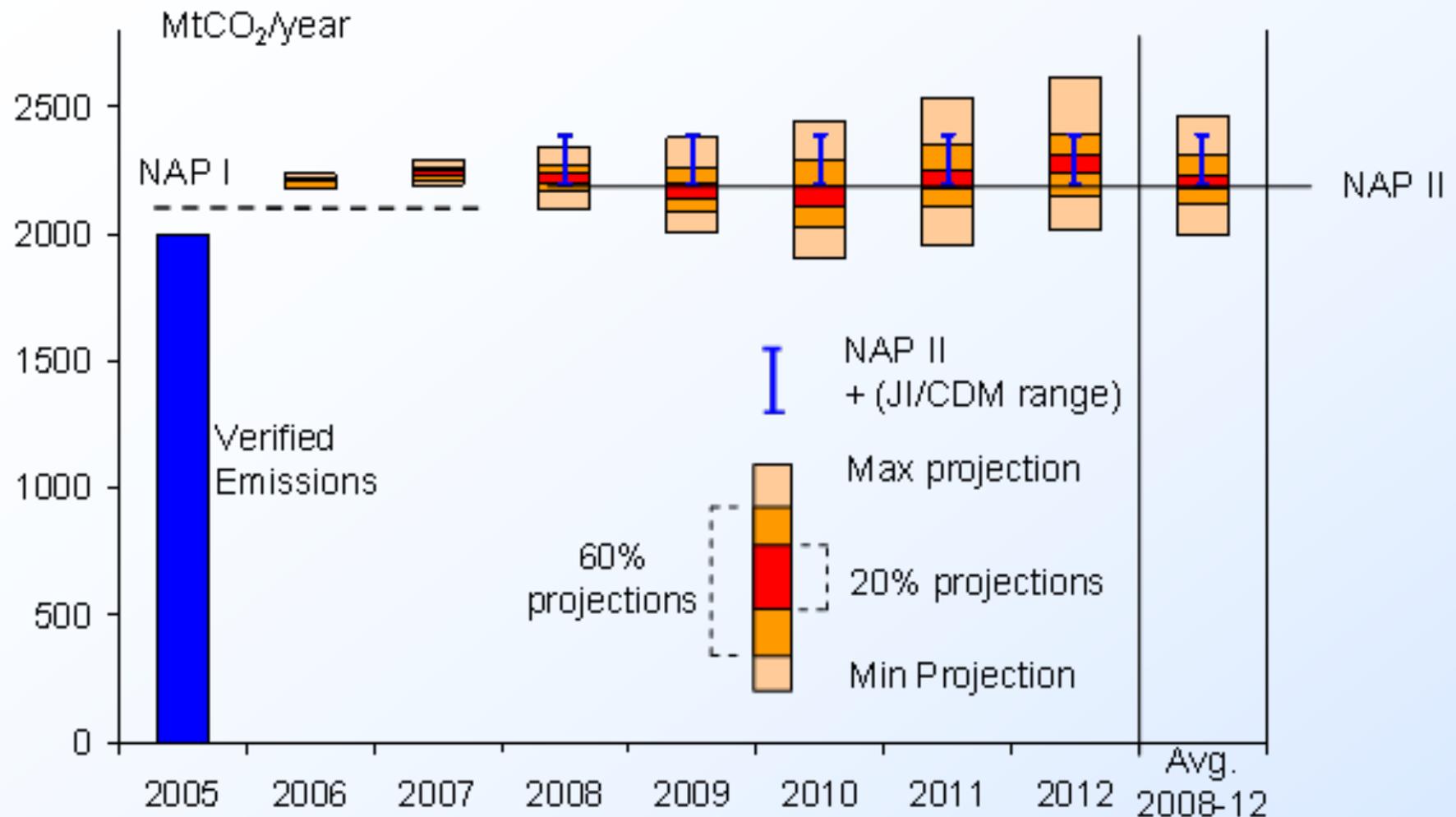
Development of price in EU Emission trading system



Learnings from EU ETS experience

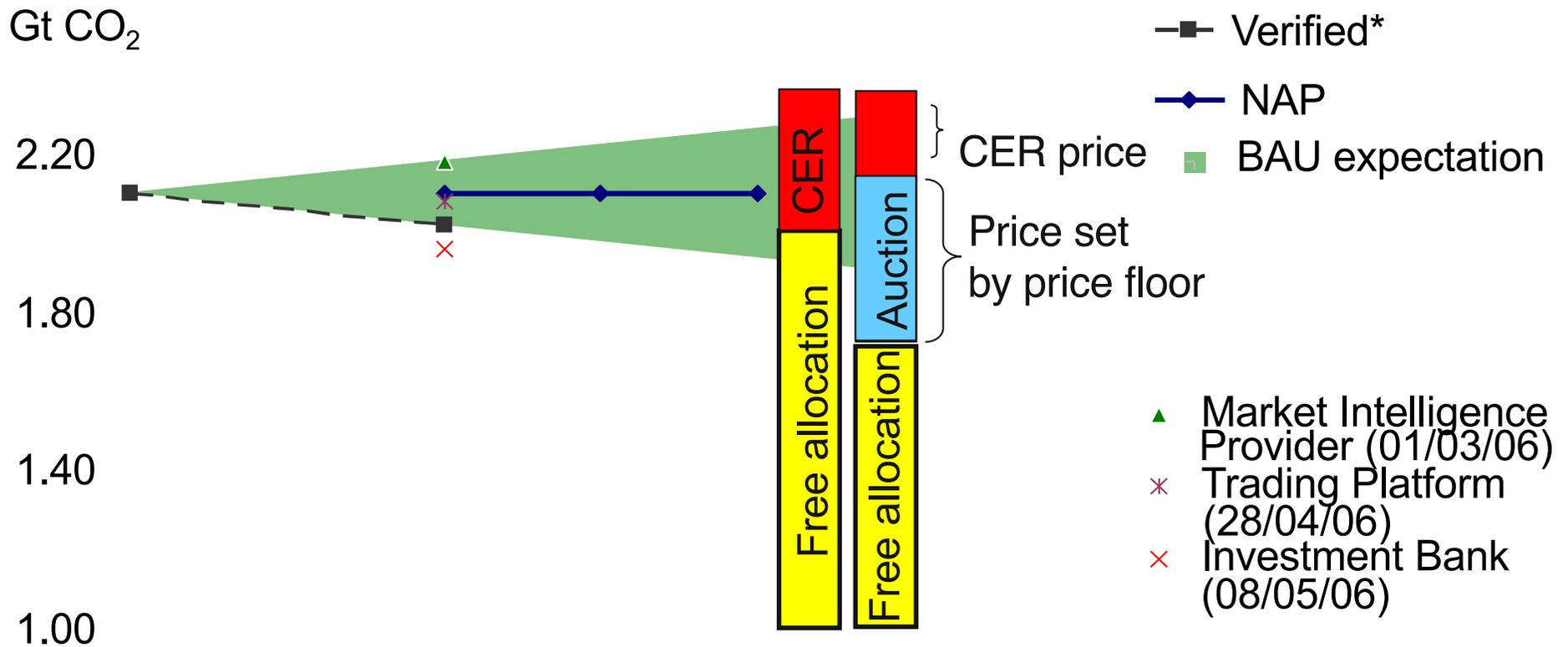
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Projection uncertainty large relative to abatement



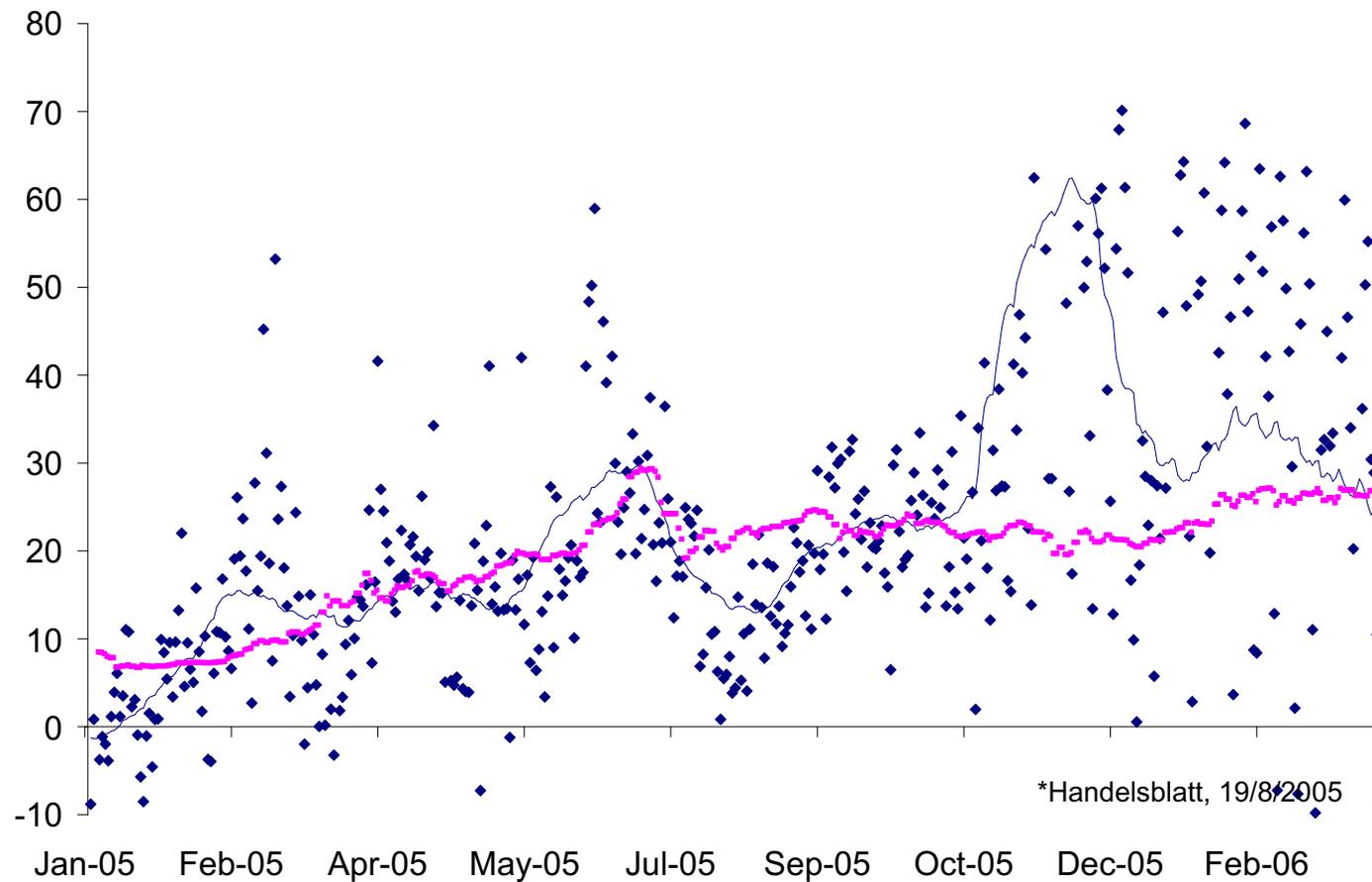
Source: Neuhoff, Ferrario, Grubb, Gabel, Keats (Sept 2006)

- Cap envisaged in NAPII too lax → expected price low → revisit NAPII
- Projections difficult – uncertainty about price likely to remain



Auctioning allowances creates opportunity to set floor price

Impact of CO2 prices on electricity prices: in liberalised markets, generators add opportunity cost of allowances to energy bids.



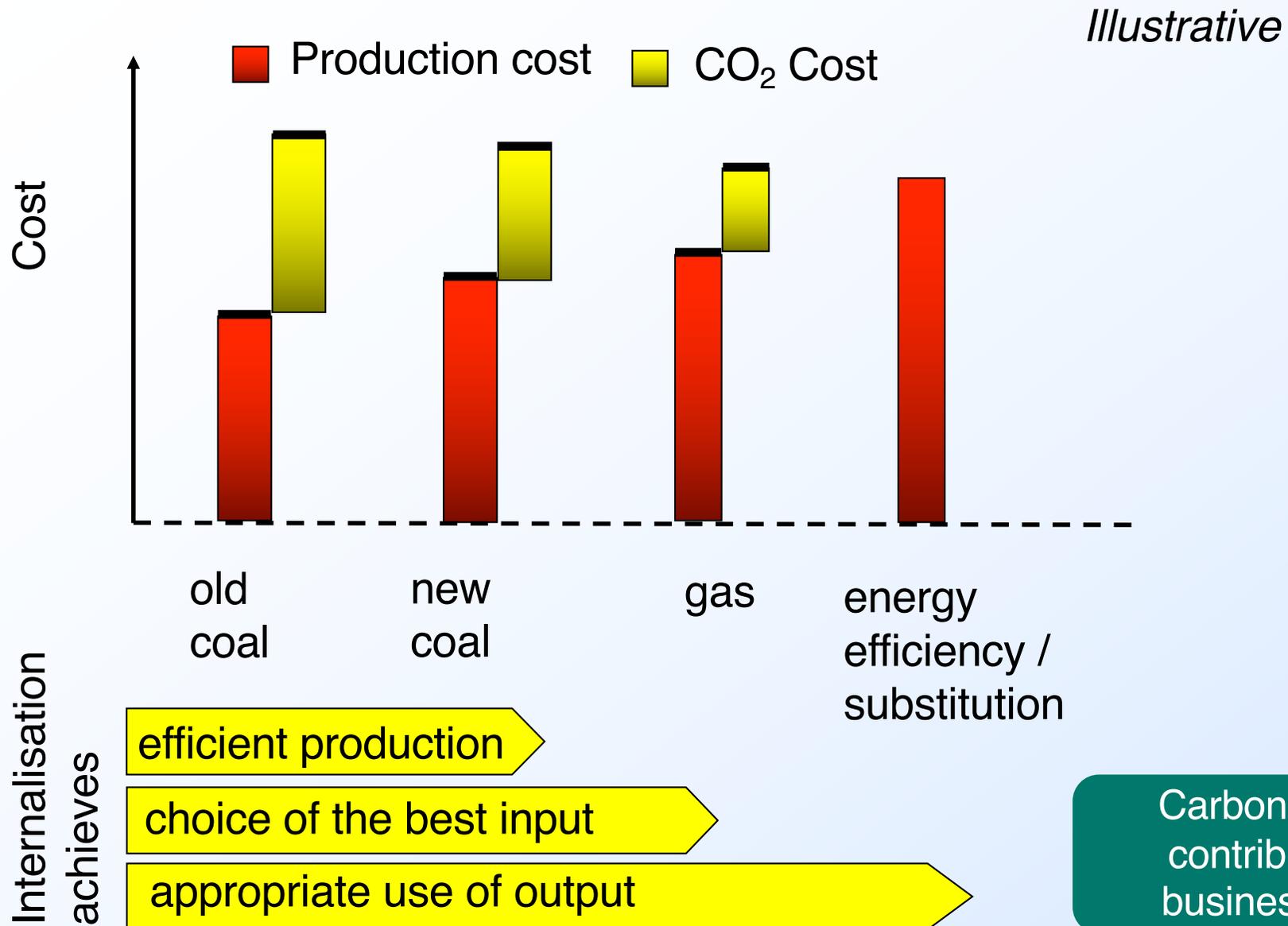
Free allowance allocation resulted in large windfall profits in power sector

Auctioning of allowances captures value for economy

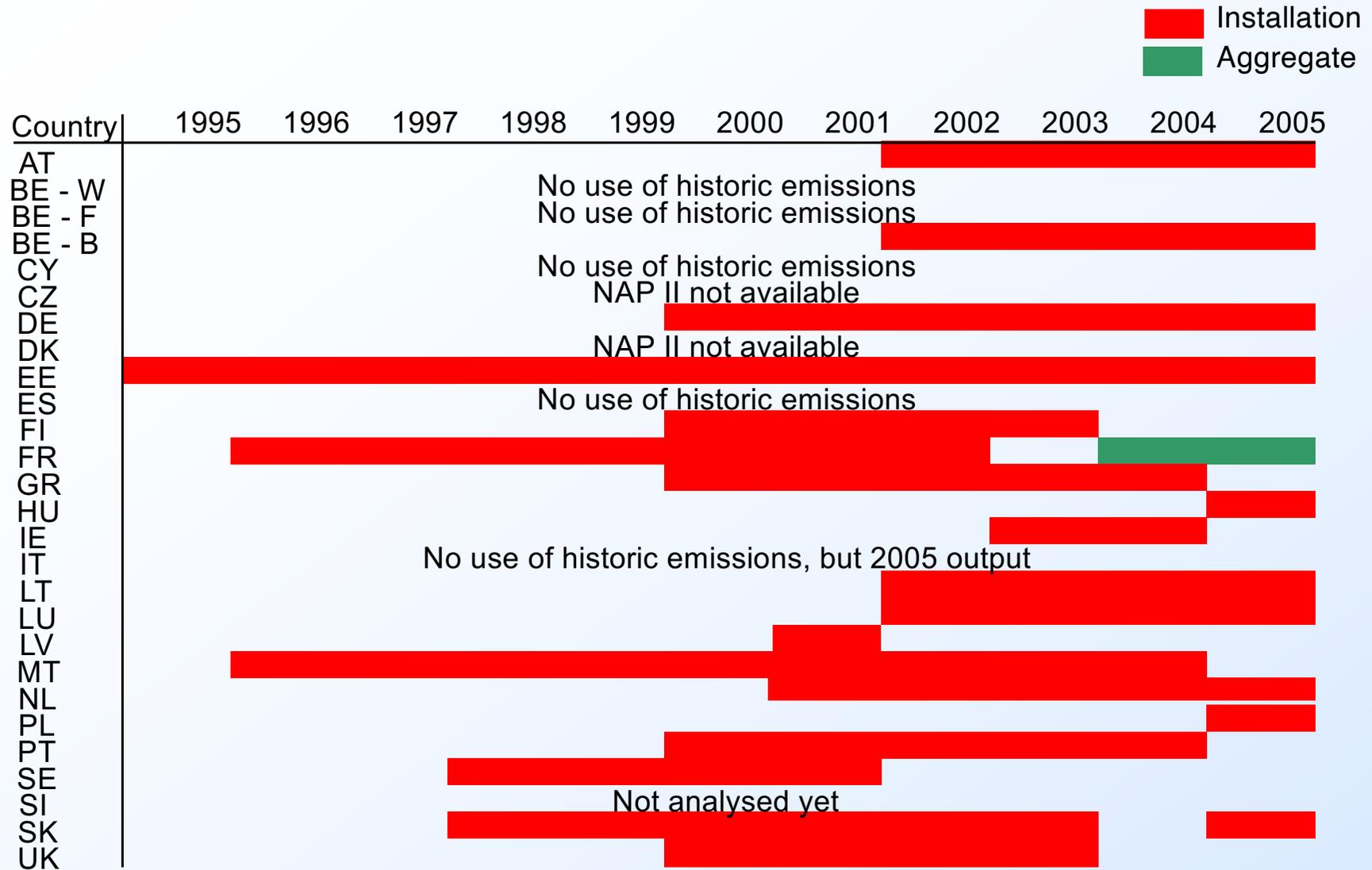
Learnings from EU ETS experience

- 1 Defining targets - bottom up or top down? Rather not bottom up
- 2 Price stability? Auctioning is essential (price floor, windfall profits ..)
- 3 Distortions from free allocation?
- 4 Role of ETS in national policy?

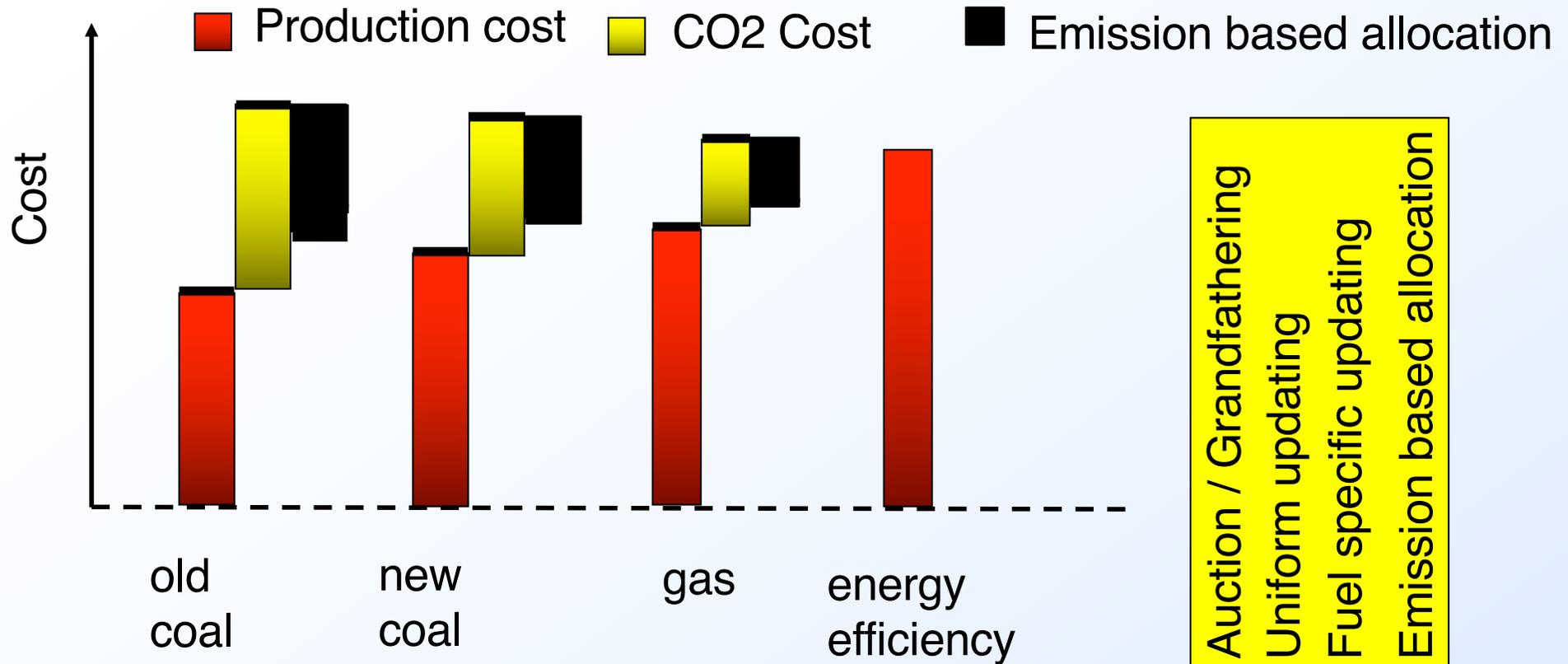
What is the objective of internalizing CO₂ costs?



Allocation to existing facilities: Updating prevalent in phase 2



What is the effect of updating/dynamic allocation?



efficient production

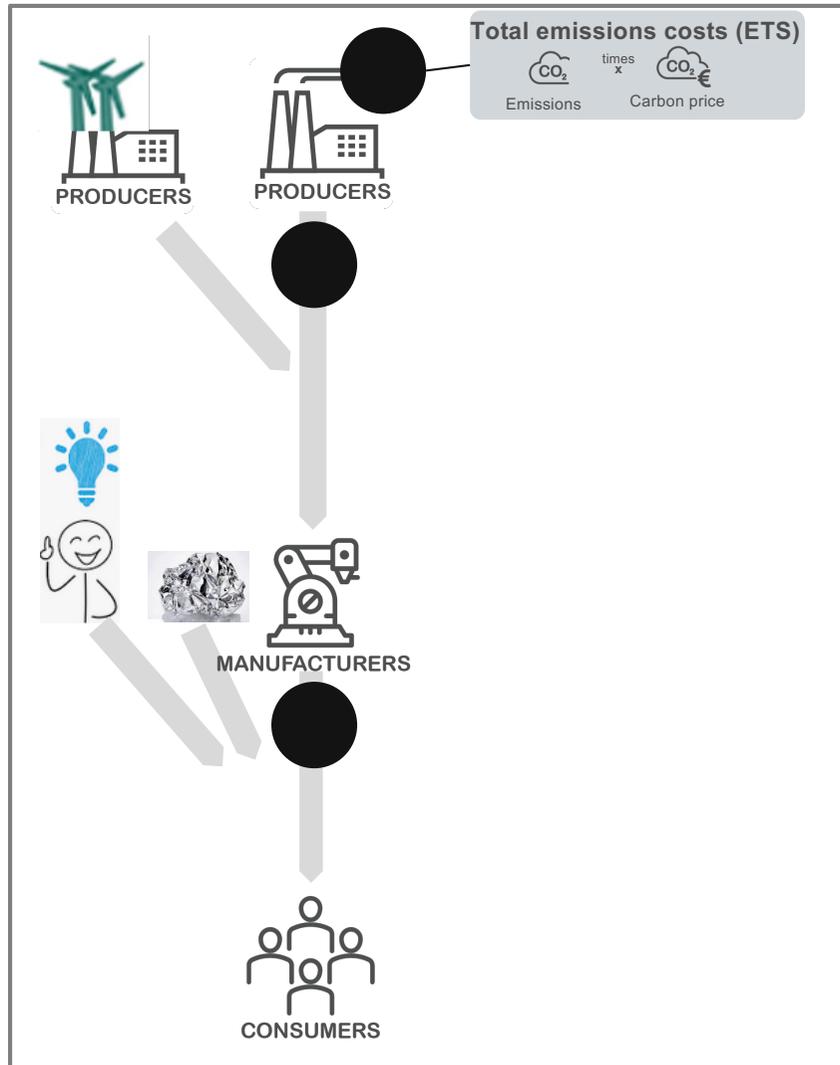
choice of the best input

appropriate use of output

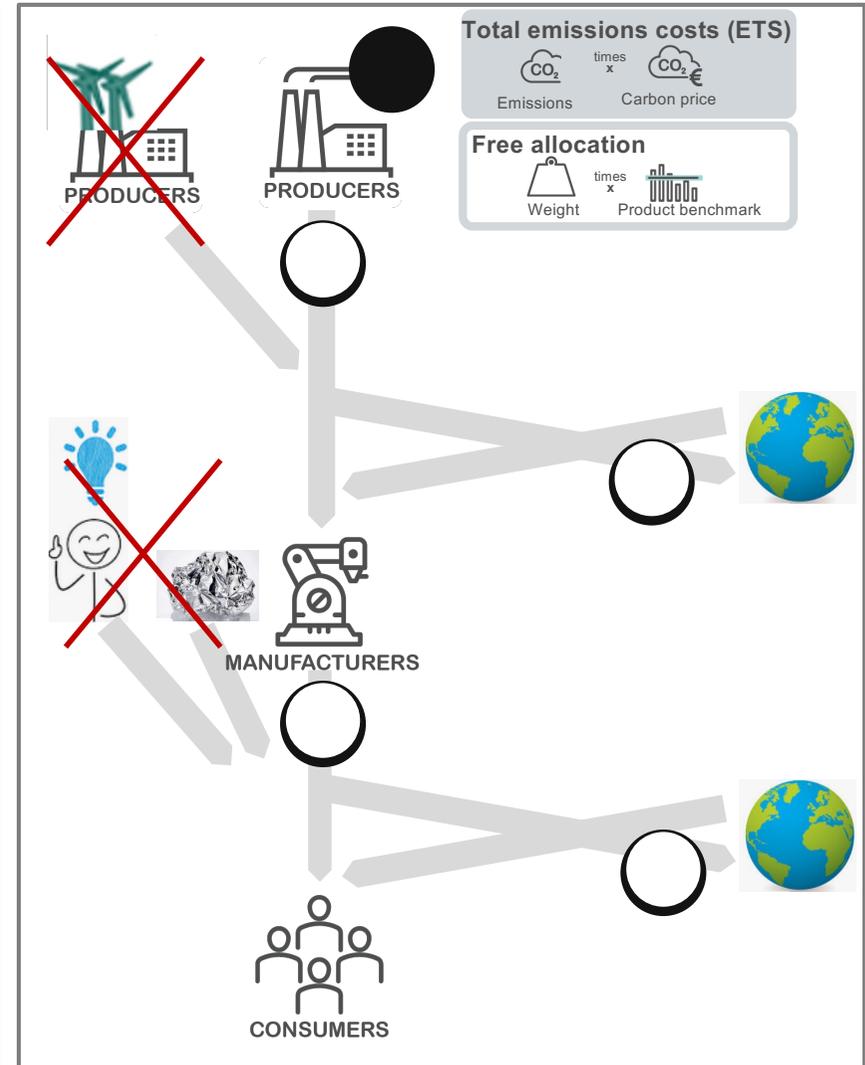
Auction / Grandfathering	✓	✓	✓
Uniform updating	✓	✓	
Fuel specific updating	✓		
Emission based allocation			

What are the challenges of using free allowance allocation in industry?

Desired incentives from carbon pricing



Carbon pricing & free allowance allocation



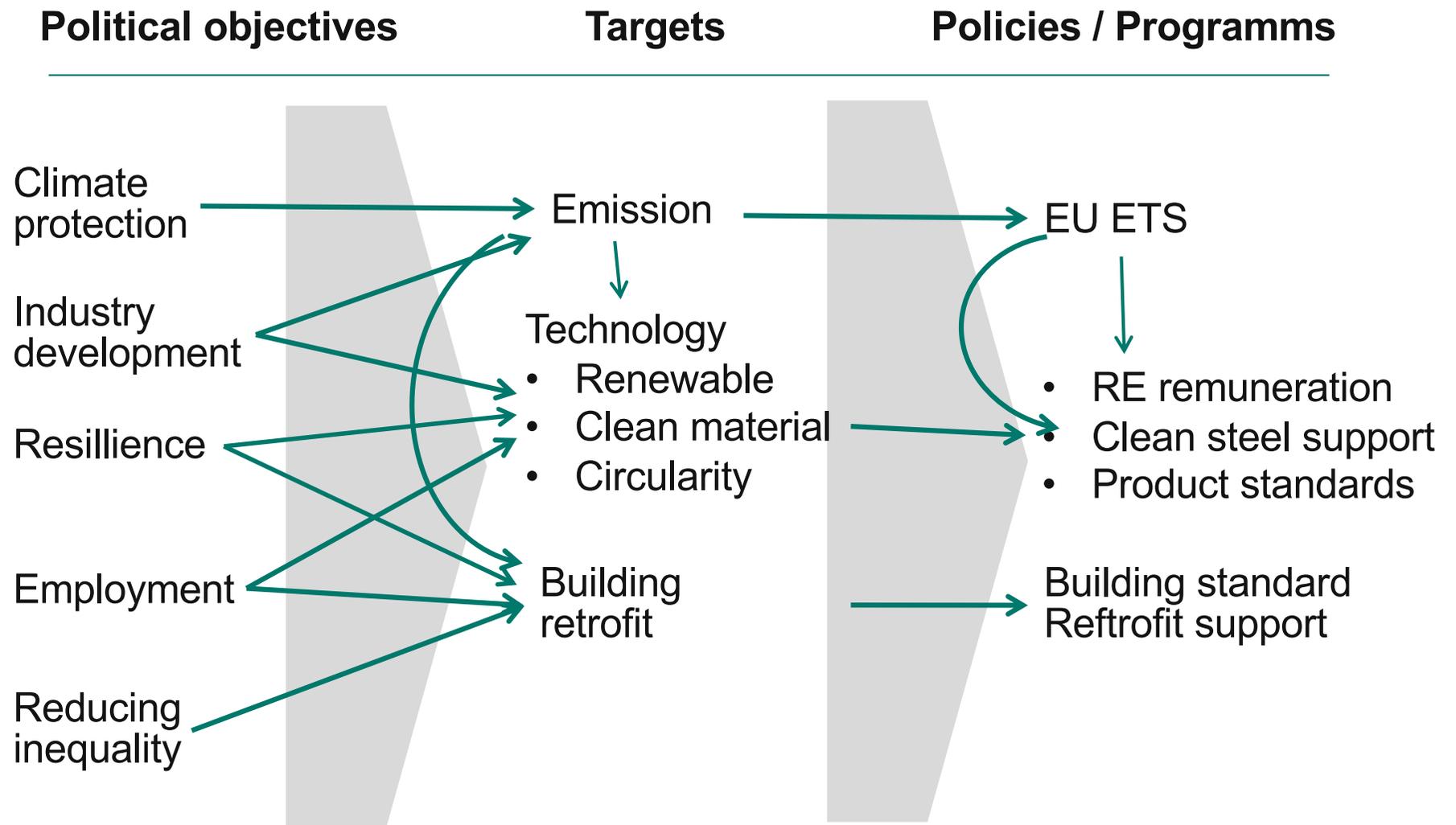
Consider trade – but don't kill carbon price incentives

Learnings from EU ETS experience

- 1 Defining targets - bottom up or top down? Rather not bottom up
- 2 Price stability? Auctioning is essential (price floor, windfall profits ..)
- 3 Effects of free allocation? Benchmarks partially helpful
- ➔ 4 Role of ETS?

Synergies across objectives, targets and policies

Illustration



Learnings from EU ETS experience

- 1 Top down or bottom up? No bottom up target setting
- 2 Price stability? Auctioning is essential (price floor, stability reserve ..)
- 3 Effects of free allocation? Benchmarks partially helpful
- 4 Role of ETS? Realize synergies across policy fields