

Berliner Energietage, 29.4.2015

---

## **Neue Ideen zu strukturellen ETS Reformen: Möglichkeiten und Herausforderungen konsumorientierter ETS-Ansätze**

Karsten Neuhoff

## The challenge: ETS and carbon intensive commodities

- Opportunities for innovation and investment exist along the value chain
- Leakage protection with free allocation limits carbon price in value chain
- Thus EU ETS can only incentivise up-stream efficiency and fuel shift
- Reinforced with dynamic allocation or removal of linear adjustment factor
- Uncertainty about introduction of new policy for abatement in value chain.

- What:
- Charge levy with release of carbon intensive materials for domestic consumption
  - Weight (e.g. tons of steel) \* production benchmark \* ETS allowance price
  - Also covers materials in goods (e.g. steel in cars)
- Why:
- Create incentives in value chain (e.g. to reduce clinker content in cement)
  - Recover value of free upstream allocation to fund climate action
- How:
- Replicate computerised system used for alcohol, tobacco, energy
  - Create liability with production per tone of steel (or other covered material)
  - Acquire liability with import and acquit liability with export
  - Pass liability with on-sale of steel (or good containing steel)
  - Pay levy to national trust fund with steel (containing good) for EU consumption

- Full carbon price along value chain for abatement opportunities
  - implementation at consumption end avoids leakage concerns
- Long-term clarity on allocation at full benchmark level
  - With inclusion of consumption value of free allocation is recovered
- Alignment of interests of different actors
  - Long-term stability to support innovation and investment
  - Basis for joint public-private development of sector road maps

What is needed to unlock CO<sub>2</sub> abatement opportunities?

Why inclusion of consumption and free allocation?

How to implement inclusion of consumption?

Conclusion

# Carbon Control and Competitiveness Post 2020

Karsten Neuhoff, Arjan van Rooij, Misato Sato, Oliver Sartor , Manuel Haussner,  
Andrzej Ancygier, Ian Christmas, Anne Schopp, William Acworth Philippe Quirion,  
Ayse Tugba Atasoy, Bruno Vanderborcht , Benedikt Mack, Nagore Sabio, Jean-Pierre Ponsard



Radboud University Nijmegen



Hertie School  
of Governance



THE LONDON SCHOOL  
OF ECONOMICS AND  
POLITICAL SCIENCE



FAU

FRIEDRICH-ALEXANDER  
UNIVERSITÄT  
ERLANGEN-NÜRNBERG  
FACHBEREICH  
RECHTSWISSENSCHAFT



Centre for  
Climate Change  
Economics and Policy

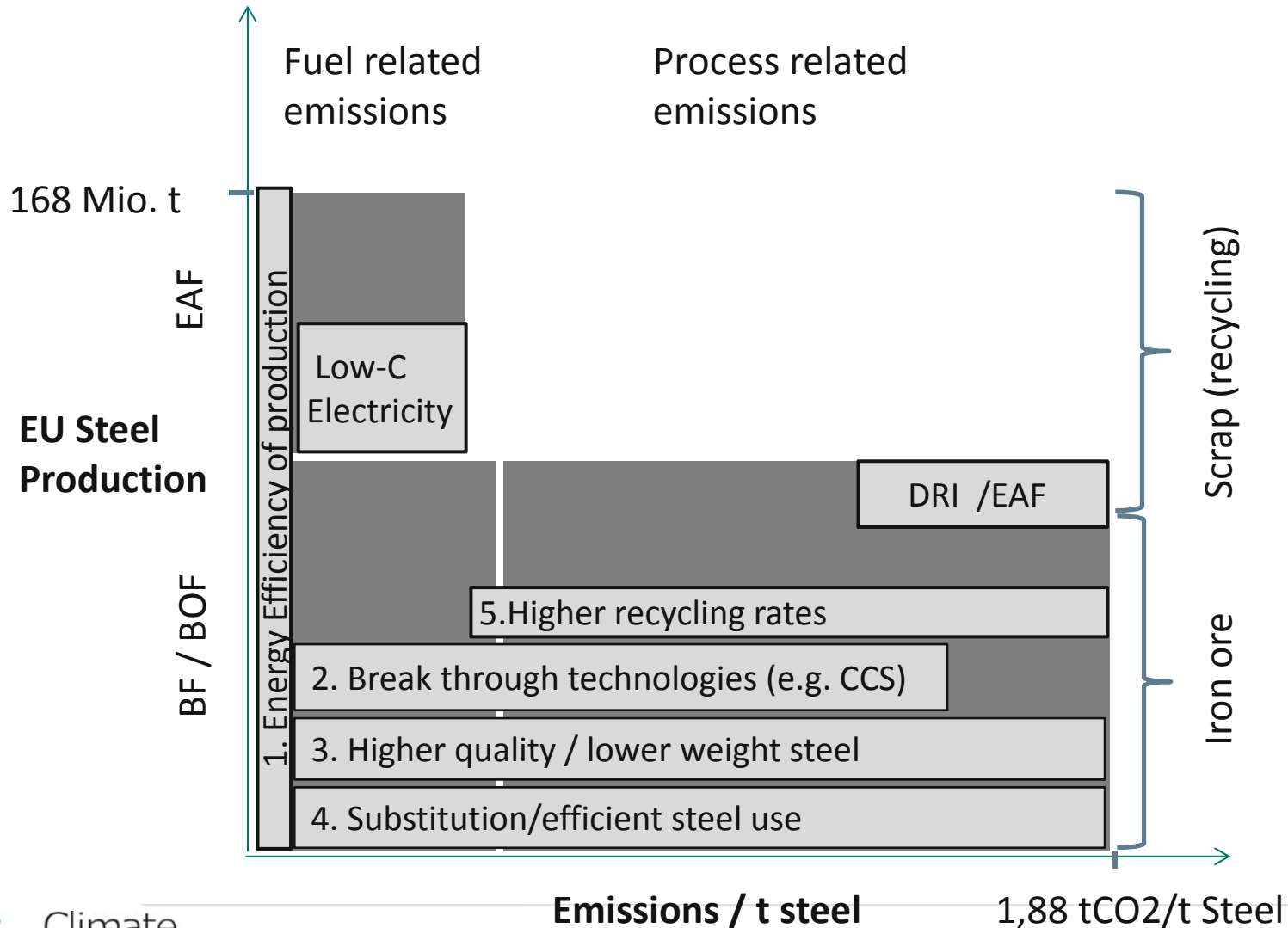


Grantham Research Institute on  
Climate Change and  
the Environment



# CO<sub>2</sub> abatement opportunities in steel

*Illustration*



## 1

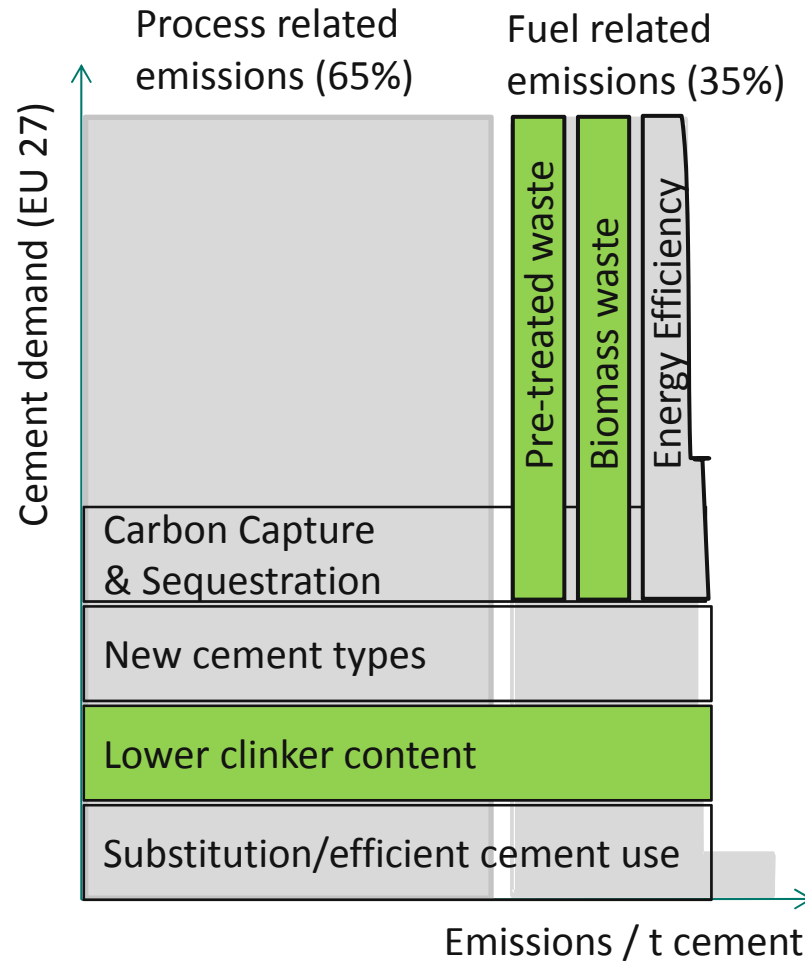
## Policy requirements for investment in modernization

	Strengthening ETS	Carbon price along value chain	Engagement of all actors	Funding of technology innovation
Unlocking efficiency potential	X			
Business case for break-through technologies like CCS	X	X		X
Higher value steel products and efficient use	X	X	X	X
Increasing recycling rates			X	



# 1

## CO<sub>2</sub> abatement opportunities in cement



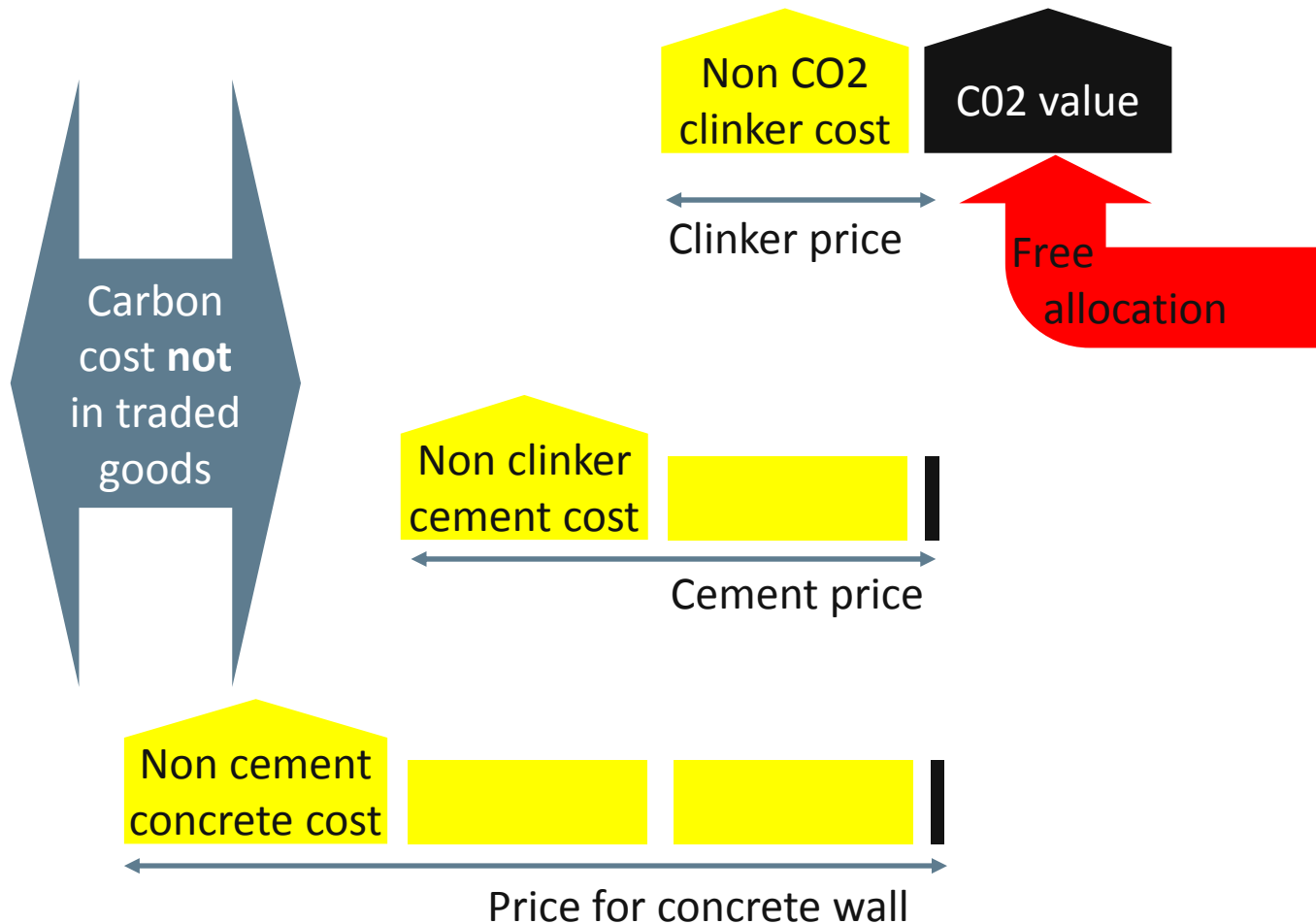
## 1

## Policy requirements for investment in modernization

	Strengthening ETS	Carbon price along value chain	Engagement of all actors & regulation	Funding of technology innovation
Biomass and fossil waste	x		x	
Unlocking efficiency potential	x			
Clinker substitution	X	x	x	
Business case for break-through technologies like CCS	x	x		x
Low-carbon cement and efficient use (building practices, etc.)	x	x	X	x

2

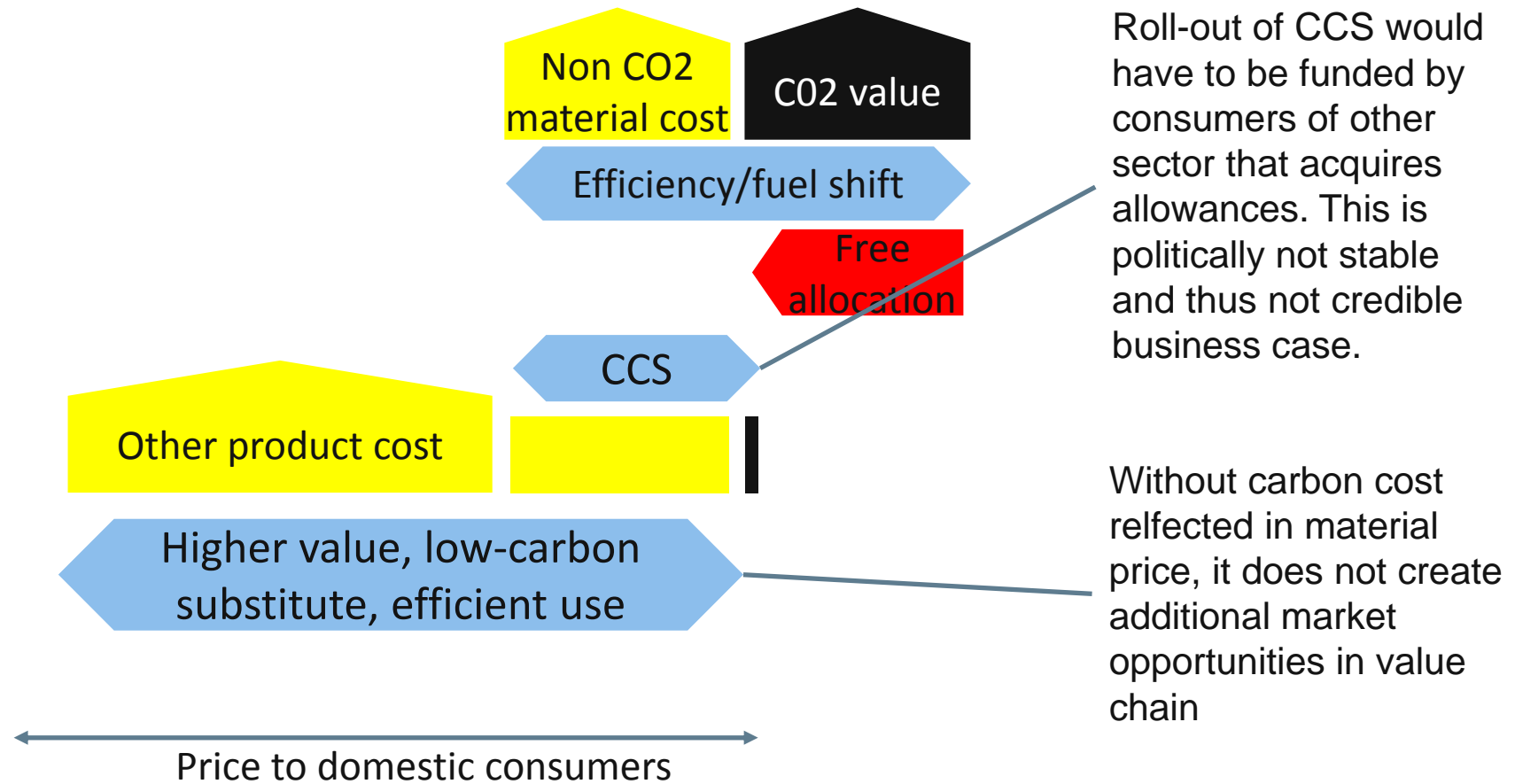
## What is the economic effect of dynamic allocation?



Carbon costs are not reflected in prices of intermediate and final goods – other than for carbon intensity above allocation.

## 2

# Leakage protection with (dynamic) free allocation:

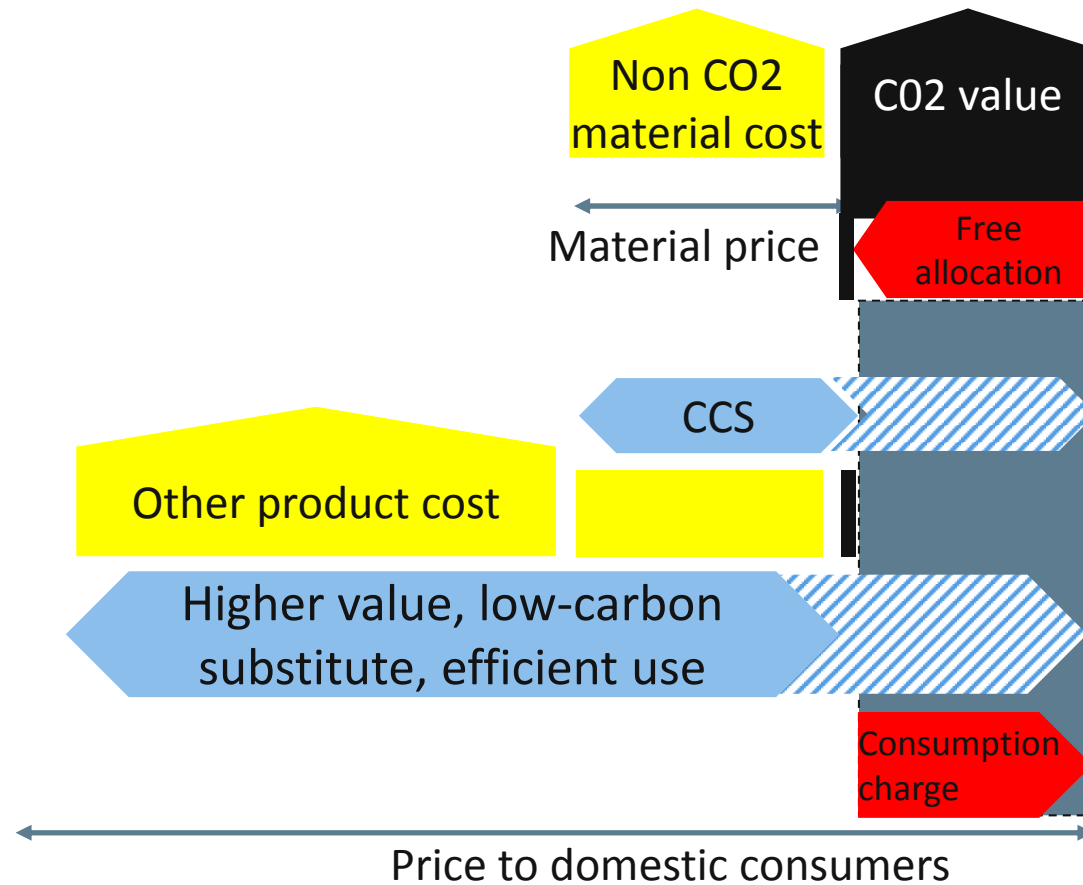


Incentives for mitigation other than for upstream efficiency are largely eliminated.

- What if, in addition to free allocation at the benchmark level, we add on a CO<sub>2</sub> charge for producer of benchmark product?
- To avoid distortions of competition, the liability for this charge could be deferred down the value chain to final product consumer (following example of excise liabilities on alcohol, tobacco, energy).
- Computerised system in place used for alcohol, tobacco ....

3

## Solution: Inclusion of consumption in ETS to complement dynamic free allocation



Thus ET can deliver the full incentives for all mitigation opportunities.

# 4

## Combination avoids need for linear reduction factor

- Without inclusion of consumption free allocation reduced:
    - to retain some incentives for abatement in value chain
    - to secure auction revenue to fund climate action.
  - Inclusion of consumption ensures
    - full incentives across the value chain
    - recovers value forgone at auctions due to free allocation
- > No linear reduction factor is required
- > Long-term clarity on allocation volumes.

- Create liability with production in/import to territory
  - Measured in tons of steel, clinker .. (not steel type)
  - Embodied in imports (e.g. steel in cars above threshold)
- Trace liability with movement of material
  - Analogous to EMCS (Excise movement & control system)
  - Electronic reporting to national authority by both parties ensures correct transfer of liability
  - Liability vanishes with export from territory
- Levy charged with release for domestic consumption
  - At primary production benchmark \* ET allowance price
  - To national trust fund for climate action



# 6

## Combination is environmental regulation not a tax

- It is part of ET to deliver incentives towards environmental objective
- Charge is linked to carbon (bearing component) of product
- Revenue used to pursue climate action that was supposed to be funded with (forgone) auction revenue under ET
- Some revenue used to retire allowances to compensate for net-imports of carbon embodied in trade
- Level of charge based on ET allowance price
- Charge instead of obligation to surrender allowances for ease of administration

## **WTO perspective**

- Charge for final consumer irrespective of origin and process
- If implemented without discriminatory components not WTO relevant

## **Climate policy perspective**

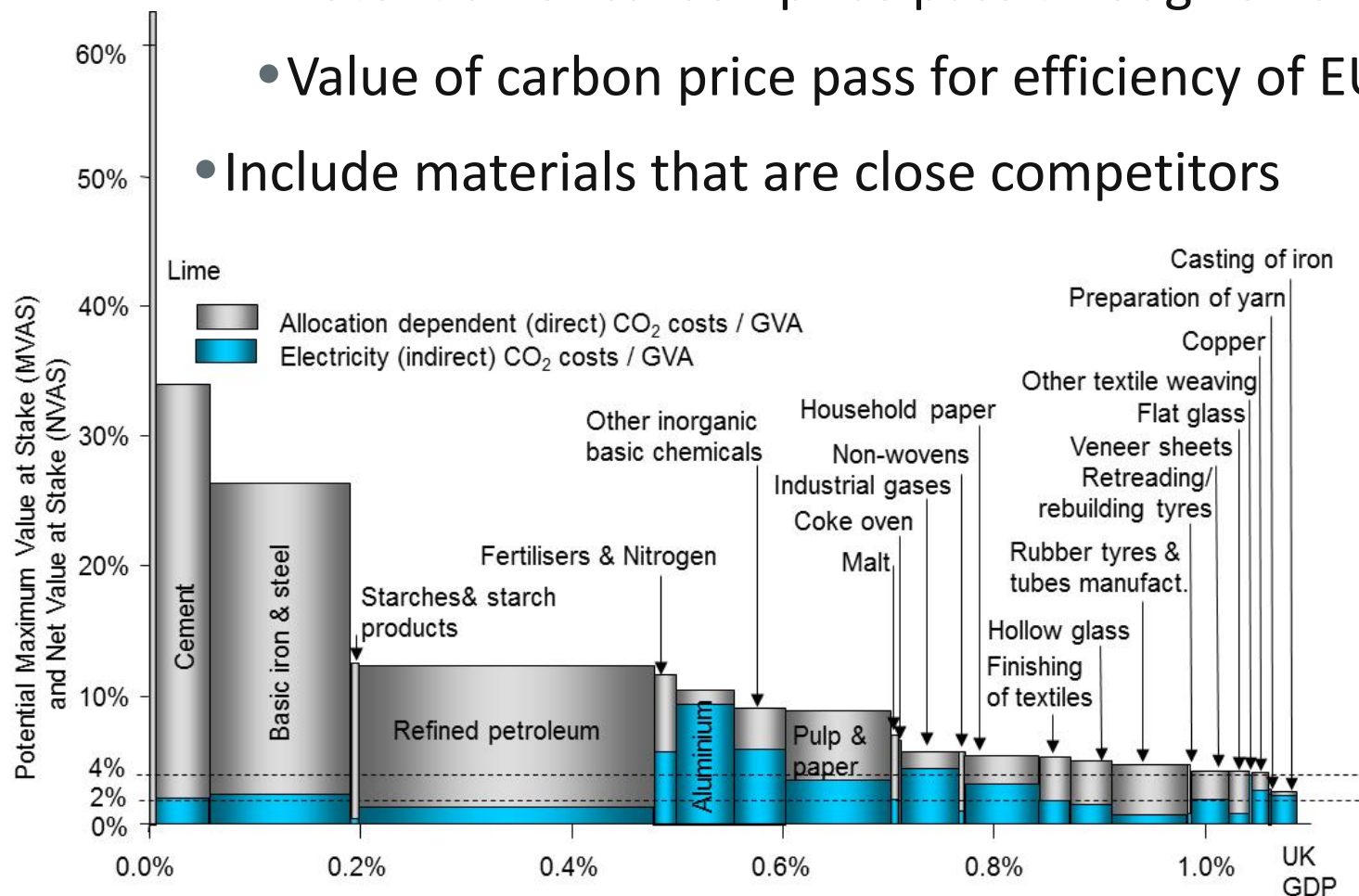
- Directly reflects aim to reduce consumption of CO<sub>2</sub>
- Paid by consumers not at border

## **Explored also in other regions for carbon intensive materials**

- to understand common challenge and share experience
- to identify possible aspects for coordination/cooperation

## For ease of implementation: Focus on few materials

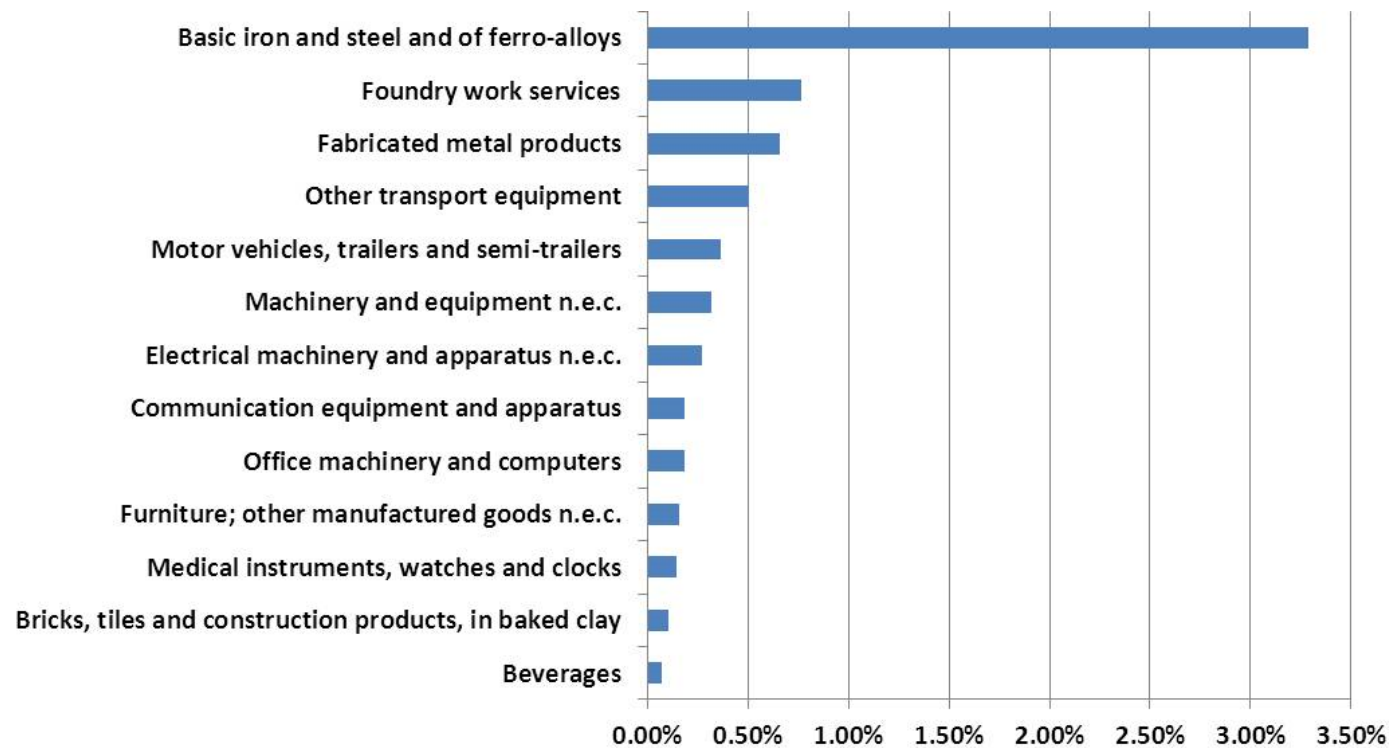
- Internationally tradable carbon intensive materials:
  - Potential for carbon price pass through small/uncertain
  - Value of carbon price pass for efficiency of EU ETS high
- Include materials that are close competitors



## 8

## For ease of implementation: De minimis rule

- Domestic: self-selection whether or not to handle material (containing products) under levy suspension arrangements
- Imports if pre-defined categories of Standard International Trade Classification (SITC) or at self reported or at average level



## **Facilitates investment in all abatement opportunities:**

- Establishes full carbon price to preserve incentives for innovation and investment in all modernization opportunities
- Costs allocation to consumers presents a credible perspective for breakthrough technologies

## **Long-term stability for investment business case & credible leakage protection:**

- Free allocation at full realistic benchmark without cross-sector reduction factor possible as full carbon price signal retained and auction revenue recovered.
- Allocation at recent production volume matches consumption charge.

## **Simple policy framework for decision makers:**

- Without conflicting interests, less uncertainty about future allocation volumes.
- Strategic decisions can assume full carbon price signal and no leakage risk  
(with free allocation and consumption charge only administrative details)

Berliner Energietage, 29.4.2015

---

## **Neue Ideen zu strukturellen ETS Reformen: Möglichkeiten und Herausforderungen konsumorientierter ETS-Ansätze**

Karsten Neuhoff

Ein Vortrag im Rahmen der

2015

Berliner

ENERGIETAGE

**Energieeffizienz in Deutschland**

Die Leitveranstaltung für **Energieeffizienz in Deutschland** fand in diesem Jahr vom 27. bis zum 29. April 2015 im Ludwig Erhard Haus in Berlin statt.

Weitere Informationen und alle Vortragsunterlagen zu rund 300 Vorträgen aus 52 Veranstaltungen im Rahmen der Berliner Energietage 2015 finden Sie unter

**[www.berliner-energietage.de](http://www.berliner-energietage.de)**

Eine kommerzielle Weiterverbreitung darf nur nach schriftlicher Genehmigung der Rechteinhaberin erfolgen. © 2015 Referent(in) / Veranstalter(in)

Diese Seite darf nicht entfernt werden. Für die in diesen Unterlagen bereit gestellten Informationen kann keine Haftung übernommen werden. Den Berliner Energietagen wurden diese Folien durch die Veranstalter(in) / den Referent(inn)en freundlicherweise zur Verfügung gestellt. Bei Fragen oder Ansprüchen kontaktieren Sie diese bitte direkt.