EU ETS and competitiveness: dealing with carbon leakage

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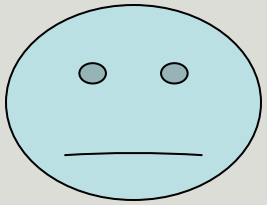
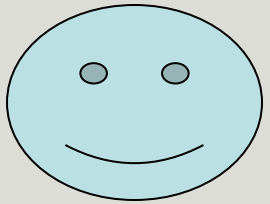
Enterprise and Industry

Border Measures



- Considerable administrative cost
- Ensure conformity with WTO and UNFCCC principles
- Avoid retaliation
- Negative effect on Copenhagen negotiations
- Welfare effects?

Co-operative sectoral approaches



- Focus on the development, application and diffusion, including transfer of technologies, best practices and processes that control, reduce or prevent GHG emissions;
- Foster initiatives in R&D, capacity building and technology cooperation (covering) all phases of the technology cycle;
- Include measures to overcome barriers to development, transfer and deployment of technology;

3 Studies

1. “Proof of concept”: assess merits of SA as a tool to engage business to act
2. “Governance” – stakeholders involvement
3. “Comparability of efforts and costs to industry”

European Commission's carbon leakage assessment: Background

- ETS Directive (Dec. 2008): Sectors at risk of carbon leakage will receive ***100% free allocations based on (AMBITIOUS!!!) benchmarks***.

- EC undertook comprehensive assessment of 258 NACE 4-digit sectors covering Mining and Manufacturing activities and specific subsectors where needed.

How have industrial sectors been assessed ?

- **Quantitative evaluation of indicators** (*Article 10a Paragraphs 14-15-16):*
  - Intensity of trade with third countries.
  - Direct and indirect additional costs induced by the implementation of the directive as proportion of gross value added.

- **Qualitative assessment** (*Article 10a Paragraph 17*) **taking into account :**
  - Extent to which it is possible to reduce emission levels
  - Current and projected market characteristics
  - Profit margins

When is a sector deemed at risk ?

- Quantitative assessment
  - Trade Intensity over 30% OR
  - CO_2 cost over 30% of GVA OR
  - Trade Intensity over 10% AND CO_2 cost over 5% of GVA
- Qualitative assessment at NACE 4-digit level
  - No threshold, expert judgement based on economic and technological assessment

What was the reference period ?

- Trade: 2005-2007 / 2004-2006 / 2006-2007

	2004	2005	2006	2007
Turnover	SBS COMEXT	SBS COMEXT	SBS COMEXT	COMEXT
Exports	COMEXT	COMEXT	COMEXT	COMEXT
Imports	COMEXT	COMEXT	COMEXT	COMEXT

- Cost increase: 2005-2006

	2004	2005	2006	2007
GVA	SBS	SBS	SBS	
Direct CO2	MS	CITL MS	CITL MS	CITL MS
Indirect CO2	MS	MS	MS	MS

How has Trade Intensity been measured

- Directive defines trade intensity as:

  "*ratio between the total value of exports and imports to third countries and the total market size for the community (annual turnover plus total imports from third countries)"*

- Data sources: EUROSTAT COMEXT and SBS databases

- Key issue: M&X needed to be compatible with turnover data
  → annual production sold (not straight forward – different data domains!)

- Fallback: turnover from SBS

How have CO2 costs been measured?

- Direct emissions:
  - process emissions
  - combustion installation related emissions
- Indirect emissions: cost increase due to CO2 cost pass-through by power sector

- … compared to gross value added at factor cost (GVA)

Direct Emissions in CITL

- CO2 emissions for each current ETS installation
- Emissions and GVA of an installation have been allocated to the same NACE sector
- Results of the matching process >95% complete. Emissions not matched do not impact on the position of any given sector relative to thresholds
- Challenge:
  - Matching of installations with NACE sector (AMADEUS, Dan&Bradstreet, Kompass; MS; Industry)
  - No emission data for new (“2013”) ETS sectors and gases
  - Sectors with a substantial number of small installations that are not included in the scope of the EU-ETS
  - Sectors with "opt-outs" or temporary exclusions.

Data Sources other than CITL

- Process emissions data from the European Community’ s greenhouse gas inventory.
  - matching of activities with NACE sectors
- Direct CO2 emissions, fuel consumption, (limited) process emissions data by Member States
- Challenge on indirect cost: Data on electricity not available!!!
- Electricity consumption reported by MS

Indirect CO_2 Cost

- Primary data source: MS data on net electricity consumption in volume (MWh)
- Calculation of corresponding emissions: Average CO2 content of the EU-27 electricity mix (0.465 CO2 tons per MWh) used to estimate cost increase due to purchasing of allowances by power sector.
- Not all MS reported data but ratios calculated for reporting MS assumed to be representative of EU27 as a whole
- Issues
  - Relevant emission factor
  - NET electricity consumption: autogeneration & double counting
  - Data coverage & representativity

Gross value added (GVA)

- Data sources: EUROSTAT SBS database
- Challenges:
  - Ensure consistency with emissions data
  - Not readily available at company level
- Ad-hoc aggregates of GVA estimates < EU-27

Quantitative assessment results

- Out of 258 sectors, 146 meet the criteria at NACE 4-digit level
  - Most (117) sectors show a high trade intensity (>30%)
  - Others (27) have both significant CO2 cost and trade intensity
  - Two sectors qualify through significant CO2 cost alone (>30%)

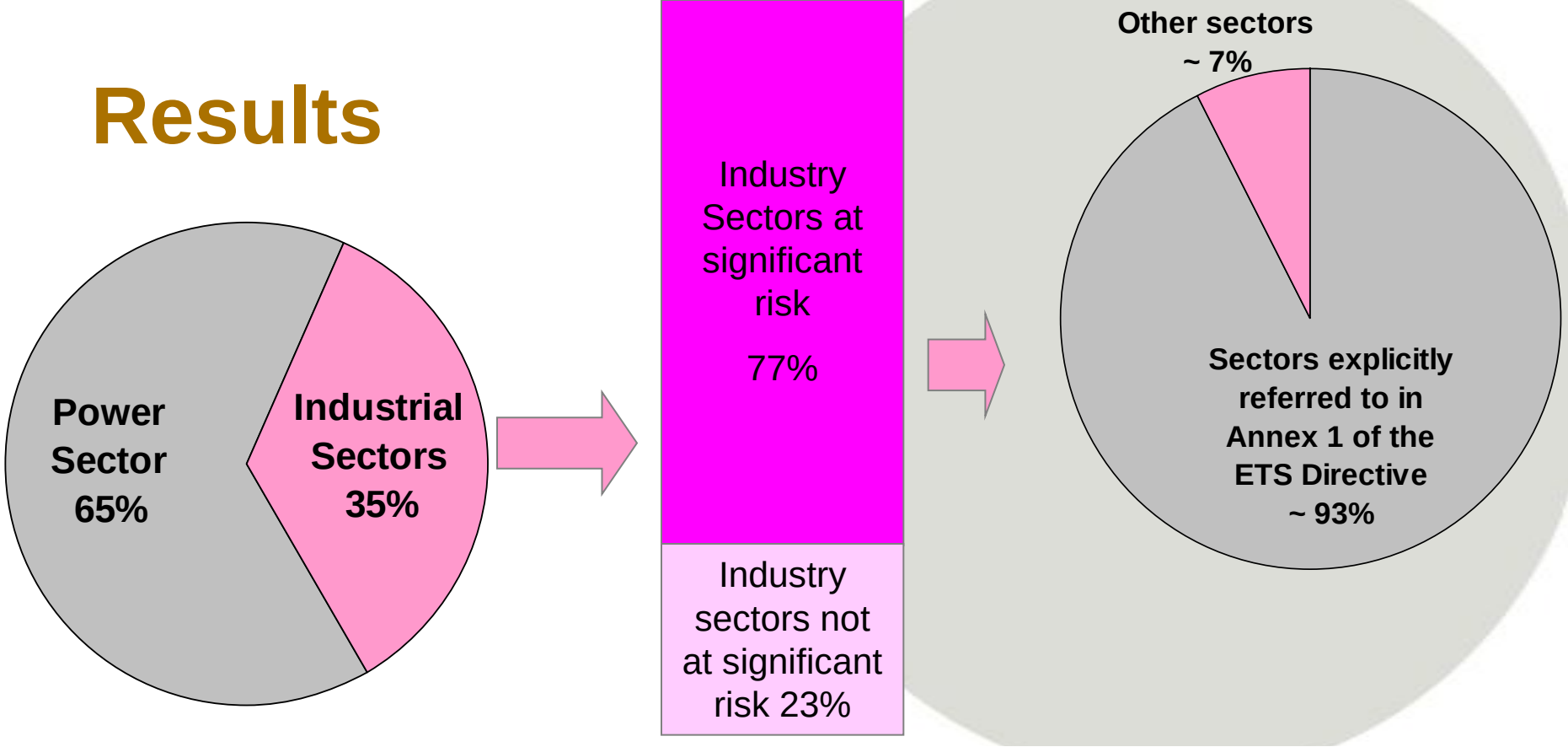
Sectors quantitatively assessed at a higher level of disaggregation

- **WHY:** Assessment at NACE 4-digit can be missing specific products or groups of products which would meet the thresholds for the quantitative criteria laid down in the Directive.
- **HOW:** Same Trade Intensity and CO2 Cost indicators and thresholds as for NACE 4-digit sectors.
- 9 product groups deemed at risk of carbon leakage, including: Reinforced Glass Fibres; Hydrogen, Nitrogen and Oxygen

Qualitative assessment results

- **What triggered a qualitative assessment**
  - sectors close to the thresholds,
  - absence of data for one of the indicators (ex.: casting sectors → no trade data),
  - doubts about accuracy or coverage of quantitative data (Ex.: discrepancy GVA vs. emissions)
  - integrated production
- **Selective, clear EXCEPTION to the rule:** only 7 out of 94 sectors that did not meet the thresholds were assessed.
- 5 sectors deemed at risk of carbon leakage, including plastics in primary forms and casting of light metals

Results



- A majority of emissions in ETS will be auctioned
- Free allowances focused on sectors explicitly referred to in Annex 1
- The environmental objectives not compromised at all, as cap is not influenced, only distribution of efforts!!!
- Emission reductions are autonomous and unilateral, and not conditional like under border measures!

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