# Identifying sectors deemed to be exposed to a significant risk of carbon leakage

## Progress since the last stakeholder meeting

J. Barreiro-Hurle - I.Juergens
J. Bemelmans – M. Przeor - A. Vasa

**European Commission**
Enterprise and Industry

# What has been analysed?

Sectors are understood as NACE sectors.

NACE Rev. 1.1 is used due to reference period

Data has been obtained for all sectors at 4-digit level and therefore analysis has been undertaken at this level

For some sectors where specific sub-sectors' trade intensity or CO2 cost would be masked by aggregation, analysis at a more disaggregated level has been undertaken (PRODCOM 6-digit or 8-digit level)

# What was the reference period ?

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

| | 2004 | 2005 | 2006 | 2007 |
|---|---|---|---|---|
| **Turnover** | SBS<br>COMEXT | SBS<br>COMEXT | SBS<br>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<br>MS | CITL<br>MS | CITL<br>MS |
| **Indirect CO2** | MS | MS | MS | MS |

# Trade Intensity (TI)

- EU27 Turnover

  Mainstream – Annual Production sold in COMEXT 2005-2007

  If not available – SBS Turnover

- Exports and imports from third countries

  Mainstream – Extra EU27 X and M from the Annual Production sold domain in COMEXT 2005-2007

  If not available – EU27 SINCE 1999 CN (SIMULATED) 2005-2007

# Trade Intensity (TI)

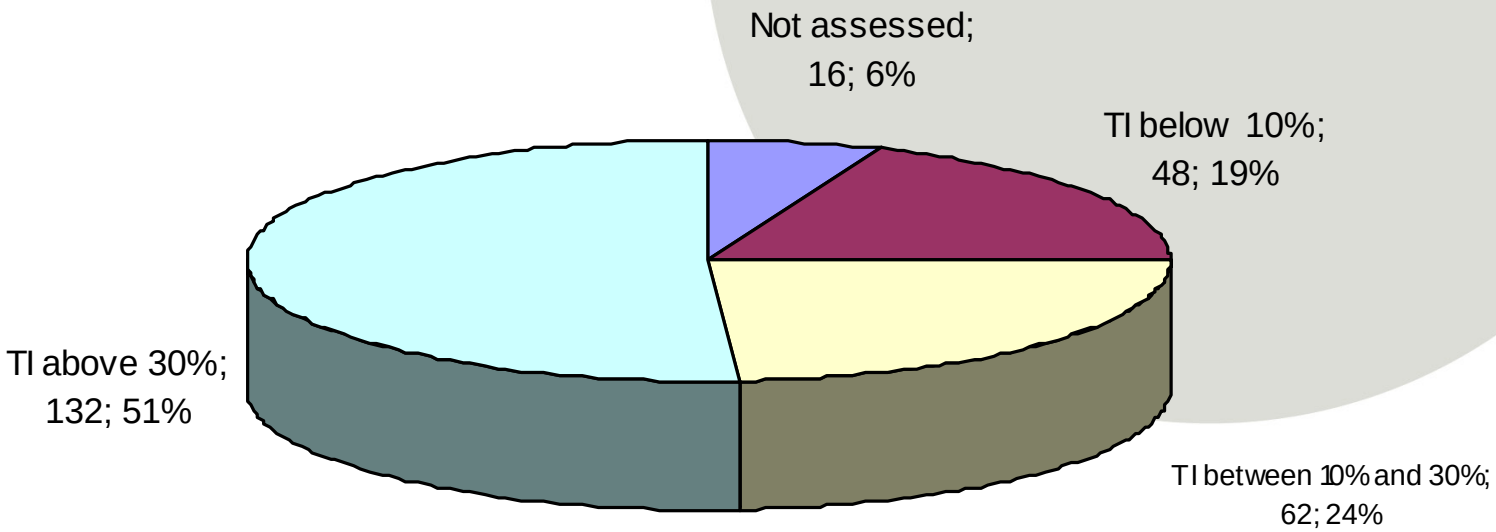
- Exceptions

  4-digit sectors for which no trade is reported have been analysed at 3-digit level.

  Some sectors cannot be assessed under this criterion due to lack of data

# Trade Intensity (TI)

- Summary of obtained results:



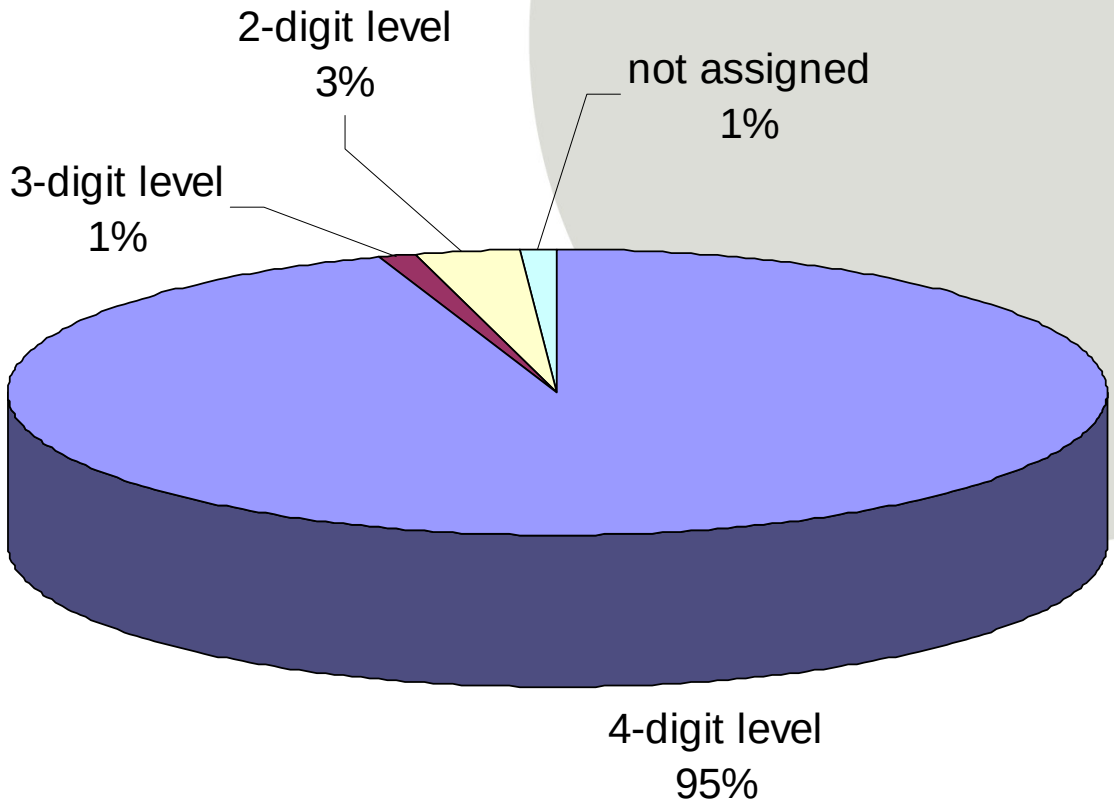
# $CO_2$ cost increase: Direct Emissions in CITL

Matching of installations and their emissions with NACE sectors

- Emissions and GVA of an installation have been allocated to the same NACE sector

Results of the matching process not 100% complete but emissions not matched do not impact on the position of any given sector relative to thresholds.

# Assignment of CITL emissions and installations to sectors



# Data Sources other than CITL:

## Member State reporting and Process Emissions from Greenhouse Gas Inventories

- Direct CO2 emissions, fuel consumption, (limited) process emissions data and electricity consumption reported by Member States
- Process emissions data from the European Community' s greenhouse gas inventory.

# The Rationale for Using Member State Data for Direct Emissions

- CITL data is not suitable for all sectors -

- Sectors entering the scope of the EU-ETS only as of 2013.
- Sectors with a substantial number of small installations that are not included in the scope of the EU-ETS or sectors concerned by "opt-outs" or temporary exclusions.
- Sectors which had no emissions identified in CITL but for which MS had reported emissions the MS data has been used to determine their direct emissions.

# Confidentiality

- **Addressed how?**
  Response to confidentiality concern: EUROSTAT received encrypted, confidential data and processed it.

- **Applicable when?**
- Data for a sector is treated as confidential in line with relevant regulation on processing of statistical data.
- Confidential already if one of the parameters (direct cost, indirect cost or GVA) is confidential (otherwise estimate of other confidential parameters possible).

- **Presented how?**
- “Confidential data” indicated relative to the threshold, i.e. as <5%, >5% <30%, or >30%.

# Representativity

- Data was provided by all member states, except for Cyprus, Malta, Luxemburg, Estonia, Greece, and Hungary

- Measure of representativity of available data: GVA of member states that delivered data for a given sector divided by total EU-27 GVA for that same sector.

- Average representativity for sectors where MS data was used, is >66%.

# Process emissions I

- Most MS did not report process emissions data

→ European Community's greenhouse gas inventory (inventory 2005 and 2006, submission 2008 v1.1).

- The relevant greenhouse gases for the purpose of this directive are CO2, N2O and PFC

# Process Emissions II: activities, sectors, gases

| Process Emissions – average for years 2005 and 2006 | | $CO_2$ | $N_2O$ | PFC |
|---|---|---|---|---|
| Activity specified in the Inventory | Nace-4 code | - $CO_2$ equivalents (1000 t) - | | |
| **A. Mineral Products** | | | | |
| Soda Ash Production and Use | *24.13* | x | | |
| **B. Chemical Industry** | | | | |
| Ammonia Production | *24.15* | x | x | |
| Nitric Acid Production | *24.15* | | x | |
| Adipic Acid Production | *24.14* | x | x | |
| Carbide Production | *24.66* | x | | |
| **C. Metal Production** | | | | |
| Aluminium Production | *27.42* | x | | x |

- **Data Source:** TABLE 2(I) SECTORAL REPORT FOR INDUSTRIAL PROCESSES, Inventory 2005 and 2005, Submission 2008 v1.1, http://www.eea.europa.eu/publications/technical_report_2008_6

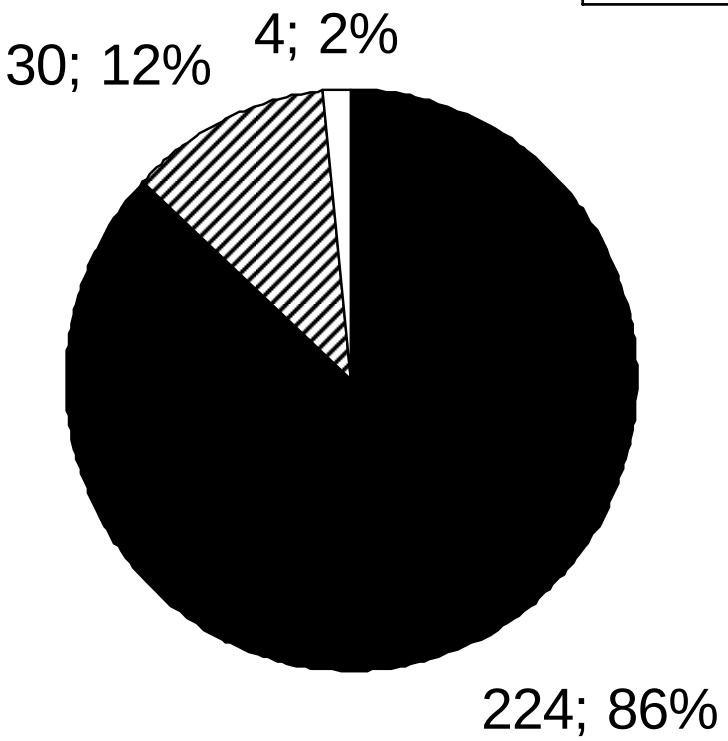
# Indirect emissions

- **Data source:** not covered by CITL and not available at EUROSTAT→MS data.
- **Representativity:** based on the GVA of member states that delivered data for a given sector, divided by total EU-27 GVA for that same sector.

| Data representativity – Share of EU-27 GVA… | Number of NACE4 sectors | % |
|---|---|---|
| …<33% | 47 | 18 |
| …>33% and < 66% | 165 | 64 |
| …>66% | 46 | 18 |

# Results

| | Total CO2 cost over GVA… | | | |
|---|---|---|---|---|
| | … <5% | … >= 5% and < 30% | … >= 30% | Total |
| No. of Sectors | 224 | 30 | 4 | 258 |




■ … <5%
▨ … >= 5% and < 30%
□ … >= 30%

Sectors and their CO2 cost relative to the thresholds: no. of sectors and percentage

## Obtaining the results of this assessment would have been impossible without the collaboration of:

DG ENTR colleagues (Directorates F & G)

EUROSTAT (Mr. E. Pongas; Ms. P. Sneijers and Mr. B. Williams)

Member States

Industry Associations and individual members

# Identifying sectors deemed to be exposed to a significant risk of carbon leakage

## Progress since the last stakeholder meeting

J. Barreiro-Hurle - I.Juergens
J. Bemelmans – M. Przeor - A. Vasa

**European Commission**
Enterprise and Industry