

# The role of benchmarking in EU ETS



***ECCP II WG on EU ETS review***

*22 May 2007*

*Tomas Velghe, Belgium*



# Content

1. distribution of EU ETS emissions among Annex I-activities
2. the role of benchmarking in determining sectoral caps
3. the role of benchmarking in individual allocation methodologies



# To begin with

distribution of EU ETS  
emissions among Annex I-activities



## Distribution of EU ETS emissions among Annex I-activities

sector	n° of sites which are in emissions range (emissions relate to 2006)					sites	allocation 2006	emissions 2006	% in total emissions
	< 25 kton	> 25 kton < 0,1 Mton	> 0,1 Mton < 0,5 Mton	> 0,5 Mton < 1 Mton	> 1 Mton				
combustion > 1 Mton CO2	0	0	0	0	298	298	957	1.068	53%
cement & lime	105	87	168	102	40	502	185	178	9%
refineries	16	20	36	27	56	155	159	149	7%
iron & steel	58	97	43	5	26	229	167	138	7%
combustion 0,1 < Mton < 0,5	0	0	596	0	0	596	158	136	7%
combustion 0,5 < Mton < 1	0	0	0	169	0	169	126	122	6%
combustion 0,025 < Mton < 0,1	0	1.388	0	0	0	1.388	84	69	3%
combustion < 25 kton	4.296	0	0	0	0	4.296	81	32	2%
paper	505	234	73	0	0	812	37	30	1%
other	533	39	16	8	4	600	32	25	1%
coke ovens	2	6	6	1	5	20	23	21	1%
glass	173	174	53	1	0	401	22	19	1%
metal ore	1	5	3	1	2	12	9	8	0%
ceramics < 25 kton CO2	936	0	0	0	0	936	11	8	0%
ceramics > 25 kton CO2	0	136	2	0	0	138	6	6	0%
	<b>6.625</b>	<b>2.186</b>	<b>996</b>	<b>314</b>	<b>431</b>	<b>10.552</b>	<b>2.058</b>	<b>2.009</b>	<b>100%</b>

**source:** data from Point Carbon (not officially reviewed, only to give order of magnitude of distribution of emissions)



## Distribution of EU ETS emissions among Annex I-activities

Focus on activities with high % in total CO<sub>2</sub>-emissions necessary

- fossil fueled power plants (appr. 60%)
- cement & lime (appr. 9%)
- refineries (appr. 7%)
- iron & steel (appr. 7%) (be aware: blast furnace gas)

⇒ total: 83% of total EU ETS emissions

⇒ not identified: chemical crackers, propylene and ethylen, ...



# 1. The role of benchmarking in determining sectoral caps (1)

## 1. EU-target (at least 20%)

to be translated in EU ETS and non-EU ETS cap after combination of “grandfathering” and “equity based” approach made at EU-level

- a. EU ETS cap out of post-Kyoto burden sharing
- b. EU ETS cap will be known much more in advance

## 2. given upfront EU-wide EU ETS cap (<-> previous periods:

EU-wide EU ETS cap only known after assessment of all NAPs)

to be translated into:

- a. EU sectoral caps for certain EU ETS activities (including EU-wide NER, harmonised allocation methodology & amount of auctioning);
- b. cap for rest of EU ETS activities



# 1. The role of benchmarking in determining sectoral caps (2)

## 3. EU-sectoral caps for certain sectors essential

- guaranteeing level playing field within EU;
- giving clear signal to specific markets;

## 4. size of sectoral caps for certain sectors

- determined on basis of benchmarks & EU-wide projected activity levels (=top down);
- stringency of used benchmarks depending on “exposure to international (=non EU) competition” of the sector
- depending on climate policy measures outside EU

## 5. use of (sub)sectoral caps would require more subactivities listed in Annex I of the Directive

- more (sub)sectors in Annex I (esp. within “Combustion installations”);



## 2. The role of benchmarking in individual allocation methodologies (1)

### electricity sector

1. strong (non-fuel specific) benchmark should be used for all fossil-fuel fired power plants;
2. rest of allowances within sectoral cap to be auctioned or in EU-wide reserve;



(non-fuel specific) benchmark  
used in Belgium/Flemish Region\*

$$\text{Allocation} = \text{MWe} * \text{fixed operation hours} * 0,35584$$

where “fixed operation hours” = 6.300 for CCGT  
3.000 for coal

where “0,35584” = assumption of natural gas & 56% efficiency





## 2. The role of benchmarking in individual allocation methodologies (2)

certain specific sectors (refineries, iron & steel, cement & lime)

- large CO<sub>2</sub>-emitters within those sectors: existing benchmarks are being developed by different institutes;
- EU-wide benchmarks should be applied for level playing field;
- benchmarks based on CO<sub>2</sub>;
- stringency of EU-wide benchmark depending on:
  - differentiation within installations in the EU;
  - determined sectoral cap;
  - CER/ERU percentage;
  - climate policy measures outside EU;
  - level of desired auctioning set at sectoral level;
- activity levels must fit in sectoral cap



## 2. The role of benchmarking in individual allocation methodologies (3)

for the smaller sectors (paper, glass, ceramics, ...)

- benchmarking also available, but for some small sectors indeed probably too diverse;
- other EU-allocation method (given the fact that guarantees must exist that similar installations are treated the same way) or subsidiarity to MS?