

Benchmarking, the cement of Emissions Trading Systems, CDM and Sectoral Approaches



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Benchmarking and project-based mechanisms: Can they live together?
IETA CoP/MoP Poznan, 5 December 2008

A Sectoral Approach is ...

A sectoral approach is a policy, based on multiple systems with efficiency objectives and implementation mechanisms tailored to the characteristics of the sectors of society and the regional socio-economic development.

Sectoral Approaches to ...

- National implementation measures
- Emissions Trading Systems
- Clean Development Mechanisms
- Global framework

Sectoral Approaches to ...

- National implementation measures

- Emissions Trading Systems
 - ↳ Leakage Exposure
 - ↳ Allowance Allocation
 - ↳ Leakage Prevention measures

- Clean Development Mechanisms

- Global framework

Sectoral Approach for Recognition of Leakage Exposure in EU ETS

- Power & heat sector: Low risk of leakage exposure
- For each other sector, leakage exposure criteria:
 - ↪ Cost of CO₂ compared to cost of production
 - ↪ Change of trade patterns due to cost of CO₂
 - ↪ Resulting relocation of production and emissions

Example: Clinker-cement production:

- *EU average emission: 0.865 ton CO₂/ton clinker*
- *i.e. ~45 Euro cost / ton clinker (@ ~50 €/ton CO₂)*
- *i.e. more than all “conventional” production costs combined*
- *i.e. up to twice the non-EU import transport cost*

= High risk of leakage of the marginal clinker production volume

Sectoral Approach for Allowance Allocation in EU ETS



CSI - "Getting the Numbers Right"

Year: 2006

Region: EU 27

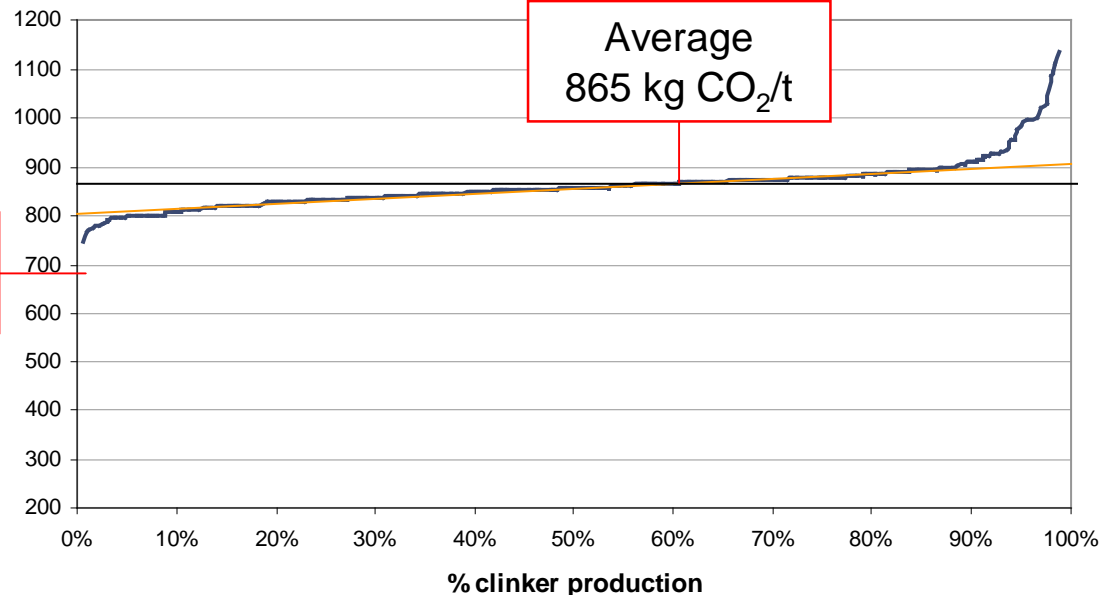
Company: All GNR participants



Numbers Right", 2008

Source: WBCSD CSI

Gross CO₂ emission per tonne clinker



20 % reduction
692 kg CO₂/t

- A 20 % reduction obligation for clinker-cement manufacturing would have to bring the industry average to a performance level not reached by any installation in the world

Sectoral Approach for Allowance Allocation in EU ETS



CSI - "Getting the Numbers Right"

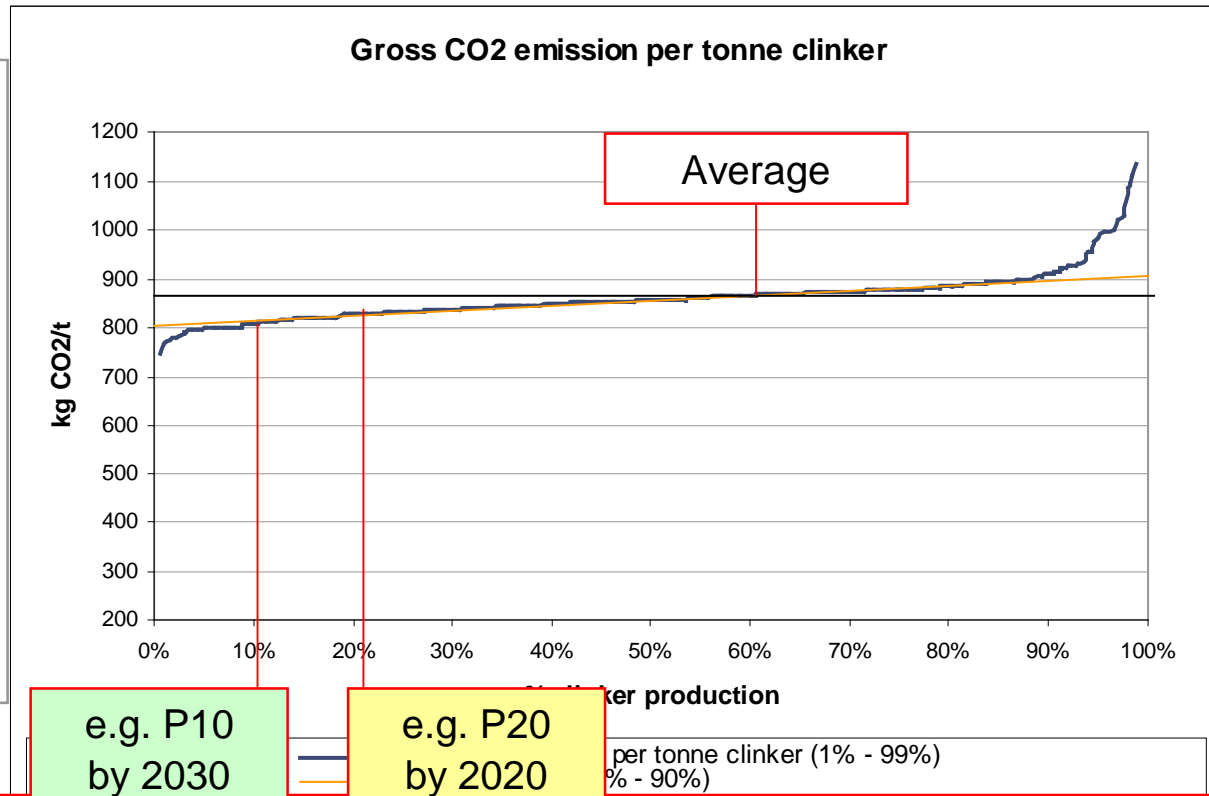
Year: 2006

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Source: WBCSD CSI "Getting the Numbers Right", 2008



- e.g. P10 by 2030
e.g. P20 by 2020
- Sectoral benchmarking - to inter-sectoral EU harmonized percentiles - is a sectoral approach for equitable burden sharing and allowance allocation between sectors in the EU ETS



Sectoral Approach for Leakage Prevention in EU ETS

- Power & heat sector: up to 100 % auctioning
- For the sectors recognized as exposed to leakage :
 - ↳ 100 % free allocation up to the technically achievable benchmark (e.g. the 20 percentile in 2020)
 - ↳ In case the allocation is lower than the technically achievable benchmark, then an equalization system ensuring equal treatment between domestic production and import will be necessary to prevent leakage
 - ↳ Use a sectoral approach for equalization systems and leakage prevention

WBCSD - CSI Sectoral Benchmark CDM Methodology

Objectives

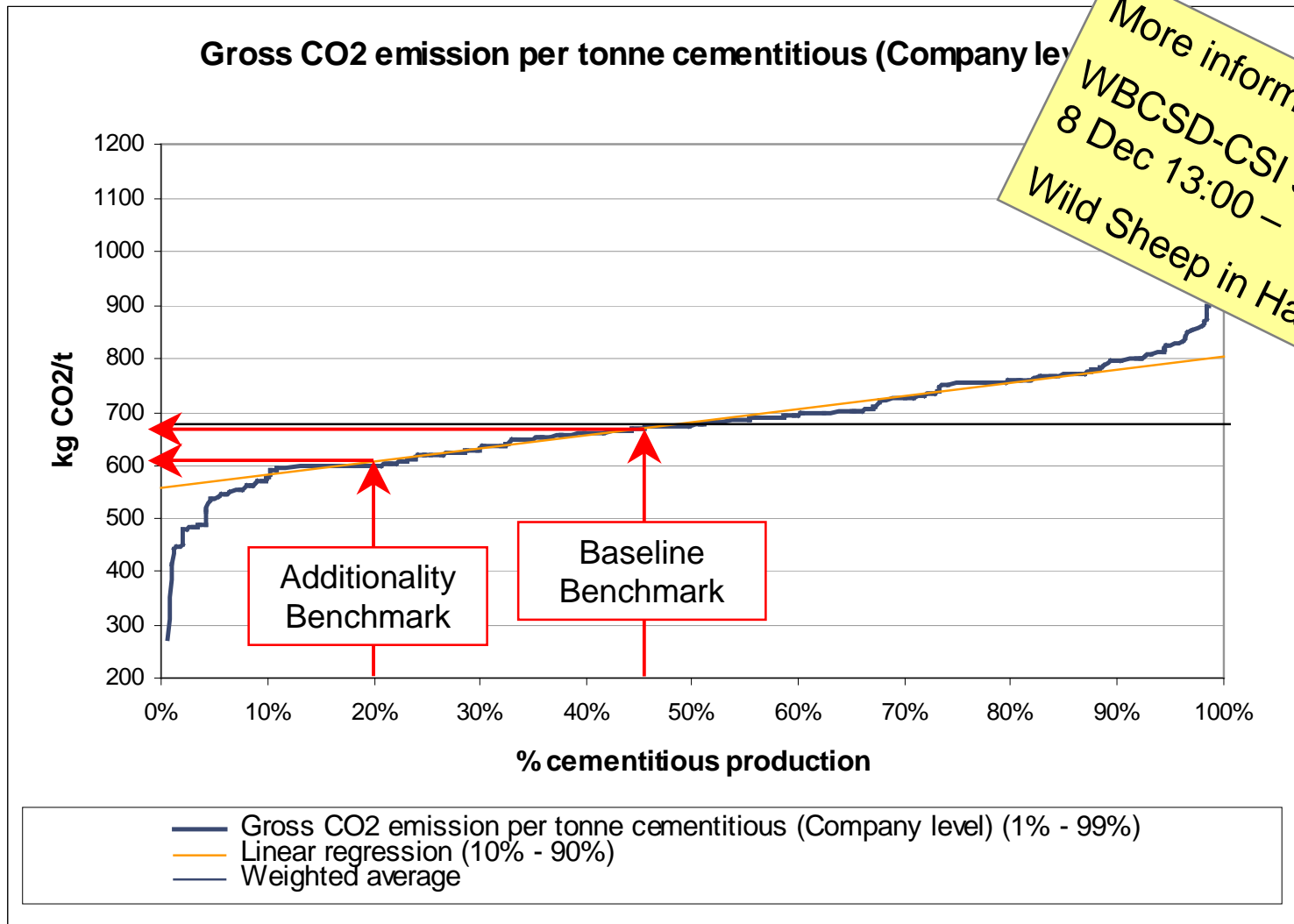
1. Combine environmental integrity with sound business incentives
2. Bring objectivity, transparency and integrity in the demonstration of additionality, the setting of the baseline and the validation of projects
3. Applicability to programmatic CDMs and compatibility with broader sectoral approaches

Concept

Use of regional, sectoral, “carbon intensity” based benchmarks to:

1. demonstrate additionality
2. calculate baseline scenario emissions

The Twin Benchmarking concept guarantees environmental integrity and possibly a meaningful business incentive



Sectoral Approaches to ...

- National implementation measures
- Emissions Trading Systems
- Clean Development Mechanisms
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Principally three trading systems can be considered, each with its “environmental stringency level”.

**Cap & Trade System
(ATS - ETS)**

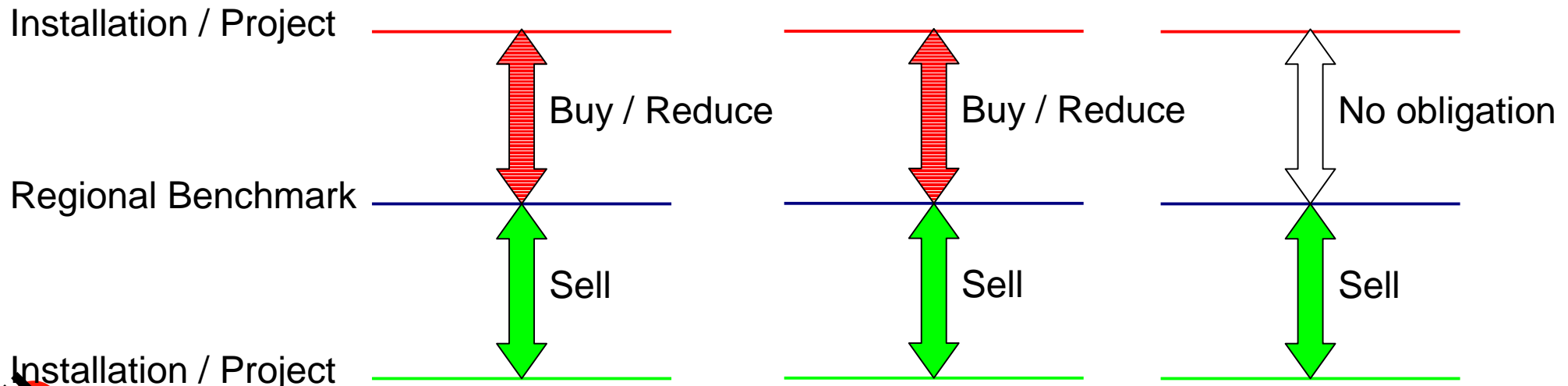
- Governmental allowance allocation
- Absolute Cap to total industry emissions
- Compliance obligation

**Baseline & Credit System
(BCS)**

- Credit generation by Baseline & Crediting
- No Absolute Cap
- Compliance obligation
- No additionality requirement

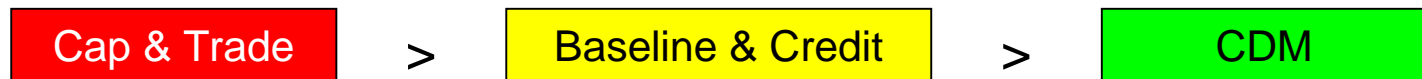
**One-way Credit Trading:
(CDM)**

- Credit generation by projects
- No Absolute Cap
- No compliance obligation
- Demonstration of Additionality



In a global framework geographical regions gradually evolve into more stringent policies & trading systems as a function of time and of socio-economic development

The “severity” of regulatory systems:

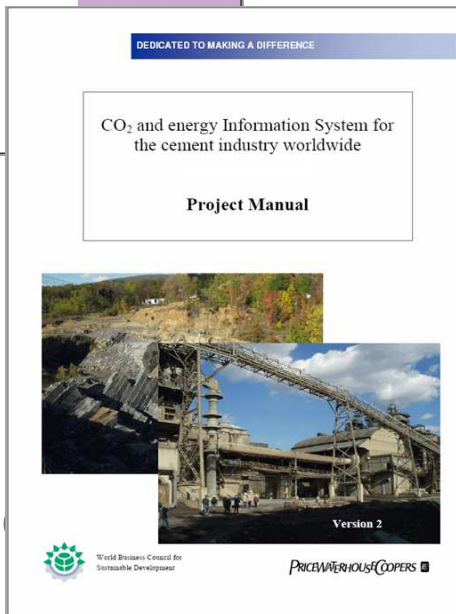
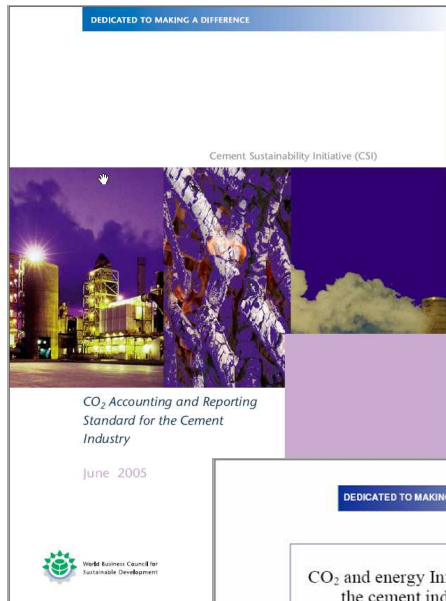


Region \ Time	< 2020	< 2030	< 2040	< 2050
Annex 1	Red	Red	Red	Red
G5 +	Green	Yellow	Orange	Red
OPEC	Green	Yellow	Orange	Red
Developing countries	Green	Green	Yellow	Yellow
Least Developed	Green	Green	Green	Green

G5 + = China, India, Mexico, Brazil, South Africa and Singapore, South Korea

The “Getting the Numbers Right” system is the reference source for benchmarking in the global cement industry

- WBCSD – Cement Sustainability Initiative (CSI)
- WRI Cement GHG Protocol + Verification
- World-wide cement production related CO₂ and Energy Performance Information: 23 indicators at installation and company level on production, CO₂ emission, thermal & electric energy, fuel mix, etc., ...
- Coverage: 35% worldwide production (60% outside China), 66% Brazil, 47% India, etc.
- Years now available: 1990, 2000, 2005, 2006
- The global statistics of all parameters and the regional benchmarks will be published on www.wbcSDcement.org
- Additional data analyses can be requested on gnrPMC@wbcSD.org



Conclusion

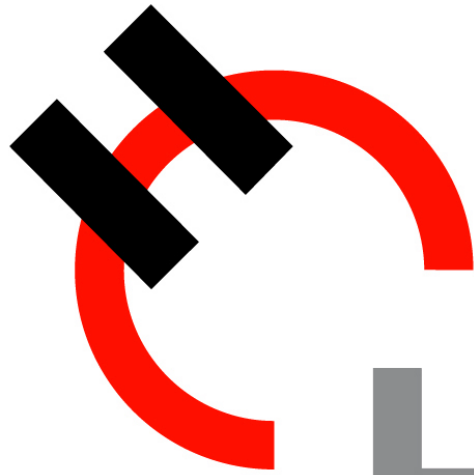
A Sectoral Approach to each key aspect of ETS, CDM and a Global Framework enables effective CO₂ mitigation systems across sectors and regions.

- Emissions Trading Systems
 - ↪ Leakage Exposure
 - ↪ Allowance Allocation
 - ↪ Leakage Prevention measures

- Clean Development Mechanisms
 - ↪ Demonstration of Additionality
 - ↪ Definition of the Baseline

- Global framework

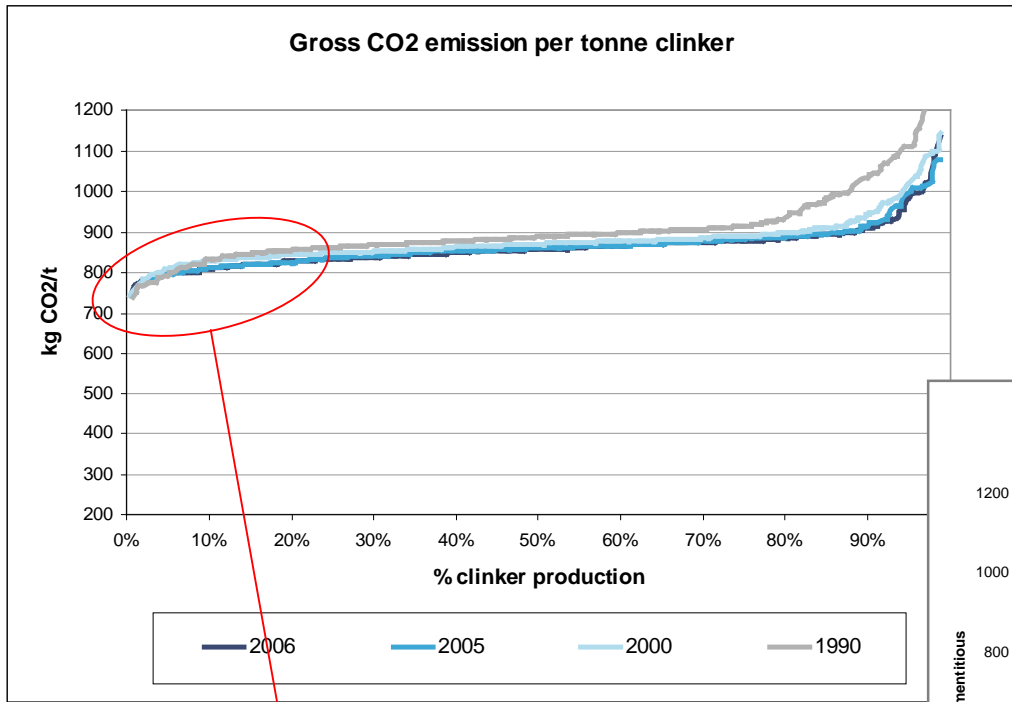
Sectoral monitoring protocols, data collection and benchmarking
are the cement of equitable sectoral reduction objectives
and flexible market systems



Holcim

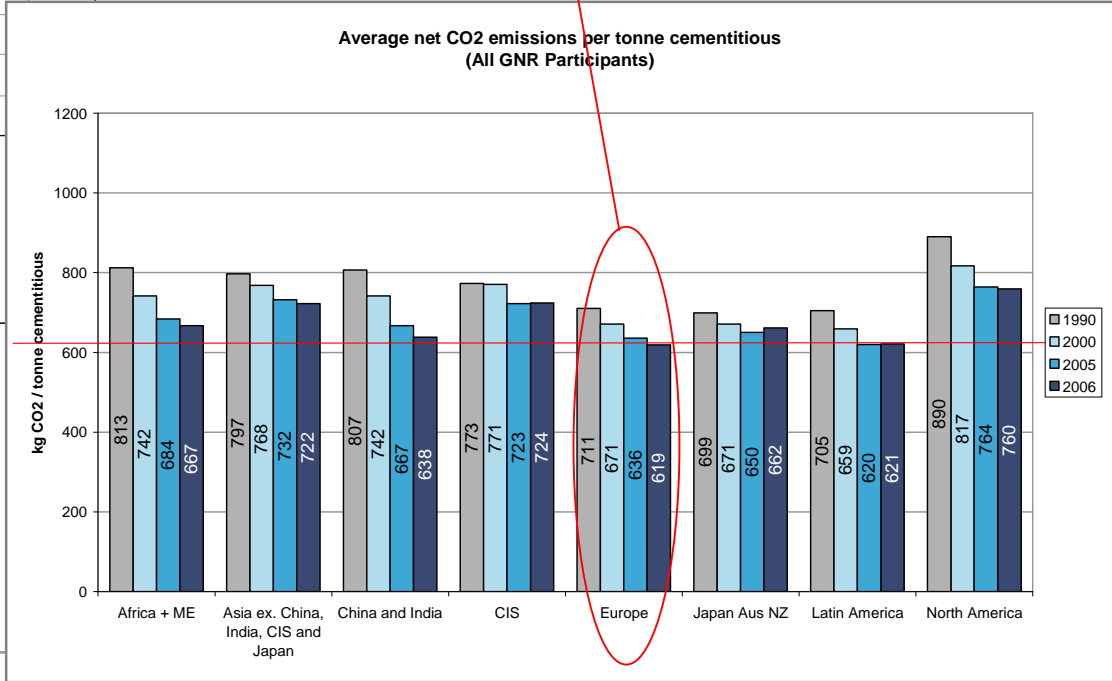
Back Up slides

The potential to further reduce CO₂ emissions with conventional technologies in European cement production is low because:



Europe is already world leader in CO₂ per ton cement

The technically achievable limits in CO₂ per ton clinker



Source: WBCSD CSI "Getting the Numbers Right", 2008

