

18 April 2008

Submission to ETS Discussion Paper
Garnaut Climate Change Review Secretariat
Level 2, 1 Treasury Place
EAST MELBOURNE VIC 3002

Dear Sir/Madam

Cement Australia Submission: Emissions Trading Scheme Discussion Paper

Cement Australia is the leading integrated manufacturer of cementitious products in Australia. The company holds 47% of the Australian market, and is an acknowledged leader in the national industry while retaining an international shareholding providing leading global support on the full range of related technical, environmental and sustainability issues confronting the industry.

Our strong links with global cement players provides us with real benefits including:

- global benchmarking of our operations;
- access to the latest in cement processing technology; and
- links to the World Business Council for Sustainable Development (“WBCSD”) through our parent Holcim - one of the founding members of the Cement Sector Initiative - which provides, amongst a half a dozen sustainability initiatives, an international focus on greenhouse issues, emissions reporting, and resource sustainability.

Cement Australia has an annual turnover of \$870 million dollars, through 4.2 million tonnes of cement sales, as well as sales of lime products, fly ash and slag, on an asset base of \$1 billion dollars. We employ a fleet of transport assets and some 1,420 employees.

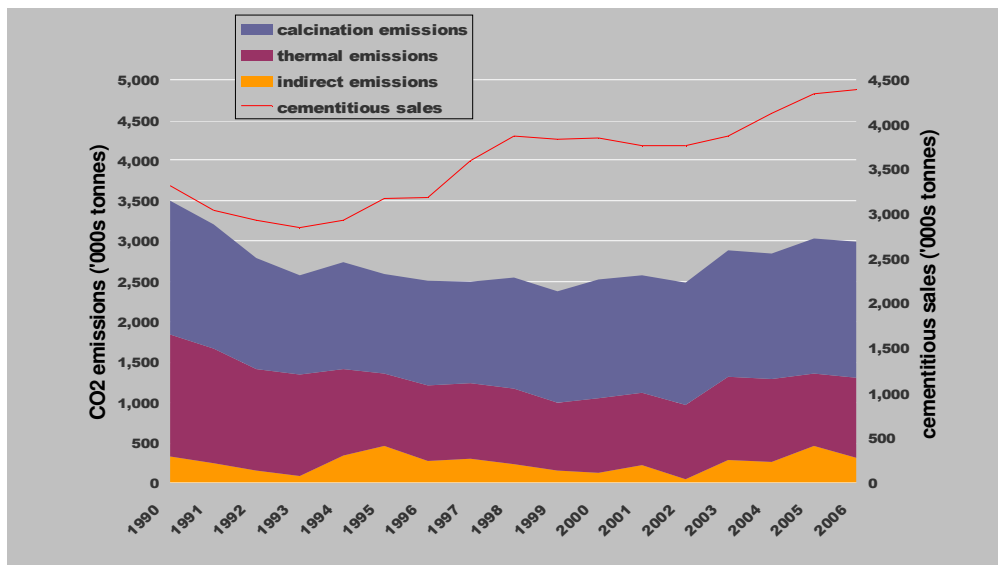
Cement Australia has the commitment and capacity to drive worthwhile sustainable outcomes in cement manufacture and sustainable materials, and has been actively involved over the last decade in responding to the climate change challenge:

- 1997: Cement Australia, through our peak industry body, the Cement Industry Federation (CIF), became an early signatory to the Greenhouse Challenge Plus program

- 1999: Holcim (a 50% shareholder of Cement Australia) embarks on the WBCSD Cement Sustainability Initiative which identifies climate change as a key sustainability issue for the industry
- 2004: Cement Australia participates in an industry-wide ‘Technology Pathway’ exercise to identify the likely course of technology investment and determine the resulting efficiency and CO₂ savings
- 2006: Cement Australia collaborates in drafting the Cement Industry Action Agenda, which outlines government and industry recommendations to progress technology adoption/ CO₂ emissions abatement.
- 2006: Ongoing and substantive involvement in the Cement Sector Task Force of the Asia-Pacific Partnership for Clean Development and Climate

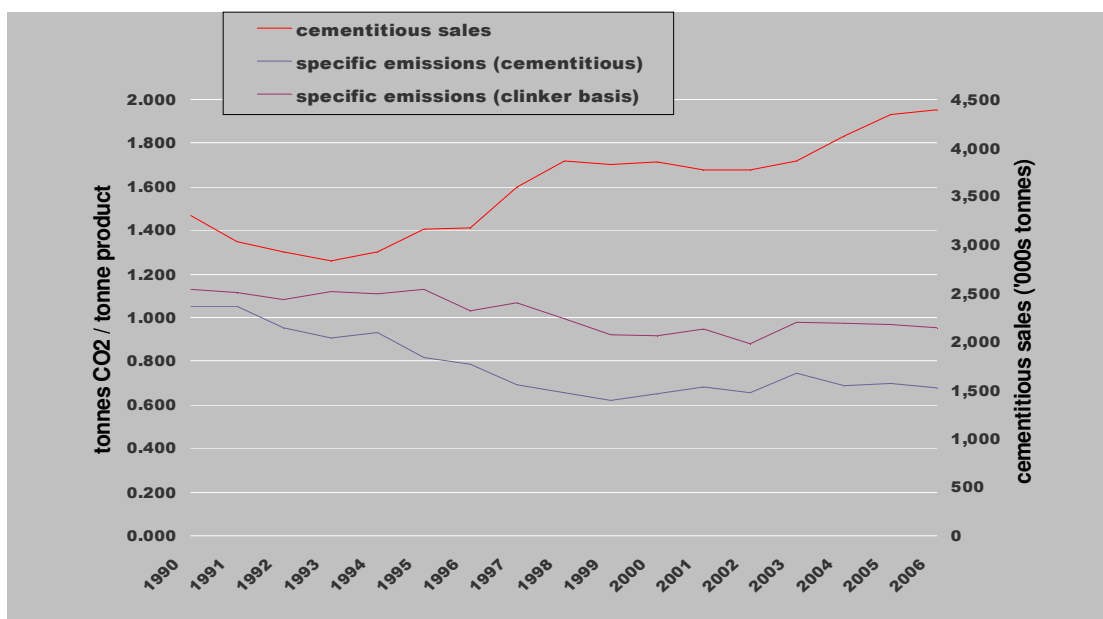
Through early and concerted action, Cement Australia has maintained total carbon dioxide emissions at less than 1990 levels while achieving cementitious sales increases of over 37% (Figure 1).

Figure 1: Total Carbon Dioxide Emissions and Cementitious Sales since 1990.



This has resulted in a significant improvement in the emissions intensity of our products (Figure 2).

Figure 2: Specific Emissions Intensity and Cementitious Sales since 1990.



Relevant aspects of cement manufacture

Making cement is an energy and resource intensive process, requiring the precise combination of lime, silica, alumina, and iron that are fused together during the mixing and cooking process in the kiln. The raw materials are initially heated to 1000 °C, calcining the calcium carbonate in limestone to calcium oxide and releasing carbon dioxide, a process usually referred to as calcination and contributing to approximately 50% of our total carbon dioxide emissions (refer Figure 1). This calcination process is unique to cement and highlights the importance of focussing on emissions rather than energy when discussing climate change policy.

Within the rotary kiln, the materials are mixed and further heated to about 1450 °C causing a high-temperature sintering reaction to occur, forming a calcium silicate matrix called ‘clinker’. All of the materials fed into the kiln become part of the clinker, forming an intrinsic matrix which, once cooled, is then ground with small amounts of gypsum and other minerals to produce the grey powder commonly recognised as cement.

Manufacture of the intermediate product – clinker, is responsible for about 90% of carbon dioxide emissions. Clinker is also a much easier material to transport than cement with most global trade occurring in this form.

Cement manufacture is capital intensive with economically efficient increases in capacity being substantial in comparison with Australia's market size. For optimum energy and economic efficiency, kilns must operate at full production with typically only a major maintenance shutdown of perhaps 4 weeks duration annually.

Cement manufacture is predominantly domestic, requiring access to limestone, energy supplies and markets. Demand shortfalls are made up from imports due to the aforementioned issues relating to capital intensiveness.

General comments in relation to Emissions Trading

Cement Australia is pleased to have this opportunity to comment on the Garnaut Climate Change Review Discussion Paper (“the Discussion Paper”). We believe that it is worth noting that, in both our own right, and through the CIF, we have actively participated in what we believe to have been thorough and constructive consultation processes that were associated with the development of the Australian State and Territory Governments National Emissions Trading Taskforce (“NETT”) and the former Prime Minister’s Task Group on Emissions Trading (“TGET”). We strongly endorse the final reports of both of these processes as significant and state-of-the-art contributions to Emissions Trading Scheme (“ETS”) design principles and would be very disappointed if this accumulated knowledge is not given an appropriate standing by the current ETS development processes.

Further, Cement Australia supports the submission made by the Australian Industry Greenhouse Network particularly in relation to the generic design principles made. Rather than reiterate those points, our submission focuses on the specific issues related to trade-exposed, emissions-intensive industries (“TEEIs”), particularly noting that this largely sectoral categorisation contains a range of uniquely different industries operating within uniquely different market circumstances. We believe that it is important for the Garnaut Climate Change Review to have a sufficient understanding of the cement industry to be cognisant of the potential impacts to the industry arising from the detail of ETS design. An invitation for further consultations with individual TEEI sectors was put to the recent, albeit brief consultation forum held on 28 March 2008 and we would restate this invitation here.

Cement Australia holds to the following key principles in relation to the introduction of an ETS:

- We would support a decision to introduce emissions trading as the core price-based measure to reduce greenhouse gas emissions for Australia.
- However, emissions trading will not constitute a “silver-bullet” response to climate change and carefully targeted, non price-based, complementary policy measures will be required to achieve a truly-effective climate change response.
- Of all ETS design issues; competitiveness-at-risk is of critical concern for Cement Australia. The potential consequences of failure in this respect are extreme and therefore warrant detailed and careful consideration.
- The full streamlining of energy and greenhouse reporting programs is necessary to remove the inefficient administrative burden currently imposed by duplicative programs.

- The removal of non-complementary, price-based government programs is necessary to allow a properly functioning ETS.

Specifically in relation to complementary policy responses, it is our belief that an ETS will only be an effective response where low abatement technologies are both available and then available at a price deemed to be affordable at the market carbon price. While there is some capacity for Cement Australia operations to upgrade to current technologies, this capacity is limited – largely reflecting the early technology adoption undertaken by the company. There are currently no foreseeable alternative technologies available within the mainstream of cement processing knowledge that will provide this industry with any significant improvements in emissions abatement. In essence, significant abatement within this industry will only occur through new technologies yet to come about – highlighting the requirement for significant research, development and demonstration effort which will require policy measures complementary to an ETS.

Trade-Exposed, Emissions-Intensive Industries

Cement Australia welcomes the Discussion Paper's recognition of the need to provide transitional assistance to TEEI industries until competitors are exposed to similar emissions constraints. We support the acknowledgement of the need for government intervention to address 'carbon leakage' where production and emissions in effect migrate to countries not similarly exposed to a carbon-price measure. The direct result of such 'carbon-leakage' is foregone domestic economic activity with no global emissions benefit or indeed a global emissions disbenefit where comparative carbon advantage exists in Australia through either natural resource characteristics or local industry adoption of low-intensity technologies.

Cement Australia contends that it is an emissions-intensive, trade-exposed firm; at least as far as our cement products are concerned. The combined effect of requiring significant thermal energy for our manufacturing process and the contribution for calcination emissions supports this contention with respect to emissions-intensity. With respect to trade-exposure, our product pricing can be demonstrated to be aligned with import parity pricing and, in addition, few barriers to entry to Australian cement markets exist.

We note also the NETT Final Framework Report on Scheme Design, which includes the following specific reference:

“As a broad indication, the types of activities that are likely to meet the criteria of a high degree of trade exposure and emissions intensity include:

- *Aluminium and other non-ferrous metal smelting*
- *Steel manufacturing*
- *Cement manufacturing*
- *.....”* (NETT, 2007)

With respect to what a TEEII administrative allocation mechanism might incorporate, Cement Australia advocates the use of comparative energy efficiency, or comparative emissions intensity, as the basis for a performance-based allocation system. With this approach, the emissions performance of any Australian energy intensive business is benchmarked against its international peers and provides the following benefits:

- the provision to government of the quantitative information to precisely target the performance of any emissions-intensive scheme participant;
- the provision of quantitative information that Boards of companies require to justify capital investments to improve emissions performance;
- it is not distortionary - it does not unjustly punish domestic industry that is already at best practice; and thereby preserves the position of such businesses against less efficient competitors both domestically and overseas – in effect providing the only integrated measure recognising early action that has already been taken by companies on abatement measures.

We do not advocate a benchmarking approach that sets the performance level to that of some real or imagined “state-of-the-art” facility. This approach creates a number of difficulties including the identification of an appropriate best-practice facility and then determination of appropriate performance indicators. There may also be issues of transferability where local or regional differences such as raw material and energy supply impact on the performance of the best-practice facility chosen.

For an industry such as cement, we believe that a workable benchmarking approach can be based on taking readily identifiable cement-sector key performance indicators (KPIs), and using available benchmarking information to identify an acceptable best practice benchmark. This benchmark is best set at a percentile level rather than some best-achieved level and, as indicated above the actual percentile level chosen is not critical in terms of differentiating between sectoral scheme participants. There are now a number of sector-specific organisations and large corporations that hold sufficient

data to identify KPI benchmarks that do not compromise commercial-in-confidence concerns.

Cement Australia further believes that an alternative option to an administrative allocation to address competitiveness at risk exists, but which has not received sufficient consideration. Within a cement-manufacturing context, this alternative approach is to deal with emissions attributable to the manufacture of imported cement in an equivalent manner to emissions from domestic manufacture (with the exception of imports originating from a nation which has already adopted a measure applying a similar carbon-price to emissions). We believe that such an approach is both equitable and workable. This option provides for the existing level of imports required to meet home market demand not to be penalised where manufacture occurs within a carbon-constrained economy.

Cement Australia can see a number of benefits from such an approach – the primary of these being the equitable treatment of imports and exports that takes into account the existence of a linkable carbon constraint. We would also suggest that such an approach will drive consideration of the carbon intensity of products by traders and suppliers, and increase knowledge capacity through reporting and verification requirements and thereby effect an extension of a carbon pricing signal to nations without a similar trading scheme.

Specific comments on the text of Section 3.8 – Avoiding distortion in trade-exposed, emission-intensive industries

In relation to the specific text provided at Section 3.8 of the Discussion Paper, we make the following comments:

- At paragraph 3, we question whether the “economic efficiency grounds” suggested are not more accurately stated as “environmental effectiveness grounds” and/or “economic disruption grounds”.
- At paragraph 6, it is suggested that “carbon leakage... would result in an economic loss for Australia with no commensurate global environmental benefit”. Given the arguments supporting this statement, we would suggest that this might be more accurately stated as “having a commensurate global environmental disbenefit”.
- We agree with the objective stated at paragraph 8 that “any arrangements put in place must be environmentally and economically efficient, equitable, and transitional and built on sound governance practices”.
- Paragraphs 9 and 10, and the discussion provided in Appendix 3, suffer from an apparent assumption that industry has the ability to seamlessly adjust production rates to reduce costs and therefore adjust to the impacts of an ETS. For a capital-intensive, energy-intensive industry, this is incorrect. For such industry, it is imperative that capital equipment is operated at maximum output to achieve both best energy efficiency, as well as minimising fixed costs per unit of output. The

ability to adjust production is not linear, but more akin to a binary or on/off decision. If these efficiencies cannot be achieved, competitiveness is further diminished, accelerating a decision to cease production altogether.

- The reference to a “transitional” measure at paragraph 13 is not consistent with what we have understood to be meant by “transitional”. At paragraph 13, “transitional” seems to refer to the measure ceasing when a firm has achieved some (presumably internationally competitive) product emissions intensity. But the ETS simply adds a cost to production. As indicated previously, Cement Australia already operates at relatively low emissions intensity. In line with the previous discussion in relation to technology impediments, this may not be feasible. We have usually considered “transitional”, within the context of a TEEI discussion, to refer to the initial ETS period ending at the point in time at which competitor nations also adopt a carbon constraint.
- The “simple” assessment for TEEI proposed at the end of page 39 appears to have some inherent difficulties:
 - The first assessment dot point would be better associated with a definition of the term “trade-exposed” (which would also include the paragraph 5 statement that trade-exposed firms “must accept that world price”. The current expectation is that any cost impact, particularly for an emission-intensive firm (for example cement), is likely to be material. Appendix A provides some insights into impacts to the cement industry arising from the EU ETS and developments already occurring in Australia, that may be related to an impending carbon-price signal.
 - The second dot point would appear to be a very difficult assessment to undertake.
 - Dot point 3 applies what appears to be a “benchmarking” approach and we would refer to our earlier comments in relation to benchmarking

Cement Australia welcomes the opportunity to provide input to this critical debate and we look forward to further consultations on this matter.

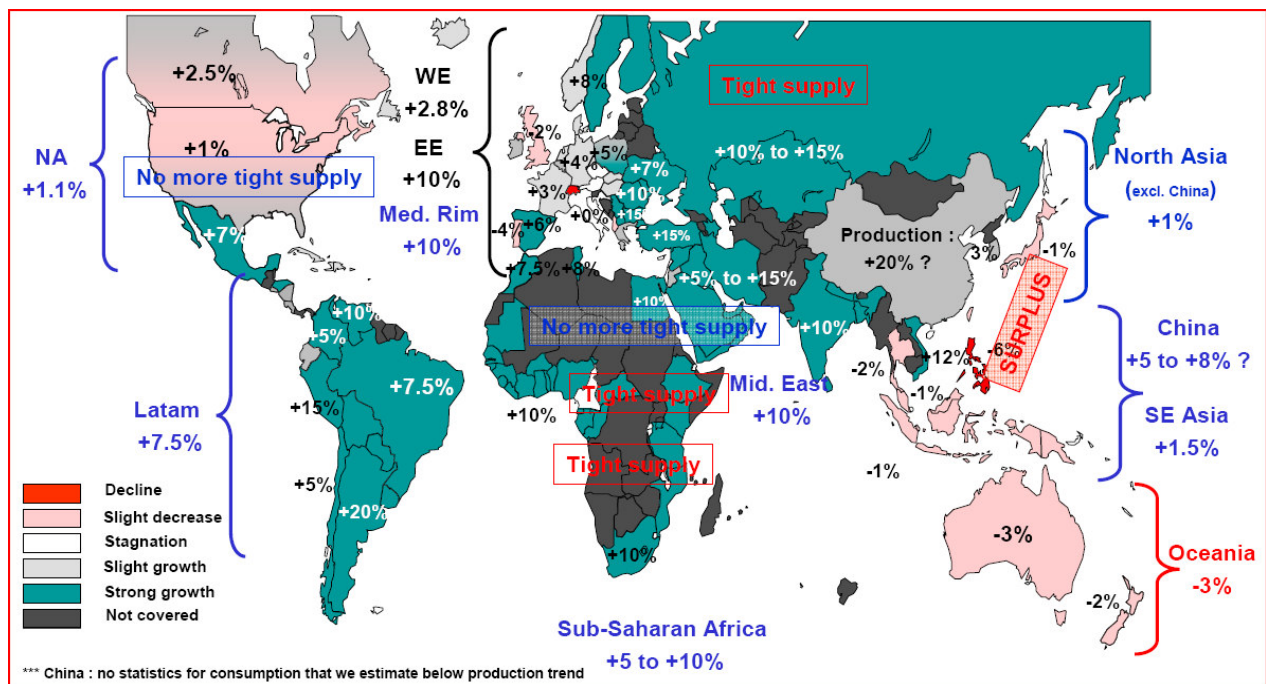


Stuart Ritchie
National Sustainability Manager

Appendix A

In October 2006, Exane BNP Paribas (“EBNP”) released a number of papers in Beijing providing an analysis of the current status of the world cement industry and forecasting trends in imports and exports. The papers assist in placing the Australian cement industry into context with the global cement production and trade flows. Figure A.1 highlights EBNPs estimates of cement volumes showing decline and growth areas and highlighting the significant potential for surplus in areas proximate to Australia.

Figure A.1: Forecast cement volumes in 2006 (Source EBNP, Overview on World Cement Trends, 2006)



EBNP note the following trends:

- A significant increase in new capacity addition worldwide with robust volume growth due to reduced greenfield costs.
- Emerging markets in Asia representing 80% of world cement demand and seen to have potential cost advantages due to low energy prices and low likelihood for carbon dioxide pricing. Asian exports are reported at 22 Mt in 2005 and rising to 35-40 Mt in 2006.
- Import markets from 2007 predicted to require less volume. Particularly, US cement demand, which has been the largest global import market, and which has relied strongly on Asian imports is predicted to decline in 2007 with import sourcing switching to Mexico due to tariff removals under the Free Trade Agreement.
- Chinese exports are expected to diminish in the longer term due to government disincentives, but there will be a significant short-term surplus looking for a destination.

The European Commission Directorate General for Environment commissioned a study on the impact of the EU ETS on international competitiveness for a number of industry sectors, including cement. Even though the focus was on Europe, the conclusions are very relevant to Australia. The assessment was based on a CO₂ price of 20 Euro/ton.

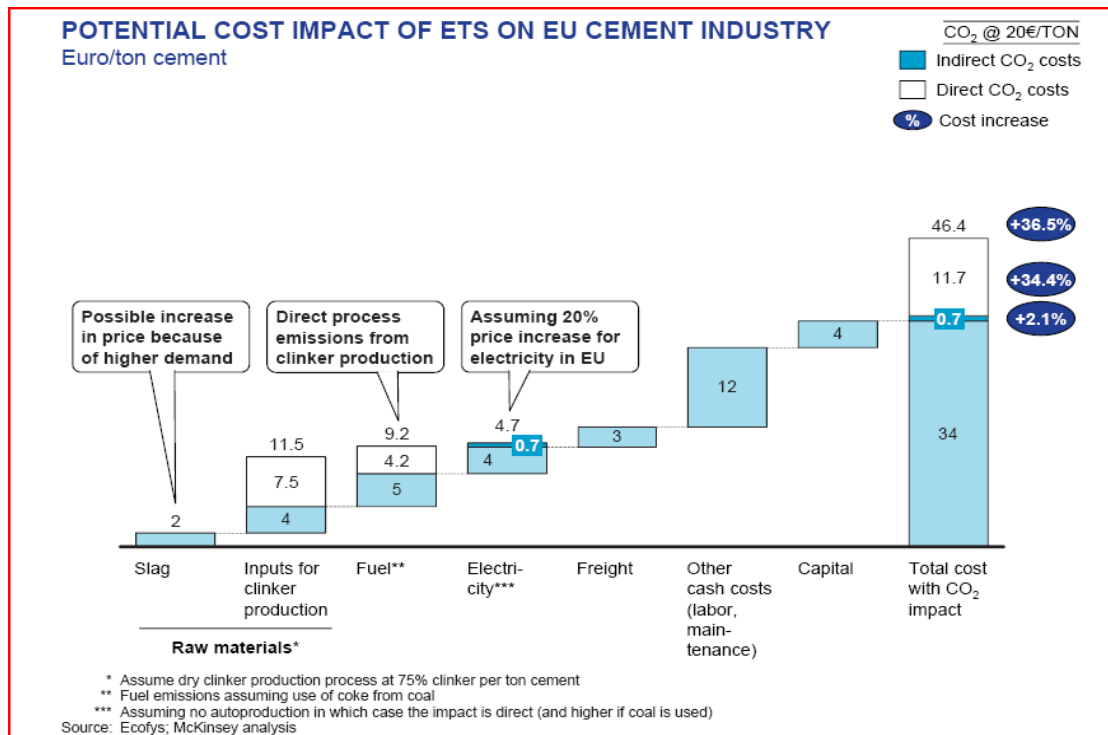
In relation to the cement sector, the study made the following findings:

Depending on the level of potential cost pass through, the cement industry on average across Europe might face a cost increase, come out neutral or experience a net benefit. The likelihood of a cost increase is particularly high in areas close to seaports or outside EU borders, such as Greece, Italy, southern France and Spain, where the possibility for substitution by imports is highest. The level of free allowances is crucial for the impact of the EU ETS on the cement industry's competitiveness.

Further the report cited

The impact on the cost of the marginal unit of production in the cement industry is very significant at over 36% or 12 Euro per ton of cement, which is roughly equal to freight costs from northern Africa or the eastern European countries outside the EU to Antwerp. Therefore, under an allocation method based on historic emissions – which is the current preferred method in the EU ETS – the possibility of production shifts and CO₂ leakage is real.

Figure A.4 (EC Directorate General for Environment, 2006)

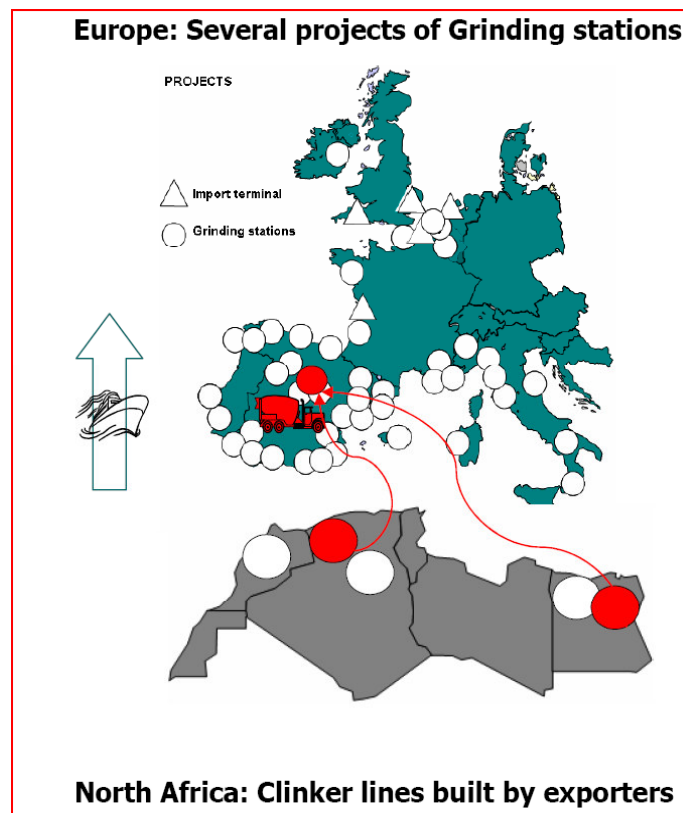


Communications from the European Cement Association (Cembureau) take this observation further with the following findings:

EU cement consumption is increasing steadily and the cement market is global when taking into account ship transportation. It has to be noted that 15.5 Mt of cement have been imported from outside EU in 2005 and that the number of import terminals with grinding stations fed from imported clinker is rapidly increasing in the EU (refer Figure A.4). In many cases, this de facto relocation of production can be explained by a simple calculation of the EU producer. When CO₂ allowances reach a cost of circa €20 per tonne of CO₂, there is an incentive not to produce, but to sell the allowances and import. This process will not reduce, but on the contrary increase, global CO₂ emissions. CEMBUREAU estimates that the extra emissions from seaborne transport of imported cement are about 10 - 20% of the total emissions of CO₂ per tonne of product

In relation to Figure A.4, EBNP further note that North African and eastern producers are active with several ambitious emerging markets players that are targeting Europe and developing export strategies to “seize the opportunity of cost advantages”.

Figure A.4: “North African and Eastern producers are also active” (EBNP, 2006)



These findings are very relevant to Australia, highlighting the substantial import pressures that the Australian market is subject to and indicating that if a carbon-pricing instrument was applied to the Australian cement industry and no arrangements made to offset the erosion of competitiveness, then the future of Australia's cement industry would be at grave risk of moving from integrated clinker/cement manufacturing plants to clinker importing terminals with attached grinding plants. This would clearly result in carbon leakage.

The sensitivity of the cement industry is highlighted by recent plans to construct a clinker grinding facility in Queensland, which we understand will receive imported clinker. This further highlights the substantially higher business risks of operating within the Australian manufacturing market associated with a now-signalled carbon price as well as the associated administrative burden for compliance that importers will not be subject to.