



24 December 2010

Committee Secretary
Senate Select Committee on Scrutiny of New Taxes
Parliament House
Canberra Act 2600

Dear Sir/Madam

Following is a submission from the Cement Industry Federation to the Inquiry into Carbon Tax Pricing Mechanisms.

As an import competing industry and significant CO₂ emitter, the cement industry has taken a keen interest in carbon policy and carbon pricing mechanisms for some time. The Cement Industry Federation has made numerous submissions to a range of parliamentary inquiries and also to Government consultative papers.

We have taken care in this submission to present the most up to date figures from our annual survey of members which includes a range of greenhouse emissions data.

Thank you for the opportunity to submit to the Senate inquiry.

Yours sincerely

Margaret Thomson
Chief Executive Officer



CIF SUBMISSION: Inquiry into Carbon Tax Pricing Mechanisms

The Cement Industry Federation (“the CIF”) welcomes the opportunity to submit comments to the Inquiry into Carbon Tax Pricing Mechanisms.

The Cement Industry Federation is the national body representing the Australian cement industry, and comprises the three major Australian cement producers - Adelaide Brighton Ltd, Boral Cement Ltd and Cement Australia Pty Ltd. Together these companies account for 100 per cent of integrated clinker and cement supplies in Australia. Their operations are located in every state and territory, and include nine integrated cement manufacturing facilities, mines to service those facilities and a national distribution network.

The industry employs over 1,800 people and produces over ten million tonnes of cementitious materials, with an annual turnover in excess of \$2.14 billion. In Australia, the industry is responsible for around 7.2 Mt per annum of greenhouse gas emissions.

The Importance of Cement

The cement industry is critical to many industries. It is the ‘glue’ that binds our buildings and infrastructure, including roads, rail, airports, bridges and ports. With nearly three tonnes used annually for each person on the planet it is estimated that concrete, which contains 10-15 per cent cement, is second only to water as the most consumed substance on earth.

Cement is a vital commodity for the Australian economy, not only as a critical input for Australia’s building and construction industry, but increasingly in resource recovery and reuse innovation – in both cases providing significant economic and social benefits. Competitively priced supplies of cement are essential to Australia’s continuing economic growth. Hence security of supply should be a goal supported by all levels of Government.



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The Australian Cement Industry and Action on Climate Change

The Australian cement industry recognises the threat that climate change poses to our natural environment as identified by the scientific world. We have been working diligently on this challenge for well over a decade and have developed and maintained a verifiable emissions database extending back to 1990. Since that time the industry has maintained carbon dioxide emissions at 108% of 1990 levels while increasing production by 40% and reduced the carbon intensity of its product by 24% per tonne.

The cement industry has consciously engaged in striving for improvement through being a leader in the uptake of technology to maximise energy efficiency, increasing the use of by-products of other industries, reducing greenhouse emissions through reduced dependence on fossil fuels and in working in concert with the broader community.

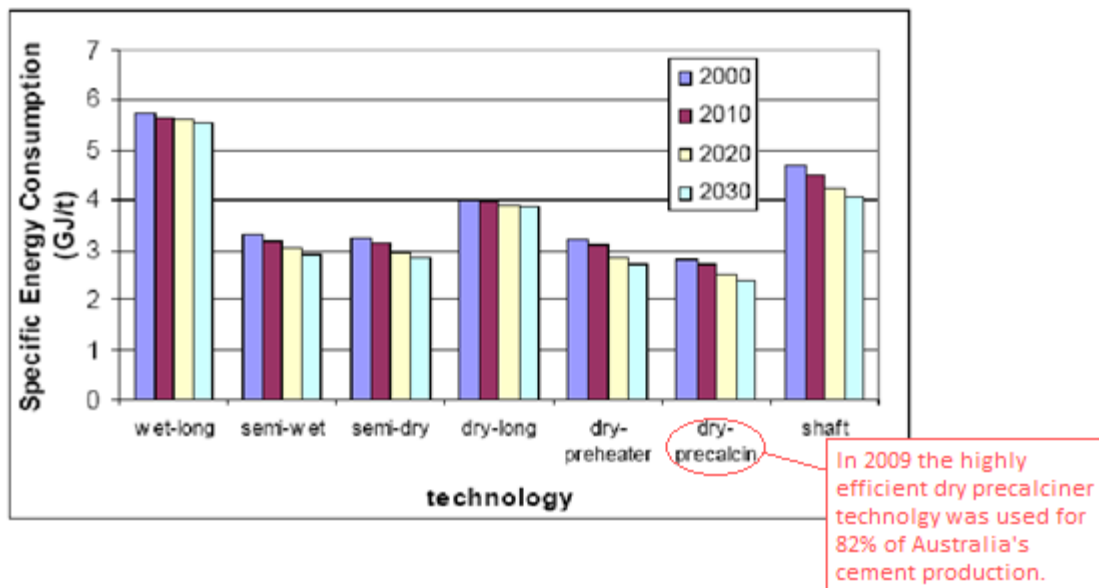


Figure 1 – Average world specific energy consumption by kiln technology

From a global context the Australian industry, while small in size, has a high uptake of best technology (see Figure 1) and has remained price-competitive with our closest neighbours. Retaining this competitive position with our Asian neighbors remains a critical area of importance and is potentially the most difficult challenge for the development of any national emissions scheme. The highly efficient dry precalciner technology represents 82 per cent of Australia's cement production.



We believe that an effective climate change strategy should incorporate mechanisms focused on addressing the impediments to developing technology solutions. The recent focus on emissions trading schemes and carbon prices have ignored the importance of technology solutions such as international technology partnerships and research, development and demonstration (RD&D) support.

The CIF supports the promotion of international technology partnerships to facilitate operational excellence, technology adoption, development and sharing, and workforce skills development (e.g. the Asia Pacific Partnership for Clean Development and Climate (APP) within which Australia has a creditable standing). The CIF believes Government should encourage driving the RD&D of emerging technologies (e.g. carbon capture through geo- or bio-sequestration, improved waste heat recovery) that have the potential to provide the next step-change process improvements.

Recent examples of the benefits of such partnerships include the installation of efficient waste recovery technology at Geocycle, a Cement Australia company that produces a consistent “waste to energy” alternative fuel for cement kilns.

Boral cement is currently trialling equipment to remove mercury from stack emissions, to allow the use of a very large stockpile of sewage sludge at Melbourne Water’s Werribee Water Treatment Works as an alternative fuel to the gas which is currently used in conjunction with a number of alternative fuels at Waurm Ponds Cement Works

There are some opportunities for further CO₂ reductions using existing technology available for the further addition of supplementary cementitious materials (SCMs) and the use of alternative fuels and raw materials. These opportunities could be realised if regulatory barriers could be removed. This is discussed in more detail below.

Carbon Leakage

An important characteristic for the Australian cement industry is that our competitors, almost without exception, are countries in the developing world where there is an unlikely prospect of green house gas (GHG) emissions penalties being imposed. With respect to GHG emissions and given the relative carbon efficiency of the Australian industry, there is little or no global environmental benefit in locating cement manufacturing in Asia or elsewhere, in preference to Australia as GHG emissions across the globe would rise to meet unmet Australian demand through the use of existing old technology kilns in other Asian countries .

As outlined in Figure 2, the Australian cement industry has emission intensity second only to Japan in the Asia-Pacific region, and with the emissions from shipping included, delivered cement from Japan would come at a higher CO₂ cost.

Carbon leakage is inconsistent with any objective to contribute to reductions in global emissions.

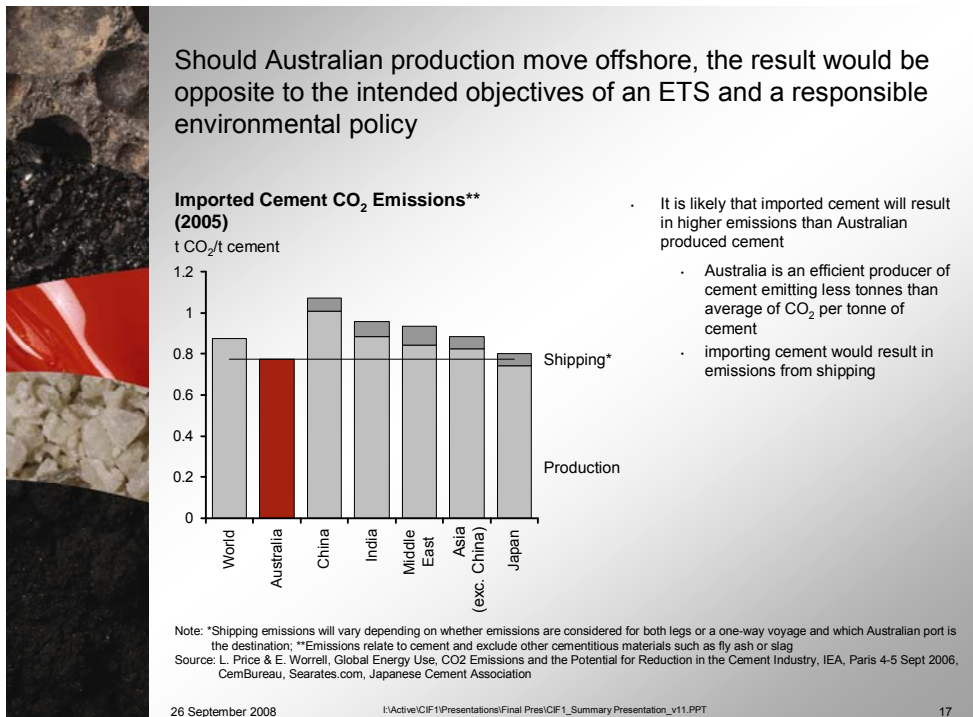


Figure 2 – Imported Cement CO₂ Emissions



In the absence of a truly global scheme, it is essential to ensure that measures to offset the loss of competitiveness are implemented.

In the context of a carbon tax, this could be addressed by applying the tax at the point of consumption of the materials rather than at the point of production of those materials. If a carbon tax were applied at the point of production, a border tax adjustment would be required.

In the context of an emissions trading scheme, the need for an emissions intensive trade exposed assistance programme is well recognised as necessary to avoid carbon leakage. To date it is not so much the principle of an EITE programme but the architecture of the EITE programme that has attracted considerable debate.

From the cement industry's perspective the EITE programme design under the CPRS proposed during the last term of Government went some way to offsetting the impact of competitiveness but fell short in three key areas:

1. Activity Definition
2. The Decay of EITE permits
3. The EITE scheme cap.

1. Activity Definition

Cement manufacturing is an integrated process involving the recovery and blending of minerals, the calcining and sintering of those minerals to form clinker and the grinding of clinker to create cement.

The CIF considers the clinker manufacturing process as an integrated process as each activity does not occur in isolation. If cement manufacturing relocates offshore as a result of poor shielding policy then the clinker manufacturing and limestone mineral blending will also move offshore. This is not the case with other mining products such as coal and bauxite, as these products are valuable in their own right and will be exported should manufacturing not take place in Australia.



The CIF does not believe it appropriate to separate the clinker manufacturing and cement grinding process and only provide assistance for the clinker manufacturing activity as cement grinding is responsible for half of the electricity use associated with cement manufacture.

The CIF believes the aggregation of particular activities which make up an integrated manufacturing process, such as cement manufacturing, is consistent with the intent of a shielding policy for EITE industries. Any disaggregation of EITE activities contradicts the overall objective not disadvantage EITE industries to the point where carbon leakage may occur.

2. The Decay of EITE entitlements.

The CIF disagrees with any arbitrary decay of EITE entitlements where the decay is not linked to commensurate action on climate change applied to EITE sectors in competitor countries.

Arbitrary decay rates applied bluntly across the economy do not take international action (or inaction) into account or the ability of a particular sector to find cost effective options for reducing emissions despite a lack of international action.

Decay that is not linked to international action will quickly lead to carbon leakage as investment decisions will be made on the basis of an assumption of the future (decayed) rate of shielding as many of the investment decisions have a long time horizon associated with them. At the same time, it is not reasonable to expect companies to factor in international action when making investment decisions with long lead times as there is currently no global agreement and no firm commitment on GHG reductions from all of the relevant international competitors.



3. The EITE Scheme Cap

The CIF strongly disagrees with the assumption that the total EITE assistance programme should be made to fit under a fixed (or declining) cap as it severely restricts Australian growth in these industries to meet unmet demand that may otherwise be met by less efficient international producers who will continue to operate old and inefficient plant and equipment.

International comparison

The CIF is currently examining international approaches for the purpose of making comparisons and will be in a position to make further international comparisons in the coming months. The following general observations can be made on the Canadian, Californian and New Zealand approaches.

1. Canada

The Canadian ETS (Regulatory Framework for Air Emissions) does not include fixed process emissions. The Canadian ETS emissions-intensity reduction calculation applies only to combustion and non-fixed process emissions. The calcination in cement and lime production is listed as an example of fixed process emissions. The Canadian framework states *“there are no known techniques or practices to avoid the release of carbon dioxide when limestone is calcined”*.

The CIF would strongly urge the Australian Government to duplicate this approach taken by Canada.

2. California

Under the Californian Scheme Cement Manufacture is determined to be at high risk of leakage and has therefore been granted 100% shielding under the policy across all forward years.

3. New Zealand

New Zealand has a legislated emissions trading scheme. EITE assistance is available for all parts of the manufacturing process, including cement milling.



The Australian Cement Industry and Resource Recovery

The cement industry is at the forefront of resource efficiency initiatives, which have been achieved through research and development programs and innovation. The versatility of the cement manufacturing process enables the safe use of certain secondary materials from other manufacturing processes, and has resulted in the progressive uptake of supplementary cementitious materials (materials which exhibit cementitious properties), non-traditional or alternative raw materials (materials containing calcium, silica, alumina or iron), and non-traditional or alternative fuels (having calorific value and in some cases recyclable raw material components). Examples of the secondary materials opportunities for the cement industry are listed in Figure 3.

The Australian cement industry's viability is dependent upon minimising costs, advancing the industry toward greater sustainability and maintaining a "social licence to operate". In this regard, **the industry has been innovative and creative in reducing its environmental footprint via the uptake of alternative fuels, raw materials and supplementary cementitious materials (SCMs)** - predominantly sourced from secondary materials/by-products. These actions not only conserve natural resources (for example coal, gas, limestone, iron ore, sands and shales) and reduce landfill, but in many cases also reduce greenhouse gas and other emissions.



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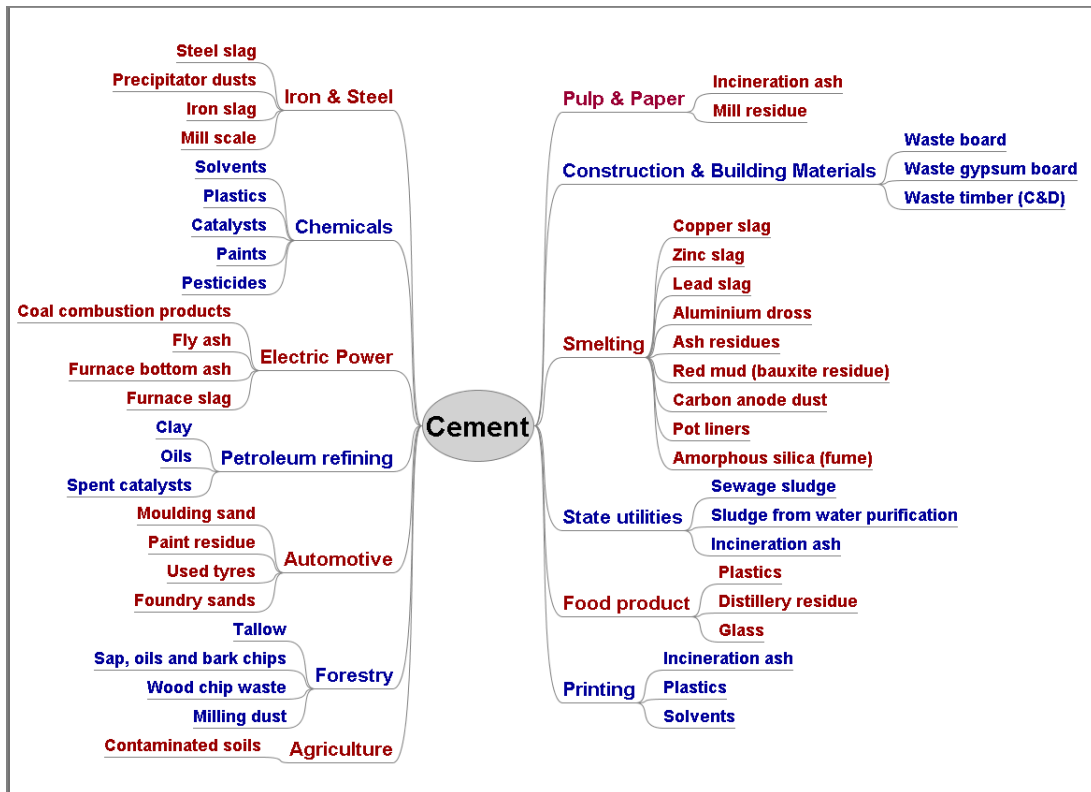


Figure 3 Secondary / By-Product Material Opportunities for the Industry

For the year 2008 - 2009, over 7% of our total thermal energy requirements were met by alternative fuels which have been safely converted to energy and product materials. In the same year nearly 2.5 Mt of SCMs (in a total market in excess of 10Mt of cement and cement materials) were introduced to the market. **These figures make the cement industry one of the largest recyclers in Australia yet the Australian cement industry's can recycle more.** Globally, particularly in Europe and Japan, the cement manufacturing process is recognised for its contribution to sustainable resource management. Internationally the cement industry has made significant achievements in the use of alternative resources over the past 30 years which have not been able to be realised in the Australia industry due to a number of factors including:



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- the abundant opportunities and low cost of land filling which has diminished the market incentive to establish resource recovery
- Outdated and inconsistent waste and recycling legislation within State and Federal jurisdiction which results in regulatory uncertainty or disincentives to drive progress supporting resource recovery.

In particular, State approaches vary to defining, classifying and regulating wastes. This leads to increased ambiguity and confusion, and forms barriers to progressing innovative initiatives for end use.

These problems were recognised in November 2009 by the Environment and Heritage Ministerial council of the Council of Australian Governments through the *National Waste Policy: Less Waste, More Resources*.

The National Waste Policy will be implemented over the next ten years, unfortunately the implementation plan, for the National Waste Policy agreed in July 2010 does not focus on the issues that would make way for a greater utilisation of waste as resources in the Cement Industry for a number of years.

The CIF believes that with adequate implementation of the National Waste Policy, further recycling and an associated drop in greenhouse gas emissions from the cement industry could be easily achieved.

Current waste legislation limiting resource recovery opportunities

Lowering energy costs is one of the main ways of improving the international competitiveness and sustainability of the Australian cement industry. More and more, cement plants are turning to using alternatives to fossil fuel and natural raw materials. Today, in Europe, alternative fuels provide on average approximately 12% (up to 72% in some individual plants) of thermal energy consumption to the industry. Yet alternative fuels account for only 6.5% of the Australian cement industry's total thermal energy requirements.

Reducing the quantity of clinker required in concrete through the substitution of pre-calcined and supplementary cementitious materials (SCMs) during the manufacture of cement and concrete lowers the greenhouse gas emissions per unit of cementitious material used and manages large volumes of normally land filled waste. The industry currently substitutes 22%



(about 2.2 million tonnes) of clinker with both mineral addition and SCMs such as fly ash and slag as blends in cement products or as sales direct to the premix industry for use in the concrete products markets.

Unfortunately alternative fuels and raw materials and SCMs are commonly classified as “wastes” under existing state regulatory regimes and this can constrain legitimate resource conservation efforts. As a minimum standard, all CIF member companies using alternative fuels and raw materials follow the World Business Council for Sustainable Developments “Guidelines for the selection and use of fuels and raw materials in the cement manufacturing process” which are built upon the principles of sustainable development, eco-efficiency and industrial ecology, and the best practice of the global industry.

Current inconsistent legislative requirements place significant limitations on some cement plants ability to re-use waste materials. This varies from state to state. Opening legislative requirements and approval processes to move progressive approaches to the re-use of alternative resources, encourages the opportunities for the industry to adopt more sustainable practices and reduce its environmental footprint.

Recommendations

- The CIF strongly supports measures which maintain the competitiveness of Australian Industry, particularly where carbon leakage would result from the existence of an Australian carbon tax or emissions trading scheme. Such measures should only be weakened in response to real global action on climate change on a sectoral level in competitor countries.
- Driving Technology development should be considered an important part of Australia’s climate change strategy and appropriate support and facilitation made available by the Australian Government.