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aluminium
SINCE 1963



Alcoa of Australia is the global leader in alumina production and Australia's sixth largest resources sector exporter. Alcoa is an integrated business comprised of bauxite mining, alumina refining, aluminium smelting, rolling and canned sheet products, with operations in Victoria, Western Australia and New South Wales.

FEDERAL GOVERNMENT CARBON POLLUTION REDUCTION SCHEME

**Submission by Alcoa of Australia on the
Green Paper released in July 2008**

September 2008

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Summary of Key Elements of Alcoa's Submission

Alcoa shares the view expressed in the CPRS Green Paper that the first best solution to address the international competitiveness concerns of Emissions Intensive Trade Exposed Industries (EITEs) is the development of a comprehensive global agreement under which all major emitters have binding carbon constraints.

In the absence of such an agreement, Alcoa supports the Australian Government's desire to show leadership and introduce an Australian emissions trading scheme, provided it is done in a way that addresses the environmental challenge while strengthening the Australian economy and preserving the jobs and social benefits that spring from Australian export industries – such as the alumina and aluminium industry.

Introduction of the Carbon Pollution Reduction Scheme (CPRS) in a way that led to carbon and jobs leakage would not be in the interests of the global environment, Australian economy or Australian people.

Conversely it is imperative that EITE industries, and the communities they support, continue to grow in Australia through sustaining and expansion investment.

Critical elements in the early introduction of an Australian CPRS for the alumina and aluminium industries include:

- Maintaining the international competitiveness of Australian emissions-intensive trade-exposed (EITE) industries, in the period of transition to a comprehensive, comparable international carbon signal;
- An allocation of permits covering direct and indirect emissions for both existing and new investments in emissions-intensive trade-exposed industries;
- Permit security over an investment-relevant time frame that must be retained while key international competitors do not face a similar carbon cost; and
- Ensuring an effective market-based ETS is not damaged by other policy interventions such as renewable energy targets – and that steps taken to avoid prejudice to emissions-intensive trade-exposed industries are not negated by such policies now or in the future.

To achieve the above, Alcoa's submission recommends the following in relation to EITE assistance:

- Australian EITE permit security must extend to the point that key competitor countries adopt similar carbon costs;
- All EITE industries should receive an initial allocation of 90% of direct emissions obligations;
- It is essential that trajectory-driven decay of EITE permits is restricted until competitor countries implement a comparable carbon price signal. This can be achieved through a flat emissions cap until competitor countries embrace change;
- Allocations to cover indirect emissions must be based on facility (power provider) emissions intensities to avoid disproportionate and unsustainable impacts on some EITE facilities;
- The CPRS should treat the additional carbon costs of energy purchase as gas in a manner similar to that proposed for electricity purchase;
- Embedded generators that supply directly to EITEs should be considered as part of indirect emissions allocations to EITEs, rather than as market generators;
- The most electricity intensive of the EITE industries should be exempt from the National Renewable Energy Target (NRET)
- The Alcoa Australia rolled products and remelting facilities be included in the EITE category.

In relation to other matters of design detail Alcoa recommends the following:

- Design of the CPRS should include provisions to encourage greenhouse effective domestic use of Australia's natural gas resources;
- Carbon transferred to CCS facilities should generate credits that can be transferable and be subject to commercial arrangements between the original emitter and CCS operators;
- The CPRS must allow for equity share accounting of emissions associated with facilities subject to joint ventures, partnerships or facilities owned by a different corporation;
- The regulator's decisions should be subject to Ministerial review and oversight. Provided that directions are made in a transparent and public manner, the Minister should be empowered to give specific directions to the regulator.

PART A – Background to Alcoa of Australia

1. OVERVIEW

Alcoa has been a major Australian exporter and employer for over 40 years. Alcoa's operations in Victoria, Western Australia and New South Wales form an integrated aluminium industry which produces about:

- 47% of Australia's alumina and;
- 30% of the national aluminium output.

These operations include bauxite mines, refineries, smelters, rolling mills and aluminium recycling facilities adding value to Australian resources throughout the manufacturing process.

Alcoa of Australia Limited is 60% owned by Alcoa Inc and 40% by Alumina Limited. Alumina Limited was established in 2002, following the de-merger of WMC Limited which partnered with Alcoa in the 1950s to build Australia's aluminium industry.

Alcoa directly employs over 6,000 people in Australia with thousands more employed as contractors across Alcoa's operations. It is conservatively estimated that Alcoa's Australian operations provide employment, through direct and indirect means for over 20,000 people – most in regional areas of Victoria and Western Australia.

Alcoa produces one third of Australia's aluminium, about half of its alumina and is the country's largest recycler of aluminium. Alcoa's operations contributed almost \$5 billion in exports in 2007, including partners' share of production. Of Alcoa's share of export earnings, around 80 cents in every export dollar earned stays in Australia. Alcoa is Victoria's largest exporter and a leading WA exporter.

Both the refining of bauxite into alumina and its subsequent conversion, through smelting, to aluminium are energy intensive. On average in Australia the direct cost of energy represents over 20% of the total cost of both alumina refining and aluminium smelting, with some sites experiencing energy costs well above this average.

Alcoa's Australian operations fall into the category of a Emission Intensive Trade Exposed Industry (EITEI).

Although it is energy intensive to produce, aluminium provides significant climate change management opportunities. For example, the use of light weight aluminium in the transport sector greatly reduces greenhouse gas emissions in comparison to heavier metals – each kilogram of aluminium used in motor vehicle manufacture, instead of steel, saves around 20kg of greenhouse gas emissions over the life of the vehicle.

Aluminium is almost endlessly recyclable and recycling saves 95 per cent of the energy it would take to make new metal. Around two thirds of the aluminium produced since 1886 is still in use today.

Alcoa is the largest recycler of aluminium in Australia and recycles around 70,000 tonnes of aluminium at its remelting facility at Yennora, New South Wales each year. Globally, Alcoa utilises about 20 percent of recycled metal for fabricated products and is working to increase this to 50 per cent.

Climate Change is one of the key issues of our time. As Alcoa recognised over a decade ago, the public debate has moved from whether climate change is occurring to what can we do to address it.

Alcoa in Australia has, over the past decade, significantly reduced its greenhouse emissions. For example, Alcoa's Victorian smelters have reduced greenhouse gas emissions per tonne of aluminium by 20 per cent since 1990. At Alcoa's alumina refineries in Western Australia, emissions intensities have been reduced by 6 per cent from an already very efficient base.

More broadly Alcoa took a voluntary global leadership position in addressing climate change and reducing greenhouse gas emissions. It set an ambitious target to reduce its 1990 global direct greenhouse gas emissions by 25 per cent by 2010. This was achieved in 2003. Alcoa is now working to maintain that reduction as the company grows.

2. ALCOA IN AUSTRALIA

2.1 40 year investment in Australia

Alcoa has driven the development of Australia's aluminium industry for over 40 years. Alcoa produces almost half of Australia's alumina and 30% Australia's aluminium.

It is a major value adder, adding value to Australian resources throughout the manufacturing process. In Australia, Alcoa operates:

- the Portland and Point Henry aluminium smelters in Victoria
- the Pinjarra, Kwinana and Wagerup alumina refineries in WA
- the Huntly and Willowdale mines in WA
- the Point Henry aluminium rolling mill in Victoria
- the Yennora rolling mill and aluminium recycling plant in NSW; and
- dedicated port facilities in WA and Victoria

Alcoa operates the world's largest integrated bauxite mining and alumina refining operations in Western Australia. In 2007, Alcoa produced around 8.7 million tonnes of alumina and 32 million tonnes of bauxite. Alumina produced by Alcoa in WA currently accounts for around 11% of world demand.

Alcoa produced 548,000 tonnes of aluminium in 2007 at the Portland and Point Henry smelters.

Alcoa Australia Rolled Products is the only manufacturer of aluminium rolled products in Australia, and the country's largest recycler of aluminium.

It produced 191,000 of rolled product in 2007, over 50% of which was exported, mainly to rapidly growing markets in Asia.

Alcoa is investing to expand its operations in Australia. It has completed a major upgrade of its Pinjarra refinery and has received environmental approval by the WA Government to expand its Wagerup refinery.

Together these projects could generate \$23 billion in additional exports for Australia and thousands of new jobs.

2.2 A leading exporter with \$5 billion in exports

Alcoa is a leading exporter with almost \$5 billion in exports in 2007, including partners' share of production. These exports comprise around \$4.6 billion for Alcoa of Australia and \$380 million for Alcoa Australia Rolled Products.

Alcoa is Victoria's largest exports, accounting for around 8% of Victoria's goods exports or 5% of total exports. It is a leading West Australian exporter, accounting for around 5% of WA's total exporters.

These exports make a significant economic contribution to the economy. Of Alcoa's share of export earnings, around 80 cents in every export dollar earned stays in Australia.

Alcoa distributed around \$3.5 billion in Australia in 2007, including on wages, local suppliers, dividends, rates and taxes.

2.3 A major employer and skills developer

Alcoa is a major employer supporting 7200 direct jobs – including 6200 employees and around 1000 full-time contractors. Most of these jobs are located in local communities in regional Australia.

The stability and longevity of Alcoa's operations provides stable, long term jobs for local communities. The company has very low staff turnover rates with 60% of employees having worked for Alcoa for more than 10 years.

Alcoa invests around \$22 million on training in Australia each year comprising:

- \$12 million on general training
- \$7.5 million on apprentices
- \$500,000 on traineeships
- \$2.1 million on youth and community-based training programs

It has trained over 1500 Australian tradespeople through its apprentice program. In 2008, Alcoa recruited 25 new apprentices and has around 140 apprentices in training across its operations.

This investment in training and skills development directly supports skills development in local and regional communities.

2.4 Supporting local communities and businesses

Alcoa provides around \$6 million each year in sponsorships and partnerships to help build stronger communities. Alcoa's community partnerships focus on:

- Conservation and Sustainability
- Stronger Communities
- Safe and Healthy Children and Families
- Arts for Everyone
- Future Leaders of Industry

Alcoa supports partnerships on health, safety, diversity, the environment, community development, leadership and education, science and technology. These include programs like the KIDS Foundation, which is dedicated to childhood injury prevention and recovery in line with our core safety values.

Alcoa employees play a key role in the artistic and cultural life of their communities as community members and as volunteers in community associations and organisations.

Over 1200 Alcoa employees actively volunteered in their local communities in Australia in 2007, contributing over 71,000 volunteer hours. This is equivalent to more than 8 years of time (24 hours a day, 7 days a week), contributed in local communities, in one year.

Alcoa supports employees in their local communities through the Alcoa Foundation. The Alcoa Foundation supports employee volunteering through ACTION and BRAVO

grants. In 2007, the Alcoa Foundation provided more than USD\$ 1.86 million to local community organisations in Australia.

Alcoa is committed to support local and regional businesses. The company's Local Supplier Policy aims to add value to the economy of local communities through:

- the preferred use of local suppliers,
- helping local suppliers do business with Alcoa, and
- encouraging suppliers to employ locally

Benefits to local businesses include short and long term purchases, contractual arrangements, and downstream benefits from Alcoa's extensive apprentice training programs and traineeships.

2.5 Supporting energy infrastructure

Alcoa's presence in Australia has enabled the development of essential regional energy infrastructure such as the Dampier to Bunbury Natural Gas Pipeline in Western Australia and energy infrastructure in Victoria.

2.5.1 *Dampier to Bunbury Natural Gas Pipeline*

Alcoa's operations underwrote the original construction of the Dampier to Bunbury Natural Gas Pipeline in the 1980's via its take or pay gas contract with SECWA. It underwrote 50% of the pipeline's debt servicing and capital repayments and contributed over \$1.4 billion over almost 20 years. Alcoa derived no benefit when the State sold the pipeline for \$2.4 billion in 1998.

In 2004, Alcoa and its consortium partners spent \$1.9 billion to rescue the pipeline out of receivership in order to secure its expansion. Alcoa is a 20% owner of the pipeline. The consortium has committed a further \$1.8 billion to expanding the pipeline since May 2005.

The pipeline has delivered stable, low-cost energy supplies to businesses and communities in the South West of WA. Expansion of the pipeline enables further development in the State by meeting existing and future demand for energy.

2.5.2 Promoting new natural gas supply

Alcoa is promoting the development of potential new sources of natural gas supply in Western Australia.

In 2007, Alcoa entered into an agreement with ARC Energy in which Alcoa pre-paid A\$ 40 million to support ARC Energy's gas exploration program in the Canning Basin.

In 2008, Alcoa and Latent Petroleum formed a joint venture to appraise and develop the Warro Gas Field north of Perth. The field is located onshore, close to existing gas pipeline infrastructure. If successful the project will promote development of other tight gas fields in WA and open a new source of supply.

2.5.3 Supporting energy infrastructure in Victoria and South Australia

Alcoa's aluminium smelters provided the necessary base load demand to support the development of the Loy Yang power generation complex in Victoria. This directly contributed to Victorian households and industry enjoying low cost reliable power supplies over the past 20 years.

The construction of Alcoa's Portland smelter was the catalyst for the construction of a high voltage line from Geelong to Portland and an interstate interconnector between Victoria and South Australia. Connecting South Australia to the Victorian grid has enabled South Australians to access a more stable and reliable power supply.

The Portland smelter also supported construction of a pipeline delivering natural gas to Portland and surrounding communities.

3. ALCOA MEETING THE CLIMATE CHANGE CHALLENGE

3.1 Global leadership position

A defining feature of the aluminium industry is its stability and longevity. The industry operates long life assets with high capital and replacement costs. Sustainability is therefore critical to the aluminium industry and underpins its decisions, actions and products.

Alcoa has taken a global leadership role on climate change policy, and will continue to do so. Alcoa's record is one of substantial emission reductions.

In 1998, Alcoa set itself a voluntary target to reduce global direct emissions by 25% from 1990 levels. This was achieved in 2003.

3.2 Alcoa's performance in Australia

Alcoa is reducing greenhouse gas emissions through energy efficiency, productivity improvements and new technology. It has made significant efficiency gains in both direct and total emissions per tonne of product (GHG intensity).

Alcoa has reduced direct greenhouse emissions per tonne of production:

- aluminium smelters – by 61% from 1990 levels
- alumina refineries – by 11% from 1990 levels
- aluminium rolling operations – by 16% from 1990 levels

Alcoa has reduced total greenhouse gas intensity per tonne of production:

- aluminium smelters – by 16% from 1990 levels
- alumina refineries – by 12% from 1990 levels
- aluminium rolling operations – by 21% by 1990 levels

Alumina produced by Alcoa in Australia uses just over half the energy, and produces less than half the greenhouse emissions, compared to alumina produced in China.

3.3 Deployment of new technology to reduce greenhouse emissions

Alcoa's greenhouse improvements have been underpinned by innovation and new technology. As Australia addresses climate change, Alcoa will continue to take a leading role through its application of technologies that reduce greenhouse emissions.

3.3.1 *New smelting technology*

Alcoa's smelters in Victoria have improved energy efficiency through new anode technology in the electrochemical cells. This reduced the accumulation of gas and subsequent reduction in the electric potential or what is termed pot voltage. This translates into a direct saving of up to 5% in power intensity or reduction in greenhouse gas intensity.

Alcoa's smelting operations have also reduced perfluorocarbon (PFC) emissions by over 85% compared to 1990 levels. PFC emissions are produced by anode effects in the smelting process. Anode effects are caused by low alumina levels in smelting pots and are a main source of direct greenhouse gas emissions from aluminium smelting.

Alcoa is developing new aluminium smelting technology that will further improve greenhouse performance. The technology, when available, has the potential to eliminate all consumable carbon anodes and related CO₂ emissions. It could also eliminate all PFC emissions.

3.3.2 *Greenhouse friendly gas-fired cogeneration*

Alcoa's alumina operations underpin the development of greenhouse friendly gas-fired cogeneration power plants. Alcoa and Alinta Limited have partnered to build the plants at Alcoa's refineries in Western Australia. The plants produce electricity and steam from natural gas, delivering substantial greenhouse efficiency benefits.

Each cogeneration unit will supply 140 megawatts of power, equivalent to the power needs of 90,000 households. Energy is supplied to WA households and businesses directly through the South-West grid.

Gas-fired cogeneration is the most thermally efficient and greenhouse-friendly non-renewable energy source. Cogeneration is around 75% energy efficient, compared with 30-50% for other power plants operating in WA.

A year's electricity from each cogeneration unit saves around 450,000 tonnes of greenhouse gas emissions each year compared to a similar sized coal fired plant – equivalent to taking 112,000 cars off the road.

In addition, the cogeneration plants reduce refinery emissions by 270,000 tonnes per year through more efficient steam generation – equivalent to taking a further 67,000 cars off the road.

Two cogeneration plants have been commissioned at the Pinjarra refinery. Together with a Pinjarra refinery upgrade, the plants have reduced refinery greenhouse intensity by around 13% and energy intensity by around 5%.

Two Open Cycle plants commenced operation at Wagerup in October 2007 to supply reserve capacity to the market and may be converted to closed cycle cogeneration units to meet future Wagerup steam requirements.

Cogeneration plants at the Pinjarra and Wagerup refineries could save over 1.8 million tonnes of greenhouse gas emissions when compared to coal fired electricity generation. This is equivalent to taking 450,000 cars off the road in Australia – a significant greenhouse benefit. Alcoa is already the largest cogenerator of energy in Australia.

3.3.3 Carbon capture

Alcoa has developed new carbon capture technology that uses waste CO₂ to treat bauxite residue. Bauxite residue is produced by alumina refineries and currently requires long term storage.

This new process delivers significant greenhouse benefits by permanently locking up CO₂ that is otherwise released into the atmosphere.

Alcoa's first residue carbonation plant is operating at Alcoa's Kwinana refinery in Western Australia and uses waste CO₂ from a nearby ammonia plant. Eventual deployment across Alcoa's operations in Australia alone could save up to 300,000 tonnes of CO₂ each year. The company will also deploy the technology to its refineries across the globe when practical.

3.3.4 Action at the grassroots level

Although climate change is a global issue, in Australia Alcoa is working with its workforce and the communities in which it operates to address climate change at a grassroots level.

In a first for Australian industry, Alcoa and Greening Australia have developed a greenhouse reduction program for Alcoa employees and communities called 'Make an Impact'

The 'Make an Impact' program includes a greenhouse footprint calculator and tips to cut energy, water use and waste. Given that households generate almost one-fifth of Australia's greenhouse emissions, helping change everyday activities and habits can have a real impact. This Australian initiative will subsequently be implemented to Alcoa staff across the world.

Alcoa employees also participate in voluntary tree planting, and the company is supporting this through the global 'Ten Million Trees' program. The program aims to plant 10 million new trees worldwide by 2020 which will absorb more than 250,000 tonnes of carbon dioxide each year.

Alcoa has been consistently recognised in the Dow Jones Sustainability Index and by the World Economic Forum as one of the most sustainable companies in the world.

3.3.5 Asia-Pacific Partnership on Clean Development and Climate.

Alcoa and the Australian aluminium industry is actively supporting the work of the Partnership through the Aluminium Taskforce chaired by Australia.

The Taskforce is examining opportunities to share best practice and technology to reduce greenhouse emissions. This includes Alcoa's new carbon capture technology.

Importantly, the Partnership includes the world's major greenhouse emitting countries, including the United States, India and China. For example, China has over 80 aluminium smelters - compared to Australia's six smelters - and accounts for over a quarter of global aluminium production. Sharing best practices and technology will have a significant impact in reducing greenhouse emissions.

Alcoa is an active participant in the work of Asia-Pacific Partnership on Clean Development and Climate (APP) and sub forums, including those associated with technology development.

3.3.6 Alcoa and USCAP

Alcoa is a member of the US Climate Change Action Partnership (USCAP) which includes a broad range of large US corporates, including Alcoa Inc, BP, Caterpillar, Duke Energy, Du Pont, FPL Group, GE, PG&E Corporation and PNM Resources.

Also included are Environmental Defense, the Natural Resources Defense Council, The Pew Centre on Global Climate Change and the World Resources Institute.

In 2007 the USCAP group called on the US Government to enact a policy framework for mandatory reduction of GHG emissions from major emitting sources, transportation, and energy use in commercial and residential buildings. The cornerstone of this approach would be a cap-and-trade scheme for the USA. The environmental goal is to reduce global atmospheric GHG concentrations to a level that minimises large scale adverse impacts to humans and the natural environment.

The group recommended the US Congress provide leadership and establish short and mid term emissions reduction targets; a national program to accelerate technology research, development and deployment; and approaches to encourage action by other countries, including those in the developing world.

The recommendations are based on the following six principles:

- Account for the global dimensions of climate change;
- Recognise the importance of technology
- Be environmentally effective;
- Creative economic opportunity and advantage;
- Be fair to sectors disproportionately impacted; and
- Recognise and encourage early action.

More information on USCAP is available at <http://www.us-cap.org/index.asp>

4. ALUMINIUM – PART OF THE SOLUTION

Aluminium is part of the solution to climate change. Aluminium's lifecycle provides significant greenhouse benefits through recycling and the increased use of aluminium in transport. By 2025, increased use of aluminium in transport could offset emissions of the entire aluminium industry.¹

4.1 Aluminium recycling

Aluminium is almost endlessly recyclable and nearly three-quarters of all aluminium ever made since 1886 remains in use today.

Recycling saves 95% of the energy it would take to make new metal. For example, an aluminium can recycles 100% back into another aluminium can while only using 5% of the energy needed to make a new can from scratch. Used aluminium cans can be recycled and returned to a store shelf as a new can in as few as 60 days.

Alcoa is the largest recycler of aluminium in Australia and recycles around 70,000 tonnes of aluminium at its remelting facility in Yennora, NSW, each year. The aluminium can recycling rate for Australia is around 70%.

Globally, Alcoa utilises about 20% of recycled metal for fabricated products and is working to increase this to 50%.

4.2 Lifecycle benefits in transport

Use of aluminium in transport provides lifecycle benefits from improved performance, fuel efficiency and lower greenhouse emissions.

Every kilogram of aluminium used in a car potentially saves a net 20 kilograms of greenhouse gas emissions over the car's life. For other vehicles, such as trains, ferries and aircraft, the potential savings are even greater.

¹ Martchek, K., 'Modelling More Sustainable Aluminium: Case Study', Int J LCA (2006), available at http://www.alcoa.com/global/en/about_alcoa/sustainability/pdfs/KMartchek_IJLCA_7772.pdf

An aluminium component is 40 – 50% lighter than an equivalent steel component. Every 10% reduction in weight produces 6 – 8% in fuel savings, with a consequent reduction in vehicle greenhouse emissions.

A life cycle study demonstrated that use of aluminium in passenger cars manufactured in 2006 will lead to potential global savings of around 140 million tonnes of CO₂ equivalent greenhouse gas emissions.

Alcoa is working with Boeing, Airbus and the car industry to develop new alloys for aircraft and motor vehicles.

PART B – Response to the Green Paper

Reading Part B

Key recommendations or preferred positions from the CPRS Green Paper are shown inside grey shading. The text that follows each shaded area represents Alcoa's response. Alcoa has focused most attention on these elements with greatest potential for impact on the Australian aluminium industry.

CHAPTER 1. FRAMEWORK

CPRS 1.1 The objective of the Carbon Pollution Reduction Scheme is to meet Australia's emissions reduction targets in the most flexible and cost-effective way; to support an effective global response to climate change; and to provide for transitional assistance for the most affected households and firms.

Alcoa acknowledges the Federal Government's commitment to an Emissions Trading Scheme.

CPRS 1.2 Design options are to be assessed against the following assessment criteria:

- environmental integrity
- economic efficiency
- minimisation of implementation risk
- policy flexibility
- promotion of international objectives
- implications for the competitiveness of traded and non-traded industries
- accountability and transparency
- fairness

Alcoa acknowledges these criteria as a general guide for assessing design options.

In particular, Alcoa supports recognition of the need to ensure environmental integrity and the competitiveness of industry.

CHAPTER 2. COVERAGE

CPRS 2.1 All greenhouse gases included under the Kyoto Protocol—carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, hydrofluorocarbons and perfluorocarbons— would be covered from scheme commencement.

Alcoa supports coverage of the six commonly accepted (and Kyoto Protocol specified) greenhouse gases: carbon dioxide; methane; nitrous oxide; sulphur hexafluoride; perfluorocarbons; and hydrofluorocarbons – expressed as carbon dioxide equivalents.

However, it is important to apply a reasonable materiality test to ensure coverage of the Scheme applies only to those facilities emitting above an agreed threshold quantity of greenhouse gases.

CPRS 2.2 In general, the emissions threshold for direct obligations under the scheme would apply to entities with facilities which have direct emissions of 25,000 tonnes of carbon dioxide equivalent a year or more. Different thresholds may be required for the waste sector and synthetic greenhouse gases.

Supported. It is desirable to have as broad as possible coverage of sectors under the scheme.

CPRS 2.3 Stationary energy emissions would be covered from scheme commencement by applying scheme obligations both to facilities with direct emissions of 25,000 tonnes of carbon dioxide equivalent a year or more and to suppliers of fuel to small energy users.

Supported.

CPRS 2.4 Transport emissions would be covered from scheme commencement, with scheme obligations applied to upstream fuel suppliers.

Supported.

CPRS 2.5 Fugitive emissions would be covered from scheme commencement by applying scheme obligations to facilities with direct emissions of 25,000 tonnes of carbon dioxide equivalent a year or more.

Supported.

CPRS 2.6 Emissions from industrial processes would be covered from scheme commencement by applying scheme obligations to facilities with direct emissions of 25,000 tonnes of carbon dioxide equivalent a year or more.

Supported.

CPRS 2.7 Synthetic greenhouse gas emissions would be covered from scheme commencement by applying scheme obligations to bulk importers of synthetic greenhouse gases, large importers of equipment containing synthetic greenhouse gases, and domestic synthetic greenhouse gas manufacturers (of which there are currently none), with a threshold to be determined.

Supported.

CPRS 2.8 Emissions from the waste sector would be covered from scheme commencement, with the precise scope of coverage, thresholds and other detailed design issues to be determined.

Supported.

CPRS 2.9 Carbon that is transferred to carbon capture and storage (CCS) facilities would be netted out of the originating entity's gross emissions. Scheme obligations for fugitive emissions—from transport of the carbon and from the CCS facility—would be imposed on the operator of the CCS facility.

While Alcoa acknowledges the desirability of avoiding double counting, it is important that the Scheme promotes, and not discourages, third party development and deployment of CCS technologies.

For example, Alcoa has developed new carbon capture technology that uses waste CO₂ to treat bauxite residue. Bauxite residue is produced by alumina refineries and currently requires long term storage. This new process delivers significant greenhouse benefits by permanently locking up CO₂ that is otherwise released into the atmosphere.

Alcoa's first residue carbonation plant is operating at Alcoa's Kwinana refinery in Western Australia and uses waste CO₂ from a nearby ammonia plant. Eventual deployment across Alcoa's operations in Australia alone could save up to 300,000 tonnes of CO₂ each year and the technology has potential global application.

Under preferred position 2.9, Alcoa would derive no benefit from developing and deploying the carbon capture process at Kwinana refinery and would in fact be liable for fugitive emissions from operating the facility.

To ensure the scheme does not discourage the development and deployment of new CCS technology, or limit it only to originating entity operations, carbon transferred to CCS facilities should generate credits that can be transferable and be subject to commercial arrangements between the original emitter and CCS operators.

CPRS 2.10 Scheme obligations for emissions from fuel combustion would be applied to all fuel excise and customs duty remitters for all liquid fuels currently subject to fuel excise and excise-equivalent customs duty, with thresholds to exclude smaller customs duty remitters to be determined.

Alcoa has no comment on this element.

CPRS 2.11 Scheme obligations for emissions from synthetic liquid fuels would be applied to fuel excise and customs duty remitters.

Alcoa has no comment on this element.

CPRS 2.12 Scheme obligations for emissions from liquefied petroleum gas would be applied to producers, marketers, distributors and importers of liquefied petroleum gas supplied to energy users.

Alcoa has no comment on this element.

CPRS 2.13 Scheme obligations for emissions from domestic combustion of liquefied natural gas and compressed natural gas would be applied to producers of those fuels.

Alcoa has no comment on this element other than there is a need for caution to ensure the scheme provides a level playing field between production and supply of export LNG vis-à-vis natural gas for the domestic market. Refer to Alcoa's response on 12.1.

CPRS 2.14 Scheme obligations for emissions from natural gas combustion would be applied to entities with facilities which have direct emissions of 25,000 tonnes of carbon dioxide equivalent a year or more, and to natural gas retailers for emissions from gas supplied to small emitters, or to gas producers where they supply directly to small emitters.

Alcoa has no comment on this element.

CPRS 2.15 Scheme obligations for emissions from black coal combustion would be applied:

- to facilities with direct emissions of 25,000 tonnes of carbon dioxide equivalent a year or more
- to all coal mines, distributors, washeries, and producers of coke and coal by-products for emissions from small emitters.

Alcoa has no comment on this element.

CPRS 2.16 Scheme obligations for emissions from brown coal combustion would be applied:

- to facilities with direct emissions of 25,000 tonnes of carbon dioxide equivalent a year or more
- on manufacturers of brown coal briquettes and other brown coal by-products for emissions from small emitters.

Alcoa has no comment on this element.

CPRS 2.17 Scheme obligations would not apply to emissions from combustion of biofuels and biomass for energy; they would receive a 'zero rating'.

Supported

CPRS Section 2.5.7 *Netting-out arrangements:*
Stakeholder feedback is sought on netting out arrangements.

CPRS 2.18 The scheme would cover only domestic emissions sources and sinks that are counted in Australia's Kyoto Protocol emissions account.

Supported.

CPRS 2.19 The Government is disposed to include agriculture emissions in the scheme by 2015 and to make a final decision on this in 2013. Given the compliance costs that would be involved if scheme obligations were to apply at farm-level, the Government seeks stakeholder views on the merits of an approach to coverage that would apply obligations generally off-farm, at some other point in the supply chain (for example, on fertiliser suppliers, abattoirs, dairies and beef exporters). The Government recognises that any approach will also need to provide appropriate incentives for on-farm abatement.

Alcoa supports as broad as possible coverage of sectors under the scheme and supports the inclusion of agriculture where practical.

There is however a need for consistency of treatment between agriculture EITEs and industrial EITEs in emission trajectory.

Under the proposed arrangements, agriculture EITEs would effectively receive 100% shielding until at least 2015. It would be inappropriate to subject industrial EITEs to trajectory erosion from 2010 while agriculture trajectory remains constant at 100% until 2015.

The issue of trajectory-driven erosion of EITE allocation is discussed further in Alcoa's response to CPRS Chapter 9.

CPRS 2.20 All reforestation (as defined for the first commitment period of the Kyoto Protocol) would be included, on a voluntary basis, from scheme commencement in 2010, with design details to be determined.

Supported.

CPRS Section 2.8.1 Reforestation: Stakeholder feedback is sought on reporting and acquittal periods, accounting rules, thresholds and other design details.

Alcoa has no comment on this element.

CPRS 2.21 After careful deliberation the Government does not propose to include deforestation in the Carbon Pollution Reduction Scheme. Australian deforestation emissions have reduced markedly since 1990, largely due to increased protections against land clearing.

Alcoa has no comment on this element.

CPRS 2.22 The scheme would not include domestic offsets from agriculture emissions in the period prior to coverage of these emissions.

The Government would consider the scope for offsets from emissions sources that cannot be included in the scheme in 2013, following final decisions on coverage of agriculture emissions.

There is potential for the agriculture and forestry sectors to play a significant role in carbon sequestration and the provision of credits or offsets.

Any scheme should also encourage opportunities for new technologies such as bio-char to lock-up carbon.

The International Biochar Initiative (IBI) for example considers the bio-char process as carbon negative – producing both bio-energy and carbon-sequestering fertiliser from agricultural waste, which results in a net reduction of carbon dioxide from the atmosphere. Bio-char could sequester carbon for hundreds or thousands of years, while at the same time improving soil fertility and plant growth.²

Alcoa supports the proposition put forward by Alumina Limited that Biochar is an important carbon sequestration opportunity and that it should be treated by Government as a carbon capture and storage process.

² International Biochar Initiative, <http://www.biochar-international.org/aboutbiochar.html>, accessed 1 September 2008.

CHAPTER 3. CARBON MARKETS

CPRS Section 3.1.2 Efficient price discovery: The Government seeks specific feedback on whether the scheme regulator should publish the following information that would assist in the development of the permit market:

- quantities and prices of carbon pollution permits auctioned by the regulator;
- the quantity of free carbon pollution permits received by each entity and/or by industry sector;
- total shortfalls in permits surrendered by liable entities; and
- extent and nature of non-compliance with the scheme.

Alcoa supports transparency in the operation of the emissions trading scheme.

Alcoa is already a participant of the Greenhouse Challenge Plus and Energy Efficiency Opportunities Scheme and values the transparency and accountability provided by those programs.

CPRS 3.1 A carbon pollution permit (which will be referred to in legislation as an Australian emissions unit) would be an entitlement composed of various 'rights' contained in the carbon pollution reduction legislation. The main rights would be the right to surrender the permit and to transfer it.

The scheme regulator would issue only one type of domestic permit, called an Australian emissions unit (referred to in this green paper as a carbon pollution permit).

Supported. Alcoa supports the transferability of permits and the development of a healthy secondary market.

CPRS 3.2 A permit could be held and traded by any legal or natural person (subject to verification of identity and measures to prevent criminal activity).

There would be no restriction on foreign ownership of permits, apart from any that might apply under a law other than the scheme legislation.

Supported.

CPRS 3.3 The permit would be a financial product for the purposes of the Corporations Act 2001, but some adjustment to that regime may be required to fit the characteristics of permits.

Alcoa has no comment on this element.

CPRS 3.4 Unlimited banking of permits would be allowed under the scheme.

Supported.

An appropriate level of banking would allow market participants the flexibility to assign emissions within and across budget periods. This could, for example, assist in the management of growth projects.

The ability to bank permits reduces the underlying price volatility and therefore the risk to market participants. It also establishes a basis for lower volatility in forward markets as future prices reflect the underlying cost of carry of the current permit.

Banking is an accepted feature of most similar schemes, and has been supported by both the NETT and the 2007 Task Group on Emissions Trading.

CPRS 3.5 The scheme would permit a limited amount of short-term borrowing by allowing liable entities to discharge up to a certain percentage (less than 5 per cent) of their obligations by surrendering carbon pollution permits dated from the following year.

The exact percentage should be subject to further investigation and should be considered in conjunction with decisions about the level of the initial scheme caps.

Alcoa supports limited borrowing which, along with banking, can provide market participants with flexibility.

While the effectiveness of borrowing will ultimately depend on the allocation of future permits, the ability to borrow may however provide an incentive for participants to delay emissions reductions by borrowing from the future for current liabilities.

Alcoa believes these risks may be managed through the rate of release of future dated permits and prudential limits on lending by the independent market operator, and by penalty and compliance arrangements.

CPRS 3.6 The scheme would have a compliance period of one year. Further consultation with industry will be needed for reporting and compliance periods for reforestation.

Supported.

CPRS 3.7 The scheme would have a price cap for the period 2010–11 to 2014–15.

The price cap would be set high enough above the expected permit price to ensure a very low probability of use. The precise level would be set taking into account all information about scheme design and the expected abatement costs in the economy.

Climate change is a truly global challenge and maintaining production and investment in countries with modern emission controls, relatively high greenhouse efficiency, a history of environmental improvement and a strong desire to achieve even more must be a sustainability priority.

Erosion of EITE industry allocations ahead of international competitors embracing a comparative carbon cost jeopardises the viability of Australian industries, the jobs they support and flow-on benefits to Australian communities. It also represents a real prospect of carbon leakage to rapidly growing sectors in other countries.

Forecasts of a rapidly eroding EITE permit allocation will have immediate impacts by curtailing very substantial capital investment as industries must take a long-term view with capital decision-making. As stated in Alcoa's response to Chapter 4, investment decisions for green-field and brown-field developments such as in resource processing and power generation are typically assessed on a 20-25 year investment time-frame. This type of competitiveness certainty is essential if Australia is to attract and sustain investment in industry.

It is therefore essential that the trajectory-driven erosion of EITE permits is restricted until competitor countries also implement a carbon price signal. This can readily be achieved through Government implementing a flat emissions cap until competitors in other countries face similar carbon costs.

The alternative is to apply strict price control (at a low level) for emission permits - a low carbon price until competitor countries adopt a carbon price signal.

Where a price cap is set too high with a very low probability of use – as proposed by CPRS 3.7 - a flat trajectory approach is essential to maintain international competitiveness of EITE industries.

CHAPTER 4. EMISSION TARGETS AND SCHEME CAPS

CPRS 4.1 At the end of 2008, in the context of the white paper, the Government would announce a medium-term national target range for 2020 that provides upper and lower bounds to give investors and market participants information on directions and retains sufficient flexibility for the Government.

CPRS 4.2 The Government would announce an indicative national emissions trajectory to provide broad guidance on the pathway towards the medium-term target range.

Alcoa supports the Australian Industry Greenhouse Network's submission that consideration of a national emissions trajectory must also consider global scenarios.

Alcoa supports the position expressed in the Green Paper and the Australian Aluminium Council that the development of a comprehensive global agreement under which all major emitters have binding carbon constraints would be the first best solution to address the competitive concerns of EITEs.

Pending the development of a comprehensive global agreement, it is critical that the Australian Scheme recognises the need to ensure the competitiveness of EITEs. Erosion of EITE industry allocations ahead of competitor countries implementing a carbon price signal jeopardises the viability of Australian industries, the jobs they support and flow-on benefits to Australian communities, as well as presenting a real prospect of carbon leakage to rapidly growing sectors in other countries.

It is therefore essential that the trajectory-driven erosion of EITE permits is restricted until competitor countries also implement a carbon price signal. This can readily be achieved through Government implementing a flat emissions cap until competitor countries embrace change.

The alternative is to apply strict price control (at a low level) for emission permits – a low carbon price until competitor countries adopt a carbon price signal.

Alcoa believes this approach is consistent with the Australian Industry Greenhouse Network's proposal that the permit price path should reflect the availability of both supply and demand-side technologies to meet the abatement task. In each of these scenarios the price of carbon is not driven up by an aggressive cap.

See also Box 9.2 in Alcoa's response to Chapter 9.

CPRS 4.3 The Government would announce a minimum of five years of the indicative national emissions trajectory, to be extended by one year, every year as required to maintain a minimum of five years of guidance at all times after commencement of the scheme.

CPRS 4.4 The difference between the scheme cap and the national target would be explicitly and transparently reconciled through notional allocation (and retirement) of permits for sources of emissions not covered by the scheme.

CPRS 4.5 Scheme caps would be set and announced for a minimum period of five years in advance at any one time.

In the event that Australia's international commitment period extends beyond five years, scheme caps would be extended to the end of the commitment period.

CPRS 4.6 Scheme caps would be extended by one year, each year, as required to maintain a minimum five year certainty period. Should the international commitment period (and therefore scheme caps) already extend beyond five years, an annual extension would become optional.

Alcoa supports forewarning of the indicative national emissions trajectory to promote business certainty. It is however critical that any time periods reflect commercial reality.

Investment decisions for carbon sensitive green-field and brown-field developments, such as in resource processing and power generation, are typically assessed on a 20-25 year investment time-frame. This type of competitiveness certainty is essential if Australia is to attract investment in industry.

Alcoa supports a minimum 15 year fixed forward trajectory periods to provide the certainty that businesses require to invest. Shorter periods would discourage new and sustaining investment and job creation, by undermining investment certainty.

Refer also to Alcoa's response to Chapter 9.

CPRS 4.7 By using gateways, the Government would provide guidance over future scheme caps beyond the period of fixed scheme caps.

CPRS 4.8 The Government would provide guidance over future scheme caps beyond the initial certainty period through the use of a gateway in each of the following years, to the end of the gateway period.

CPRS 4.9 The initial length of the gateway would be 10 years beyond the minimum five years of scheme caps.

CPRS 4.10 Gateways would be extended by five years, every five years, as part of a strategic review of international conditions and Australia's likely future international commitments.

Alcoa supports the use of gateways to provide greater certainty for industry.

Alcoa supports a 15 year period – however, this should equate to a minimum 10 years of scheme caps, and a 5 year gateway beyond this.

CPRS 4.11 The scheme cap would not be adjusted in the event that it is incompatible with internationally negotiated national targets and, if necessary, the Government would make up any shortfall in internationally agreed targets by purchasing international emissions units.

Supported.

CPRS 4.12 The Government would announce an approach in early 2010 for expanding the cap to accommodate increases in scheme coverage that provided a smooth scheme price path.

Supported.

CPRS Section 4.4.2 Adjusting the cap for expansions in scheme coverage: The Government seeks comment on the appropriate decision rule to facilitate this.

Any inclusion of additional sectors into the scheme in the future should not disadvantage existing covered sectors.

CPRS 4.13 At the end of 2008, in the context of the white paper, the Government would announce the indicative national emissions trajectory for the period 2010–11 to 2012–13, and in 2010 the Government would announce a further two years of the trajectory up to and including 2014–15, or to the end of any international commitment period, whichever is longer.

Refer to Alcoa's response to CPRS 4.7 – 4.10.

CPRS Section 4.5 Scheme caps and gateway announcements: The Government seeks comment on the appropriate decision rule to facilitate this approach.

CPRS 4.14 At the end of 2008, in the context of the white paper, the Government would announce an approach for setting scheme caps for the period 2010–11 to 2014–15, consistent with the national emissions trajectory.

In early 2010, the Government would announce the finalised scheme caps for the first five years of the scheme (2010–11 to 2014–15) and 10 years of gateways beyond this period.

Refer to Alcoa's response to CPRS 4.7 – 4.10.

CHAPTER 5. REPORTING AND COMPLIANCE

CPRS 5.1 NGERS would be the starting framework for monitoring, reporting and assurance under the scheme, and elements of that system would be strengthened to support the scheme.

Alcoa has no comment on this element other than to support streamlining, integration and to reduce additional compliance burdens.

CPRS 5.2 In general, entities with operational control over covered facilities or activities would be liable for emissions obligations arising from those facilities or activities under the scheme.

- Where multiple entities exercise a degree of operational control over a covered facility or activity, a single responsible entity would be required to register and meet scheme obligations.
- For corporations, obligations would be placed on the controlling corporation of a company group where either the controlling corporation or a member of the group has operational control over a covered facility or activity.

Alcoa strongly opposes this general liability. It would result in Alcoa as the controlling corporation for the Alinta cogeneration plants, moving from a simple accountability for reporting Greenhouse gas emissions from these facilities under the NGER Scheme, to being fully liable for the emissions under the CPR Scheme – with all the attendant financial and administrative costs. This would operate as a significant disincentive to develop and support greenhouse-efficient cogeneration plants.

Alcoa's alumina refineries in Western Australia have been critical in underpinning the development of cogeneration plants. Gas-fired cogeneration is the most thermally efficient and greenhouse-friendly non-renewable energy source. Cogeneration is around 75% energy efficient, compared with 30-50% for other power plants operating in WA. Two cogeneration plants have been commissioned at the Pinjarra refinery. Two Open Cycle plants commenced operation at Wagerup in October 2007 to supply reserve capacity to the market and may be converted to closed cycle cogeneration units to meet future Wagerup steam requirements.

Alcoa should only be accountable for its share of the emissions associated with the indirect energy taken (as steam) from the facilities, while Alinta should be responsible for all other Greenhouse gas emissions and their necessary permits, involved in generating electricity exported to others.

During the development of the NGERs, Alcoa raised concerns about the requirement for the operator of joint ventures and partnerships to report on all emissions associated with jointly owned or operated facilities. A strong preference for equity share reporting was expressed in our submissions and when attending NGER briefing sessions (August 2007, February 2008). AGO officers at the briefings indicated that for administrative reasons, operator control was deemed the only workable way of defining an entity responsible for reporting.

Officers assured attendees that when the Australian ETS was being designed, the matter of liability under that scheme for emissions would be considered on its own merits, and that the operator control definition for NGER reporting in no way committed the Government to adopting the same approach for carbon emissions liability under an ETS.

We strongly oppose the intent of preferred position 5.2 - that operators should automatically assume liability for all the emissions of joint ventures, partnerships or facilities owned by a different corporation to that operating the facility. It is illogical in respect of the cogeneration plants for the following reasons:

- A greater proportion of the energy output from these facilities is owned by a corporation other than the controlling corporation;
- The facilities themselves are owned by a corporation other than the controlling corporation;
- Energy taken from the plants by the controlling corporation (as electricity or steam) is already counted as a Scope 2 indirect emission under the NGER, and will attract the liability of the controlling corporation under CPRS; and
- It would impose an excessive and unfair burden on the controlling corporation to be held liable for the emissions associated with generation of energy that it holds no ownership or interest in (being the electricity exported to third parties).

It is Alcoa's view that a far more workable and just approach would be to:

- Allow for equity share accounting of emissions associated with such facilities for the purposes of the CPRS;

- It would remain the responsibility of the controlling corporation to report the full emissions of the facility;
- The controlling corporation would also be accountable to report on the equity share proportion to be applied to the different owners/interested parties under the CPRS;
- With each equity share holder held fully liable for its emissions under the CPRS;
- Where an equity share is smaller than some lower threshold (say 5 or 10%) of the facility, it would be appropriate to require the controlling corporation to manage the liability under CPRS for the smaller share owner, however this could be achieved by contractual agreement.

CPRS 5.3 Emissions estimation methodologies under the scheme would be those available under the National Greenhouse and Energy Reporting System.

Alcoa generally supports the use of the NGERS methods for use in the CPRS accounting.

Alcoa notes however that the NGERS approach to accounting for cogeneration given in Section 2.70 of the Technical Guidelines mandates the use of the 'efficiency method' (as described in the WRI/WBCSD 'Allocation of Emissions from a Combined Heat and Power Plant Guide' 2006) for calculating the quantity of fuel consumed (and Greenhouse gases emitted) that is then allocated to the production of electricity and steam from a cogeneration plant.

The original WRI/WBCSD Guide that is referenced allows for use of a variety of approaches and is not limited to the efficiency approach. In particular the WRI approach accepts the use of a contractual arrangement where one exists, which ensures that all parties use the same method (and thereby ensures that full emissions of the cogen plant are accounted for).

Alcoa believes that the existence of a contractual agreement covering the accounting and allocation of emissions should be allowed for use in determining the allocation of emissions (to steam and electricity) to be covered by the CPRS, despite the mandating of the efficiency approach in the NGER Technical Guidelines and the Reporting Regulations subregulation 4.23 (3).

CPRS 5.4 Noting the four classes of methodologies available for NGERs, where Method 2 (see Box 5.1) or above is already in widespread use for a source, those methodologies would be imposed as the minimum to be used from the commencement of the scheme.

The following sources would have minimum standards for emissions estimation methodologies imposed from the commencement of the scheme:

- electricity sector emissions (as required for the National Greenhouse and Energy Reporting Scheme and the Generator Efficiency Standards program)
- perfluorocarbon emissions (from aluminium production, as is current business practice and used for the National Greenhouse Accounts)
- fugitive emissions from underground coal mines (as currently mandated by state safety regulations for the large majority of mines).

CPRS Section 5.3.1 Monitoring: (Preferred option 5.4) Comments are sought on these or other sectors that could be considered for higher order measurement methods following the commencement of the scheme.

The preferred approach 5.4 would require Alcoa to adopt higher order measures for calculating and reporting natural gas combustion emissions from for example calciners, kilns, furnaces and other non electricity emissions sources at its refineries and smelters.

It is expected that methods should improve over time, but this will come at a cost (higher monitoring costs, reporting, verification etc). Alcoa's power plants (refineries and Anglesea) are included in the Generator Efficiency Standards program, so already use Method 2 – a higher order method, for electricity emission factor determination.

CPRS 5.5 Further consultation and analysis would be undertaken to establish appropriate reporting requirements and emissions estimation methodologies relating to the obligations of upstream fuel suppliers under the scheme.

Supported.

CPRS 5.6 Consistent with adjustments to the scheme trajectory, five years notice would be given before major revisions of emissions estimation methodologies that affect the majority of stakeholders.

As stated in Alcoa's response to Chapter 4, investment decisions for carbon sensitive green-field and brown-field developments, such as resource processing and power generation, are typically based on a 20-25 year investment time-frame.

To give business the certainty required to invest, it is critical that time periods for scheme adjustments reflect commercial reality. This includes proposed major revisions of emissions estimation methodologies.

Alcoa supports 15 year fixed forward trajectory periods to provide the certainty that businesses require to invest. This period should also apply to major revisions of emissions estimation methodologies.

Given the potential consequences for individual businesses, this notice requirement and timeframe should apply to changes in methodologies that affect individual stakeholders – and not just the “majority of stakeholders” as proposed.

CPRS 5.7 Noting the four classes of methodologies available for NGERS, where an entity has elected to use Method 2 (see Box 5.1) or above for a particular source, that methodology would be the minimum standard for that entity for a period of four years.

The scheme regulator may grant exceptions to this rule in some circumstances.

CPRS 5.4 would require Alcoa to adopt higher order measures for calculating and reporting some natural gas combustion emissions from (for example) calciners, kilns, furnaces and other non electricity emissions sources at the refineries and smelters.

It is expected methods should improve over time, but this improvement will come at a cost (higher monitoring costs, reporting, verification etc). As it stands, Alcoa's power plants (refineries and Anglesea) are already included in the Department's Generator Efficiency Standards program, so already use Method 2 – a higher order method, for electricity emission factor determination.

Alcoa does not object to the CPRS 5.7 requirement that Method 2, where used should continue to be used for a minimum period of four years.

CPRS 5.8 Provisions relating to documentation and record keeping under the scheme would be based on those set out for the National Greenhouse and Energy Reporting System.

Alcoa has no comment on this element.

CPRS 5.9 A single report would be sufficient to satisfy an entity's obligations under both the National Greenhouse and Energy Reporting System and the Carbon Pollution Reduction Scheme, with reports to be submitted by 31 October each year.

CPRS Section 5.3.2 Reporting: (Preferred position 5.9) The Government seeks feedback on whether the scheme should provide for the publication of reported information to the facility level.

Alcoa supports the current reporting arrangements under the Greenhouse Challenge Plus scheme.

CPRS 5.10 Large emitters (those with obligations under the scheme of 125,000 tonnes of carbon dioxide equivalent or more) would be required to have their annual emissions reports assured by an independent accredited third party prior to their submission. The Government would consider the need to extend this requirement on the basis of initial experience, developments relating to international linking and the compliance burdens likely to be placed on small entities.

Alcoa has no comment on this element.

CPRS 5.11 Assurance under the Carbon Pollution Reduction Scheme would be carried out in accordance with guidelines made under the National Greenhouse and Energy Reporting Act 2007 and standards produced by the Australian Government's Auditing and Assurance Standards Board.

Alcoa has no comment on this element.

CPRS 5.12 The scheme would operate on a financial-year basis.

It would be necessary to ensure that whatever arrangements are implemented, the scheme does not unduly disadvantage companies that report on a December year-end basis. For example, this might be if permit allocation occurs in a tax year that differs to the year of surrender. Refer to Alcoa's response to 11.4.

CPRS 5.13 The final date for the annual surrender of permits would be a fixed time after the final date for emissions reporting. At scheme commencement, this period would be six weeks.

Alcoa has no comment on this element.

CPRS 5.14 Liable entities would be allowed to surrender permits at any time before the annual surrender deadline to meet their end-of-year obligations (any permits surrendered would not be available for future compliance periods).

Alcoa has no comment on this element.

CPRS 5.15 The regulator would be given a range of compliance, investigative and enforcement powers, and a broad range of mechanisms to respond proportionately to non-compliance under the scheme.

Given the potential consequences for individuals and businesses, it is critical that the elected representative has accountability for the scheme's implementation and application to individual cases.

The regulator's decisions should therefore be subject to Ministerial review and oversight. Provided that directions are made in a transparent and public manner, the Minister should be empowered to give specific directions to the regulator.

States and Territories should also have a strong and formal role in the implementation and administration of the scheme.

The proposed framework for monitoring, facilitating and enforcing compliance, and the proposed powers of the regulator, should be made subject to detailed public consultation and comment.

Refer to Alcoa's responses to Chapter 13.

CPRS 5.16 The emissions trading regulator would be able to exchange information with relevant Australian Government, state and territory governments, and international regulators.

Compliance and enforcement provisions, including penalties, would be finalised over the remainder of 2008.

Any exchange of information with non-Australian governments should protect commercial-confidential information of Australian companies. Where information relates to individual companies, such companies must first be consulted and approve any transfer to a non-Australian government entity.

Given the potential implications for individuals and businesses, proposed compliance and enforcement provisions should be subject to detailed public consultation.

CHAPTER 6. LINKING THE SCHEME TO INTERNATIONAL MARKETS

CPRS 6.1 The scheme would be designed so that it can link with international markets and schemes, with a preference for open trade within an effective global emissions constraint.

Any restrictions placed on linking would be to ensure:

- the stability and ongoing credibility of the scheme
- the environmental integrity and effectiveness of the scheme
- the scheme's consistency with international objectives and obligations.

Supported in principle.

A comprehensive response to the challenge of climate change will require either a truly global ETS or a "patchwork" of trading schemes with well defined and managed linkages and covering the vast majority of major emitting jurisdictions.

International linkages may play a significant role in Australia's response through the provision of international offsets or credits, particularly low cost abatement opportunities from developing countries. When practical, Australian firms, governments and individuals should have the option to meet all or part of their permit obligation through this mechanism. However, during the formative years of the Australian ETS it is important that international linkages do not simply result in the Australian ETS importing the emissions price and volatility of other, linked schemes.

Building a strongly functioning domestic scheme should be a priority, with opportunities to link to other schemes and harness the 'gains from trade' pursued when appropriate – particularly where these lower the costs of achieving effective abatement for Australia.

It is critical however that controls are put in place to prevent the export of large quantities of permits (AEUs) out of Australia to, for example, the European ETS.

Appropriate controls should also be applied on banking for future use of large quantities of permits to ensure Australian industry is not disadvantaged. There is a strong risk that large international corporations not operating in Australia, and large investment managers (either local or international) may buy up Australian permits for use elsewhere or for investment. This will reduce the pool of available permits for any given year in Australia and increase the cost of the scheme for Australian industry.

CPRS 6.2 A carbon pollution permit (which would be referred to in the legislation as an Australian emissions unit) would be created for the scheme, and it would be distinct from Australia's international (Kyoto Protocol) units.

Supported.

CPRS 6.3 Subject to restrictions, the scheme would link internationally via the Kyoto Protocol's flexibility mechanisms in the early years of operation.

Supported.

CPRS 6.4 The Government believes the short-term priority is to minimise implementation risk while the scheme is being established. This includes promoting price stability and predictability in the early years of the scheme.

Liable entities would be able to meet their obligations by using eligible Kyoto units for compliance in the scheme, limited to a maximum percentage of each entity's obligation (for the period 2010–11 to 2012–13).

Alcoa supports the caution expressed by the Government on the need to avoid international distortions to the Australian market, particularly when establishing the Scheme.

Alcoa also recognises that climate change is a global challenge and it is desirable that any Australian scheme encourage actions. This means allowing Australian industry opportunities to offset emissions internationally, and for industry in other countries to offset emissions in Australia.

The Clean Development Mechanism (CDM) is an example. For instance, the Australian aluminium industry is working in close collaboration with counterparts in China through the work of the Aluminium Task Force under the Asia Pacific Partnership for Clean Development and Climate. The Taskforce is examining opportunities to share best practice and technology to reduce greenhouse emissions.

This includes Alcoa's new carbon capture technology. With over 80 aluminium smelters in China, compared to six in Australia, sharing best practices and technology will have a significant impact in reducing global greenhouse emissions.

At the same time, it is important to ensure that international linkages do not lead to volatility in the scheme. Alcoa believes this can be managed in a manner that provides Australian industry flexibility, while promoting global action.

CPRS 6.5 No assigned amount units would be accepted for compliance in the scheme (for the period 2010–11 to 2012–13). This position would be reviewed in the light of international developments.

Refer to Alcoa's responses above.

CPRS 6.6 Emission reduction units created under the Kyoto Protocol's joint implementation mechanism would be recognised for compliance purposes in the scheme (for the period 2010–11 to 2012–13).

CPRS 6.7 Removal units would be recognised for compliance purposes in the scheme (for the period 2010–11 to 2012–13).

CPRS 6.8 Certified emission reductions generated by the Kyoto Protocol clean development mechanism would be accepted (for the period 2010–11 to 2012–13), with the exception of those that have associated contingent obligations and high administrative costs: currently, temporary certified emission reductions and long-term certified emission reductions from forestry-based projects.

Supported. This would allow Australian industry flexibility to harness for use in the Australian scheme opportunities for Joint Implementation and Clean Development Mechanism projects in other countries where it operates effectively, for example Brazil and China.

CPRS 6.9 Certified emission reductions and emission reduction units generated in the first Kyoto Protocol commitment period would be recognised for compliance in the scheme in 2012–13 and in subsequent years, in accordance with the rules set out in the protocol and any restrictions that apply to the use of international units set out in the Australian scheme.

CPRS 6.10 International non-Kyoto units would not be accepted for compliance in the scheme. This position would be reviewed for the post-2012–13 period in the light of future developments in international negotiations.

CPRS 6.11 In order to facilitate a smooth start to the scheme and to minimise implementation risks, the Government would not allow Australian permits to be converted into Kyoto units for sale in and transfer to international markets in the early years of the scheme.

CPRS 6.12 Australia would not host joint implementation projects in sectors that are covered by the scheme.

Decisions on joint implementation projects for uncovered activities would be aligned with decisions on domestic offsets.

The scheme would not include domestic offsets (and therefore joint implementation) from agricultural emissions during the period before decisions relating to coverage of that sector's emissions.

In 2013, the Government would consider the scope for offsets (and joint implementation) in sectors that cannot be included in the scheme.
Australia would not host joint implementation projects before the start of the scheme.

Given climate change is a global challenge, an Australian ETS should aim to encourage international actions. Joint Implementation projects can deliver significant global benefits in emissions reductions, develop new technologies, and promote international cooperation and collaboration.

Should other countries apply reciprocity and adopt the same approach as Australia, this could significantly discourage such projects. It could also lock-out Australian firms from participating in projects and accessing new carbon-reduction technology in other countries.

CPRS Section 6.8 Providing clarity over linking rules: The Government seeks stakeholder input on how much notice should be given before qualitative restrictions are changed, including in a situation in which the environmental integrity of a particular type of international unit has been compromised.

CPRS 6.13 The Government would provide the maximum feasible level of certainty about future linking arrangements, consistent with retaining enough flexibility to respond to changing international arrangements.

CPRS 6.14 Linking arrangements would be subject to review in the light of ongoing international negotiations and market development, with a clear preference for relaxing restrictions on linking with credible schemes and mechanisms as the Australian scheme matures.

Refer to Alcoa's responses above.

CHAPTER 7. AUCTIONING OF AUSTRALIAN CARBON POLLUTION PERMITS

CPRS 7.1 Allocations would, over the longer term, progressively move towards 100 per cent auctioning as the scheme matures, subject to the provision of transitional assistance for emissions intensive trade-exposed industries and strongly affected industries.

Supported, subject to the adequate provision of transitional assistance to EITEs. Refer to Alcoa's response to Chapter 9.

CPRS 7.2 The relevant minister would direct the regulator in the early phase of the scheme.

The scheme regulator would later assume all auction policy responsibilities.

The responsibilities of the scheme regulator, auction design, and the relevant minister's power of direction would be reviewed at the five-year review.

Supported in principle, provided that all matters of public policy remain the responsibility of elected government.

CPRS 7.3 Four auctions would be held each financial year, one in each quarter. The Government seeks stakeholder feedback on the relative risks of alternative models, such as annual or weekly auctions.

Alcoa supports quarterly auctions to provide businesses with greater certainty on an ongoing basis on the current carbon price signal.

It is critical that the Scheme minimise any price volatility to provide industry with certainty to invest. This can be achieved by implementing a flat trajectory until such time as competitors in other countries face similar carbon costs, or by setting a low price cap.

CPRS 7.4 At least one auction of the relevant year's vintage would be held after the end of the financial year in the lead-up to the relevant surrender date. A suggested date would be within one month prior to the acquittal date.

CPRS 7.5 The first auction would take place as early as is feasible in 2010, prior to the start of the scheme.

CPRS 7.6 Four years of vintages would be auctioned (current vintage plus advance auction of three future vintages).

CPRS 7.7 The advance auction of future year vintages would occur once each year.

CPRS 7.8 Subject to the lodgement of any required security deposit, universal participation would be permitted at auctions.

CPRS 7.9 Ascending clock auctions would be used for single vintage auctions, and simultaneous ascending clock auctions would be used for multiple vintage auctions.

CPRS 7.10 Only those entities that receive free permit allocations would be allowed to sell them through double-sided auctions in the early phase of the scheme.

CPRS Section 7.5.6 operational features of the auction: The Government seeks comment on the operational feature of the auction detailed in Box 7.8.

Alcoa has no comment on this element.

CHAPTER 8. HOUSEHOLD ASSISTANCE MEASURES

CPRS 8.1 The Government has committed that every cent raised for the Australian Government from the Carbon Pollution Reduction Scheme will be used to help Australians – households and business – adjust to the scheme and to invest in clean energy options.

Alcoa acknowledges the Government's commitment to provide assistance to households and businesses to adjust to the scheme and invest in clean energy options.

CPRS 8.2 The Government is also committed to providing low-income households with increases in assistance through the tax and payment system and all households with other assistance to address the impact on their living standards.

Alcoa acknowledges the Government's commitment to provide assistance to low income households.

CPRS 8.3 The Government has indicated in the terms of reference for Australia's Future Tax System Review that it is to consider the interrelationships between the tax and transfer payment systems and the scheme.

Alcoa acknowledges the Government will consider the interrelationships between the tax and transfer payment systems and the scheme.

CHAPTER 9. ASSISTANCE FOR EMISSIONS-INTENSIVE TRADE-EXPOSED INDUSTRIES

CPRS 9.1 The key rationales for providing assistance to emissions-intensive trade-exposed (EITE) industries would be to:

- address some of the competitiveness impacts of the scheme on EITE industries in order to reduce carbon leakage
- provide transitional support to EITE industries that will be most severely affected by the introduction of a carbon constraint
- support production and investment decisions that would be consistent with a global carbon constraint.

The Government's support for EITE industries would be balanced against its objectives for non-assisted sectors and households.

EITE assistance would be adjusted over time to ensure that all parts of the economy contribute to the objective of reducing emissions.

The EITE assistance policy would be reviewed at each five-year scheme review to determine whether that assistance continues to be consistent with the rationale for assistance, appropriately balances the competing policy objectives and continues to be consistent with Australia's international trade and climate-change obligations.

EITE Industries Background

Emissions-intensive trade-exposed (EITE) industries are those that have a high carbon burden but are unable to pass a carbon cost onto their customers because the price for their sale commodity is set by the international marketplace. In this way Australia's move to introduce emissions trading (the CPRS) ahead of key international competitors represents a significant international competitiveness risk for EITE industries. (See Table 9.1)

A carbon cost impact ahead of their competitors creates great potential for these industries to be "out competed" to the point of becoming economically unviable. Ironically, closure of these industries in Australia may simply see the emissions arise in other countries, in some cases at higher carbon emission rates than currently occur in Australia. (See Box 9.1)

The Australian aluminium industry is a case in point. The international market for aluminium continues to grow (Figure 9.1a and b) and any loss of production in Australia would be quickly replaced by growth in areas such as Asia, Africa, Latin America or the Middle East. This risk of carbon and jobs leakage is present for each part of the Australian aluminium industry; alumina production, aluminium smelting and the manufacturing of aluminium rolled and sheet products.

China is undergoing a significant expansion in the production of aluminium. In the last 8 years China has tripled its share of global aluminium production. Between 2005 and 2010 China is expected to account for over half of the growth in global aluminium output (an increase in capacity of over 5.5 million tonnes p.a. – or more than 2.8 times the total Australian production in 2007)

Secure and sufficient EITE industry permit allocations are essential to prevent carbon and jobs leakage to other countries, including those with less stringent environmental standards and higher rates of greenhouse gas emissions per tonne of product. Permit security must extend to the point that key competitor countries adopt similar carbon costs.

Table 9.1 World Primary Aluminium production (,000 tonnes)

<i>Country/region</i>	<i>2001</i>	<i>2002</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>Average growth</i>
<i>Australia and New Zealand</i>	2,119	2,170	2,191	2,245	2,252	2,270	1.4%
<i>Americas</i>	7,220	7,644	7,772	7,470	7,767	7,826	1.7%
<i>Europe</i>	7,895	8,037	8,314	8,716	8,855	8,781	2.2%
<i>Asia</i>	4,291	5,307	6,672	7,914	9,134	10,874	20.5%
<i>China</i>	3,371	4,321	5,547	6,689	7,806	9,349	22.7%
<i>Africa</i>	1,087	1,098	1,020	1,166	1,199	1,302	3.9%
<i>Middle East</i>	1,265	1,281	1,297	1,472	1,849	1,933	9.2%
<i>World</i>	24,436	26,076	28,001	29,922	32,021	33,967	6.8%
<i>China % of World</i>	13.8%	16.6%	19.8%	22.4%	24.4%	27.5%	

Source: ABARE 2007

Ref: Access Economics (2008)

Box 9.1 Example Alumina Refinery Emissions Intensity Comparison

<i>Process</i>	<i>Emissions Intensity (tCO₂-e / t alumina)</i>
<i>Chinese Sinter refinery</i>	<i>~ 1.80</i>
<i>Chinese Bayer refinery</i>	<i>~ 1.40</i>
<i>Australian refinery average</i>	<i>0.75</i>
<i>Annual CO₂-e emissions from a 1Mt p.a. refinery growth project</i>	
<i>Chinese Sinter refinery</i>	<i>~ 1,800,000</i>
<i>Chinese Bayer refinery</i>	<i>~ 1,400,000</i>
<i>Australian refinery average</i>	<i>750,000</i>

The Australian Government has recognised this exposure for some Australian industries and proposed partial assistance to EITE industries as part of the CPRS. This assistance would be a transitional measure until there is a truly global approach to emissions trading – i.e. until key competitors in other countries experienced a comparative carbon cost, thereby removing the international competitiveness dilemma.

Transitional assistance, until a global carbon price is established, is essential to preserve the large capital investments, tens of thousands of jobs and enormous flow-on benefits to the Australian community that come from the alumina and aluminium industry in Australia. However, modifications are also required to the partial assistance measures presented in the CPRS Green Paper to prevent substantial domestic impacts.

Figure 9.1a Global Primary Aluminium Outlook (ABARE 2007)

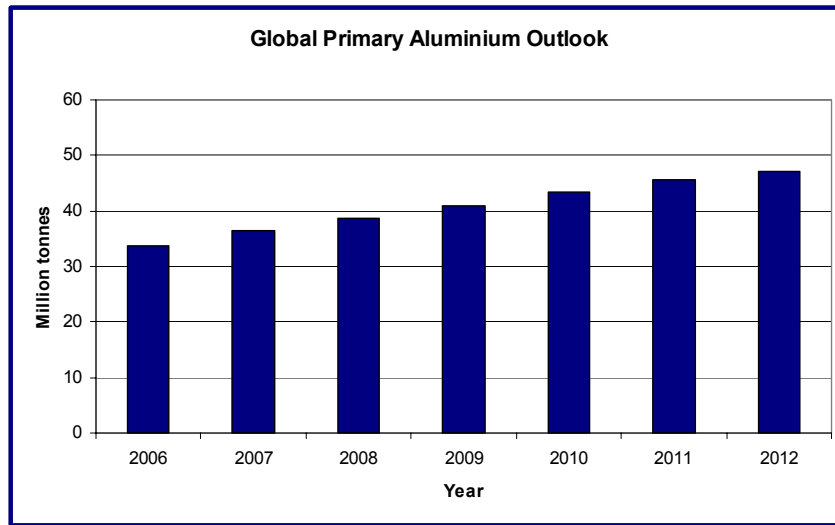
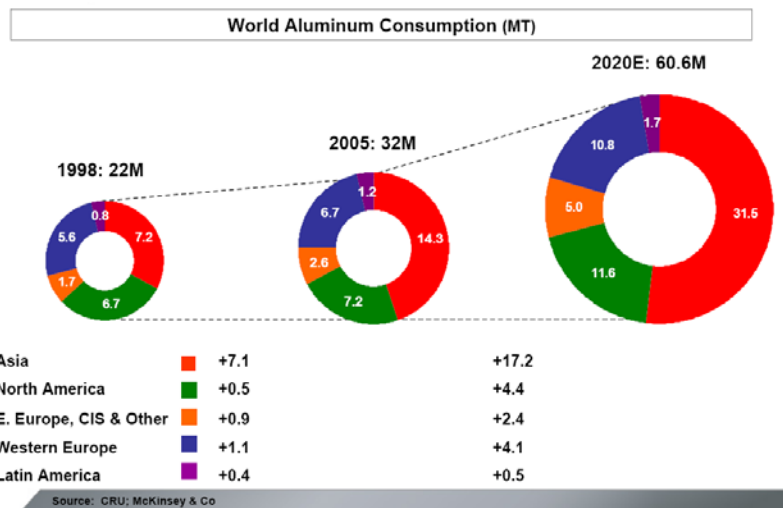


Figure 9.1b Projected World Aluminium Consumption (Alcoa 2008)



The proposed five year review of the approach to EITE allocation will significantly increase investment uncertainty. However the proposal can be supported provided the review is linked directly to the fundamental intent of the EITE component of the scheme - to ensure an international competitiveness risk (during the global transition period) does not lead to EITE facility closures and the resultant carbon and jobs leakage. **Reductions in EITE assistance must only occur when international competitors face comparable carbon cost impacts**

The alumina and aluminium industry typically assesses the financial viability of capital investments on a 20 to 25 year timeframe. This type of competitiveness certainty is essential if Australia is still to attract international investment to sustain and grow industries such as ours.

As the concerns raised in this submission highlight, the CPRS has great potential to impact negatively on capital investment in Australian industries and without adequate security in the assistance measures there is a real risk it could see \$billions of investment in EITE industries stall or move offshore. These industries would ultimately close without ongoing sustaining capital investment leading to profound impacts on employment and local communities.

For these reasons, together with the risk of carbon and jobs leakage it is critical that key modifications are made to some preferred positions outlined in the CPRS Green Paper – these issues are expanded upon in the relevant sections of this submission.

CPRS 9.2 The proposed assistance would be provided to emissions-intensive trade-exposed industries in the form of free allocations of carbon pollution permits at the beginning of each compliance period, contingent on production.

The CPRS Green Paper proposition that assistance for EITE emissions be provided in the form of permits is supported by Alcoa. Alcoa also agrees that this assistance should be contingent on the level of production

Alcoa believes both the direct and indirect emissions assistance should be in the form of permits and supports the Australian Aluminium Council submission that indirect emissions assistance should also cover the EITE CO₂-e emissions in preference to the proposed assistance via a portion of the CPRS-driven change in power price. Alcoa acknowledges the latter is potentially workable if well constructed and secure.

Alcoa proposes:

- a) assistance should be in the form of permits for both the direct and indirect emissions and
- b) assistance should cover EITE indirect CO₂-e emissions based on a verifiable site specific data.

These issues are discussed further in the response to CPRS Section 9.4, dealing with indirect emissions assistance and response to CPRS Sections 9.5.2 and 9.5.3, which deal with the calculation of EITE assistance for indirect emissions

CPRS 9.3 The proposed emissions-intensive trade-exposed assistance would be provided on the basis of the industry-wide emissions from a process or activity to ensure that assistance is well targeted and is equitable both within and between industries.

Alcoa supports this proposal in relation to direct emissions because it establishes a further incentive for EITE industries to invest in emissions reductions or energy efficiency in their own facilities. Facilities achieving a better than average emission intensity will receive a slightly reduced “permit gap” because the allocation of EITE permits is based partly on the average emissions intensity.

However, it is essential that a distinction is drawn between this approach for direct and indirect emission obligations. It is entirely appropriate that this incentive be in place for investment in a company’s own facility – **it would not be appropriate to use an average electricity intensity to calculate indirect permit allocation as the responsibility to invest in efficiency improvements (and the converse penalty) must lie with the power provider, not the downstream EITE entity which does not own the power station and has no ability to drive change in that facility.**

This is a particularly critical point for aluminium smelters where Australian aluminium producers have a long and proud history of investing in on-site emission reduction and energy efficiency.

For example, the Australian aluminium industry has been able to deliver a 37% reduction in total direct CO₂-e emissions since 1990 and around a 60% reduction in direct CO₂-e emissions per tonne of product since 1990. However, the very heavy reliance on power supply means that any shortfall in emissions coverage for indirect emissions is exacerbated for aluminium smelters.

As noted by the Australian Aluminium Council, the situation for Australian aluminium smelters is unique. Only 11.5% of total greenhouse gas emissions are direct emissions, with electricity inputs being the dominant source of indirect emissions.

Hence, the proposed treatment of these facilities to address the impact of the CPRS on electricity inputs is of critical importance.

Even amongst the Australian smelters there are substantial differences in the intensity of indirect emissions (approximately <0.2 tCO₂/MWh to 1.3 tCO₂/MWh) as they relate to the cost of power. These intensities are a product of existing contractual arrangements and the prevailing generation technology in each State.

For these reasons Alcoa believes it is essential that indirect allocations to EITE industries are based on facility emission intensities - otherwise there will be a disproportionate cost impact on some facilities causing their closure.

The Australian aluminium industry is not alone in its reliance on coal-fired power. As Table 9.2 shows, key competitor nations also rely heavily on this power source, particularly China (90%), Africa (73%), Asia (37%) and North America (27%).

Table 9.2 Shares of Energy Sources for Power Used in Aluminium Production 2006 (%)

<i>Regions</i>	<i>Coal</i>	<i>Natural Gas and Oil</i>	<i>Nuclear</i>	<i>Hydro</i>
<i>Australia and New Zealand</i>	77.6	0.0	0.0	22.4
<i>China</i>	90.0	5.0	0.0	5.0
<i>North America</i>	26.6	0.4	0.6	72.5
<i>Latin America</i>	0.0	4.5	0.0	95.5
<i>Europe</i>	19.4	8.9	14.8	57.0
<i>Asia</i>	37.5	51.9	0.0	10.6
<i>Africa</i>	72.9	0.3	1.5	25.3
<i>World</i>	33.1	11.1	4.7	51.1

Reference: Access Economics (2008) Data Source: International Aluminium Institute 2006

It is important to understand that the Australian aluminium industry is globally competitive and energy efficient. It can remain so when a global carbon price signal arises. Measures taken to assist the industry during the transitional period to a global carbon price will deliver significant benefits to the Australian community and economy and be well worth the investment.

CPRS Section 9.3.4 The process for determining eligible EITE activities: The Government seeks stakeholders' views on:

- the proposed assessment process for establishing the emissions per unit of revenue for different production activities in the economy
- the use of data from 2006–07 to 2007–08 to determine eligibility of production activities;
- the entity to which EITE assistance should be provided.

A measure of emissions per unit of revenue would be the most transparent and comparable indicator of the materiality of the carbon cost impact across different traded industries.

The Australian aluminium and alumina industries operate in a highly competitive global market place. Export sales account for about 80% of Australian alumina and aluminium production.

In aluminium, Australia's competitors include China, India, South Africa, the Middle East, Brazil, Europe, Russia, Canada and the United States. In alumina, competitors include China, India, Brazil, Europe, Russia, the United States, Jamaica and Guinea. The vast majority of these countries do not impose a carbon cost on their alumina and aluminium export industry.

Alcoa supports the definition proposed by the Australian Aluminium Council for the alumina, aluminium and aluminium rolling industries as EITEs:

Australian alumina

The production of alumina from bauxite within an integrated facility and typically including digestion (with variable operating temperatures depending on bauxite chemistry), precipitation, calcination and residue treatment, but excluding the production of lime.

Australian aluminium

The production of aluminium by the electrolytic reduction of alumina, which will typically include anode manufacture and casting.

Australian rolled aluminium

The production of rolled aluminium products which would typically include melting, casting, rolling, thermal treatment, finishing to customer specifications and packing.

Following release of the Green Paper there has been considerable debate over the use of revenue as the denominator in the calculation of EITE threshold, with much of the debate focussing on the disadvantage this might represent for firms with relatively high emissions, high revenue, yet low margins. Such firms could be excluded from the EITE category under a revenue model yet readily be made unviable by a carbon price impact.

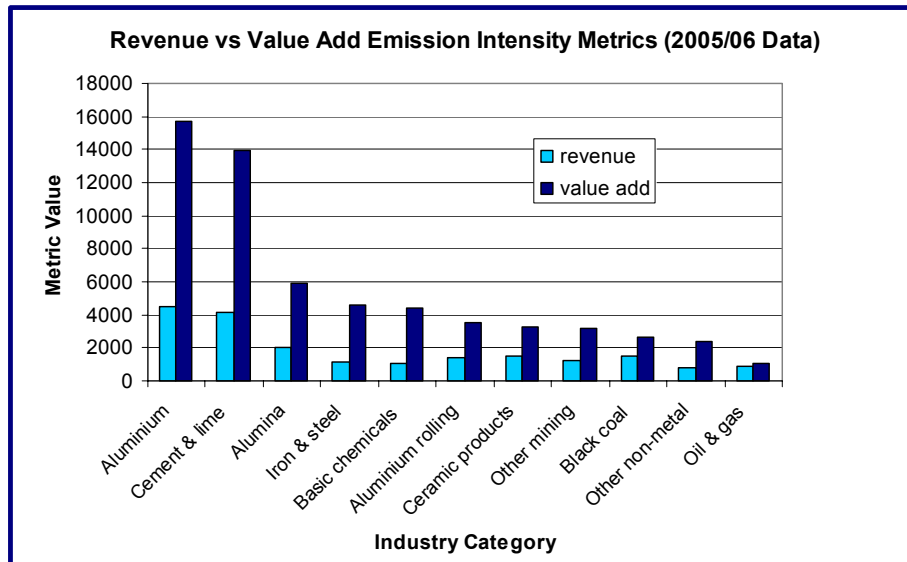
It is acknowledged that a revenue based model has the advantage of transparency and represents little risk of manipulation. However, value add data are also available that can provide transparency and confidence. Using a value add denominator in the threshold calculation could reduce the differential impacts of the revenue denominator on high revenue, low margin businesses.

In developing Gross Domestic Product (GDP) in the National Accounts, the Australian Bureau of Statistics (ABS) derives a number of measures which approximate value add, including Gross Value Add (GVA) and Industry Value Add (IVA). Gross Value Add (GVA) is the value of output at basic process prices minus the value of intermediate consumption at purchaser's prices. The term is used to describe gross product by industry and by institutional sector. Basic price valuation of output removes the distortion caused by variations in the incidence of commodity taxes and subsidies across the output of individual industries (ACIL Tasman 2008).

IVA, like GVA, represents a raw measure of the productive value of firms within an industry in a given period – over and above the intermediate inputs used by the industry. IVA closely approximates the contribution by an industry to Gross Domestic Product. One advantage of IVA is the public availability of data at a more detailed level of industry – IVA data are available nationally for ANZSIC classes (ACIL Tasman 2008).

Figure 9.2 compares the relative rankings of EITE industries under the revenue denominator model proposed in the Green paper and an IVA denominator model.

Figure 9.2 Comparison of Revenue and IVA Metrics for EITE Industries (excluding Agriculture)



Data Source: Green paper & ABS data and ACIL Tasman analysis

The data used for these tables are 2005/06 emissions based on the Department of Climate Change AGEIS database and also some of the detailed emissions splits contained in the Green Paper. The 2005/06 value added data were obtained via the Australian Bureau of Statistics (ABS) Catalogues 8221.0 for manufacturing and 8415.0 for mining. We would note that these are rough estimates based on limited data – updating the Green Paper industry emissions data to either 2005-06 or 2006-07 should be a matter of priority.

Alcoa Australia Rolled Products & Recycling (Alcoa ARP)

Alcoa Australia Rolled Products (Alcoa ARP), including metal recycling, is contained in ANZSIC code 2702 which has significantly diluted the emissions intensity of this business. When the relevant emissions and industry value add data are segregated for Alcoa ARP the correct metric values for Alcoa ARP are 1,454 tCO₂-e/\$m revenue for the revenue denominator metric and 3,500 tCO₂-e/\$m IVA for the value add based metric. The relative ranking of this business against other emissions intensive industries is shown in Figure 9.2. The value add data are taken from the quarterly Business Indicators Survey discounted for movements in change in inventory. Due to the volatility in value add for this business over recent years an average value for calendar years 2003-2006 was used for the analysis.

Alcoa ARP is the largest recycler of aluminium in Australia with its remelting facility at Yennora in Western Sydney, recycling approximately 70,000 tonnes of aluminium each year. This equates to 60% of total aluminium scrap. Aluminium is a common and essential element in everyday life with its uses ranging from beverage cans, licence plates, road signs to cars, commuter trains and planes. Its flexibility and durability have made it one of the most used metals in the world. It can be used over and over, to a level that of the 680 million tonnes produced since 1886, 440 million tonnes (two thirds) are still in use today.

One of Alcoa's corporate sustainability goals is that by 2020, 50% of Alcoa's products, except raw ingot that is sold to others directly, will be made from recycled aluminium.

By recycling material and encouraging others to do the same, Alcoa can save the energy and resources expended in the mining, alumina refining and smelting processes. Saving energy and recycling is better for the environment by reducing emissions and energy use. Using recycled scrap at Alcoa's rolling mills saves up to 95% of the energy required to produce metal from the beginning of the mining process. Based on 70,000 tonnes scrap consumption, the energy saving through Alcoa's recycling in Australia equates to offsetting approximately 1.8 million tonnes of carbon emissions each year.

The recycling of aluminium in Australia results in a wide range of environmental benefits. For example, a recent study released by the Australian Council of Recyclers Inc (ACOR 2008) found recycling of aluminium in Australia resulted in:

- Total greenhouse gas emissions savings of 4.93 million t CO₂-e p.a.;
- Total energy savings of 54.97 million TJ;
- Water savings of 73, 018 MI;
- Savings in bauxite mining of 1.6 million tonnes p.a.

The Alcoa ARP rolling and recycling business operates on relatively low margins and were it not included in the EITE category its rolling operations at Point Henry, Geelong and rolling and recycling facility at Yennora, Western Sydney would be at significant risk of closure - the result of which would be export of the emissions offshore. However, in the case of this business the environmental impact would be exacerbated as the resultant gap may not be filled by a major aluminium recycler – consequently the emissions to produce the same quantity of product could be many times that currently emitted by Alcoa ARP.

Alcoa requests that the Alcoa ARP rolled products and remelting facilities at Pt Henry, Geelong and Yennora, Western Sydney be included in the EITE assistance category.

Figure 9.2 shows that (using a value add denominator and recent data) there are two particularly high intensity industry sectors, aluminium smelting and cement and lime, there is then a sharp drop to alumina refining, followed by a more gradual tapering of other sectors against the threshold metric.

CPRS 9.4 Emissions-intensive trade-exposed (EITE) assistance would be provided for the direct and indirect electricity emissions associated with the activity or process.

Only emissions covered by the scheme would be considered in determining EITE assistance.

A measure of emissions per unit of revenue would be the most transparent and comparable indicator of the materiality of the carbon cost impact across different traded industries.

It is worth noting that the Green paper proposal does not represent a level of assistance to EITE industries that is consistent with previous statements made on behalf of the incoming Government.

In the lead up to the 2007 federal election the Australian Labor Party explicitly acknowledged the importance of EITE industry recognition in an Australian ETS – the document “Labor’s Plan for a Stronger Resources Sector” committed the incoming Rudd Government to:-

- *“Ensure that Australia’s international competitiveness is not compromised by the introduction of emissions trading” and*
- *“Establish specific mechanisms to ensure that Australian operations of emissions intensive trade exposed firms are not disadvantaged by emissions trading.”*

Until global competitors adopt an equivalent scheme the limited assistance for EITE industries proposed in the Green Paper will inevitably lead to Australian EITE firms being “disadvantaged by emissions trading” - through compromises to “international competitiveness”. Perhaps the most critical issue now is to ensure the level of disadvantage is not sufficient to make Australian operations unviable. In this regard it is essential that the CPRS includes sufficient and secure permit allocation to EITE industries. The CPRS factors that appear to have most influence on this are:

- The proportion of available permits allocated to EITE industries;
- Key aspects of the calculation of individual company allocations (including indirect emissions); and
- The rate of erosion of EITE permit allocation (due to the Australian trajectory or treatment of growth)

Indirect electricity emissions

Alcoa supports the Australian Aluminium Council’s submission that the aluminium and alumina industry be provided a full 100% allocation for the impact of the Scheme on indirect electricity emissions, given the industry’s inability to influence the indirect emissions outcome.

Alcoa believes:

- a) assistance should be in the form of permits for both the direct and indirect emissions and
- b) assistance should cover indirect emissions based on a verifiable site specific data.

This approach is necessary because:

- A cash based allocation (or permit equivalent) will be subject to volatility in the price of carbon.
- The proposed calculation for indirect emissions is driven by an “Electricity Factor”. Based on discussions with the Department of Climate Change, the Electricity Factor would be based on the expected impact of future carbon prices on average future NEM power prices. This would be calculated as a total impact (in dollars) and then either paid directly to the EITE (annually) or (more likely) re-converted into a number of permits based on the expected carbon price and permits allocated annually.

Alcoa does not support the suggested approach of using the average change in NEM power prices because:

- It is not simple, robust or transparent.
- Assistance will be fundamental to whether many EITEs continue to operate. Forecast errors in carbon and power price impacts will be significant and therefore increases the risk of carbon leakage and inaccurate allocation.
- It is based on average NEM power impacts and gives no regard to the regional nature of power supply.
- It has no regard for existing long term supply arrangements and has no relevance to the amount of pass through into the power price.

An alternative approach where assistance for indirect emissions is based on existing supply arrangements provides a simple, robust and transparent approach that minimises the risk of carbon leakage or over allocation.

To assist this process Alcoa has already provided the Department of Climate Change with detailed information on the power supply arrangements for the Portland and Pt Henry smelters based on the Joint Statement by the Government of Victoria and Alcoa of Australia, "The Portland Aluminium Smelter Joint Venture" dated 31 July 1984.

The statement outlines the tariff arrangements for supply of electricity by the government to the Portland smelter and also the Pt Henry smelter. It should be noted that the Anglesea Power Station (a dedicated supply to the Pt Henry smelter) would be considered as part of the existing supply arrangements.

Alcoa understands that the CPRS proposal to provide assistance for the calculated change in power price, rather than indirect emissions, is due to a perception that a contract between an EITE industry may "protect" coal-fired power providers and remove the incentive to improve.

Such a situation does not exist for the following reasons:

- EITE contracts do not change a generator's marginal decision to reduce emissions, change generation patterns or close operations;
 - EITE contracts represent only a portion of the generator contract portfolio. Alcoa's Victorian smelter load represents less than 50% of the average Latrobe Valley generator capacity;
 - EITE assistance is proposed to reduce over time.
- 1) EITE power contracts and marginal generator decision making (reduce emissions; reduce generation; close operations and impact on the risk of bankruptcy)

a) Impact on the incentive to reduce emissions

Permit allocation and the incentive to reduce emissions are two issues that are often confused:

- The incentive to reduce emissions is driven by the establishment of the emissions market and a price for carbon
- The level of permit allocation to EITE industries is based on preventing carbon leakage by maintaining competitiveness and enabling industry to adjust to a carbon constrained environment.

While it is highly limited by its existing technology, Alcoa will continue to strive for emission reductions. Alcoa expects established and mature businesses such as the Latrobe Valley generators to operate in the same manner, where it is cheaper to reduce emissions than to generate and surrender emissions permits.

b) Impact on the incentive to reduce generation

NEM power contracts are financial hedges that do not require generators to actually produce and supply power. If the electricity spot price is lower than the marginal cost of generation (including carbon), the generator will not produce, regardless of whether they have a hedge contract or not. This will not change if the contract is with an EITE as the marginal decision will be the same. Therefore, the existence of a contract does not change the marginal decision to reduce generation in response to a carbon price.

c) Impact on the incentive to close facilities

Similarly, if a generator is facing a marginal cost of generation that is higher than the prevailing spot price for an extended period it would be “incentivised” to close the facility. Again, the same logic applies as above – the hedge contract is not linked to output from the generator and therefore does not change this decision.

d) Impact on the risk of bankruptcy

However, there are some beneficial aspects to EITE contracts that would assist with the integrity of the CPRS. Various studies have concluded there is significant risk of generator bankruptcy as a result of the introduction of the CPRS. In this case the generators may continue to operate where electricity prices are greater than marginal costs, but the larger sunk capital costs of the generators will not receive an adequate return causing the risk of equity and significant debt write downs. This situation was seen in late 1990s/early 2000s with Victorian generators.

Generator bankruptcy is not in any responsible stakeholder's interest – it is unlikely to change generation profile for the reasons discussed above (except through increased failure due to avoided maintenance). Bankruptcy would undermine the integrity of the CPRS and it will also undermine the power contract market. EITE contracts do provide partial *financial* shelter for generators, in that they would contribute to these fixed costs, however again the contract is not going to change the generation pattern.

On this basis Alcoa does not believe EITE industry contractual arrangements will change a generator's incremental decision to reduce emissions, reduce generation or close. However, they may make a further positive contribution by reducing the risk of generator bankruptcy.

2) Permit allocation and EITE contracts as part of a generator portfolio

Alcoa's power load, net of its Anglesea Power Station, represents approximately 695 MW, or about 11% of the total Latrobe Valley generation capacity.

The existing Brown coal generators in the Latrobe Valley have capacities as follows:

- Loy Yang A (2120 MW)
- Loy Yang B (1026 MW)
- Hazelwood Power (1600 MW)
- Yallourn Energy (1440 MW)

Alcoa's load represents less than 50% of the average capacity and less than 70% of Loy Yang B (the smallest generator). In the case where Alcoa contracts with a generator, on average less than 50% of that generator's portfolio would be contracted. This is likely to assist with avoiding bankruptcy as discussed above, but it will not avoid this risk completely nor will it change the marginal operating decisions of the generator – it will not remove the incentive to reduce greenhouse gas emissions.

It should be noted that the smelters are the only significant highly electricity intensive EITEs in Victoria; the total load as a proportion of Latrobe Valley generation is extremely low (less than 15%).

3) Impact of reducing EITE assistance over time

All of the above analysis implies 100% assistance for EITEs.

Based on the current proposal in the Green Paper, total EITE allocation for smelting operations would start at 90% and diminish as a proportion of the Australian emission cap - ensuring a decline in EITE permit allocation.

Therefore the level of protection afforded to any generator that contracts with an EITE industry is likely to not only to be less than 50% of total capacity but also will reduce from 50% over time. The current proposals in the Green Paper will tend to incentivise EITEs to contract for shorter periods, to not invest in capital in their plant and to run down assets towards closure.

The above outlines the real life issues that exist in EITE industry power arrangements. These reinforce Alcoa's belief that the vast increase in complexity and volatility that would result from the proposal to deal with power price increases, rather than EITE indirect emissions is neither necessary nor desirable.

Very large users of electricity

The aluminium smelting industry has a disproportionately high reliance on purchased electricity. Therefore CPRS policy initiatives relating to scope 2 emissions have a disproportionately high potential to impact the industry. Conversely this issue may also limit the range of practical policy initiatives that can be put in place by Government relating to scope 2 emissions.

Alcoa supports the suggestion by the Australian Aluminium Council that a separate approach be taken in the CPRS to deal with scope 2 emissions associated with facilities where the size of the electricity consumption has driven contractual outcomes that will not reflect the wholesale price uplift expected from the CPRS. This could be applied via a threshold test or "large user clause" based on a minimum consumption in the order of 500 GWh/annum.

Alcoa recommends the Government undertake consultation with the relevant industries in relation to the above suggestion, as part of developing how the upcoming White Paper proposes to deal with Scope 2 emissions associated with very large users of electricity.

Energy as gas

Some EITE industries, including Alcoa, also purchase significant quantities of energy in the form of natural gas, rather than electricity. The indirect upstream emissions will be subject to the CPRS and the energy provider will pass on the additional carbon cost, much the same as a power station will. This pass through will include fugitive emissions and emissions associated with the transport of gas. Initial analyses by ACIL Tasman indicate this could result in up to a seven to ten percent increase in energy costs, as a direct result of the CPRS.

The Green Paper proposal includes no provision for EITE assistance in relation to the increased cost of energy purchase as gas. **Alcoa requests that the CPRS treat the additional (carbon) costs of energy purchase, such as gas, in a manner similar to that proposed for energy purchases as electricity. Alcoa believes this would be a readily achievable addition to the current proposal.**

Cogeneration

Alcoa believes that the CPRS should encourage energy efficiency operations such as cogeneration where the thermal efficiency of steam and power production increases from ~ 50% for a combined cycle gas turbine operation to ~75% for cogeneration. Such arrangements may result in part of an EITE facility's energy requirements being provided indirectly by the owner of the cogeneration facility and the CPRS should allow for the partner EITE facility to be credited with permits on a no disadvantage basis.

Alcoa notes that the NGERS approach to accounting for cogeneration in Section 2.70 of the Technical Guidelines mandates the use of the 'efficiency method' (as described in the WRI/WBCSD 'Allocation of Emissions from a Combined Heat and Power Plant Guide' 2006) for calculating the quantity of fuel consumed (and GHGs emitted) that is allocated to the production of electricity and steam from a cogeneration plant.

The original WRI Guide allows for use of a variety of approaches, not limited to the efficiency approach. In particular the WRI approach accepts the use of a contractual arrangement where one exists, to ensure that all parties use the same method (and thereby ensure that full emissions are accounted for). Attendant to the above no-disadvantage test, **Alcoa requests that the existence of a contractual agreement covering the accounting and allocation of emissions should be allowable for use in the determination of emissions to be covered by the CPRS, despite the mandating of the efficiency approach in the NGER Technical Guidelines and the Reporting Regulations subregulation 4.23 (3).**

Alumina refining is Australia's largest existing and future potential host for highly greenhouse efficient co-generation operations.

National Renewable Energy Target (NRET)

A separate critical factor associated with electricity purchase will be the way EITE industries are treated under the Government's National Renewable Energy Target (NRET), which poses significant international competitiveness risk to energy-intensive trade-exposed firms in Australia. Renewable Energy Certificates (REC) come at a very significant cost premium, recently reaching AU\$57 each. If the aluminium smelting industries in Australia were subject to the 20% NRET it would add up to \$300M p.a. to the cost of producing aluminium in Australia.

Even under an improved CPRS the financial impacts on the aluminium industry will be significant. The industry cannot tolerate both the CPRS and NRET cost impacts and Government decision-making on the NRET must recognise this imperative and consider it in the context of the CPRS.

The most electricity intensive of the EITE industries, such as the aluminium industry, should be exempt from the NRET – to avoid substantial international competitiveness impacts. This imperative was recognised by the Victorian Government when it exempted the Victorian aluminium smelters from the Victorian RET scheme.

CPRS 9.5 All industries, other than those for which there exists a physical barrier to trade, would be considered for emissions-intensive trade-exposed assistance.

This approach has value in its simplicity, however, there will be unintended consequences on individual industry sectors that may need to be addressed via other mechanisms. For example, application of this approach may mean the Australian domestic gas industry will not be considered trade-exposed, due to its restriction to the Australian continent. However, if the Liquefied Natural Gas (LNG) export industry were to be included in the EITE category it may establish a financial (carbon price) incentive to direct gas reserves towards the export market, rather than to domestic uses.

The recent gas supply crisis in Western Australia has highlighted the importance on energy security to industry (large and small) and domestic consumers. Government decision-making must support secure long-term supply of natural gas into the Australian domestic market.

Even prior to the recent disruption to supply from the Apache Energy gas processing plant, local consumers in Western Australia were experiencing a significant shortage of natural gas supply which has resulted in escalating prices. At the same time, oil and gas producers continue to expand exports of Australia's clean energy reserves as LNG.

Promoting new domestic gas development and supply has been recognised as a priority by the Federal Government, including as part of Australia's long term energy security needs.

Natural gas supplies half of Western Australia's primary energy requirements and fuels 60% of the State's electricity generation. Access to natural gas is critical for underpinning manufacturing, processing and mining in the State, and the exports and employment benefits they represent.

Natural gas is also critical to underpin Australia's transition to a low carbon economy by supporting greenhouse-efficient growth. From a global greenhouse perspective, gas used domestically represents the most greenhouse effective use of Australia's natural gas resources. By comparison, LNG is a greenhouse intensive process over its lifecycle as gas is processed, liquefied, shipped long distances overseas, regasified and piped to its final end-use.

Design of the Scheme should therefore encourage greenhouse effective domestic use of Australia's gas resources. This requires that any assistance provided to oil and gas producers under the Climate Change Action Fund be done on a level playing field and does not discriminate against domestic gas exploration, development and supply vis-a-vis LNG exports.

Conversely, if export LNG were to receive assistance as an EITE, it may be appropriate to use the Fund to ensure a level playing field for domestic gas supply.

It would be a perverse outcome if the Scheme discourages domestic gas supply, with downstream economic and environmental consequences.

CPRS 9.6 Up to around 30 per cent of Australian carbon pollution permits would be freely allocated to emissions-intensive trade-exposed (EITE) activities. At the outset of the scheme, if agricultural emissions are excluded from scheme coverage, this would be up to around 20 per cent of permits.

Alcoa supports the submission prepared by the Australian Aluminium Council (AAC) including the call by the AAC for the amount of permits initially allocated to EITE industries to be equal to the share of the covered sector emissions currently accounted for by EITE industries. The permit allocation share for EITEs should be determined on this basis, rather than be pre-determined as a fixed percentage without a clear relationship to the share of emissions represented by the final EITE grouping.

The preferred CPRS position, including the proposal to “cap” the EITE allocation at “up to 30%” of the permit pool, represents several significant inequities and challenges to the viability of EITE industries, including the following:

- In effect, agricultural industries would receive 100% shielding from the CPRS until they are included in the scheme – during this time other EITE industries may suffer significant financial impact due to the issues identified below;
- The proposed method of determining EITE permit allocation would see only partial assistance provided and it is therefore inevitable that some EITE industries will suffer significant international competitiveness impacts and financial disadvantage - contrary to the pre-election commitments made by the current Government (see Section 9.4);
- Any decline in the Australian emissions cap (Australian trajectory) would further reduce the real permit allocation to EITE industries (see Box 9.2);
- Any growth in EITE industries will see exacerbated erosion of EITE allocations (see Box 9.2).

Box 9.2 Example Erosion of EITE Permit Allocations Over Time

	1.5% erosion p.a.		2.0% erosion p.a.		4.0% erosion p.a.	
Year	Annual EITE Permit Allocation (% of emissions obligation)					
2010	90%	60%	90%	60%	90%	60%
2015	83%	56%	81%	54%	73%	49%
2020	77%	52%	74%	49%	60%	40%
2025	72%	48%	66%	44%	49%	33%
2030	67%	44%	60%	40%	40%	27%

*For example, an EITE industry emitting 2MtCO₂-e p.a.
2% trajectory-based erosion plus 2% growth erosion
Initial permit allocation @ 60%*

Initial exposure (2010) @ \$20 / permit = \$16.0M p.a.
Year 2025 exposure @ \$20 / permit = \$26.8M p.a.
Year 2025 exposure @ \$40 / permit = \$53.6M p.a.
Year 2030 exposure @ \$50 / permit = \$73.0M p.a.

A simple forward projection of the Australian emissions trajectory to achieve the Government's goal of a 60% reduction in 2000 level emissions by 2050 would suggest a decline in the Australian emissions cap of around 1.5% to 2% p.a. This alone could result in the initial allocations to EITE industries decreasing from 90% and 60% to 74% and 49% respectively by as soon as 2020 and to 60% and 40% by 2030.

If this erosion in EITE allocations was then exacerbated by growth at the scale of 2.0 – 2.5% the erosion of initial EITE allocations could decline further from 90% and 60% to 60% and 40% by 2020.

There is good reason to believe the introduction of an emissions trading scheme, with only partial assistance to EITE industries, will significantly stifle growth in these sectors, so the dominant erosion factor in the near future may be the rate of tightening of the Australian emissions cap, or the steepness of the declining Australian emissions trajectory.

Erosion of EITE industry allocations ahead of international competitors embracing a comparative carbon cost jeopardises the viability of Australian industries, the jobs they support and flow-on benefits to Australian communities. It also represents a real prospect of carbon leakage to rapidly growing sectors in other countries.

Forecasts of a rapidly eroding EITE permit allocation will have immediate impacts by curtailing very substantial capital investment (sustaining and growth) as industries must take a long-term view with capital decision-making.

It is therefore essential that the trajectory-driven erosion of EITE permits is restricted until competitor countries implement a comparable carbon price signal. This can readily be achieved through Government implementing a flat emissions cap until competitor countries embrace change.

The alternative is to apply strict price control (at a low level) for emission permits - a low carbon price until competitor countries adopt a carbon price signal.

CPRS 9.6 (continued) Eligibility for EITE assistance would be based on the industry-wide emission intensity of an activity or process being above a threshold of about 1,500 tonnes carbon dioxide equivalent (CO₂-e) per million dollars of revenue.

Initial assistance would cover around 90 per cent of emissions for EITE activities that have emissions intensities above about 2,000 tonnes CO₂-e per million dollars of revenue and around 60 per cent of emissions for EITE activities that have emissions intensities between about 1,500 and 2,000 tonnes CO₂-e per million dollars of revenue.

These thresholds and rates of assistance may be reconsidered on the basis of further information provided through the consultation process to ensure that the total quantum of EITE assistance would be limited to around 30 per cent of permits (inclusive of agricultural emissions).

Clearly there is direct linkage between any cap on total EITE permit allocation, the threshold value to determine EITE eligibility and the percentage of total permit obligation allocated to EITE industries.

The potential of using Industry Value Add (IVA) as the denominator in the EITE threshold metric and the relative ranking of different EITE sectors is discussed in the response to CPRS 9.3.4 and displayed in Figure 9.2. A move to an IVA denominator in the threshold calculation would require a new threshold value (for EITE classification) to be determined.

Alcoa supports the Government's commitment that there be "no competitive disadvantage" for EITEs. We acknowledge the merit of the approach proposed by the Australian Industry Greenhouse Network that the share of permits allocated to trade exposed operations needs to be the amount that ensures no competitive disadvantage to existing operations and proposed new investment. This might require trade exposed operations to receive 100% of scope 1 permits and 100% of permits needed to offset the increase in costs passed-through by non-trade exposed industry.

As a minimum, Alcoa supports the position put forward by the Australian Aluminium Council (ACC) that all EITE industries should receive an initial allocation of 90% permit allocation for direct emissions and 100% assistance for indirect emissions. While this still represents only partial assistance it aims to reflect the Government's commitment *"to ensure that Australian operations of emissions intensive trade exposed firms are not disadvantaged by emissions trading."*

The initial allocation of EITE permits and the rate of erosion, particularly in relation to the changing Australian emission cap, will be critical factors in delivering the Government's other key EITE commitment to *"ensure that Australia's international competitiveness is not compromised by the introduction of emissions trading."*

Early action

Section 12.3 of the CPRS Green paper proposes that "a program for establishing early action credits would not be established". Therefore the investment that many companies, including EITE industries, have made to reduce greenhouse emissions in past years (Table 9.3) will receive no recognition.

Table 9.3 Australian alumina refining – improvements since 1990

<i>Australian Alumina</i>	<i>2006</i>	<i>Variation on 1990</i>
<i>Alumina production</i>	<i>1.8Mt</i>	<i>+64%</i>
<i>Share of world production</i>	<i>28%</i>	
<i>Exports tonnage (1990 = 8.7Mt)</i>	<i>14.7 Mt</i>	<i>+ 68%</i>
<i>Exports value 91990 = \$2,940 million)</i>	<i>\$5,993 M</i>	<i>+101%</i>
<i>Av emissions intensity (t CO2/t alumina)</i>	<i>0.75 t CO2-e</i>	<i>-21%</i>

Source: Australian Aluminium Council 2008

Without any recognition of early action it is conceivable that investment decisions made in recent years to reduce emissions may actually penalise a company's position in the CPRS – the alumina refining industry is an example. Using the CPRS metric of tCO₂-e/\$m revenue the Australian average emissions intensity for the alumina refining industry is around 1,900 t CO₂-e/\$m revenue – only just below the proposed threshold for 90% permit allocation. Without the work done to reduce emissions in Australian alumina refineries since the 1990s the activity would have fallen within the 90% permit allocation category.

Ironically, had these improvements not been made the industry may have been better placed to cope with the CPRS in two ways. On the methodology presented in the Green paper it would have received a higher initial permit allocation and had greater opportunity for improvement to cope with future reductions in EITE permit allocation.

Alcoa is proud of the actions it has already taken to reduce greenhouse gas emissions. Nevertheless, the lack of recognition for early action increases the importance of providing adequate and secure permit allocations to EITE industries.

CPRS 9.5.2 Establishing emissions-intensity and electricity-intensity baselines: The Government seeks stakeholder views on whether baselines for allocations should be based on emissions and output data over the period 2006–07 – 2007–08

CPRS 9.5.3 The Government's preferred position is that the electricity emissions factor would be determined to reflect the likely average electricity price impact of the scheme. A focus of stakeholder consultation will be to further explore options for the calculation of the electricity emissions factor.

Electricity Factor: The Government seeks stakeholder views on the electricity factor to be used in calculating allocations for indirect electricity emissions and how it can be robustly and transparently calculated.

Alcoa welcomes the Government's commitment to genuine consultation on this issue – it is essential. **The methods of determining emissions-intensity and electricity intensity have enormous potential for financial impact on EITE industries. If inappropriately applied these factors could quickly make some large Australian industrial facilities unviable.**

The Green Paper proposal for the allocation of indirect emissions assistance is open to wide ranging interpretation and is not well understood by many stakeholders. Following discussion with Department of Climate Change staff Alcoa believes the proposal (in relation to indirect emissions) is to model or estimate the change in electricity price due to introduction of the CPRS and factor this calculation based on industry-wide electricity emissions intensity. The Government would then provide either cash or an equivalent number of permits to the EITE as assistance for indirect emissions obligations.

Alcoa is strongly opposed to this approach to indirect emissions assistance. The disparity between national average and site based electricity emissions intensity would quickly lead to site closures and job losses in States where there is a heavy reliance on coal-fired power, such as Victoria.

A power provider will pass on their carbon cost to an EITE and the intent of the CPRS proposal would seem to be to (initially) provide 90% assistance to the EITE to cope with this power cost increase. However, for some EITE facilities, such as in Victoria, the initial assistance provided by the CPRS may be far less than 90% - because the intensity of the existing power supply is more than the market average.

The cost passed on by the power provider may be based on 1.25t CO₂-e for every MWh purchased. However, the CPRS EITE assistance may be based on only 0.93tCO₂-e / MWh purchased. That would mean that for every MWh purchased the actual assistance provided to the EITE would be 0.9 x (0.93/1.25) or 0.67. In this way the actual starting point assistance to the EITE would be 67%, not 90% for indirect emissions obligations.

However, if the modelling assumes lower intensity generators such as gas and hydro are setting the NEM price and only 70% of the average cost of carbon cost passes through into the power market, the level of assistance would reduce again. Based on this example the level of protection would reduce to 47%, not 90% for indirect emissions obligations

The financial impact of this Green Paper preferred position (assuming the 67% real allocation) is shown in Box 9.3.

Box 9.3 Example potential disproportionate impacts on Victorian smelters (using indirect emissions averaging factor)

<p>Victorian aluminium smelters (2007 data)</p> <p><i>Direct emissions: ~ 1.1Mt (CO₂-e)</i></p> <p><i>Indirect emissions: ~ 10.4Mt (CO₂-e)</i></p>
<p><i>Initial EITE allocation for direct emissions</i></p> <p>$0.9 \times (2.0\text{tCO}_2\text{-e/tAl} \times 545,000\text{tAl}) = 981,000 \text{ permits}$</p> <p><i>Direct emissions permit gap = 119,000 permits</i></p> <p><i>Assuming \$20/permit = \$2,380,000 p.a. initial direct carbon cost</i></p>
<p><i>Initial EITE allocation for indirect emissions cost</i></p> <p>$0.9 \times (0.93\text{tCO}_2\text{/MWh} \times 8.4\text{M MWh}) = 7,030,800 \text{ permits}$</p> <p><i>Indirect emissions permit gap = 3,369,200 permits</i></p> <p><i>Assuming \$20/permit = \$67,384,000 p.a. initial indirect carbon cost</i></p>
<p>Outcome: An additional cost of around \$70M per year (and increasing) means the Victorian smelters quickly become financially unviable - due to the method used to determine indirect emission allocation</p>

These financial impacts would be exacerbated by exposure to costs associated with the National Renewable Energy Target (NRET). For example, at a cost of \$57/ Renewable Energy Certificate the 20% NRET would add approximately \$300m p.a. to the cost of smelting aluminium in Australia.

The above example demonstrates that the calculation for indirect emissions for EITEs needs to be based on existing supply arrangements, at the very least for those few businesses in the 90% assistance bracket.

As described in response to CPRS preferred position 9.3, Alcoa and the Australian Aluminium Council support the use of industry-wide determination of intensity factors for direct emissions and facility specific determination of intensity factors for indirect emissions calculations. There are important reasons behind this distinction:

- Australian EITE companies can invest in emissions reductions at their own facilities (to reduce direct emissions obligation) but cannot make significant capital investments at sites owned by others (such as power stations);
- On average Australian aluminium smelters have around six to eight times as many indirect emissions as direct emissions, so any percentage “permit gap” due to an indirect emissions averaging factor has a disproportionately high potential for financial impact.

The Green Paper (page 327) states “On balance, the Government’s preferred position is that Australian historical industry average baselines for each EITE activity be used to calculate allocations for direct and indirect electricity emissions for new and existing facilities.”

As shown in the above example (Box 9.3) this approach would have enormous financial impacts on the viability of the Victorian aluminium smelters, putting them on a path to closure.

This potential outcome would be driven by the Green Paper preferred use of industry wide approach to determining emissions intensity and would apply whether a tonnes CO₂-e/MWhr hour or a price based “electricity factor” was used in the relevant calculation.

In the absence of an appropriate “very large user clause” determination of indirect emissions assistance must be made on the basis of an individual facility’s electricity/emissions factor.

Importantly there is no cost to the scheme or Australian community in choosing a facility based electricity emissions factor over an industry-wide electricity emissions factor. There are significant benefits to the economy and public in doing so - through job preservation and avoided carbon leakage.

As the Green paper acknowledges “*determining the increase in electricity prices as a result of the scheme (CPRS) is not straightforward. The electricity prices will vary between EITE industries for several reasons.*” This is, at best, an understatement – attempting to base assistance on an estimated portion of the change in electricity price would be a highly challenging and complex approach to calculating level of assistance. This suggested approach is strongly opposed by Alcoa and the Australian Aluminium Council (ACC)

The calculation of assistance to EITE industries for indirect emissions should be in the form of emission permits to cover indirect emissions obligations, not cash (or equivalent permits) to cover an estimated change in electricity price.

The formula to calculate indirect emissions assistance to an EITE would then be far simpler and more consistent with the approach taken to direct emissions assistance. We would propose the following:

Industry factor x (MWh used x facility electricity intensity) = tCO₂-e (permits)

The response to CPRS section 9.4 explains how this approach will still provide a substantial incentive to reduce emissions from coal-fired power plants.

Box 9.4 below is a reproduction of Box 9.3 using a facility specific electricity emissions factor – other components are as shown in Box 9.3.

Box 9.4 Example alternative approach to indirect allocation to Victorian smelters
(using facility based emissions factor)

Victorian aluminium smelters (2007 data)
<i>Direct emissions ~ 1.1Mt (CO₂-e)</i>
<i>Indirect emissions ~ 10.4Mt (CO₂-e)</i>
<i>Initial EITE allocation for direct emissions</i>
$0.9 \times (2.0tCO_2\text{-e/tAl} \times 545,000tAl) = 981,000 \text{ permits}$
<i>Direct emissions permit gap = 119,000 permits</i>
<i>Assuming \$20/permit = \$2,380,000 p.a. initial direct carbon cost</i>
<i>Initial EITE allocation for indirect emissions cost</i>
$0.9 \times (1.25tCO_2/MWh \times 8.4M \text{ MWh}) = 9,450,000 \text{ permits}$
<i>Indirect emissions permit gap = 950,000 permits</i>
<i>Assuming \$20/permit = \$19,000,000 p.a. initial indirect carbon cost</i>
<i>Outcome : An additional cost of over \$21M per year (and increasing) means the Victorian smelters suffer a very substantial additional cost burden – however although they are significantly impacted they would remain financially viable.</i>

This approach is more consistent with what is understood to be the intent of the EITE allocation process – that the initial allocation covers 90% of direct and indirect emissions obligations for the most emissions intensive trade exposed industries.

The calculation of indirect allocation must also consider the circumstance of embedded generation. For example, the full generation from Alcoa’s Anglesea Power Station is supplied directly to Alcoa’s Pt Henry smelter (it is a direct feed and does not enter the market). Pt Henry smelter would hold EITE status (which includes direct emissions) under criteria outlined in the CPRS Green Paper. In Alcoa’s view it is logical for emissions from the Anglesea Power Station be covered as part of Pt Henry’s allocation, rather than be treated as a market generator as it has no reference to the market price of power.

Therefore Alcoa proposes that embedded generators that supply directly to EITE industries should be considered as part of indirect emissions allocations to EITEs, rather than as market generators. It should be noted that is Alcoa’s approach (above) is adopted and permits are allocated on the basis of facility intensity then the issue is resolved.

CPRS Section 9.5.4 Measuring Output: The Government seeks stakeholder views on the approach for estimating the level of output used to calculate assistance to EITE entities.

Setting aside changes due to growth projects, alumina and aluminium production in Alcoa's Australian facilities remains reasonably constant with small percentage increases in production (due to efficiency improvements) from year to year. Therefore, there is likely to be little material impact from EITE permit allocation on the basis of either the annual productive capacity of a facility or the average level of production from the previous year or previous few years. Similarly, it would be practical for such stable facilities to base allocation on an operator predicted annual production at the beginning of the year – each facility will have a projected production for the coming year.

Specific provision needs to be made for the circumstances of a facility during a phase of significant growth as it may not be appropriate for the company to carry an additional permit gap because EITE permit allocation is out of step with production increases.

CPRS 9.5.5 The Government's preferred position is that, should an EITE activity cease to operate, the EITE entity would be required to return permits that had been allocated above actual production levels in the year it closed

Alcoa supports this approach.

CPRS 9.7 Allocations of assistance for direct emissions of new and existing emissions-intensive trade-exposed (EITE) entities would be calculated on the basis of:

- an Australian historical industry-average emissions-intensity baseline for each EITE activity
- the output of the EITE activity for each entity
- the assistance rate for that EITE activity.

Allocations of assistance for indirect electricity emissions of new and existing EITE entities would be calculated on the basis of :

- an Australian historical industry-average electricity-intensity baseline for each EITE activity
- an electricity factor, where the electricity factor is determined to reflect the likely average electricity price impact of the scheme
- the output of the EITE activity for each entity
- the assistance rate for that EITE activity

- take into account whether the EITE entity has contractual arrangements with regard to electricity supply that would shield them from increases in electricity prices as a result of the introduction of the scheme.

If an entity ceases operating an EITE activity, it would be required to return carbon pollution permits that had been allocated to it for production that did not occur.

The proposed methods of calculating assistance for direct emissions obligation are generally supported by Alcoa, with the modifications suggested in previous sections. However, the preferred method of calculating and providing assistance for indirect emissions are strongly opposed as they would lead to enormous, and unsustainable, impacts on the Victorian aluminium smelters.

In relation to accounting for contractual arrangements Alcoa makes the following comments. It is logical and appropriate that assistance to EITE industries for indirect emissions obligations consider the issue of contract pass-through. This is a relatively simple matter to incorporate into the calculation. Put simply the amount of assistance for indirect emissions should be proportional to the degree of carbon obligation passed through the contract from the power provider to the EITE facility.

Where a power provider contract has a full carbon pass-through provision to the EITE facility the EITE facility would receive the full available EITE allocation to cover indirect emissions. Where no pass-through occurred there would be no need for indirect emissions assistance, where the carbon burden is shared the EITE industry would receive the relevant proportion of assistance.

CPRS 9.8 The emissions-intensive trade-exposed (EITE) assistance rate would be reduced over time with the intent that the share of assistance provided to the EITE sector does not increase significantly over time.

CPRS 9.6.1 Adjusting the level of allocations to EITE entities over time: The Government welcomes stakeholder views on how the proposed EITE assistance rate should be adjusted over time.

CPRS 9.9 Between 2010 and 2020 assistance would be provided to emissions-intensive trade-exposed industries as proposed unless broadly comparable carbon constraints are introduced in key competitor economies, in which case assistance be withdrawn.

Beyond 2020:

- assistance would be withdrawn if broadly comparable carbon constraints are introduced in key competitor economies or

- assistance would be phased out over a five-year period in the event of acceptable international action that places obligations on an industry's major competitors
- assistance would be continued as proposed in the absence of broadly comparable carbon constraints or acceptable international action.

An earlier section of this document, which responded to CPRS Section 9.6, highlighted the significant potential impact due to erosion of the initial EITE allocation. If the EITE industry permit allocation is "capped" as a proportion of the overall permit pool the EITE allocation will decline over time in proportion to the national emissions cap (the Australian trajectory).

This factor alone has the potential to undermine the fundamental intent of having an EITE industry category – which is to ensure EITE industries are not disadvantaged to the point of becoming unviable and therefore lead to carbon and jobs leakage from Australia.

This exposure exists while Australia institutes a carbon price signal (the CPRS) ahead of key competitor nations – the transitional period.

Alcoa supports the Australian Aluminium Council's position that any erosion of EITE assistance should only occur when international competitors face similar carbon constraints.

The most obvious mechanism to avoid these impacts is to keep the Australian trajectory flat (and therefore reduce erosion) until key competitor countries also adopt a carbon price signal and Australian EITE industries are once again able to compete on a level carbon playing field.

The alternative solution is to cap the price of carbon at a very low level and therefore minimise the international competitiveness impact on EITEs during the transition period.

Box 9.2 is reproduced below which shows the potential for rapid erosion of the initial EITE permit allocation factors

Box 9.2 Example Erosion of EITE Permit Allocations Over Time

	1.5% erosion p.a.		2.0% erosion p.a.		4.0% erosion p.a.	
Year	Annual EITE Permit Allocation (% of emissions obligation)					
2010	90%	60%	90%	60%	90%	60%
2015	83%	56%	81%	54%	73%	49%
2020	77%	52%	74%	49%	60%	40%
2025	72%	48%	66%	44%	49%	33%
2030	67%	44%	60%	40%	40%	27%

*For example, an EITE industry emitting 2MtCO₂-e p.a.
2% trajectory-based erosion plus 2% growth erosion
Initial permit allocation @ 60%*

***Initial exposure (2010) @ \$20 / permit = \$16.0M p.a.
Year 2025 exposure @ \$20 / permit = \$26.8M p.a.
Year 2025 exposure @ \$40 / permit = \$53.6M p.a.
Year 2030 exposure @ \$50 / permit = \$73.0M p.a.***

It is imperative that Government adopt a mechanism to ensure permit allocations to EITE industries are not eroded at an unsustainable rate.

CHAPTER 10. ASSISTANCE FOR STRONGLY AFFECTED INDUSTRIES

CPRS 10.1 The characteristics of strongly affected industries are that they must:

- be non-trade-exposed (as entities in trade-exposed industries may be eligible for assistance as emissions-intensive trade-exposed industries)
- be emissions-intensive (exceeding the threshold for eligibility proposed for emissions-intensive trade-exposed industries)
- include some entities that are emissions-intensive compared to their competitors, such that they cannot fully pass on carbon costs and could experience significant losses in asset value
- have significant sunk capital costs
- not have significant economically viable abatement opportunities available to them.

Alcoa has no comment on this element.

CPRS Section 10.2 Possible strongly affected industries: The Government seeks stakeholder feedback on whether any other industry might meet the proposed characteristics of strongly affected industries outlined in this chapter.

Alcoa has no comment on this element.

CPRS Section 10.2.2 The Waste Industry: The Government seeks stakeholder feedback on competitive constraints and abatement opportunities in the waste industry.

Alcoa has no comment on this element.

CPRS 10.2 Coal-fired electricity generators are likely to be strongly affected by the scheme, based on the characteristics proposed in Section 10.1.

Alcoa supports this conclusion.

CPRS 10.3 The Australian Government has made significant contributions to progress the commercial deployment of carbon capture and storage (CCS). These contributions, and any further support, should recognise the technical and institutional hurdles to the development and deployment of carbon capture and storage technologies, and reflect Australia's significant domestic and international interests in the development of this technology.

Alcoa supports the Government initiative to encourage CCS.

CPRS 10.4 The Government would address particular impacts of the scheme on workers, communities and regions.

Supported.

CPRS Section 10.4.1 *Energy security implications of assistance: The Government seeks stakeholder feedback on the effect on the security of energy supply of:*

- measures specific to the energy market
- the medium-term national target range
- direct assistance to coal-fired electricity generators.

Alcoa has no comment on this element.

CPRS 10.5 To ameliorate the risk of adversely affecting the investment environment, the Government proposes to provide a limited amount of direct assistance to existing coal-fired electricity generators.

Alcoa supports the provision of assistance to this sector.

CPRS 10.6 Final decisions on an appropriate quantum of the proposed direct assistance for coal-fired electricity generators would be made after the medium-term national target range is established.

Alcoa believes this issue should be the subject of detailed consultation with the relevant industry representatives.

CPRS 10.7 Eligibility for the proposed direct assistance for coal-fired electricity generators would be limited to those assets that were 'in existence' as of 3 June 2007, that is, assets that:

- were in operation, or
- satisfied the National Electricity Rules criteria for a 'committed project'.

Alcoa has no comment on this element.

CPRS 10.8 The proposed direct assistance for coal-fired electricity generators would be allocated to individual recipients using a simple asset-by-asset method.

Alcoa has no comment on this element.

CPRS Section 10.5.4 A proposed simple asset-by-asset allocation method: The Government seeks stakeholder views on:

- whether the relative proportion of the black coal and brown coal pools of assistance should be determined by estimating the relative impact of the scheme on these two asset classes using the broad results of a bottom-up electricity market modelling exercise
- the appropriate definition of brown and black coal for the purposes of allocating direct assistance between assets in the two classes
- whether it is appropriate to limit allocations of direct assistance to generation assets that are exclusively coal-fired.

The Government seeks stakeholder views on whether it is appropriate to allocate direct assistance:

- to assets on the basis of their capacity on the eligibility cut-off date
- on the basis of 'nameplate' or 'sent out' capacity.

Alcoa's view is that the future allocation of permits for *market* generators should be a formula based on actual energy market outcomes rather than based on modelling.

The allocation method must also consider the circumstance of *embedded* generation. For example, the full generation from Alcoa's Anglesea Power Station is supplied directly to Alcoa's Pt. Henry smelter (it is a direct feed and does not enter the market). Pt Henry smelter would hold EITE status (which includes indirect emissions) under criteria outlined in the CPRS Green Paper. In Alcoa's view it is logical for emissions from the Anglesea Power Station be covered as part of Pt Henry's allocation, rather than be treated as a market generator as it has no reference to the market price of power.

Therefore Alcoa proposes that embedded generators that supply directly to EITEs should be considered as part of indirect emissions allocations to EITEs, rather than as market generators. It should be noted that if Alcoa's proposed approach (as outline in Chapter 9 response) that permits be allocated on the basis of energy facility intensity for EITEs then this issue is resolved.

CPRS 10.9 The proposed direct assistance for coal-fired electricity generators would be allocated to individual recipients using a simple asset-by-asset method that involves:

- the available assistance being split into separate pools, with one pool being made available to brown coal-fired assets and the other to black coal-fired assets
- assistance in each pool being allocated to individual assets in direct proportion to the capacity of each asset.

See responses above.

CPRS 10.5.5 The form of assistance: The Government seeks stakeholder feedback on the relative merits of providing direct assistance to coal-fired electricity generators through allocations of carbon pollution permits or cash permits.

Alcoa supports the allocation of permits rather than cash as the means of providing direct assistance to generators.

CPRS 10.10 The quantum of the proposed direct assistance for coal-fired electricity generators would be determined 'up front'—that is, before the scheme begins. However potential recipients will need to submit to a review process to minimise any prospect of windfall gains.

See responses above.

CPRS 10.11 The proposed direct assistance for coal-fired electricity generators would be provided on a 'once and for all' basis—that is, further allocations of assistance would not be provided after the scheme begins.

Alcoa has concerns regarding the proposed upfront assistance. Alcoa believes that such an approach could substantially bias carbon market outcomes in the early years of the scheme. Alcoa supports a approach that entitles generator to a future stream of permits.

CPRS 10.12 A decision on the timing of the delivery of the proposed direct assistance for coal-fired electricity generators would be made at the time the quantum of assistance is determined.

See responses above.

CHAPTER 11. TAX AND ACCOUNTING ISSUES

CPRS 11.1 Discrete provisions of the income tax law would be developed. Such provisions would provide generally the same tax treatment to permits purchased by taxpayers who are carrying on a business or other income-earning activity as would occur under existing legislation, but would provide increased certainty and reduced complexity.

The provisions would allow a deduction for expenditure incurred on the purchase of a permit and include any proceeds from the sale of a permit in assessable income.

Supported. Alcoa welcomes the proposal to ensure clarity in the application of the law.

CPRS 11.2 The cost of acquiring a permit would be deductible at the time the permit is acquired.

If the permit is banked, the effect of the deduction would be deferred until the time the permit is surrendered or sold.

Any proceeds received on the sale of a permit would be treated as assessable income.

Alcoa considers that the deferral using a rolling balance method should be based on historic cost.

CPRS 11.3 The effect of deferring a deduction for the purchase of a permit would be achieved through a rolling balance method, under which the value of permits held at the beginning and end of the income year would be taken into account.

Alcoa considers this should be based on historic cost.

CPRS 11.4 The value of free permits would be included in the taxpayer's assessable income in the year the permits are received.

Timing of the allocation needs to be advised. Early balancing companies (such as December year-end companies) will be at a disadvantage if the permit allocation occurs in a tax year that differs to the year of surrender.

The subsequent tax deductibility when permits are sold or surrendered is essential for this to operate successfully.

CPRS 11.5 The value of a cash grant given to a liable entity as assistance under the scheme would be included in their assessable income in the income year it is received.

Alcoa has no comment on this element.

CPRS 11.6 Scheme transactions would be treated under the normal GST rules. This would ensure that scheme transactions would receive the same treatment as similar transactions in the broader economy. It would also be consistent with the underlying principles of the GST, including its broad-based nature, minimise compliance costs for entities and avoid complexity in the law.

The treatment of permits under the normal rules would generally not lead to embedded GST for registered entities and, from a GST perspective, those entities would be indifferent as to whether permits were auctioned or free.

Alcoa has no comment on this element.

CHAPTER 12. TRANSITIONAL ISSUES

CPRS 12.1 To assist business more generally, the Government proposes to establish the Climate Change Action Fund. This Fund will focus predominantly on those industries not receiving free permit allocation, but which nevertheless need assistance to adjust to the carbon price.

Supported in principle.

It is important however that the operation of the Fund avoid unintended consequences and inequities.

For example, local consumers in Western Australia are experiencing a significant shortage of natural gas supply which has resulted in escalating prices and serious shortages. At the same time, oil and gas producers continue to expand exports of natural gas as LNG.

From a global greenhouse perspective, gas used domestically for electricity generation and minerals processing is also the most greenhouse effective use of Australia's natural gas resources. By comparison, LNG is a more greenhouse intensive process over its lifecycle as gas is processed, liquefied, shipped long distances overseas, re-gasified and piped to its final end-use.

Promoting new domestic gas development and supply has been recognised as a priority by the Federal Government.

Design of the Scheme should therefore encourage greenhouse effective use of Australia's gas resources. This requires that any assistance provided to oil and gas producers under the Climate Change Action Fund be done on a level playing field and does not discriminate against domestic gas exploration, development and supply vis-a-vis LNG exports.

Conversely, if export LNG were to receive assistance as an EITE, it may be appropriate to use the Fund to ensure a level playing field for domestic gas supply.

It would be a perverse outcome if the Scheme discourages domestic gas supply, with downstream economic and environmental consequences.

CPRS 12.2 State and territory governments are encouraged to discontinue their market-based programs once the Carbon Pollution Reduction Scheme commences, as this is consistent with the Council of Australian Governments' complementary measures and streamlining agenda. The Government will continue to work cooperatively with the New South Wales, Australian Capital Territory and Queensland governments to assist them in their development of appropriate transitional arrangements.

Supported.

CPRS 12.3 A program for allocating early action credits would not be established.

The Australian aluminium industry took early action to respond to climate change and has invested in significant emission reductions. The greenhouse gas intensity of Australian aluminium smelting has fallen sharply over time, reflecting the industry's efforts to invest in emission controls and efficiency technology.

The industry has reduced direct emissions per unit of production by 59% since 1990 - falling from 5.05 tonnes of CO₂-e per tonne of metal produced in 1990 to 2.04 tonnes of CO₂-e per tonne of metal in 2006.

While indirect emissions from electricity and alumina consumption in the aluminium smelting process have risen in absolute terms, this reflects a 56% growth in aluminium production. Importantly, indirect emissions growth has been at a rate well below the increase in production.

Overall, the emissions intensity (including direct emissions and indirect emissions from both electricity and alumina inputs) of Australia's aluminium smelters in 2006 has improved 23% since 1990.

These efforts have placed the Australian aluminium industry at the front of global competitors. Our electricity performance can be seen in a global comparison: ³

³ Source: International Aluminium Institute Electrical Power Used in Aluminium Production ES002 21 December 2007.

Regional Average Electricity Use for Primary Aluminium Production (kWh/tonne)	
	2006
Africa and South Asia	14 622
North America	15 452
Latin America	15 030
Asia	15 103
Europe	15 387
Oceania	14 854
Weighted average	15 194

Regional Average Energy Use of Metallurgical Alumina Production (GJ/tonne)	
	2006
Africa and South Asia	14.5
North America	11.9
Latin America	11.2
Europe	13.1
East Asia and Oceania	11.8
Weighted average	12.0

Growth in the alumina refining sector has been even higher than in aluminium smelting with a 64% increase in production from 1990 levels. During this period, growth in total industry CO₂-e emissions was only 29% higher, reflecting a 21% improvement in emissions intensity.

Key Characteristics Comparison 1990:2006 ⁴

Australian Alumina	
	Variation on 1990
Production	+ 64%
Total alumina ghg emissions	+ 29%
Per unit ghg emissions	- 21%
Australian Aluminium	
Production	+ 56%
Total direct ghg emissions	- 37%
Per unit direct ghg emissions	- 59%
Total indirect ghg emissions from electricity	+ 37%
Per unit indirect ghg emissions from electricity	- 12%
Total indirect ghg emissions from alumina	+ 23%
Per unit indirect ghg emissions from alumina	- 21%
Total aluminium ghg emissions	+ 20%

⁴ Source: Australian Aluminium Council Sustainability Report 2006. Note: In the Report, indirect emissions from the alumina consumed in the smelting process are not included to avoid double counting these emissions.

The available data indicate that the Australian alumina and aluminium industry is a world-leading performer in greenhouse gas performance. For example, alumina produced by Alcoa in Australia uses just over half the energy, and produces less than half the greenhouse emissions, compared to alumina produced in China.

These early greenhouse improvements are in no way recognised by the scheme, which effectively penalises Australia's aluminium industry for the early action taken.

This underlines the importance of ensuring that assistance provided to EITEs is maintained and not eroded until international competitors face similar imposts. Failure to do so would impact continuing production and investment in an Australian industry with strong emission controls, comparably high greenhouse efficiency and a history of environmental improvement.

CPRS Section 12.4.2 Contractual impediments to carbon cost pass through: The Government seeks stakeholder views on the impacts of the scheme on commercial contractual arrangements

See response to CPRS section 9.4

CHAPTER 13. GOVERNANCE ARRANGEMENTS AND IMPLEMENTATION

CPRS 13.1 Elected representatives (the Parliament and the Government, acting through the responsible minister) would be given responsibility for policy decisions with significant and far-reaching implications, and an independent regulator would be responsible for decisions that are essentially administrative in nature or that involve individual cases.

The guiding approach to governance arrangements would be to provide as much certainty and predictability for regulated entities and the market as is practicable, while retaining a legitimate degree of flexibility for the Government to adjust the scheme in response to changed circumstances.

Supported.

An additional guiding principle should be that Australia's EITEs not be disadvantaged by the scheme. The Government has committed to"

"Ensure that Australia's international competitiveness is not compromised by the introduction of emissions trading" and

"Establish specific mechanisms to ensure that Australian operations of emissions intensive trade exposed firms are not disadvantaged by emissions trading."⁵

CPRS 13.2 A non-binding reference to the medium- and long-term national targets would be included in the objects clause of the Act establishing the scheme. Factors that the Government may consider when making decisions about the national targets over time could also be set out in the objects clause.

The scheme caps and gateways would be set out in delegated legislation.

Refer to Alcoa's responses to Green Paper Chapter 4 above.

CPRS 13.3 The broad principles of industry assistance would be set out in the establishing Act. Further detailed criteria for determining eligibility and the quantum of assistance would be set out in delegated legislation.

This would be administered by the regulator, which would have a high level of operational independence in determining individual cases in accordance with the legislatively prescribed criteria.

Given the potential consequences for industry and communities, detailed criteria for industry assistance should be subject to the highest Parliamentary, as well as State /

⁵ "Labor's Plan for a Stronger Resources Sector", 2007.

Territory scrutiny. These detailed criteria should be set out in the establishing legislation and not by way of delegated legislation.

Application of the criteria in individual cases should be subject to Ministerial review and oversight, with the elected representative having accountability for the scheme's implementation and application to individual cases.

The regulator's decisions should therefore be subject to Ministerial review and oversight. Provided that directions are made in a transparent and public manner, the Minister should be empowered to give specific directions to the regulator.

States and Territories should also have a strong and formal role in the implementation and administration of the scheme.

CPRS 13.4 The Act establishing the scheme would set out a broad framework for monitoring, facilitating and enforcing compliance. The regulator would then be given responsibility for ensuring compliance by liable entities and, to that end, be given a range of compliance, investigative and enforcement powers, with the flexibility to select from a set of graduated options to respond proportionately to noncompliance.

Supported in principle. The proposed framework for monitoring, facilitating and enforcing compliance, and the proposed powers of the regulator, should be made subject to detailed public consultation and comment.

CPRS 13.5 An independent expert committee would be constituted every five years to conduct public strategic reviews of the scheme. The responsible minister would be provided with the power to bring forward a review. More frequent 'care and maintenance' reviews may be necessary in the early years of the scheme to assess the operation of administrative arrangements. To improve market certainty, the scope of those early reviews would be tightly defined.

Supported, subject to Alcoa's response to 13.3 above.

CPRS 13.6 The scheme would be implemented through unitary Commonwealth legislation. States and territories will be informally engaged as part of ongoing cooperation and coordination on climate change policy through the Council of Australian Governments.

As recognised by the Government, an ETS will have significant consequences for the Australian economy. These are likely to be profound at the local and regional level, affecting local industries and communities.

It is therefore critical that States and Territories have a formal role in the ongoing operation and administration of any national scheme.

To ensure a strong role by States and Territories, a national scheme should be implemented by way of Commonwealth legislation, in conjunction with mirror legislation by the States and Territories.

Consideration should be given to establishing a formal joint Commonwealth – State – Territory Ministerial Council for this purpose. This should be led by the Commonwealth, with regular forums to establish and coordinate policy, and oversee the scheme.

CPRS 13.7 The scheme regulator would be given a high level of operational independence to implement the emissions trading legislation and apply it to individual cases. The regulator would be accountable to the responsible minister and subject to ministerial directions of a general nature only.

Given the potential consequences for individuals and businesses, it is critical that the elected representative has accountability for the scheme's implementation and application to individual cases.

The regulator's decisions should therefore be subject to Ministerial review and oversight. Provided that directions are made in a transparent and public manner, the Minister should be empowered to give specific directions to the regulator.

States and Territories should also have a strong and formal role in the implementation and administration of the scheme.

CPRS 13.8 The regulator would be required to report on its operations each financial year to the responsible minister for presentation to the Parliament. The regulator's decisions would be subject to sound appeals processes, including judicial review pursuant to the Administrative Decisions (Judicial Review) Act 1977 and merits review by the Administrative Appeals Tribunal.

Given the significant impact of the scheme for individual sectors or companies, the regulator's decisions should be subject to Ministerial review and oversight.

CPRS 13.9 The regulator would be established as an incorporated body subject to the Financial Management and Accountability Act 1997. The regulator would have a commission structure with a number of statutory office-holders appointed by the responsible minister.

Supported.

CPRS 13.10 The Government will assess the potential for consolidating the Greenhouse and Energy Data Officer, the Renewable Energy Regulator and the proposed scheme regulator.

Supported.