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4 June, 2009

Committee Secretary  
Senate Standing Committee on Economics  
PO Box 6100  
Parliament House  
Canberra ACT 2600  
Australia

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Dear Mr. Hawkins

**SUBMISSION: CARBON POLLUTION REDUCTION SCHEME BILL 2009**

**Background to Alcoa in Australia**

Alcoa undertakes several Emissions-Intensive Trade-Exposed (EITE) activities in Australia through operation of Australia's largest integrated aluminium business. This network includes:

- two bauxite mines, three alumina refineries and two ship loading facilities in Western Australia;
- two aluminium smelters, a rolling mill, port facilities, power station and mine in Victoria; and
- a rolling mill and Australia's largest aluminium recycling plant in NSW.

Alcoa has been investing in Australia for over 40 years and the replacement value of this capital is in excess of \$20 billion.

In 2007 Alcoa's Australian operations contributed around \$5 billion in exports including over 8.5million tonnes of alumina, around 550,000 tonnes of aluminium, over 30 million tonnes of bauxite and over 110,000 tonnes of aluminium rolled products. Alcoa of Australia makes a significant contribution to the Australian economy and around 80cents in every dollar earned by the company stays in Australia.

Alcoa directly employs over 6,000 people in Australia and provides around a further 1,500 jobs via contract – most of these jobs are in regional Australia. Allowing for flow on employment it is estimated the company's activities in Australia provide employment for over 20,000 people.

**Position on Climate Change**

Alcoa has long recognised the importance of responding to climate change and for over a decade has taken a voluntary global leadership position in rising to this challenge. The following are examples of Alcoa's global and Australian response to climate change:

- Alcoa set an ambitious target to reduce its global 1990 direct greenhouse gas emissions by 25% by 2010 – this target was reached in 2003 and the company has continued this drive to the point of now operating at around 35% below the 1990 benchmark.
- In Australia, Alcoa’s aluminium smelters have reduced direct greenhouse gas emissions per tonne of product by 61% since 1990.
- Our Australian alumina refineries are amongst the most efficient in the world and have still been able to reduce greenhouse gas emissions per tonne of product by 12% from 1990 levels.
- Our Australian aluminium rolling businesses have reduced direct emissions by 21% from 1990 levels.

In recognising the importance of responding to climate change Alcoa also accepts that economic instruments, such as emissions trading, have a valid role to play in this response. 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, Alcoa supports the introduction of a carbon price signal in Australia.

Fundamental to delivering this balanced outcome is a need to ensure the international competitiveness of Australian industry is not significantly weakened. Emissions-Intensive Trade-Exposed (EITE) sectors, such as the aluminium industry, are particularly exposed to this risk. Their electricity-intensity or emissions-intensity means that a carbon price signal may represent a very high cost impost and their trade-exposure means this additional cost cannot be passed on to customers.

Most of the countries that are home to aluminium producers have not yet adopted carbon pricing and jurisdictions that have, such as the European Union, have implemented schemes that impose significantly less cost than the current Australian proposal (the CPRS). In this regard Australia is proposing to add significant additional cost to the production of aluminium (and other products) ahead of international competitors. This then creates the risk of unsustainable cost impacts that, if sufficiently high, would quickly lead to reduced investment in Australian facilities followed by carbon and jobs leakage to lower cost centers overseas.

Alcoa’s view is that a carbon price signal in Australia can play an important role in incentivising greenhouse gas emissions reduction and such a scheme should start soon. However, it needs to be introduced with design elements that ensure the costs to Australian EITE industries can be sustained without significantly curtailing investment and facility viability before key competitor countries adopt a comparable carbon price.

## **EITE Provisions and Alcoa’s Australian Operations**

The key purpose of EITE assistance provisions in the proposed CPRS is to ensure that the CPRS-driven cost impact on EITE industries does not jeopardise the sustainability of existing Australian facilities. This is a critical issue not only to many Australian industries, but also to the thousands of employees and local communities that depend on the industry’s future viability.

Analyses undertaken by Alcoa indicate that if the CPRS was implemented in accordance with the December 2008 white paper (including the May 2009 modifications) it would put some of Alcoa’s Australia facilities on a path to closure. This is because the combined impact of the various carbon costs would make some facilities either unprofitable or reduce their profitability to the extent that they would no longer secure investment and would gradually “run down” to

closure. No responsible company could continue to invest capital in facilities that will inevitably become unprofitable or provide an on-going subsidisation of unprofitable facilities at the expense of profitable sites.

Even after applying the white paper EITE provisions, the cost increases experienced by Alcoa from the CPRS would amount to over \$50 million in only the second year of the scheme (at a carbon price of AU\$22). This would rise to an estimated AU\$ 190 million by the tenth year of the CPRS (carbon price \$36). A breakdown of these costs against business elements is shown in Table 1.

Table 1. Impact of the proposed CPRS & RET on Alcoa’s Australian businesses

Business element	Cost year 2	Cost year 10
Bauxite Mining	\$ 2M	\$ 4M
Alumina Refining <sup>1</sup>	\$ 20M	\$ 50M
Aluminium Smelting		
CPRS	\$ 5M	\$ 55M
RET	\$ 2M	\$ 19M
Without EAF correction	\$ 16M	\$ 52M
Aluminium Rolled products	\$ 6M	\$ 10M
<b>Total</b>	<b>\$ 51M</b>	<b>\$ 190M</b>

Because these costs cannot be passed on to the market place and they are not imposed on key overseas competitors they are a direct reduction in the ability of these Australian facilities to remain internationally competitive.

### The necessary changes

Alcoa believes there are a number of key changes that need to be made to the CPRS and RET that can find a reasonable balance and provide an incentivising carbon price signal without creating carbon and jobs leakage from the Australian aluminium industry. These changes are:

- I. Australian EITE industries should receive a free permit allocation equivalent to at least 90% of their direct emissions obligations (including alumina refining, aluminium smelting and aluminium rolling operations);
- II. The same (90% permit allocation to EITEs) principle should apply to indirect emission obligations. Alternatively, inequities in the proposed calculation of the Electricity Allocation Factor must be rectified to avoid unsustainable impacts on the Victorian aluminium smelters;
- III. Erosion of EITE permits should not occur before international competitors are subject to comparable carbon costs

<sup>1</sup> Assumes refining activity commences with 94.5% EITE assistance – cost impacts would be significantly higher at 66% initial EIET assistance rate

- IV. Aluminium smelting deserves at least 90% exemption from the Expanded RET and existing Mandatory RET (the recent COAG decision only supports the former and fully exposes aluminium smelting to the latter)

Under the CPRS, even the most emissions-intensive, trade-exposed activity would only receive an initial permit allocation of 90% (94.5%) of the industry average emissions for that activity. For activities that are highly emissions intensive, such as much of the alumina and aluminium industry, the obligation to purchase the remaining permit gap is a significant cost. This is then exacerbated if parts of the sector receive only 60% (66%) initial permit allocation and others, such as bauxite mining, receive 0% initial allocation.

A simple example can show the potential detrimental impact on profitability. A hypothetical integrated alumina and aluminium business operating in Australia during 2008 (say with around 2Mt alumina production and approx 500,000t aluminium production) would likely have experienced an overall 20% – 25% reduction in profitability had it been operating under the CPRS as outlined in the white paper. Some individual facilities in this hypothetical business would have experienced an even higher a reduction in net operating profit of around 30% to 50% during 2008. Very few trade exposed businesses could sustain such a large impact ahead of their international competitors.

The importance of initial permit allocation calculations has increased further since release of the recent EITE Guidance Paper. There are elements of all industrial processes, such as alumina refining, aluminium smelting and aluminium rolling, that are not proposed as part of the 'defined activity' and therefore require the purchase of permits. This includes transport of raw materials and final product, materials handling prior to and after the activity, treatment of residues and waste and potentially other factors. The industry cannot operate without these other activities (and the emissions associated with them) yet they are not captured under the activity definition that would receive an EITE allocation of permits.

This restriction of 'activity' definition, along with exclusion of activities such as mining reduces the real level of EITE assistance to less than the claimed 66% or 94.5%.

### **Indirect emissions and the CPRS Electricity Allocation Factor**

Indirect emissions (those generated during the production of purchased power) can be very significant for sectors such as the aluminium industry. For example, Alcoa's 'greenhouse gas footprint' in Victoria is dominated by emissions associated with power generation undertaken by others (indirect emissions). In 2008 approximately 1.1 million tonnes of CO<sub>2</sub>-e emissions arose directly from the two Alcoa aluminium smelters in Victoria. In comparison the production of power that was purchased from other parties and used by the Alcoa smelters generated over 10.4 million tonnes CO<sub>2</sub>-e.

Any scheme that did not properly recognise the significance of indirect emissions to EITE industries would be fraught with risk. One of the lessons from the EU experience with emissions trading in the first two phases of the scheme is that failing to provide assistance for indirect emissions may push the cost burden on electricity-intensive trade-exposed industries beyond sustainable limits. In the latest revision of the directive covering the EU ETS from 2012 onwards, the carbon leakage problem resulting from indirect emissions has been

recognised and may be compensated by Member States providing financial aid to those severely affected.

The proposed CPRS recognises that EITE industry assistance should at least partially cover the increase in electricity price caused by a carbon price. This is particularly critical to EITEs which are also electricity intensive, such as aluminium smelting. The intention to provide assistance based on CPRS-driven cost uplift, rather than simply as permits for indirect emissions, has merit, provided the method of application achieves the intent. In the case of the CPRS the intent is to provide an initial assistance equivalent to 90% (94.5%) of the CPRS driven cost uplift, however, aspects of detail mean this will not be delivered in all instances.

The CPRS would base the indirect assistance calculation on an Electricity Allocation Factor (EAF) – which is a carbon intensity (tonnes CO<sub>2</sub>-e/MWh) of power supply that some CPRS modelling has suggested may be passed on to EITEs. The CPRS proposes to apply an EAF of 1.0 t CO<sub>2</sub>-e/MWh, however, Alcoa's experience in the Victorian energy market is that this modelled estimation price will significantly underestimate the real impact. As shown in Table 1, applying an EAF of 1.0 to the Victorian aluminium smelters would add \$16m to the cost of production in CPRS year 2 and \$52M in CPRS year 10. These costs are not sustainable and jeopardise viability of the aluminium smelters in Geelong and Portland.

Alcoa believes no other Australian aluminium smelter is exposed to this additional cost because in every other Australian jurisdiction it is possible to secure long-term power contracts at an EAF of 1.0 or less.

The CPRS proposal acknowledges that very large electricity users (such as aluminium smelters) have no flexibility to source electricity from other sources, or reduce emissions for that electricity, under existing contracts. However, it assumes that any new contract would allow the modelled factor (1tCO<sub>2</sub>/MWh) to be achieved. Because this will not be achieved in Victorian long-term power contracts, the two Victorian aluminium smelters would be exposed to a substantial increase in electricity costs that would not be matched with an ongoing permit allocation. This may deliver an outcome that is far removed from the policy intent to provide 90% or 94.5% assistance for CPRS-driven power price uplift.

Alcoa has raised its concerns over the EAF in numerous meetings with Government representatives as well as in submissions to three previous Senate inquiries investigating the CPRS. However, no indication has been given by Government to date that it is prepared to address this very serious issue.

### Independent review

Alcoa recently commissioned independent specialist consultants KPMG to review the EAF and its potential impacts on the two Victorian aluminium smelters. KPMG's findings included the following.

*“Alcoa's Victorian smelters are defined by the following constraints in terms of their electricity supply which makes them unique to most other EITE entities:*

*Constraint 1: They are dependent on maintaining long-term electricity supply agreements;*

*Constraint 2: They are financially constrained to relying on electricity sourced from within the Victorian NEM region to meet their electricity needs; and*

*Constraint 3: Within the Victorian NEM region, they are physically constrained to relying on electricity supplied by Victorian brown coal generators.*

*As a consequence, the use of a single, national EAF is an overly simplistic approach that will not provide adequate assistance to Alcoa's Victorian smelters. The analysis presented in this report<sup>2</sup> shows that they are only likely to receive assistance levels of around 74 per cent of the CPRS related increase in energy costs, well short of the Commonwealth Government's objective to provide assistance levels for 90 per cent. Failure to address the inadequacy in assistance provided to Alcoa's Victorian smelters could have a range of internal, financial, investment and operational implications for Alcoa and external economic implications that ultimately compromise the Commonwealth Government's stated policy objectives."*

*The Commonwealth Government should set the EAF differently for Alcoa's Victorian smelters to ensure that adequate assistance is provided. This can be implemented by 'fine tuning' the final EAF in the CPRS Regulations and would not require any major policy shift. KPMG's proposal for achieving this is to extend the site-specific EAF provisions for very large electricity users to new electricity contracts entered into after 3 June 2007."*

Alcoa agrees this very significant issue is readily resolved by allowing for the very large electricity user provision to also apply to new contracts. In response to this request, Department of Climate Change officials have expressed concern that modifying the EAF might create a disincentive to secure lower carbon intensity power for the smelters. This concern can be easily addressed - in extending the very large user clause to new contracts the EITE in question could be required to demonstrate that no practicable, lower carbon intensity, alternative power supply was available.

## **Security of EITE permits**

The fundamental premise for an EITE assistance component is to prevent international competitiveness loss to the point that it risks carbon and jobs leakage. This requires both sufficient initial assistance and preservation of this assistance until international competitors adopt a comparable carbon price.

The CPRS proposes that even where an activity receives a permit allocation under the EITE provisions, the allocation of permits will decay by 1.3% per annum. EITE industries will therefore have to purchase an ever-increasing quantity of permits as the scheme proceeds. This increasing permit gap will combine with the expected increase in the permit price to lead to significantly escalating costs as part of the scheme (refer Table 1). This will be a disincentive for investment in new facilities, expansion of existing facilities and sustaining investment to maintain the competitiveness of current facilities.

This risk is exacerbated for the Australian alumina and aluminium sector because it has already made substantial reductions in emissions intensity, such as the Alcoa examples on

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<sup>2</sup> Implications of the CPRS on the Victorian Aluminium Smelting Industry. KPMG 2009.

page 2 of this submission. The penalty for these past improvements is that it is now much more difficult to find efficiency gains that can compensate for an eroding permit allocation.

A central flaw of the proposed CPRS is that it anticipates global action in the near future and pre-determines a reduction in the measures to maintain competitiveness of Australian industry (permit decay) based on the assumption that global action will occur. In forcing Australian industry to accept the risk of that action occurring, the CPRS establishes a perverse incentive for other countries not to take action.

If there was a link in the Australian scheme to ensure permits only eroded in line with global action there would be far less investment risk for Australian industry and a clearer incentive for other countries to join the abatement effort.

### **Renewable Energy Targets**

Alcoa also believes the CPRS should not be viewed in isolation from other parts of the Federal Government's climate change response strategy, such as the Expanded Renewable Energy Target (RET) and Mandatory Renewable Energy Target (MRET).

For electricity-intensive trade-exposed firms, the two RETs pose the same international competitiveness challenge as an Australian carbon price. Renewable energy is available only at a much higher price than traditional power sources and because some trade-exposed facilities, such as aluminium smelters, use very large amounts of electricity, a mandatory requirement to purchase renewable power can be a very significant increase in the cost of production. If international competitors don't pay an equivalent additional cost, the Australian firms can be made uncompetitive and eventually, unviable. This can then lead to them downsizing or closing - causing carbon and jobs leakage in the same way a carbon price would (in the absence of sufficient assistance measures).

A discussion paper released by Federal Government in December 2008<sup>3</sup> recognised some activities will require assistance to ensure the RETs do not cause carbon and jobs leakage. To distinguish the situation from the EITE provisions under the CPRS, these industries have been termed RET-Affected Trade-Exposed (RATE). Because of their high reliance on purchased electricity, aluminium smelters are the most exposed RATE industry (refer graph 1).

Given the potential impact on RATEs the Government has considered providing assistance to those industries that can demonstrate "a material impact on costs as a result of the increase in electricity prices associated with the expanded RET."

However, the recent decision by the Council of Australian Governments (COAG) provided insufficient exemption from the RET to avoid very large financial impacts on the Australian aluminium smelters. The COAG decision was as follows (extract of communiqué of April 30, 2009):

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<sup>3</sup> COAG Working Group on Climate Change and Water Discussion Paper : Treatment of electricity –intensive, trade-exposed industries under the expanded Renewable Energy Target scheme

*Exemptions of 90 per cent or 60 per cent will apply, corresponding to the level of assistance provided under the EITE framework. All businesses will contribute to supporting renewable energy as these exemptions will only apply above the MRET's existing 9,500 GWh target. These assistance arrangements will be reviewed in 2014 as part of broader RET and CPRS reviews.*

*The RET scheme includes a shortfall charge, which is the penalty paid by the electricity retailer in lieu of renewable energy certificates. The shortfall penalty has been increased to \$65 per megawatt-hour from the \$40 of the current MRET to encourage compliance under the RET scheme. The level of the shortfall penalty will be monitored to ensure it remains effective as an incentive for investment in renewable energy. “*

The implications on this for the Victorian aluminium smelters are significant, even if the price of RECs stays below the new shortfall charge of \$65. For example, a REC price of only \$50 would expose the two Victorian aluminium smelters to an additional cost of production of over \$17 Million in 2016 (rising to \$19M by 2020).

This additional \$17 Million arises because the COAG decision provided smelting with a 90% exemption from the Expanded RET yet fully exposed aluminium smelting to the existing Mandatory Renewable Energy Target (MRET).

The COAG decision seeks to achieve some consistency with the CPRS by offering 90% and 60% exemptions for emission intensive trade-exposed (EITE) facilities from the Expanded RET. However it is only ELECTRICITY-intensive trade-exposed facilities that are exposed to the financial impacts of renewable energy targets, of which aluminium smelting is an order of magnitude more exposed than other activities. The decision potentially provides exemptions for facilities that don't need the exemption, by virtue of being emissions intensive rather than electricity intensive and fails to provide any exemption from the existing MRET for the activity most acutely exposed to financial impacts from the MRET

This inequitable impact on aluminium smelting can be easily resolved by extending the 90% exemption for aluminium smelting to the MRET.

### Why aluminium smelting is the main concern with RET?

Graph 1 shows the electricity intensity of aluminium smelters in comparison to other EITE industries<sup>4</sup>. This clearly demonstrates aluminium smelters are enormously more electricity intensive than other EITE industries and therefore far more exposed to severe financial impacts from the RET policies. This is why:

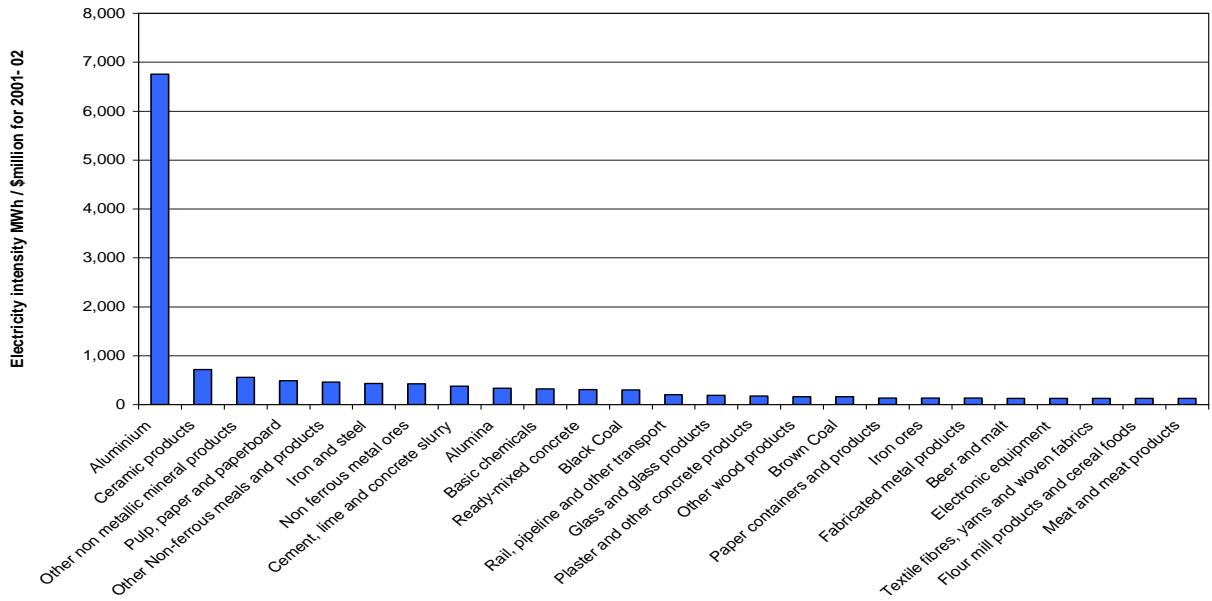
1. Aluminium companies are expressing grave concern about RET impacts;
2. Why it is feasible to exempt only smelting from both expanded and existing RET cost impacts

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<sup>4</sup> Source: COAG Working Group on Climate Change and Water, Discussion Paper, Treatment of electricity-intensive, trade-exposed industries under the expanded national renewable energy target scheme, 19 December 2009



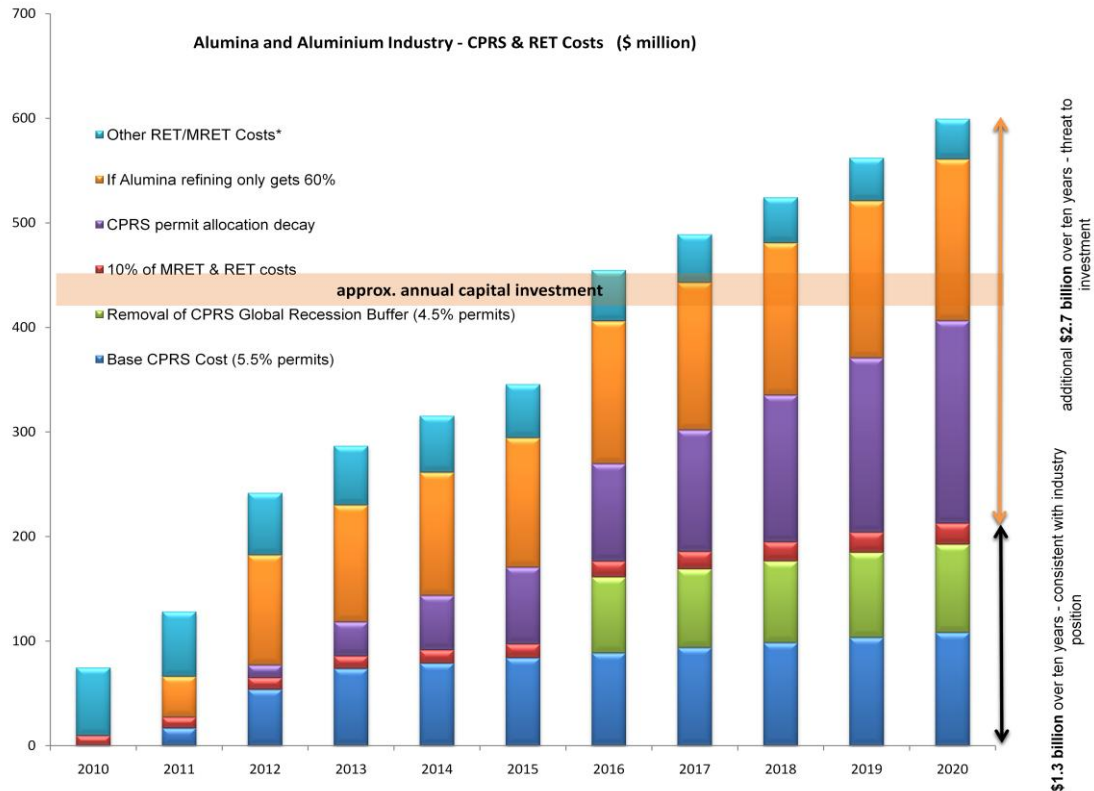
Graph 1. Electricity intensity of different EITE industries



**Overall impact on the aluminium industry**

Graph 2 shows the impact on the Government’s current CPRS and RET proposals on the Australian alumina and aluminium industry (key points are described on the following page)

Graph 2 Cost Impact of CPRS and RET proposals on the Australian alumina and aluminium industry



Source: Australian Aluminium Council 2009

As can be seen from Graph 2

The current CPRS and RET proposals would:

- Expose the Australian alumina and aluminium industry to around \$3Billion additional cost leading up to 2020;
- Annual additional costs would rise from around \$120Million in 2010 to over \$600Million in 2020;
- By as early as 2016 the annual CPRS & RET costs would equal the entire annual capital investment made in sustaining the existing Australian facilities – an example of how the additional costs will impact the ability of companies to continue investing in the Australian facilities.

The proposals for CPRS and RET changes being put forward by the Australian alumina and aluminum industry would:

- Still see the an additional cost of around \$1.3Billion out to 2020, demonstrating the financial incentive to further reduce greenhouse gas emissions;
- See annual additional costs rise to around \$200Million by 2020;
- Ensure continued investment in the Australian facilities was not compromised

## **Administrative Issues**

Review of the CPRS bills has also highlighted two administrative issues requiring attention; as follows.

### Valuation of Banked Permits and calculating tax deductions

The proposed legislation follows the terminology existing in the current income tax law as it applies to trading stock held at the end of an income year. However, the requirement to track each Australian Emission Unit's (AEU) actual cost for the purpose of tax deductibility is overly onerous. In the case of the income tax assessment act, the ATO has issued a tax ruling IT 2289 that allows the use of a weighted average cost for valuation of trading stock. This is also a method of valuation that is acceptable under ordinary accounting principles. It is therefore submitted that the CPRS Consequential Amendments Bill be amended to allow companies to avoid unnecessary compliance costs and facilitate the use of weighted average cost as against actual cost for the purposes of claiming a tax deduction of for valuing AEU on hand at year end.

### Point of Liability

Because of the approach being taken to operational control and point of liability it will be necessary in numerous instances to transfer some degree of liability to joint venture partners or subsidiary companies. At the moment the mechanism provided for this transfer is through the issue of Liability Transfer Certificates (LTCs). LTCs must be entered into voluntarily by both parties; however, concern has been expressed that voluntary acceptance of a liability may present a difficulty for Directors of the company receiving the liability.

It is recommended the current proposals in respect to point of liability and LTCs be reviewed to avoid potential reluctance by company Directors to properly accept CPRS liability.

## Conclusion

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, Alcoa supports the introduction of a carbon price signal in Australia.

Alcoa believes the proposed Australian CPRS and RET programs can achieve this outcome with a few straightforward modifications to the current proposals – these modifications are:

- I. Australian EITE industries should receive a free permit allocation equivalent to at least 90% of their direct emissions obligations (for the aluminium industry this would include, alumina refining, aluminium smelting and aluminium rolling operations);
- II. The same (at least 90% permit allocation to EITEs) principle should apply to indirect emission obligations. Alternatively, inequities in the proposed calculation of the Electricity Allocation Factor must be rectified to avoid unsustainable impacts on the Victorian aluminium smelters;
- III. Erosion of EITE permits should not occur before international competitors are subject to comparable carbon costs
- IV. Aluminium smelting deserves at least 90% exemption from the Expanded RET and existing Mandatory RET (the recent COAG decision only supports the former and fully exposes aluminium smelting to the latter);
- V. Various administrative issues require amendment.

In the absence of several important modifications the combined impact of the CPRS and RET will significantly impede investment in Alcoa's Australian operations to the point that carbon and jobs leakage as a direct result of government policy will be inevitable.

Yours Sincerely

Tim McAuliffe  
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