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The Secretary
Senate Select Committee on Climate Policy
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Dear Mr. Hawkins

ALCOA OF AUSTRALIA SUBMISSION: INQUIRY INTO CLIMATE POLICY

The following is provided as Alcoa of Australia's submission to the Senate Select Committee's Inquiry into Climate Policy

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 conservatively 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 36% 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 weakened beyond tolerable limits. 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 those that have, such as the European Union, have implemented schemes that impose significantly less cost than the current Australian proposal (the Carbon Pollution Reduction Scheme (CPRS) white paper). 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 lead to reduced growth in Australian and eventually carbon and jobs leakage to lower cost centers overseas.

Key policy design factors that will determine whether such costs go beyond tolerable limits for sectors such as the Australian alumina and aluminium industry will include:

- the scope of coverage and assistance (such as direct & indirect emissions);
- the quantum of EITE assistance (such as free permits);
- the security of EITE assistance (such as triggers for EITE permit erosion);
- the price of carbon;
- the impacts of other initiatives, such as the renewable energy target

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 will not be beyond tolerable limits, at scheme commencement or before key competitor countries adopt a comparable carbon price.

This position has broadly underpinned Alcoa of Australia's contribution to the CPRS public debate including our detailed responses to the Garnaut review process and the Government's CRPRS Green Paper, both of which are publicly available via the following links to Alcoa Australia's website.

Green Paper Submission:
http://www.alcoa.com/australia/en/pdf/Alcoa_submission_CPRS_GreenPaper_Sept08.pdf

Garnaut ETS Discussion Paper:
http://www.alcoa.com/australia/en/pdf/Garnaut%20Review%20-%20Alcoa%20response.pdf

The Carbon Pollution Reduction Scheme (CPRS)

In relation to the CPRS; Alcoa has made its position on the CPRS well known to Government and the public. Consistent with the policy position described above, Alcoa believes there are a number of key changes that need to be made to the CPRS in order for it to be effective in Australia. In particular these changes are necessary to ensure EITE industries do not suffer unsustainable international competitiveness reductions that will eventually lead to carbon and jobs leakage to low cost centers in other countries. This position was also presented as part of the recent Senate Economics Committee review of the CPRS Bill. In summary the minimum changes Alcoa believes to be necessary 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

<u>Assistance to Australian EITE industries</u>

Whether an Australian carbon price signal is introduced as an emissions trading scheme (ETS), a carbon tax or different mechanism it will be critical to many Australian industries, their employees and local communities that the cost impact on EITE industries does not jeopardise the sustainability of existing Australian facilities or dampen their prospects for growth.

Under the CPRS, even the most emissions-intensive, trade-exposed activity would only receive an initial permit allocation of 90% 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% 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 60% or 90%.

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 other companies. In 2007 approximately 1.1 million tonnes of CO_2-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_2-e.

Any scheme that did not 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 cause 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% 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_2-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_2-e/MWh, however, Alcoa's experience in the Victorian energy market is that this modelled estimation of carbon intensity and price will significantly underestimate the real impact.

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 ($1tCO_2$/MWh) to be achieved, or reflected in the contractual arrangements. 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% assistance for CPRS-driven power price uplift.

Because the Victorian aluminium smelters would only be able to secure long-term power contracts with full carbon cost pass through, they would be required to pay a carbon cost for the power they receive at around $1.22tCO_2$/MWh. Therefore, their initial starting allocation for indirect emissions would effectively be reduced from 90% assistance to 74% assistance. The potential cost impacts of this shortcoming are significant enough to quickly threaten the viability of the two Victorian aluminium smelters.

This significant issue is readily resolved by allowing for the very large electricity user provision to also apply to new contracts. In applying this change 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. 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 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 between the rate of global action and the relaxing of treatment of Australian industry then there would be far less investment risk for Australian industry and a clearer incentive for other countries to join the abatement effort.

Other climate change initiatives

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).

For electricity-intensive trade-exposed firms, the RET poses 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 EITE operations, such as aluminium smelters, use very large amounts of power 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 - without sufficient assistance measures.

A discussion paper released by Federal Government in December 2008[1] recognises some activities will require assistance to ensure the RET does 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 it is assumed aluminium smelters would be a RATE industry.

Given the potential impact on RATEs the Government is considering 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."

In the case of the Australian aluminium industry the six Australian aluminium smelters currently consume around 29,500 GWh of electricity p.a. A 45,000GWh RET applied to all 29,500 GWh would mean 4,425 GWh (projected 15% RET in 2020) from renewable sources which would equate to 4.425M Renewable Energy Certificates (RECs) being surrendered each year by the six smelters.

During 2008 RECs traded at up to A$57 each, which would expose the industry to an additional cost of over $250 million p.a. Such a cost increase, that cannot be passed onto customers and is not borne by competitors, poses a significant international competitiveness impact which would immediately represent a considerable disincentive for

[1] COAG Working Group on Climate Change and Water Discussion Paper : Treatment of electricity –intensive, trade-exposed industries under the expanded Renewable Energy Target scheme

investment in Australian facilities. Because these facilities are capital intensive and require significant annual capital injections to sustain even current levels of production this situation would then jeopardise their ongoing viability.

In this regard Alcoa believes it is essential that exemptions from the very costly obligations of the expanded Renewable Energy Target (RET) be provided for the most electricity intensive EITE industries

Alternatives to emissions trading

The key advantage of an emissions trading scheme is that it should encourage 'least cost' emissions reduction, the significance of which should not be understated. Nevertheless, economic mechanisms other than emissions trading stand an equally viable chance of creating a financial incentive for emissions reduction, such as a simple carbon tax or consumption based carbon price. The latter offers some potential for dealing with aspects of the trade exposure dilemma by imposing the carbon cost on local and overseas suppliers while not imposing a cost on exports to overseas markets.

Regardless of which model is implemented in Australia there will be aspects of detail that have great potential to increase or reduce the economic cost to industry and the consumer. For example, the current assessment of activity emissions intensity has identified that both the definition of an 'activity' and the baseline years chosen (particularly for revenue) may cause an activity to move across the 60% and 90% EITE thresholds – this then has the potential to increase or reduce annual permit costs by $tens of millions.

In terms of EITE industries the fundamental principle should be to respond to the challenge of climate change in a way that strengthens the Australian economy and preserves the economic and social values generated by Australian export industries. Furthermore, the detail of the chosen scheme should aim for simplicity and avoid complex definitions or calculations that undermine the objective of avoiding carbon and jobs leakage.

Alcoa of Australia appreciates the Parliament's commitment to consultation over all aspects of the CPRS and would be happy to provide additional information if required.

Yours sincerely

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