



the national emissions trading scheme

AWU POSITION PAPER
July 2008

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Executive Summary

When considering the issues of climate change and the debate on the establishment of a national emissions trading scheme (ETS), The Australian Workers' Union is more concerned with workers than widgets; practical impacts on industry than elements of theory. It is therefore pleasing to review aspects of the Rudd Labor Government's Carbon Pollution Reduction Scheme Green Paper¹ (green paper) which has an ETS as its centrepiece.

The AWU sees it as imperative that the various points along the road to the introduction of an ETS in Australia take account of the impacts of possible scheme designs on Australian industry, workers and regions. In particular, representing tens of thousands of workers in the emissions intensive trade exposed (EITE) industries, the AWU is concerned to ensure that full account is taken of options for improvements in scheme design and ways of working with major users and emitters of energy that will reduce cost disadvantages to industry and the economy following the introduction of an ETS.

A well designed ETS is a mechanism and means to an end, rather than an end in itself. Much may also be learned from Australia's own practical experiences, in particular with the New South Wales Greenhouse Gas Abatement Scheme (GGAS) which was one of the first emissions trading schemes in the world. What is particularly relevant is the way in which the GGAS accounts for relative emissions and comparative emissions intensity in its scheme design and in the final cost of energy to EITE industries and consumers.²

The green paper has moved some way in refining an absolute cap and trade system to encourage the uptake of lower emission energy sources and production processes through economy wide price adjustments. In particular, allocation of free permits based upon the differential emission levels for the EITE industries and the particular circumstances of coal fired electricity generation moves the consideration of design features in a positive direction.

As far as the EITE industries are concerned the principles outlined in the green paper account for the competitive disadvantages which would prevail regarding the costs of both direct and indirect emissions vis-à-vis their international competitors in the absence of an international scheme. (In other words, foreign producers can offer prices in the absence of an ETS increasing their competitive advantage).

Therefore the AWU welcomes the green paper as a cooperative model – one which works with generators, major users and emitters and the workforce – to reduce the total cost impacts on the economy following the introduction of the ETS while still meeting emissions target goals. This also will account for the progress being made by Australian industry in reducing their own carbon footprint and in meeting our international obligations. A vital cog is Australia's rapidly growing partner to both our economy and environment - China.

In addition to the AWU's historic roundtable consultation with industry, we look forward to building a collaborative relationship with other community groups and governments. This will facilitate the introduction of an ETS and limit downside risks to industry, workers and the economy. Reforms to Australian industry work best when designed and implemented cooperatively. This has been true of adjustment in the steel and motor vehicle sectors in addition to labour market reforms. The challenges posed by the introduction of the Carbon Pollution Reduction Scheme and implementation of the ETS are, ultimately, no different.



A handwritten signature in black ink, appearing to read 'P. Howes'.

Paul Howes
NATIONAL SECRETARY
THE AUSTRALIAN WORKERS' UNION



Introduction

This Position Paper responds to the major issues of priority concern to the AWU as set out in the Garnaut Climate Change Review Discussion Paper, Draft Report and Carbon Pollution Reduction Scheme Green Paper (the green paper).

The Discussion Paper, Draft Report and green paper will inform the engagement in the policy development debate by the AWU in coming months. This Position Paper aims to assist that engagement and appeals to decision makers.

The AWU has convened a round table of our major employers to call on them to join the union in devising a new and better response to the national and global Climate Change crisis.

To trigger the debate we have produced the following Position Paper.

In large part it is the result of discussions our union leadership has had travelling around the nation in the last few months and weeks where we have learned that both our members, and their employers, acknowledge we all have a responsibility as global citizens to find a way out of this crisis.

Our members have told us they want us to be active in seeking partnerships that will not only help to protect and improve their lives in these trying times but also ensure employers' profits - at a time when both are threatened.

However that does not mean we believe in giving carte blanche to all corporate demands in the climate change debate.

We believe that we must work with all people and organisations of good-will and through the power of our arguments bring them along. There is simply no alternative.

The green paper is an important and positive start to this discussion. In our view the most positive ten points are:

- An historic moment in Australia's history, which has seen the Australian Government take the lead in developing the elements of an innovative world class scheme;
- ;
- Unambiguously recognises the reality of the threat of carbon leakage for the emissions intensive trade exposed industries (EITE). While we can argue over elements of how best to provide assistance and its scope and coverage, the point is that the Australian Government understands the contribution these industries and the workers in these industries make to the Australian economy and to our standard of living;

- Anticipates international developments in carbon pollution reduction strategies and shows leadership in developing a least cost path;
- Through the ETS and supplementary mechanisms, encourages strategies and technological advance in dealing with avoiding, reducing and capturing emissions.
- Improves investment in innovation and supportive infrastructure for renewables and sustainable industrial processes;
- Recognises cost impacts on the community in addition to industry;
- Allows for a more rapid transition in the economy if required by getting started now which will serve to reduce future costs;
- Seeks in consultation with the EITE sector provision of data and information to assist in further development of the EITE assistance policy;
- Greater coverage spreads the burden of the scheme across the economy but which will also ensure that no sector is quarantined from the benefits; and
- Recognises the value of free permits as a transitional tool which can smooth the introduction of the scheme with broader coverage and lower costs.

The issues discussed in this report include responses to the Discussion Paper by a range of AWU employers including the alumina and aluminum industry, steel manufacturers, cement, chemicals and plastics industries in addition to economic analysis of the Discussion Paper – and by extension the Draft Report - undertaken by Frontier Economics and other primary sources.³ This paper also provides an initial response to the Draft Report and green paper in particular regarding impacts on the EITE sector.



In terms of areas of future work, we would request that during the consultation period and beyond that the Government consider:

- What ever form of free permits are issued to EITE industries these reverts to workers if not acquitted (carbon insurance);
- To this end, AWU requires baseline measurement of workers involved in each activity (as a subset of audits of affected workers in EITE industries and regions and mitigation strategies);
- The benefits of a lower carbon threshold for eligible EITE industries and processes;
- Benchmarking levels of assistance, including the allocation of free permits in Australia directly with international developments;
- Investigation of the value of carbon offsets in horticulture and other possible regional options;
- A focus on delivering certainty at every stage of ETS design and implementation to facilitate future investment and jobs; and
- That emission permits will be able to be traded by the EITE industries and that revenues be tax free.

We need to adopt a pragmatic approach including training, transitional arrangements for permit allocation to industry and workers, much stronger efforts internationally at driving a global ETS, making our own ETS conditional on global progress, initiatives which will also facilitate adaptation to the reality of climate change and a closer dialogue with Government.

However, subject to appropriate and complementary compensatory and incentive measures, we are pleased to see that the ETS is at the centre of the Government's plans. A trading scheme is ultimately the best mechanism to deliver the lowest cost to business and therefore to consumers of moving to a lower carbon future.



What are the principles upon which to base an ETS in Australia?

The cost of inaction is more expensive than the cost of taking action to address climate change. This is a global paradigm - not a domestic one - given Australia's small contribution to total global emissions at under 2 per cent of total emissions.

Therefore, in the absence of a binding global agreement, we are also talking about adapting or making the transition to the reality of climate change and what investments might be required to "future proof" our economy and society. These measures may also lead the way in developing new technologies and techniques with global application.

This is an important and complementary policy debate within the context of the merits, costs and benefits of an ETS and the kind of policy mix we should be pursuing to grapple with climate change.

Placing the ETS within the framework of the Carbon Pollution Reduction Scheme - which includes or relates to a range of efficiency and abatement measures in addition and complementary to the ETS⁴ - is important. In particular, it will assist to clarify how to achieve cuts to global emissions and adjustment in our own economy - thereby defining the optimal policy mix. For example, it is estimated that globally we already have the technology to deliver 70 per cent of the changes we need to meet our target goals. Greater energy efficiency alone will provide a quarter of overall gains as well as reducing bills. Deforestation accounts for up to 20 per cent of the emissions problem. Renewables and nuclear power close the gap.⁵ How we manage these issues in the future will determine how steep the climb required to reduce emissions.

The ETS is a creature of government policy in addition to economics.⁶ Freeing up trade to world prices and removal of domestic controls on the exchange rate have lowered domestic prices for producers and consumers, and improved the means of exchange, raising competitiveness, efficiency and living standards. This is why previous Labor Governments - with the support of the union movement - did not hesitate in implementing reforms that have resulted in expanded trade and a more efficient and growing financial market sector and stable foreign exchange and interest rate structure.

Unlike unilateral trade liberalisation, monetary policy and exchange rate reforms, the establishment of a national ETS in the absence of a traded goods sector or international marketplace does not guarantee an increase in welfare or efficiency in the Australian economy.

The Garnaut Review supports an ETS that is simple in design, efficient in operation and easily comprehended by market participants and the wider community.⁷ The five guiding principles are scarcity aligned with the emissions target, tradability, credibility, simplicity and integration.⁸ The AWU also supports these overarching principles and features of an ETS,

however, unlike trade reform, a freely floating exchange rate or independent monetary policy, there is no guarantee that achieving them will promote either the environment or living standards. The risk of large deadweight losses through carbon leakage is high and as a consequence potential losses to the EITE sector.

The AWU supports the overall policy goal of reducing total greenhouse gas emissions by 60 per cent by 2050 in a way which maximizes the benefits of a range of policy options and instruments, including efficiency enhancing measures, and offsets strategies at the same time as protecting and indeed promoting the national interest in the form of the contribution made to living standards by our major EITEs businesses.

This is a relevant consideration because unless made explicit, the content of the ETS must not be compromised simply because of the timetable for the commencement of the ETS (2010). There is a trade-off between completeness and timeliness in introducing an effective ETS by the due date and that carries risks.

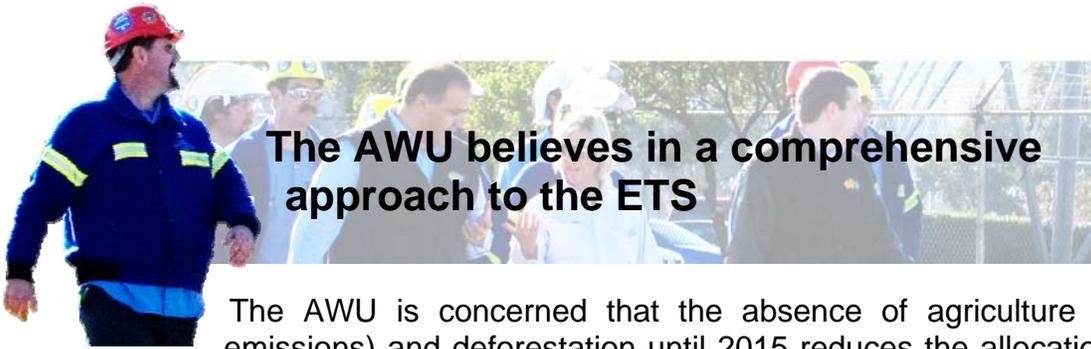
In this regard, in the time available, it is critical the Government make full advantage of the opportunity to engage with stakeholders in order to ensure that the costs and benefits of future scheme design and operation have been thoroughly considered within the context of the overriding policy goal of reducing emissions by 60 per cent by 2050. In this regard, the AWU has been encouraged by recent comments by the Rudd Labor Government that every opportunity will in fact be taken. This will serve to reassure the EITE industries that issues of concern are still “on the table” and open to scrutiny and full consideration. The views, knowledge and concerns of the EITEs vary, but what is constant is the value of these industries to the Australian economy and to the jobs they provide our Members.

In addition to achieving the first plank in Labor’s response to climate change – reducing emissions – the AWU reiterates the importance of recognising the EITEs in an Australian ETS. “Labor’s Plan for Stronger Resources Sector” committed the Rudd Government to:

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

As far as the AWU is concerned, this commitment recognized that the EITEs were not simply going to have to “wear” the consequences of 11 years of inaction on climate change by the Howard Government which has delayed transition to an ETS over a potentially longer - and therefore more gradual - time period and where the world price for carbon emissions does not yet reflect their real price.

The green paper is therefore a welcome confirmation of the Government’s pre-election intentions regarding the sector and the Government is to be commended for it. What follows therefore is a discussion of aspects of the ETS design which are relevant to the EITE industries.



The AWU believes in a comprehensive approach to the ETS

The AWU is concerned that the absence of agriculture (16 per cent of total emissions) and deforestation until 2015 reduces the allocation of free permits from 30 per cent to 20 per cent of total allocations. This is despite the fact that a range of abatement measures exist in these sectors at low cost, including forestry measures – protecting forests and in agriculture – shifting to fertilisation and tillage techniques that generate fewer emissions.⁹

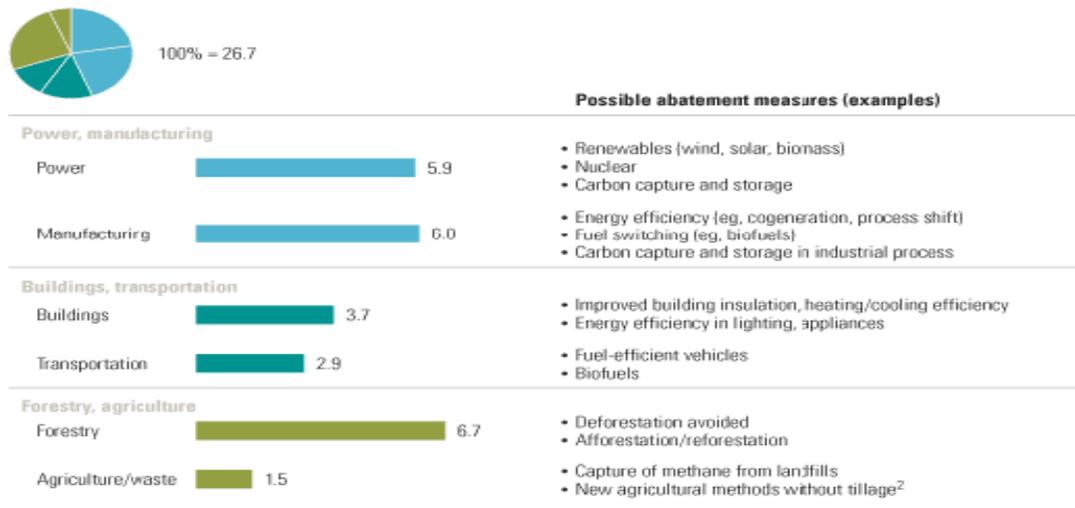
In addition, re-forestation and agriculture have the potential to play a significant role in carbon sequestration and therefore the provision of credits or offsets. Indeed, the Australian Government has identified this potential in development cooperation projects in PNG and Indonesia which are welcome initiatives to generate large carbon offsets and tradable credits in the future. A similar focus within Australia would complement these efforts. Important offset policy initiatives should not be delayed because of the ETS implementation timetable.

Partly as a consequence, the power generation and manufacturing industry have become the focus of the debate about how to address climate change, when they account for less than half of the relatively low cost potential for reducing emissions. Of course, it may be far more manageable for a an ETS to capture the 1000 major emitters in the form of large companies already subject to regulation than millions of small emitters who are often also consumers, but that may be at the expense of improving the efficacy of the scheme in lowering emissions overall.



As McKinsey has pointed out, the implications of this is that it is relatively more costly to design an ETS around the power generators and manufacturing industries in isolation of relatively cheaper abatement strategies which includes forestry, agriculture, transport and buildings. Nearly one quarter of abatement potential involves efficiency enhancing measures (mainly in the buildings and transportation sectors) that would reduce demand for energy and carry no net cost.¹⁰ This implies less impact on living standards, but would require a more sophisticated approach by policy makers to consider a suite of abatement measures. Many of the lessons learnt under the NSW GGAS should be incorporated into the ETS rules.¹¹

Abatement potential for greenhouse gases by sector, GtCO₂e¹ per year by 2030 (costing up to €40 per ton)



¹ GtCO₂e = gigaton of carbon dioxide equivalent.
² Reduces CO₂ emissions from soil.

Source: The McKinsey Quarterly, A cost curve for greenhouse gas reduction, 2007, Number 1

It is instructive to assess progress in other jurisdictions on sectoral coverage. For example, in 2007, the US Climate Change Action Partnership (USCAP), which includes a broad range of large US corporates, including Alcoa Inc, BP, Caterpillar, Duke Energy, and Du Pont among others in addition to the World Resources Institute called on the US government to enact a policy framework for mandatory reduction of emissions from major emitting sources, transportation and energy use in commercial and residential buildings.¹² The cornerstone of this approach would be a cap and trade program.¹³ And the EU, which has so far also omitted agriculture and forestry, has a generous phase in for EITE industries proposed from 2013.¹⁴



The importance of recognising pre-ETS progress in emission reductions

A number of submissions by the EITE industries indicate the degree of progress made in undertaking abatement and efficiency measures by companies employing world's best practice manufacturing. It is therefore gratifying to the AWU that these measures and investments are acknowledged by the green paper in contrast to the Draft Report.

Simply put, were the recommendations in the Draft Report adopted, emitters would compete like every other major emitter for permits where emissions occur (e.g. in steel and plastics production) or face the same increase in input costs for electricity as generators pass on the cost of permit auction purchases. In practice therefore these investments in abatement become sunk costs discounted to match emitters who have not undertaken such measures. The green paper on the other hand takes into account the differing starting positions at the commencement of the ETS through the use of industry average measures in the application of the emissions formula which effectively rewards early movers. Issuing permits close to the level of emissions at commencement goes a long way in closing the competitiveness gap.

However, a concern of the approach adopted by the green paper is the relatively high threshold level to be eligible for assistance which may affect a range of EITE industries and sectors.

For example, for polyethylene manufacturer Qenos, there is a baseline below which technologies do not currently exist for the manufacture of plastic resins free of carbon emissions. Therefore, in these cases, there will, for the foreseeable future be limited further opportunities for carbon efficiencies from the introduction of an ETS. And yet, industries such as Qenos may remain unsupported because they are short of the emissions threshold (measured by emissions per unit of revenue) which allows others to qualify for the allocation of permits.¹⁵

The most significant potential for carbon efficiencies is through general production efficiencies. Given Qenos already has a financial incentive to achieve these, it is not surprising that significant efficiency improvements have already been captured. Qenos maintain that they have reduced emissions directly associated with its business by 40 per cent since 1995 through the adoption of more energy efficient processes and feedstocks.¹⁶ As Qenos notes, EITE businesses are price takers - operating in highly competitive markets. This competition provides sufficient incentives for firms to make production efficiencies.

It should be noted that these efficiency improvements occurred despite the 11 years of policy inaction by the Howard Government. It is therefore important that the ETS should recognize and avoid disadvantaging early abatement actions by industries which date back to the early 1990s in many cases.



Similarly, as noted by the steel industry, emissions trading may be insufficient to achieve significant emissions reductions.¹⁷ The two major technologies for steel production – integrated steelmaking and electric arc furnace steelmaking – are mature. There are no commercial technologies on the horizon to replace these existing processes. The development and commercialisation of new technologies required to meet the challenge will require other targeted policy measures. Australian steel makers are contributing to research and development efforts both in Australia and overseas, but commercialisation of new, low carbon technology is likely to take many years.¹⁸ Assistance provided in the green paper recognises these realities and will provide a transition path for the sector.

The reality is that as a consequence of large scale investment if these enterprises do not run at 100 per cent capacity in most cases it is uneconomic for them to run at all. In addition, plants are long lived. EITE industries are concerned that short term emission trajectories will not provide the medium to longer term certainty for significant capital investment which often have asset lives of 40-50 years. For example, No.6 Blast Furnace at Port Kembla Steelworks, built in 1996, is designed for three campaigns each of 20 years duration.¹⁹ In this context, while a 5 or 10 year trajectory period may be potentially necessary as a practical consideration in ETS design it may be insufficient to accommodate investments of this kind.

Therefore, it is vital the Government ensure that the Carbon Pollution Reduction Scheme offer a full suite of supportive measures which will complement the ETS and assist innovation and abatement measures.



The importance of accounting for direct and indirect emissions – the Australian aluminum industry.

The greenhouse gas intensity of Australian aluminum smelting has fallen sharply over time reflecting advances in emission controls and investment in efficiency technology. The AWU has worked with the aluminum industry since 1990 in reducing direct emissions per unit of production by 59 per cent since 1990. With production increasing by 56 per cent since 1990 the changes in direct emissions is impressive. Indirect emissions from the consumption of electricity by Australian aluminium smelters are the dominant emissions for the industry – seven times greater than direct emissions – accounting for 80 per cent of total emissions attributable to aluminum production.²⁰ Importantly, the overall emissions intensity (including direct emissions and indirect emissions from both electricity and alumina inputs) of Australia’s aluminum smelters in 2006 had improved 23 per cent since 1990.²¹

Growth in the alumina refining sector has been even higher than in the aluminum smelting with a 64 per cent increase in production from 1990 levels. During this period growth in total industry emissions was only 29 per cent higher reflecting a 21 per cent improvement in emissions intensity.

Gas powered alumina refineries produce less than half the amount of emissions per tonne of alumina in comparison to Chinese alumina refineries. Energy intensity in Australia is also enhanced by the higher quality of bauxite being processed.

The impressive industry reforms described above in the plastics, iron and steel, alumina and aluminum industries have been undertaken in the absence of an ETS. It has resulted in world’s best practice in production processes and techniques giving Australia a competitive advantage in these industries while contributing to Australia’s economic growth.

It may therefore be appropriate to encourage the participation by the EITE industries through a tailored structural adjustment and response strategy which includes elements such as accelerated depreciation packages developed around each major facility where given the long life of the assets the compensation is tied to new environmentally friendly plant and equipment investments with generous accelerated depreciation. However, unless made retrospective, this would not recognize pre-ETS investments which would otherwise remain “sunk costs” post-ETS. And as we have seen, many plants are already “best in class” in terms of possible further emission reductions.

At stake are sizable new investments in Australia valued at around \$20 billion which demonstrate the integrated, value adding nature of the industry.²² This reinforces the need for a full suite of assistance and incentive measures.

AWU's Initial Reaction to Carbon Pollution Reduction Scheme

- Applaud the Government for explicitly recognising the risk of carbon leakage in the Emission-Intensive Trade-Exposed (EITE) Industries;
- There are a range of issues which require further consideration and these will be the subject of ongoing consultations with industry, unions and the government, but overall, the AWU welcomes the Government's starting point for the consideration of the recommendations in the Green Paper on the design of the ETS or (CPRS?);
- Support the free allocation of permits for the EITEs based on relative emissions intensity, however, the 30 per cent limit recommended by Garnaut has been adopted by the Green Paper but only if agriculture is included, otherwise in reality it is only 20 per cent). We do not want either 20 or 30 per cent to be an entrenched position nor the use of revenue in preference to value added;
- In addition, based on the government's formula of emissions per million dollars of revenue, it is difficult to see exactly who will be eligible to receive the permits. Note also that if the 20 per cent of permits limit is exceeded, the Government will change the materiality threshold to match the 20 per cent ceiling. That implies fewer recipients over time;
- Clarify who are the industries in and who is out based on using revenue rather than value added (as recommend by Garnaut)? How do the 90 per cent and 60 per cent allocations account for trade exposure? Coal fired electricity generation is accounted for under separate assistance scheme, but petroleum, gas etc?;
- Assistance reviewed after 5 years after which there is no guarantee of on-going assistance beyond 2020. The intention is to reduce assistance over time. However, assistance may be more properly linked to progress with international sectoral or global negotiations and agreements. Issued at the beginning of the compliance period and contingent upon production (ie annually);
- Welcome the consideration of directly compensating the coal fired electricity generators at start up that accounts for investment in plant and for the transition to cleaner processes - this will assist the wholesale electricity price and contracts between the generators and major EITE users by giving greater certainty and will serve to reduce the impact of the cost of indirect emissions on the EITE's assuming pass through of cost savings by the generators;
- In principle support greater certainty through longer rather than shorter trajectories;
- Caps (2010-2014) plus gateways (range around which the scheme cap will move of up to 10 years). Until we know the range it is difficult to assess impact;
- The Government expects all unused - free - permits which have been allocated to be returned to it. We would expect that they can also be returned to our workers as insurance for changes to processes, reduced output or leakage which materially impact our workers in these industries.

AWU's Initial response to the Draft Report

We welcome the recognition of the cost to competitiveness on the ETIEs from the ETS and that there should be compensation for this market failure but not through recycling government revenue but through the disciplines of the market (see below). Assistance to the ETIEs for the market failure associated with the lack of a global ETS has been recognised by Garnaut either through cash payments or the allocation of an equivalent value of trading permits (p372 of Draft Report).

We also agree with the focus on R&D and commercialisation of low emissions technologies and the use of the Building Australia Fund to assist in the extension of the energy grid to include renewable energy.

it is vital, given the potential price of failure, that agreement is reached at the UN Conference in Copenhagen in December next year that sees major developing country emitters included in a future global ETS around a target which Tony Blair has put at 50 per cent emission cuts by 2050.¹

Recognise that developed world, which created 80 per cent of the man-made greenhouse gases in our atmosphere, has to take a lead in reducing them. But if the US met the boldest targets for reductions and China continues on its present path, emissions will still rise above the level at which potentially catastrophic climate change becomes much more likely.

Regional impacts

The AWU is concerned about regional impacts because that is where our TEEII industries are. TEEII members have to pay higher costs of their essential services but have the risk of their jobs going offshore resulting in loss of jobs and where this carbon leakage occurs for no particular advantage for the environment. The Draft Report supports regional adjustment where necessary but based on traditional structural adjustment mechanism including welfare assistance.

Allocated permits accounting for the carbon price risk would also serve to assist regional impacts from the threat of closure and relocation of TEEII sector industries as the ETS commences, facilitating the introduction of the ETS and lessening unintended impacts.



Which are the EITE Industries?

There is a need for a clearer understanding of the criteria for qualification as a EITE industry. This has been left open in the Discussion Paper, Draft Report and green paper. The AWU supports the formulation used by Alcoa²³:

- Have energy as one of the major costs of production, or suffer a significant cost increase as a result of the ETS;
- Are based on facilities with high capital costs;
- Have long lived plants and hence limited opportunities for capital stock turnover and restrictions on the introduction on new more efficient technology;
- Rely on large scale operations that are essential to achieve international unit cost levels;
- Are directly trade exposed (import or export competing); and
- Have competitors based in countries that are not subject to equivalent carbon costs.

Production and export of steel, alumina and aluminium, plastics and cements occurs in a highly competitive global marketplace. Maintaining the competitiveness of Australian industry for both existing and new investments and preventing investment moving to countries that do not have controls on carbon emissions is a crucial component of an effective ETS.²⁴

The Discussion Paper and Draft Report acknowledge the effect:

If firms in the trade sector were subject to a higher emissions price in Australia than in other countries (which as price takers they were unable to pass through) there could be sufficient reason for emissions intensive activity to relocate from Australia to countries with lesser constraints on emissions. In the worst case, this could result in so-called carbon leakage whereby production moves from Australia to other countries without carbon constraints and with higher emissions intensity. This would result in an economic loss for Australia with no commensurate environmental benefit.

*Therefore.. there are environmental and economic reasons for establishing transitional arrangements for emissions-intensive industries that are trade exposed and at risk.*²⁵

The green paper outlines a transition path for the EITE industries. Given the exception already made for agriculture and parts of forestry this brings more weight to bear on the EITEs as a strategic sector for ensuring the integrity and success of the launch of an ETS (with 45 per cent of all emissions included rather than excluded in the ETS).

However, scheme coverage - which is aiming for a broader, inclusive net - implies a heavier adjustment discount to account for impacts of leakage, competitiveness and adjustment costs than may otherwise have been required under a different scheme design and transition path. That is, there is a benefit to the ETS of including the EITE that needs to be fully compensated given that they are so essential to the ETS. This implies the maximum compensation for the sector, including for worker



Compensation for EITEs

The Draft Report supports a broad based ETS by 2010 aimed at meeting Kyoto targets to 2012, with more ambitious targets from 2013 and beyond. The green paper builds on this recommendation in outlining the principles for the ETS but without providing firm commitments to targets and trajectories. The Draft Report supports compensating the EITE after they pass a materiality threshold to account for an increasing cost of carbon following an ETS (ie the difference between the price of exports in the absence of a carbon price).

Up to 30 per cent of revenues from the sale of auction permits would be allocated to the EITE sector based on an assessment of these material impacts. The materiality threshold would be established once a carbon price is set. This differs from the materiality threshold under the green paper which is calculated by emissions per unit of revenue rather than value of production and in the absence of agriculture only 20 per cent of permits would be allocated to the sector.

The Draft Report and green paper agree that global agreement and a global ETS is the only way of making substantial cuts in emissions, but there is a leadership role for Australia in demonstrating commitment to bring the major developing country emitters along.

Broad coverage to ETS but accounting for market failures:

- Contributing to an international Low Emissions R&D and Commercialisation Fund (around \$3 billion a year for Australia's contribution);
- Assist network infrastructure to facilitate uptake of renewable energy transmission using the Building Australia Fund;
- Issues around energy efficiency.

The Draft includes modeling results of doing nothing on growth, employment and real wages. However, there are no modeled results on the impacts of the ETS (cap and trade) on the economy or what the carbon price might look like. These are due in the Supplementary Draft.

Regarding compensation, the Draft Report proposes that some permits may be used in lieu of cash in providing assistance to eligible firms in EITEs. The AWU would insist that all compensation be in the form of permits rather than cash in order to account for upward movement in the carbon price and therefore the real value of the permits to retain the effective benefit of the support.

The Draft Report has devised a mathematical formula based on the value of emissions and the value added to products by the industry, resulting in a very short list of candidates for compensation: aluminium smelting, cattle and sheep products, cement production, iron and early stage steel manufacturing. Other big emitters such as paper processing and plastics would be unassisted.

This limited coverage has been mirrored in the green paper, with sectors such as chemicals, plastics and oil and gas sitting just under the threshold of emissions per unit of revenue. Our members work in industries that will definitely fall within the EITE sector and which would pass the materiality test regarding the impact of a carbon price on their output and exports. But many, including in plastics and paper, do not because of the constraining nature of the relatively high level of thresholds.

Not every industry is claiming to be EITE. On the other hand, some industries such as the oil refining and gas sector exposed to international prices clearly are but may not qualify for assistance based on revenue rather than value added measures. And these are transitional measures. Cooperation with EITE industries will assist the Government determine a complete list of eligible EITE industries which should be eligible on efficiency and equity grounds to allocated permits. This is important because it will assist in successfully implementing an ETS. A more-rather-than-less restrictive starting point would see fewer rather than more industries seeking assistance - on materiality grounds - as EITEs in the future as the carbon price increases and as a consequence emissions fall.

Under the Draft Report and green paper, assistance is limited to a maximum of 30 per cent of auction revenues or total permits but which need to be acquitted annually or returned to the Government. It would be better for the market to account for this uncertainty by allowing industry to have tradable permits and to let these permits reflect this uncertainty in their future price as a better compensation mechanism. In the event that the differential between domestic and international prices escalates, so will the value of these permits.

In the event of failure to reach agreements after 2012 the AWU supports automatic compensation for all emissions - both direct and indirect - through the allocation of permits and it provides an incentive to vigorously pursue future negotiations as well.

As Garnaut notes the materiality threshold moves with the carbon price. But waiting to assess who should be compensated after the collection of revenues, from the sale of auction permits, is inefficient because it takes those decisions away from the market. On the other hand, in the green paper the eligibility criteria does not move with the carbon price. It is fixed by level of emissions by value of production. However, the allocation of permits occurs ex anti to the commencement of the ETS which allows industry to adjust their production costs.

We prefer to see the linkage between materiality of the impacts on the EITE sector and the carbon price once established hardwired into the ETS providing a form of risk insurance. This would mirror EU arrangements and promote future sectoral and market comparability.

We view the initial allocation of permits as a form of risk insurance for our industries and workers at the start of the ETS, preferably on a valued added basis, rather than after the collection of auction revenues which are then redistributed and subject to arbitrary and uncertain decision making. This will ease the costs of transition to the new ETS regime.

We would like to see this option modeled by Treasury in time for inclusion in the Supplementary Draft of the Garnaut Review.



Consideration of costs and benefits of the GGAS

The NSW GGAS is legislated to operate until 2020. However, it is notable that the national emissions trading model currently being developed by the Garnaut Review and the green paper are quite different in structure to the GGAS. Nor has there been as yet any consideration of a transition plan for the GGAS, potentially stranding investments such as the Port Kembla Steelworks Co-Generation Plant (SCP) which will generate electricity from waste steelmaking gases that are currently flared.²⁶

What is clear is the impact of changing scheme design at a time when investors are making decisions based on current arrangements. For example, it is reported that uncertainty over carbon trading is holding up a proposed multi-million dollar expansion of the Kurri Kurri aluminium smelter, which plans to add another two potlines to the Kurri Kurri operation. Plant owners are waiting to see what happens with the national carbon trading scheme. Critical to their decision to invest will be the expected impact on the wholesale price of electricity.²⁷

The benefits of the alternative approaches is that the revenues forgone by the Government in permit sales are built into lower electricity prices than otherwise would have applied under an absolute cap and trade approach with full auctioning. This will tend to reduce carbon leakage by keeping input costs down, and lessen loss of competitiveness and adjustment costs to the community. It would avoid complex and inefficient recycling of carbon credits to recipients in the TEEIs sector and beyond and tend to match supply and demand more efficiently.

In the same way, from an EITE industry perspective, it would be preferable to use comparative emissions intensity measures - as opposed to absolute (gross) emissions levels - as the basis for performance measurement. It may provide a range of benefits.²⁸



Setting a sensible carbon price

- Because of leakage, a high carbon price will represent a simple dead weight loss on the economy with no commensurate environmental gains.
- Second, a high carbon price at the outset is not necessary to spur investment in new technologies. [The expectation of a rising carbon price](#) is more important than a high price in the absence of technologies sufficient to effect change in 'industrial behaviour', particularly in relation to new low emissions technologies expected to mature in the medium term. (Minerals Council of Australia, Submission to the Garnaut Review, April 2008)
- If the price delivered too powerful a shock to the economy, it could stimulate inflation and prompt a revision of targets by a future Government. (we end up going backwards)

Auction versus administrative allocation of permits

- The Review argues that Australia's proposed scheme should include near full auctioning of permits from mid 2010. In contrast, the EU's scheme will not introduce auctioned permits until 2013. Even then, under the EU's scheme, all industry sectors outside the power sectors will receive 80 per cent of their permits free on commencement of Phase 3 of the scheme in 2013 phasing down each year to full auctioning in 2020.¹
- [The European Union will also provide up to 100 per cent administrative allocation to firms classified as TEEII. The EU has also left open the continued issue of free permits to TEEII beyond 2020 if other trading nations have not embraced binding emissions reduction targets.](#)
- Administrative allocation to TEEII firms will not reduce the incentive to reduce their emissions. A firm that receives free allowances has exactly the same incentive to reduce emissions as a firm that receives no free allowances. Using an allowance, regardless how it was acquired, means giving up something of value (since the firm could otherwise sell the unused allowance in the market place).
- [What is important here is that administrative allocation allows industry to transition and adjust on a lower cost path, advantageous to consumers, to whom savings are passed on, reducing inflationary impacts. It also allows industry to remain competitive internationally. \[These are not therefore windfall gains but aids to assisting the ETS work more efficiently\].](#)
- Of course, what is also means is that the government receives less revenue to redistribute. But that is better outcome because it allows the market rather than financial market managers to decide how best to achieve emissions reductions without inefficient and expensive churn of revenues to compensate "losers".
- [It is important that the EITE permit allocations cover both indirect and direct emissions for existing and new investments.](#)
- And workers are entitled to receive permits direct in addition to permits from industry in the event they leave. This will assist in transition and acts as a form of insurance for workers along the path to a low carbon economy.



The future role of China and partnership

A recent study by Professor Garnaut et al²⁹ observing a rapid increase in global emissions this decade has established that in terms of growing contributors, China is preeminent. By 2030, China will be responsible for 37 per cent of global emissions up from 19 per cent currently. China emerges as the most important country determining emissions, especially up to 2030. By 2030, its emissions exceed by about 20 per cent all Annex I (developed and transition countries) combined.³⁰

This is a product of China's exceptionally high growth, population and carbon intensity and dependence on coal as a major energy supply (carbonisation). In terms of per capita emissions, china will catch up with Europe by 2015 and almost reach North American emissions levels by 2030. This is important to Australia for a number of reasons. First, it means that it is vital to ensure that China (and other developing country emitters) is included in an internally binding emissions reduction program as a matter of urgency. Professor Garnaut concludes his analysis by making the following statement:

There is no room any longer for defending the view that the "differentiation" of effort called for in the United Nations Framework on Climate Change Convention between developing and developed countries should be based on the application of binding emissions targets or polices to the latter and not the former.... Without all major emitters binding themselves to economy-wide targets or polices, given rapid emissions growth, the prospects for the global climate change mitigation effort are bleak.³¹

Second, Australia is currently under – or on track to - the target under the Kyoto Protocol of growth in emissions by 108 per cent from 1990 levels by 2012. This is significant because the Discussion Paper and Draft Report recommends that future emissions targets for the ETS be established with reference to Australia's progress in meeting international obligations and the progress in establishing an internationally binding emissions agreement. This means that beyond 2012, when the current Kyoto targets expire, it is uncertain what emission reduction targets should be placed as a cap on Australia's domestic ETS. Consequently, Trajectory A for the ETS extends until 2012 – the Kyoto period. The other 3 trajectories, B (2013-2020); and C - D (to 2050), reflect increasing levels of ambition. Importantly, the Discussion Paper acknowledges that:

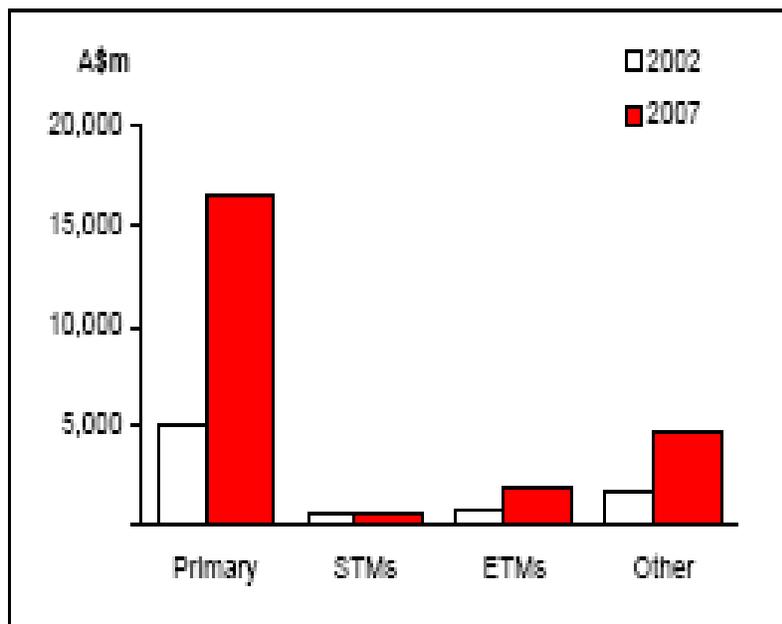
Movement between them should be based on determining the comparability of Australia's response to international effort.³²

It also means that absent a binding agreement including China, Australia will be placing its EITEs at a further competitive disadvantage if the Government acts unilaterally and / or the notification of the movement between trajectory periods of 5 years proves to be too short to ensure certainty and predictability for EITE sector investors.

The green paper has tried to anticipate this by setting a 5 year price path followed by a gateway to a trading band of an equivalent period. The AWU accepts the aim of improving certainty for new investment in lower carbon intensive technologies but would urge a larger and longer gateway period. This would serve to accommodate (and thereby encourage) a range of industry innovation which will result in lower total emissions intensity.

Third, China is Australia second highest export destination including for a range of commodity exports such as iron ore, wool, alumina, zinc concentrates, copper ores, wheat and sugar. The exponential growth in exports over the last 5 years to \$23.8 billion in 2007 is illustrated below. The growth in primary exports has been the major driver of this growth:

Australia's merchandise exports to China



Source: China Fact Sheet, DFAT

Export earnings are expected to continue to grow strongly.³³ Despite slowing global economic growth, world commodity demand, and hence prices, have remained buoyant.³⁴ Much of this demand is being driven by domestic expansion in emerging market economies. For example, steel production in China is expected to grow by 9 per cent to 533 million tonnes in 2008 and accelerate in 2009 to grow by 10 per cent to 586 million tonnes. In addition, rapid expansion of aluminium smelting capacity in China is forecast to be insufficient to meet the increase in domestic demand in both 2008 and 2009. As a result, China is forecast to be a net importer of aluminium in 2008 and in 2009.³⁵

It is therefore of concern to the AWU - and to a range of benefiting EITE industries which have significant exposure to the Chinese marketplace - such as Australia's LNG exporters - and have invested to ensure that Australia is able to continue to benefit from supplying the growing Chinese market - that the Discussion Paper considers that successful adjustment under the ETS would be facilitated by a slowdown in the boom releasing scarce skills currently tied up in the resources boom to other low emissions goods and services...

*The path of adjustment would be easier, if, by the time of introduction of the scheme, investment in the conventional resources sector had receded to more normal levels.*³⁶

The destiny of China and Australia are linked in many ways. The future prosperity of each country is tied to the other. Clearly, China's future role in contributing to lower global emissions is vital to any real progress in lowering global emissions. It is therefore also vital that options, which the Australian Government considers for the design and operation of the ETS, build on progress made in building the Australia-China relationship and to use our close economic and political ties to generate more bilateral momentum in the environmental area.

Increasingly, China is being perceived as the "threat" to the future competitiveness of manufacturing industry in developed economy markets. For example, in the US close consideration is being given to the imposition of border controls on Chinese imports to ensure that existing manufacturing capacity in the United States is not encouraged to relocate offshore to avoid the increased costs of energy resulting from the pricing of carbon.³⁷

However, it is possible for Australia to develop a cooperative model with China based on our close commercial, political and union ties. This model would have at its core the close complementarities between our economies and the ways we may be able to work cooperatively to generate a lower emissions economy and region. We do this by reducing rather than increasing the incentives to industry to relocate their industries and to ensure their competitiveness is not undercut by cheaper imports not subject to a carbon market.

For example, China is seeking greater access to Australia's minerals and processing industries to sustain growth.³⁸ It is clearly possible to place conditions on this investment by State owned entities and sovereign funds that would see China as a domestic partner in Australia investing in world's best and 'best in class' techniques in Australia which are of mutual benefit.

In partnership Australia and China link up in negotiations on free trade agreements and progress with concluding agreements fair and just in protecting workers rights, and benefiting industry through improved market access, reduction in non-tariff barriers, and opportunities for economic, social and cultural engagement that are of benefit to all parties. The AWU urges the Government to adopt a wide front in consultations with China that will serve to expand our mutual interests on the widest possible front rather than limit them to purely access based obligations for trade in goods and services.

This posture would understand and accept that China's impressive growth is not just a zero-sum threat to Australian industry but an opportunity, particularly for our exporters and with wider importance. Innovative solutions including clean exports such as LNG provide win-win solutions. Australia must capture these opportunities.

At senior levels, the AWU has a close working dialogue with China's overarching All China Federation of Trade Unions (ACFTU). Australia's commitment to contributing to global emission reductions is matched by China's significance in making real progress towards this goal. We recognize that a relationship with the ACFTU may be controversial but like many other commentators on the evolution of the ACFTU we agree that at least some parts of this

massive organisation in the face of the extraordinary economic changes are rapidly evolving into being representative unions standing up for workers rights. And we want to work to support that evolution. For example, our own unions understand that China has the worst record for deaths in coal mines and have for some years been working with the ACFTU to help them build proper OHS standards so as to lift standards and save lives.

Working in partnership with organisations such as the ACFTU with close working relations with the Chinese government, has the potential to offer Australia bilateral abatement opportunities which through offsets, abatement investments and other joint initiatives supply our two nations a broad array of potential emission reduction opportunities. Australia therefore has at hand the levers to extend opportunities for emission cuts beyond what is included or excluded in a national ETS, and broader Carbon Pollution Reduction Scheme.

This extends the options for Australia contributing to lower global emissions beyond the ETS and the terms of reference of the Garnaut Review, but illustrates that there is potential for Australia to utilize partnerships and alliances to supplement the market in achieving positive emissions reductions. The view of the AWU is that the Rudd Labor Government seize this opportunity to expand the tools to ameliorate the impacts of a national ETS while expanding global abatement goals through close bilateral dialogue with China.

Clear on what the ETS means:

We need to realise what it means to be an exporting nation and in that context what the ETS means.

Australia recorded its first trade surplus in April in over 6 years. This is as a direct consequence of the strength of the mining and commodities boom and the competitiveness of the Australian resources and rural industries.

The significance of this should not be underestimated in an economy which is around \$600 billion in debt. It is a sign of our earnings potential but also of our export dependency.

Our export industries are characterised by 3 things:

- Energy intensity;
- Foreign ownership; and
- Regional concentration.

The implications therefore of getting the ETS wrong are large: in realizing our full export potential; the risk of leakage; and the potential impacts on our regional economies.

The impact of the ETS on the trade exposed, emissions intensive sector therefore has profound implications to both our economy and to the environment.

What the AWU wants from an ETS:

- Certainty for industry and workers through clear rules of the game which will aid investment and longer term planning.
- Comprehensiveness which shares the burden but which also accounts for the lack of a global ETS on the competitive position of the TEEII sector.
- Administrative (free) allocation of permits to the TEEII sector to account for the lack of a global ETS and which recognizes the above characteristics of TEEII export industries.
- Recognition that an ETS is not a magic bullet in dealing with climate change and achieving deep cuts (such as 60 per cent by 2050) can only be achieved in combination with demand management and energy efficiency measures.
- Gradual implementation of the ETS market in cooperation with TEEII industries to adjust through a gradual transition path and administrative allocation of permits allowing savings to be passed onto consumers serving to lower costs and maintain competitiveness.
- Agreement that workers have a special place in an ETS in addition to consumers and industry and that transition arrangements including permits be allocated to workers in order to provide insurance along the road to a lower carbon economy.
- Pressure at the international level for a global ETS which includes both developed and developing countries, including through cooperation and consultation;
- Cooperation at a regional level in particular with China that rapidly factors economies into domestic ETS design features to facilitate bilateral / regional initiatives.
- Consistency in setting a carbon price and approach to the TEEII sector with progress in achieving a global ETS.



A cooperative model

The AWU is concerned to ensure that the productive capacity of Australian manufacturing remains in Australia rather than relocate offshore. The AWU understands the Rudd Labor Government shares this view. A summary of the potential jobs at risk is contained in Appendix 1. The risk is real. Qenos for example is today a wholly owned Chinese entity. It would also be of concern to the AWU that as a consequence of this loss of productive capacity that future opportunities to generate investment and jobs in sustainable low emission technologies were also lost to Australia simply because we lacked the critical mass of industry and skills to undertake this work. This is an important addition to the adjustment requirements of the EITEs because it is precisely in this sector of the economy that these skills and many of the investments in renewable energy and sustainable manufacturing practices currently exist.

In the US, co-operation and partnerships are being forged between industry and environmentalists, including between the United Steelworkers Union³⁹ and the Sierra Club⁴⁰ (Blue-Green Alliance⁴¹) and with the Alliance for Climate Protection,⁴² the nonprofit organization founded by Vice President Al Gore.⁴³

These new Alliances note that renewable energy strategies have the potential to get the US economy moving again and create a new generation of domestic manufacturing jobs while solving global warming.⁴⁴ Leo W. Gerard, International President of the United Steelworkers is quoted as saying:

“Developing, manufacturing, installing and maintaining new technologies to fuel our homes and businesses will create a whole new industry that will translate into millions of new jobs.”⁴⁵

We in Australia also need to build a blue collar constituency for global warming solutions, highlighting the opportunities for high-paying domestic jobs in renewable energy, clean technology, and “green” manufacturing while also explaining the environmental and economic risks associated with accelerating climate change.

Opportunities will emerge in a wide range of industry sectors. Potential winners from climate change include: the alternative energy sector, mechanical and electrical engineering, sustainable property, recycling, innovative financial services, chemical agriculture and some healthcare companies. Worth \$548 billion in 2004, the global market for environmental goods and services is conservatively predicted to grow to \$688 billion by 2010 and almost \$800 billion by 2015 – a growth rate of 45 per cent in little over a decade.⁴⁶

The AWU joins with the ACTU in seeking a just transition for workers.⁴⁷ To some extent, workers are seen as also having ‘stranded assets’ in the same way that businesses may have sunk investments in plant and production methods. But workers have made investments in certain occupations (e.g. mining) and are also relatively disadvantaged by climate change

policies when there is leakage. Workers' interests largely coincide with those major employers in steel, cement, and other heavy industry.

The AWU rejects the view that there is no future for coal in the Australian or global economy. Carbon Capture and Storage (CCS) technologies represent potentially the single most important abatement measure to secure safely future emissions without stranding enormous reserves of coal resources and assets.

A future carbon trading framework therefore must account for the adjustment costs of both industries and workers. Workers can have a major role in reducing harmful emissions, promoting energy conservation and suggesting work organisation and other improvements.

The Government can be more pro-active in promoting the value of Australia's traditional industries employing best practice production methods in contributing to better global greenhouse outcomes. In relative terms, Australia's aluminium or manganese plants are less greenhouse-intensive while being major employers. And if a longer term, product cycle approach is adopted; these industries in reality generate potentially huge greenhouse benefits and better greenhouse outcomes in areas such as light weight, fuel efficient vehicles. The AWU commends the Government for pursuing the Green Car Initiative which will add market impetus.

Many of our industries are also currently at best practice and we are seeking to encourage that in non ETS markets by reducing incentives for leakage. Concerted international action is therefore vital in order to limit trade diversion. Participation of developing countries in post-Kyoto targets is also a must and the AWU urges the government to redouble its efforts in this regard. China holds a number of valuable cards for Australia.

In the absence of this support, there will be strong calls for the introduction of border protections in order to remove the cost advantages enjoyed by importers of products free of a carbon price. However, this is a second rather than first resort as it will tend to invite retaliation and drive up input costs for industry which will reduce competitiveness further. It is preferable therefore to ensure a gradual transition for the EITE industries which accounts for the issues raised in this paper in order to address these legitimate concerns. Progress on this front will determine the extent to which border protection measures are ultimately sought

In this regard a clear priority for Australia is to work with the United States (and China) to encourage the US (and China) to take the lead on developing an international climate change policy. The AWU has joined US partners in the steel and aluminum industries in calling for stronger leadership on these issues.



An emissions trading scheme for workers and industry

It is time to consider the merits of workers as permit holders in their own right to ensure that workers (with, in many cases legacy or stranded skills) do receive compensation perhaps as part of industry structural adjustment packages for participating in the transition to a lower carbon intensive economy whether through retraining and reskilling, redeployment or redundancy.

Just as EITE industries have a special case to make regarding the impact of the ETS on their businesses, so workers within these same industries have the same claims. Issuing permits direct to workers would ensure that workers are stakeholders in the ETS with leverage, both within their enterprises and in the marketplace outside their enterprises. Over time, if these permits are tradeable - and hence these workers - become increasingly more rather than less valuable to the enterprise and more likely to have an opportunity to influence decision making at the enterprise level on adjustment strategies that are agreed and undertaken on a collective basis.



In addition, in the event that the EITE industries relocate, rather than return the permits to the government, as recommended in the green paper, the AWU would prefer to see these permits be distributed to the workforce of the particular enterprise concerned.

The Dusseldorp Skills Forum recommends an extensive retraining program for blue collar workers to become green collar.⁴⁸ Unions worldwide have been at the forefront of this movement and the AWU supports efforts to restructure and transition to new practices and industries. However, in order to ensure that legacy skills are also recognised, permits to workers will act as a form of insurance and can be viewed as such in negotiations on the elements of an ETS. Recent results of modeling undertaken for the Dusseldorp Skills Forum confirm this need.



The results of the modeling analysis⁴⁹ undertaken by the CSIRO illustrate economy wide benefits from the introduction of an ETS framework and that despite impacting 3.25 million workers in industries with “a high environmental impact”⁵⁰ - which constitute the carbon economy - there would over time be net benefits to the economy in terms of additional employment generated by transition and economic restructuring to a less carbon intensive economy.

The call for transitioning skills for workers is commended. However, under the two main scenarios modelled (deep cuts and carbon neutral⁵¹) there are negative short term impacts on total employment and longer term the relative shares of various employment categories change, namely:

- 1) Transition will cost - rather than create - additional employment in the short term (the period from around 2012-2017); and
- 2) The relative shares of manufacturing including heavy industry of additional employment falls between the 2 periods measured i.e. 2005-2015 and 2005-2025 (refer to tables). That is, post transition the manufacturing sector has a smaller wedge of the bigger economic pie. That represents a difference in kind rather than degree when we are considering the manufacturing sector which is the second highest employing sector currently in Australia.

Change in employment and sector employment shares,
CGE *Carbon Neutral* scenario, 2005 – 2025

Change in Employment				
	2005 – 2015		2005 - 2025	
High potential environmental impact sectors				
Agriculture, fishing and forestry	43,000	+10%	76,900	+18%
Food and drink	15,800	+9%	27,800	+16%
Mining and energy commodities	10,500	+13%	24,300	+30%
Manufacturing, heavy industry and power	47,100	+6%	69,800	+8%
Transport – road	45,700	+2%	88,600	+42%
Transport – other	37,200	+15%	66,200	+27%
Construction	145,500	+18%	235,000	+30%
Subtotal	344,800	+12%	588,600	+21%
Low potential environmental impact sectors				
Business services	293,500	+28%	494,000	+47%
Communications and finance	153,300	+17%	281,500	+31%
Trade and hospitality	247,400	+10%	458,400	+18%
Public services	429,300	+17%	886,600	+40%
Subtotal	1,123,500	+17%	2,120,500	+32%
Total	1,468,300	+15%	2,709,100	+29%

Source: Unpublished data from The Climate Institute for the *Carbon Neutral* scenario, as described in text. See Hatfield-Dodds et al 2007.

Source: Unpublished data from The Climate Institute for the *Deep Cuts* scenario, as described in text. See Hatfield-Dodds et al 2007.

	2005 – 2015		2005 - 2025		2005	2025
High potential environmental impact sectors						
Agriculture, fishing and forestry	47,000	+11%	70,600	+17%	4%	4%
Food and drink	14,100	+8%	27,600	+16%	2%	2%
Mining and energy commodities	9,500	+12%	22,800	+28%	1%	1%
Manufacturing, heavy industry and power	33,400	+4%	36,100	+4%	9%	7%
Transport – road	44,100	+21%	85,200	+40%	2%	2%
Transport – other	35,200	+15%	64,500	+27%	3%	3%
Construction	152,400	+19%	251,500	+32%	8%	8%
Subtotal	335,700	+12%	558,300	+21%	28%	27%
Low potential environmental impact sectors						
Business services	290,100	+28%	489,400	+47%	11%	13%
Communications and finance	148,000	+16%	274,400	+30%	10%	10%
Trade and hospitality	240,700	+10%	449,300	+18%	27%	24%
Public services	420,300	+19%	867,400	+49%	24%	26%
Subtotal	1,099,100	+17%	2,080,500	+31%	72%	73%
Total	1,434,800	+15%	2,638,800	+28%	100%	100%

How are our industries and workers therefore to be supported to undertake this transition?

Blue collar workers will require opportunities for obtaining new skills and new employment in green collar industries. As the Dusseldorp Skills Forum concludes, “workers in these sectors are crucial to making the difference”. And the heavy emitters will be starting further behind.

Some insurance or compensation during this transition in the form of permits to workers will be substantially more than offset by the new employment opportunities overall which the modelling indicates will be created with the acquisition of new skills over time. The cost of issuing permits to the most vulnerable workers should therefore only represent a fraction of the benefits accruing in the form of additional employment and to economic growth.



The AWU is concerned that when issues of importance to the EITE industries and workers' jobs are raised, it is viewed by some as simply self-interested, opportunistic, rent-seeking behaviour - it is preferable to ignore rather than to accept these views. Such an attitude does a disservice to the good faith in which organisations and companies offer the advice and to the process by which it has been offered.

The AWU believes this approach runs counter to the national interest which these organisations have helped build and shape for decades.

Accordingly, the AWU would like to see the following points addressed as a matter of priority by the Government before concluding elements of the ETS:

- 1) **ETS design not subject to meeting deadlines** (ie legislation drafted this year for implementation of ETS by 2010). Avoid ignoring optimal design features particularly for EITE industries, users and consumers:
 - Reports of the results of modelling indicate that the costs of current approaches are likely to be prohibitive on the economy.⁵²
- 2) **Momentum generated through committing to an ETS by 2010 can harness major emitters such as China** - factoring in what will be required to meet more ambitious targets but only in cooperation with the major emitters.
- 3) **The nature of a national ETS and the constraints faced by it compared to non-scheme members overseas is ignored.** Leakage, competitiveness and adjustment costs are being defined and qualified but must be assessed based on practical evidence, industry knowledge and fact. Only an international emissions-control scheme led by the United States (and China) can ensure that developed and developing countries are not adversely impacted by binding emission caps while developing nations merely ramp up energy-intensive production.
- 4) **There is a need for thorough assessment of the impacts of design of other state (NSW GGAS and VRET) national (MRET) and regional schemes (EU) on EITEs.** That experience and evidence exists. What are there costs and benefits? What are the lessons for Australia? For example, it was the lack of permits to EU aluminum smelters to account for indirect emissions from electricity and alumina consumption in addition to direct emissions which was so disadvantageous to this sector following the introduction of the EU ETS.⁵³

- 5) **No assessment has been made on how to and the likelihood of achieving a binding international agreement** on lower carbon emissions including the major developing emitter nations when that is precisely what is required to lower global emissions whether or not an ETS is implemented in Australia. What are the strategies for engaging with China in particular on these issues?

The AWU considers that care in scheme design will go a long way in addressing the concerns raised in this paper for the EITE industries in particular. The AWU through a range of consultations, with industry, and domestic and international unions believes that a cooperative model has the best chance of meeting the government's goals while ameliorating the impacts of the ETS on the TEEIs and the economy more generally. This has the potential to be a positive sum strategy rather than zero sum game. The AWU is ready to work with all groups to achieve the best possible outcomes for Australia.

The AWU insists on appropriate recognition and assistance to workers in the EITE industries in order to not only compensate for adjustment but assist in transitioning through reskilling and new opportunities.

Workers have a right to permits along with industry. Industries which decide to relocate would pass their permits to their workers rather than government.

In the absence of an approach which hardwires the circumstances of the EITE industries into scheme design and operation it will be far more difficult to resist calls for the introduction of border protection measures to restrict the inflow of products which exclude a carbon price as a second best measure available to us. However, the impact on the competitiveness of the manufacturing sector through higher input costs is also recognized and would need to be carefully weighed against such benefits.

The AWU stands ready to assist in this effort. It is in our mutual interest to harness all our resources to this end.

Appendix 1

Jobs at risk from the introduction of the ETS

<p>Industry is classed as Emissions Intensive if it uses more than 1,200 tonne of CO2 per million dollars of revenue</p>	<p>Emission reduction technology (ability to substitute other inputs or change production techniques)</p>	<p>Scale of operation (decision to shut plant at critical production level)</p>	<p>Import/ Export competition and domestic market share (ability to pass on price increases to customer)</p>
<p>ALCOA <u>Emissions intensity</u> Aluminium is very emission intensive around 5,800t CO2 per million dollars of revenue.</p>	<p><u>Direct emissions</u> 11.5% of total emissions New aluminium smelting technology has the potential to eliminate all consumable carbon anodes and related CO2 emissions</p>	<p><u>Indirect emissions</u> 80% of total emissions is consumption of electricity by aluminium smelters. Portland smelter will be most adversely affected a carbon tax.</p>	<p>Australian Alumina Share of global production 28% Australian Aluminium Share of global production 5.8%</p>
<p>HYDRO ALUMINIUM KURRI KURRI PTY LIMITED</p> <p>Kurri smelter represents a small and ageing asset in the Norsk Hydro portfolio. Local management has consistently had to compete for scarce capital while ageing plant in Germany and other European countries (exposed to high power prices in Europe following the introduction of the European Union ETS Scheme) is closed down and is being replaced with new world-scale smelting facilities in non-EU countries.</p>			
<p>CEMENT AUSTRALIA Clinker manufacturing is emissions intensive with 50% <u>indirect emissions</u> from electricity and combustion</p>	<p>More efficient clinker manufacturing technologies and marketing of cement extenders has some potential to reduce the 50% of <u>direct emissions which will continue to come</u> from the chemical process of calcination of limestone.</p>	<p>Manufacture is predominantly domestic, requiring access to limestone, energy supplies and markets. <u>Demand shortfalls are made up from imports</u> The sensitivity of the cement industry to import competition is highlighted by recent plans to construct a clinker grinding facility in Queensland, which will receive imported clinker.</p>	
<p>ONESTEEL emissions intensive</p>	<p>With respect to the Steel Industry, the two major technologies for steel production - integrated steelmaking and electric arc furnace steelmaking – are mature. There are no commercial technologies on the immediate horizon to replace these existing processes.</p>	<p>A steelworks is a vertically integrated asset in which each piece of equipment is optimised in size in order to provide an overall site efficiency. Adjusting production downward by even a small percentage has a large flow-on effect on unit costs, as in most cases fixed costs do not change substantially.</p>	<p>Australia in total is less than one per cent of world steel market Australian steel producers are price takers and do not have the pricing power that would enable them to pass through a carbon price to their customers.</p>
<p>BLUESCOPE STEEL emissions intensive with 90% from Port Kembla</p>			

Source: Company Submissions in response to the Garnaut Review Emissions Trading Scheme (ETS) discussion paper (closed on 18 April 2008).

Endnotes

¹ Carbon Pollution Reduction Scheme, Green Paper, July 2008, Department of Climate Change

² The geographical reach of the scheme extends to power generation projects in Queensland, South Australia, Victoria and Tasmania in addition to New South Wales.

³ Frontier Economics, Options for the design of emissions trading schemes in Australia, A Submission to the Garnaut Climate Change Review, April 2008

The economic consultancy Frontier Economics has proposed an alternate output based allocation formulation to the absolute cap and trade model proposed by the Discussion Paper and Draft Paper in addition to the Baseline and Credit Model which characterises the Greenhouse Gas Abatement Scheme (GGAS) in New South Wales.

Frontier's modeling allows for emission credits up to the current baseline and then applies an emissions target and lets the relative differences in emissions intensity among generators dictate an electricity price to consumers which ends up being much

The modelling points to significant differences in price effects across these schemes. When modelled to achieve the same greenhouse gas target:

A *Cap and Trade scheme* would result in wholesale prices on average about \$25 dollars per MWh higher per year in NSW, compared to an *output based allocation*, over the period 2010 to 2019. The differences for Queensland, South Australia and Victoria are, respectively, approximately \$26, \$27, and \$27.

A *Cap and Trade scheme* would result in wholesale prices on average about 32 dollars per MWh higher per year in NSW, compared to a *Baseline and Credit scheme*, over the period 2010 to 2019. The differences for Queensland, South Australia and Victoria are, respectively, approximately \$36, \$40, and \$39.

lower than would occur with the flat across the board application of a carbon price per MWh following an auction of permits.

⁴ Such as the National Clean Coal Fund announced in the 2008-09 Budget and the Climate Change Action Fund (CCAF) announced as part of the Carbon Pollution Reduction Scheme to help business transition to a cleaner economy, by providing in partnership funding for a range of activities, including:

- Capital investment in innovative new low emissions processes
- Industrial energy efficiency projects with long payback periods
- Dissemination of best and innovative practice among small to medium sized enterprises.

⁵ Climate Plan must involve all countries, Tony Blair, the Australian 30 June 2008.

⁶ Unlike the independent Reserve Bank which sets the rate of lending unfettered by Government, under the ETS the Government would set the target, not the Carbon Bank which is proposed will be charged with implementation of the ETS.

⁷ Garnaut Climate Change Review, Emissions Trading Scheme Discussion Paper, March 2008, p12 and Garnaut Climate Change Review Draft Report, June 2008, p 359

⁸ Discussion Paper, pp12-14

⁹ The McKinsey Quarterly, A cost curve for greenhouse gas reduction, 2007, Number 1

¹⁰ The biggest potential for reducing growth in energy demand appears mainly in transportation and in buildings. Improving the insulation of new buildings lowers demand for energy for heating and cooling and therefore emissions. Measures like these in addition to those in manufacturing industry have the potential to half growth in global electricity demand from 1.3 per cent from a current 2.5 per cent a year.

¹¹ Ernst and Young Submission: Garnaut review Emission Trading Scheme Discussion Paper April 18 2008

¹² More information on USCAP is available at <http://www.us-cap.org/index.asp>

¹³ Submission by Alcoa of Australia on the discussion paper released by the Garnaut Review, April 2008

¹⁴ **European Union - ETS**

The EU package includes draft legislation to overhaul the EU's GHG ETS for a third phase running from 2013 to 2020⁸. The brief details of the draft legislation are as follows:

- a. It proposes to cap emissions from EU ETS installations at 21 per cent below 2005 levels by 2020 and to provide for allowances to be centrally allocated by the EC rather than through national allocation plans (as has happened to date).
- b. Between 2013 and 2020, carbon permit allocations will fall in a line by 1.74 per cent each year, and the same linear reduction factor will apply in the fourth ETS phase between 2021 and 2028. The reduction factor will be reviewed by 2025.
- c. Each year, five per cent of allowances will be set aside for new market entrants. Allowances in 2013 will be allocated to member states in proportion to their emission shares in 2005. At least 20 per cent of revenues from member state auctions of allowances will be applied to reduce emissions, to support climate adaptation, and to fund renewable energy and CCS development.
- d. Power plants will be required to buy all their carbon allowances from 2013. Other sectors will get 80 per cent of their allowances free of charge in 2013, but free allocation will reduce annually by equal amounts to zero in 2020. Power plants fitted with CCS facilities will be regarded as not having been emitted (and therefore free from the requirement to buy carbon allocations).
- e. By July 2010, the EC will decide which EU industry sectors are 'at significant risk' from 'carbon leakage', namely adverse affects on comparative profitability vis-à-vis non-Annex I countries as a consequence of ETS-induced increases in carbon or fuel costs. By July 2011, the EC will review this decision against any international or sectoral climate agreements in place for the 'post-Kyoto' (post-2012) period and will either increase the free allocation of permits—potentially up to 100 per cent—or require importers to buy permits, but the overall emissions cap will not alter.
- f. There are no proposals to include shipping and road transport in the ETS from 2013, and forestry and agriculture emissions are explicitly excluded. The ETS will be extended to the aluminium, non-ferrous metals and chemicals sectors. National authorities will have the power to exempt smaller installations (below 25 megawatts) if their emissions were consistently below 10,000 tonnes of CO₂ annually. Biomass-burning plants would also be exempt.

Freehills, Greenhouse regulatory developments in the European Union and the United States, 05 February 2008

¹⁵ Refer to emissions table on p498 of green paper.

¹⁶ Garnaut Climate Change Review Submission by Qenos, April 2008

¹⁷ ¹⁷ Submission to Garnaut Climate Change review by OneSteel Limited 2008

¹⁸ Submission to Garnaut Climate Change review by BlueScope Steel Limited, April 2008

¹⁹ Submission to Garnaut Climate Change review by BlueScope Steel Limited, April 2008, p8. BlueScope notes that the recent States and Territories NETS report proposes emission caps initially fixed for 10 years and a gateway (or series of gateways) established for a second period of 10 years. While preferring a more definitive plan, BlueScope notes proposal provides greater certainty than that proposed by the Garnaut Review.

²⁰ Australian Aluminium Council

²¹ Ibid

²² Identified new investments for the sector include:

Bauxite: new mine in Cape York Qld around 6.5 million tonnes capacity; investment up to \$1 billion;
Alumina: 3 advanced projects around 6 million tonnes additional capacity; investment up to \$11 billion. 2 further projects under development, with around 2.2 million tonnes additional capacity; investment around \$4 billion;
Aluminium: 3 advanced projects on hold pending resolution of electricity supply/pricing: around 525,000 tonnes additional capacity; investment up to 3 billion. Source: Submission by Alcoa of Australia on the discussion paper released by the Garnaut Review, April 2008, p24

²³ Submission by Alcoa of Australia on the discussion paper released by the Garnaut Review, April 2008

²⁴ Worsley Alumina Submission to Garnaut Climate Change Review Emissions Trading Scheme Discussion Paper, April 2008

²⁵ Garnaut Climate Change Review, Emissions Trading Scheme Discussion Paper, March 2008, p38

²⁶ The demise of the GGAS and the introduction of the ETS potentially have a significant impact on the SCP project's economics due to two conditions of the GGAS. First, under GGAS compliance costs are only based on a percentage of purchases, whereas under an ETS they are potentially imposed on all transactions. Second, under GGAS the SCP creates NSW Greenhouse Abatement certificates (NGACs) for electricity using indigenous fuels. Therefore, movement to an ETS potentially destroys value that is attainable under GGAS as no certificates of any kind are created from SCP under an ETS. Submission to Garnaut Climate Change review by BlueScope Steel Limited, April 2008

²⁷ Power, carbon trading uncertainty delaying smelter expansion: MP, 12 June 2008

²⁸ Benefits include:

- Provides to government the quantitative information that allows it to precisely target the under-performance of any emissions-intensive scheme participant;
- Sends a strong message to company Boards that investment to improve emissions performance is both necessary and financially prudent;
- Provides the quantitative information that Boards require to justify capital investments to improve emissions performance;
- It is non-distortionary – it does not unjustly punish domestic industry that is already at world's best practice; and thereby preserves the position of such businesses against less efficient competitors both domestically and overseas – in effect providing the only integrated measure recognising early action that has already been taken by companies on abatement measures. Source: Cement Industry Federation Submission: Emissions Trading Scheme Discussion paper April 2008

²⁹ Emissions in the Platinum Age: The Implications of Rapid Development for Climate Change Mitigation, Ross Garnaut, Stephen Howes, Frank Jottzo and Peter Sheehan, May 2008

³⁰ Garnaut Climate Change Review Draft Report, June 2008, p99.

³¹ Ibid, p27

³² Garnaut Climate Change Review, Emissions Trading Scheme Discussion Paper, March 2008, p7

³³ Record export earnings are in sight. Earnings from Australia's commodity exports are forecast to be \$212.3 billion in 2008-09, compared with an estimated \$151.4 billion in 2007-08 (a rise of 40 per cent). The forecast increase in the value of commodity exports reflects considerably higher earnings from energy exports.

The value of Australia's minerals and energy exports is forecast to be nearly 50 per cent higher, at \$177.9 billion in 2008-09, compared with an estimated \$120.5 billion in 2007-08. For energy commodities, export earnings are forecast to increase by 81 per cent, from \$48.8 billion in 2007-08 to \$88.3 billion in 2008-09. For metals and other minerals, export earnings are forecast to rise by 25 per cent to \$89.6 billion in 2008-09. ABARE Australian commodities June quarter 2008.

Over the medium term, export earnings in real terms from the mineral resources sector are projected to increase to a peak of \$149.9 billion in 2009-10 before falling gradually. By 2012-13 mineral resources exports are projected to be worth \$135.5 billion, 18 per cent higher than the value forecast in 2007-08. For metals and other minerals, export earnings in 2012-13 are projected to be around \$75.8 billion while export earnings for energy resources are projected to be worth \$59.6 billion. ABARE, Australian Commodities, March quarter 2008.

³⁴ ABARE Australian commodities June quarter 2008

³⁵ Ibid

³⁶ Garnaut Climate Change Review, Emissions Trading Scheme Discussion Paper, March 2008, p56

³⁷ The Lieberman-Warner bill - defeated on a procedural vote in the US Congress on 8 June 2008 - would have required greenhouse gas emissions to be cut 18 percent below 2005 levels by 2020 and nearly 70 percent by mid-century. Several amendments to the bill sought to impose tariffs on developing countries, such as China, that do not price carbon dioxide emissions. Washington Post, 8 June

³⁸ Rio Tinto is in talks with Chinese aluminium giant Chalco about potential joint ventures at its mining and refining operations in far north Queensland. **Rio and Chalco talk joint ventures, Herald Sun, Felicity Williams & Robert Macdonald, June 13, 2008**

³⁹ <http://www.usw.org/>

⁴⁰ <http://www.sierraclub.org/>

⁴¹ March 31, 2008 **Blue Green Alliance**, Co-Chairs: Leo Gerard, International President, United Steelworkers Carl Pope, Executive Director, Sierra Club Executive Director: Dave Foster released a statement on June 5, 2008 that the competitiveness of the US economy, in particular its manufacturing industries and their communities have suffered enormously at the hands of the global economy over the last two decades. More than three million manufacturing jobs have been lost in the last seven years alone.

The Alliance says we therefore need to ensure that existing manufacturing capacity in the United States is not encouraged to relocate offshore to avoid the increased costs of energy resulting from the pricing of carbon

The Alliance also makes the point that as the necessary and scientifically based solutions to global warming are being developed, we must make sure that we do not worsen the plight of manufacturing workers and that we share the benefits of our investments in the clean renewable energy economy of the future with those who have been the most disadvantaged. The Alliance is concerned that if no further efforts are made to strengthen legislative provisions, much of the new manufacturing associated with investments in the clean renewable energy economy will likewise take place far from the communities in our country that are so desperate for these employment opportunities. http://www.usw.org/media_center/releases_advisories?id=0037 And see http://www.usw.org/our_union/allies_and_partners?id=0003 for background on the Blue-Green Alliance

⁴² United Steelworkers and the Blue Green Alliance are also working jointly with the **We Campaign** to educate their members about global warming and activate them behind solutions that promote economic prosperity. Our member-to-member program is the first of its kind to build a blue collar constituency for global warming solutions, highlighting the opportunities for high-paying domestic jobs in renewable energy, clean technology, and “green” manufacturing while also explaining the environmental and economic risks associated with accelerating climate change. http://www.usw.org/our_union/allies_and_partners?id=0004

⁴³ http://acp.3cdn.net/aaf44ae4112fdc7ffd_h8m6bqnpa.pdf

⁴⁴ The United Steelworkers ([USW](#)), the [Sierra Club](#), the Natural Resources Defense Council ([NRDC](#)), [Green for All](#) and the Blue Green Alliance, a partnership of the USW and Sierra Club, have launched the national Green Jobs for America campaign. Running through the fall, the campaign will focus on a commitment to clean, renewable energy to make the U.S. more energy-independent, to help end our dependence on fossil fuels and to create hundreds of thousands of green jobs. http://www.bluegreenalliance.org/site/c.enKIITNpEiG/b.3227091/k.E4AB/Blue_Green_Alliance.htm

⁴⁵ <http://www.wecansolveit.org/content/pages/207/> and <http://www.wecansolveit.org/page/-/SteelworkerLetter.pdf>

⁴⁶ A Climate of Opportunity Summit Paper, Victorian Climate Change Summit, <http://www.climatechange.vic.gov.au/summit/Resources/SummitPaper.pdf>

⁴⁷ ACTU Submission to the Review of Export Policies and Programmes, May 2008

⁴⁸ Growing the Green Collar Economy, Dusseldorp Skills Forum and Australian Conservation Foundation, June 2006



⁴⁹ Growing the Green Collar Economy: Skills and labour challenges in reducing our greenhouse emissions and national environmental footprint, Report to the Dusseldorp Skills Forum
Dr Steve Hatfield-Dodds, Dr Graham Turner, Dr Heinz Schandl - CSIRO Sustainable Ecosystems
Tanjua Doss, The Allen Consulting Group, June 2008

⁵⁰ Dusseldorp Skills Forum, Green Skills, Executive Summary June 2006

⁵¹ The Monash University MMRF-Green model – a computable general equilibrium (CGE) model of the Australian economy– was used to generate two scenarios:

- 'Deep cuts' – a 60 per cent reduction in emissions without significant tax reform
- 'Carbon neutral' – a 100 per cent reduction in net emissions and one-off tax reform to increase employment and participation. The modelling covers the production of goods and services across 52 Australian industries between 2005 and 2050.

⁵² The Australian, Garnaut target thwarts experts, Mathew Warren, 2 June 2008

⁵³ Submission by Alcoa of Australia on the discussion paper released by the Garnaut Review, April 2008, p9