

23 April 2008



Professor Ross Garnaut, AO  
Climate Change Review  
Level 2, 1 Treasury Place  
Melbourne 3002

Dear Professor Garnaut

**Climate Change Review: Emissions Trading Scheme Discussion Paper**

The Australian Coal Association (ACA) is pleased to respond to the Review's request for comment on its *Emissions Trading Scheme Discussion Paper*. This supplementary submission builds on the ACA's earlier submission concerning Issues Paper Number 4.

The ACA is a member of the Australian Industry Greenhouse Network and has contributed to and supports the two submissions provided by AIGN and the submission provided by the Minerals Council of Australia. This submission enlarges on a number of matters from the coal industry's perspective.

As set out in the attached submission, to minimise the cost of transforming Australia to a low emissions economy while preserving Australian industries' international competitiveness, the ACA recommends the Australian Emissions Trading Scheme involve:

1. the provision of transitional, administratively allocated permits for as long as is needed for existing and new investment in trade exposed, emissions intensive (TEEI) industry to offset the erosion of competitiveness arising from the costs of the ETS and the Renewable Energy Target. Consistent with the AIGN submission this includes:
  - permit allocation to existing facilities for five year periods in advance with an annual ex post adjustment made based on actual production;
  - reviews every five years of the amount of allocation for the next period; and
  - for new TEEI projects the amount of permits would be estimated and guaranteed for the first 25 years of the project prior to the Final Investment Decision for that project.

The review process would be guided by the principles of simplicity, transparency and minimum effective regulation and developed in consultation with stakeholders. This will aim to provide greater certainty for investors going forward;

2. careful consideration on energy security, investment clarity and equity grounds of the need for a transitional allocation of permits to compensate strongly affected assets for any demonstrable disproportionate loss in values that firms suffer upon the introduction of the ETS;
3. auctioning of the remaining permits, with revenues used: (a) to increase support for people on low incomes to offset the inflationary impact of the ETS; (b) to provide matching funds to stimulate research, development and demonstration (R,D&D) and the initial deployment of 'first-of-a-kind' low emissions technologies; and (c) to address other demonstrable market failures where they remain;
4. the widest practical coverage of emissions sources, gases and sinks in the ETS; and



5. methodologies to estimate emissions from all fugitive sources (eg coal mining, waste and ruminants) must be based on sound science:
- such a sound, science-based methodology for estimating fugitive emissions from open-cut coal mines should be developed as a priority and phased in over a sensible timeframe;
  - the practicalities of achieving reliable, widespread measurement of underground mine fugitive emissions be jointly investigated by the industry and Government; and
  - the implications of the current inaccurate and inconsistent estimation practices for the coverage of coal mine fugitive emissions under the ETS should also be jointly investigated, with a view to preserving the integrity of the ETS and emissions targets.

We would be pleased to provide further information to the Review on any of the matters raised above.

Yours sincerely

A handwritten signature in black ink, appearing to read "R Hillman". The signature is written in a cursive, slightly slanted style.

Ralph Hillman  
Executive Director

## A. Avoiding Distortion in TEEI Industries

A national emissions trading scheme (ETS) is a vital part of Australia's contribution to the global task of reducing emissions. Without a cost on carbon it is not possible to gain necessary efficiency outcomes by using the discovery power of markets to price and allocate scarce carbon emissions.

In introducing the ETS a key challenge for government is to minimise the cost of transforming Australia to a low emissions economy while preserving Australian industries' international competitiveness. One aspect of this is to address the need for complementary policies. This was the focus of the ACA's earlier submission to the Review. The other is the need to deal with the transitional arrangements for trade exposed, emissions intensive (TEEI) industries.

The Discussion Paper provides the following rationale for government intervention to establish those transitional arrangements (page 38):

*'In the absence of an international agreement, the international price of traded goods will not be a true reflection of comparative advantage in a carbon constrained world. This may cause firms to reduce production and investment in Australia.'*

*'Although a loss of profits alone does not make a case for special arrangements..., there is a case for government intervention on economic efficiency grounds if the scheme leads to a material misallocation of resources.'*

To address the issue of misallocation of resources in a world where carbon is constrained in only a few countries, the Discussion Paper suggests that 'over-shooting' with respect to reductions in production should be avoided. This is suggested to ensure that Australia's domestic production is not reduced beyond the level that would eventuate if competitor countries or potential competitors were subject to commensurate carbon constraints. To assist in achieving this outcome transitional arrangements would need to be based on both the initial and long run conditions affecting a TEEI firm's production. The essence of the Paper's Appendix 3 methodology for assessing the payments that should be made to TEEI industries is as follows:

- determine the material impact to sales of a trade exposed product due to Australia's emissions price being higher than in a competitor country;
- calculate the differential between the actual international price of the product ( $P_w$ ) and the price that would prevail if all competitor or potential competitor countries applied similar emissions pricing to Australia ( $P_{all}$ ). The maximum assessment for payment ( $M$ ) would be that differential multiplied by the amount of trade exposed sales ( $S_i$ );
- TEEI industry allocations will commence at the maximum ( $M$ ) in year one and in each subsequent year would be discounted by the expected rate of annual improvement in emissions efficiency ( $e$ ).

There are several policy issues raised by this proposed methodology:

1. **New Greenfield/brownfield investment:** The proposed methodology is static in the sense that it does not consider the potential for new entrants or expansions to take market share from Australia. New investments elsewhere in the world will be made on the basis of expected future cost increases in Australia under an ETS. That is, overseas firms will invest on the basis of future expectations, which could affect our market share, yet the Discussion Paper's methodology does not recognise this.
2. **Should the calculation be made on the basis of competitor or potential competitor countries adopting similar carbon prices to Australia?**

- a) It is not clear that Australia's emissions target, which will determine our carbon price, will be the efficient price for establishing 'sustainable production' (i.e. the carbon price which if globally adopted would internalise the externalities associated with climate change).
  - b) There are serious political economy concerns with the approach given that many of our competitors are located in developing countries and are very unlikely to adopt similar climate policy to Australia in the foreseeable future. The implication here is that the transitional allocation of permits in Australia will be lower than required because the world price  $P_w$  will take a long time to equal  $P_{all}$  if developing countries adopt less stringent abatement than Australia or no climate policy. Yet Australia's transitional allocation will be continually eroded at the rate (e).
  - c) Essentially, for many of Australia's export products world prices will continue to be determined by marginal producers in developing countries for many years to come and as a result world prices will not adjust in the way that has been postulated by the Discussion Paper.
3. **How are the annual energy efficiency improvements (e) to be calculated?** The Review's ET Paper suggests this will be based on 'well managed firms in the relevant industry'. This is much easier said than done given that many trade exposed assets are significant compilations of technology pieced together over many years of investment. If applied, this aspect of the methodology would require further significant development including to ensure a *minimum effective regulatory* outcome.
  4. **Is an annual energy efficiency improvement (e) appropriate?** This is far too onerous and not in sync with business investment and repair and maintenance cycles. A five year period would be more realistic (along the lines of the approach recommended by both the National Emissions Trading Taskforce and Task Group on Emissions Trading). Such a period has the advantage of accommodating the lumpy nature of investment, time delays in obtaining equipment and the natural inclination to take tried and tested off-the-shelf technologies rather than waiting for better (but in the short term more risky) options.
  5. **How is 'the amount of trade exposed sales' to be determined?** Both export sales and import competing sales need to be considered. Trade exposed sales should be calculated on the basis of gross value added.
  6. **The Regulatory Burden:** The Discussion Paper's methodology suggests that a substantive new agency will be necessary to peruse the books of business entities that could qualify for administratively allocated TEEI permits. For appropriate assessments to be made, the agency would require significant industry knowledge regarding the viable possibilities for abatement at given facilities. In fact, on the face of it the method would require detailed financial and technical information about every major emitting firm together with a detailed understanding of the production technologies of the processes employed as well as intricate knowledge of the many and varied global commodities' pricing arrangements. The demands of such a methodology seem to go beyond what is achievable competently by a newly formed regulatory agency both in terms of the number of staff and the technical skill set required. It is probable that the costs associated with using this methodology would outweigh any net welfare losses associated with using a simpler approach.

**In summary, the ACA suggests the Discussion Paper's approach to providing transitional, administratively allocated permits to Australia's TEEI firms is unduly**

**complex and does not appear to recognise the near term realities of the international climate negotiations. The elements of an alternative approach are as follows:**

- a) accept that no significant developing country export competitors will impose quantitative emission reductions before 2020 at the earliest;
- b) it follows that world commodity prices will not deviate significantly from their pre-climate policy pathway over that time period;
- c) it then follows that Australian TEEI industries will have a higher cost structure (given the operation of a domestic ETS) than their major international competitors;
- d) estimate the average cost penalty by industry for the most likely permit price path; and
- e) grant administratively allocated permits for five year periods with regular reviews after each such period elapses. The review process to be:
  - guided by the principles of simplicity, transparency, minimum effective regulation and certainty; and
  - developed in consultation with stakeholders.

## **B. Compensation for the Non-Traded Sectors**

There may be circumstances in which particular firms end up bearing a disproportionate share of the costs of emissions trading. For example, a firm may be unable to pass on a significant portion of the increased costs of production of non-traded sector products due to the ETS. In addition, some companies may face a reduction in the economic life of their assets following the introduction of a carbon price. Firms impacted in these ways include electricity generators and domestic “captured” coal mines. In such cases, and recognising that Australia is attempting fundamental change to the whole basis of energy production and use in the economy, there would be an argument on energy security, investment clarity and equity grounds for disproportionate loss compensation.

Such compensation should be calculated on the basis of the impact on the net present value of a firm’s balance sheet. It is important for the integrity, efficiency and effectiveness of the ETS that any compensation thereby justified be designed to avoid creating perverse incentives or reduce exposure of some entities to the true cost of carbon.

If compensation is deemed appropriate there is an argument for using permits as the mechanism to address competitiveness and compensation issues. This is because permits in the hands of the owners of assets whose value has been disproportionately impacted by the introduction of the ETS provide a natural hedge against changes in the price of permits in the future.

## **RECOMMENDATIONS**

A key challenge for the Government is to minimise the cost of transforming Australia to a low emissions economy while preserving Australian industries’ international competitiveness. Integral to addressing this challenge the ACA advocates the following approach:

- administrative allocation of permits for as long as is needed for existing and new investment in trade exposed, emissions intensive (TEEI) industry to offset the erosion of competitiveness arising from the costs of the ETS and the Renewable Energy Target<sup>1</sup>. This should be based on the principles of environmental effectiveness, equity and economic efficiency. Such permits:

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<sup>1</sup> The ACA’s earlier submission on Issues Paper 4 raises concerns about the cost of the current Mandatory Renewable Energy Target and its expansion to a 20 per cent Renewable Energy Target by 2020. If the Government elects to expand MRET then the ACA recommends this must be considered a transitional measure to a carbon price introduced through the planned emissions trading scheme. The Minerals Council of Australia in its submission also recommends to minimise distortions “it should be expanded to a Clean Energy Target and include all low emissions technologies, including carbon capture and storage.”

- to existing facilities be for five year periods in advance with an annual ex post adjustment made based on actual production; and reviews be undertaken every five years of the amount of allocation for the next period; and
- for new TEEI projects would be estimated and guaranteed for the first 25 years of the project prior to the Final Investment Decision for that project.

The review process would be guided by the principles of simplicity, transparency and minimum effective regulation and developed in consultation with stakeholders. This will aim to provide greater certainty for investors going forward;

- careful consideration on energy security, investment clarity and equity grounds of the need for a transitional allocation of permits to compensate strongly affected assets for any demonstrable disproportionate loss in values that firms suffer upon the introduction of the ETS; and
- auctioning of the remaining permits, with revenues used: (a) to increase support for people on low incomes to offset the inflationary impact of the ETS; (b) to provide matching funds to stimulate R,D&D and the initial deployment of 'first-of-a-kind' low emissions technologies; and (c) to address other market failures where they remain.

### **C. Coverage – Fugitive Emissions from Open Cut and Underground Coal Mines**

The ACA supports the widest practical coverage of all sectors of the economy in the Australian ETS from its commencement. That said, and as the Discussion Paper observes, "In order for a sector to be covered by an ETS, there must be a reliable and accurate way to monitor, measure or estimate, and verify emissions from that sector", and "Technological constraints mean that this is currently difficult for some activities, including agriculture and forestry" (page 27).

That such practical constraints apply also in regard to fugitive emissions from coal mining was recognised by the final National Emissions Trading Taskforce report and the final report of the Emissions Trading Task Group. Both reports recommended that fugitive emissions from open-cut coal mines should be investigated further during the detailed design phase.

The Australian open-cut fugitive emission factors currently in use are based on samples of emissions taken from points on the public roads around ten coal mines in Queensland and seven mines in the Hunter Valley conducted between 1990 and 1993. These factors were quantified and subsequently incorporated into the former Australian Greenhouse Office's Greenhouse Challenge Factors and Methods Workbook. They are also included in the *Technical Guidelines for the Estimation of Greenhouse Emissions and Energy at Facility Level* (in chapter 4).

It is recognised these "state average" factors mask a considerable degree of variation among the 74 open-cut mines currently operating in Australia. Nevertheless, this approach has been adequate until now for the purpose of estimating total industry emissions for national greenhouse inventory reporting.

The practical issues may be resolvable but further technical work is required to develop an open-cut methodology based on sound science. This is because, unlike fugitive emissions from underground coal mines, open-cut fugitive emissions are dispersed over a wide and "unconfined" area and releases to the atmosphere will vary over time as mining progresses.

The Australian Coal Association Research Program has been undertaking a study to develop and test a science based methodology to estimate open-cut fugitive emissions. The ACARP work represents a distinctive contribution in improving the method of collection of emissions data, which could have application internationally.

It would take considerable time (ACARP estimates a number of years) to obtain the data set at a substantial direct compliance impost of over \$70 million to the industry. Further, given the already acute shortage of drilling contractors and relevant technical support (mainly in analytical laboratories), the time involved could be longer and the cost substantially greater.

Finally, while industry is working towards a standardised methodology for open cut emissions, underground mining operations will also need to consider how to apply a standardised methodology for collecting and verifying underground emissions.

While not scientific in nature there are issues associated with the adequacy of current underground coal mine fugitive emissions estimates for the purposes of the ETS. Most underground gas measurement procedures are designed for the purpose of detecting hazardous levels of gas concentration in underground workings. The particular requirements of emissions trading call for measurement of both concentrations and flow, and while commercial instruments exist their accuracy vis a vis ETS reporting requirements would need to be established. The practical challenges involved in addressing these issues are not trivial. They will involve both additional compliance costs for the industry and time to assess what needs to be done to ensure reporting of emissions meets yet to be developed materiality and accuracy requirements. These approaches will also need to be verifiable.

## **RECOMMENDATIONS**

Methodologies to estimate emissions from all fugitive sources (eg coal mining, waste and ruminants) must be based on sound science:

- such a sound, science-based methodology for estimating fugitive emissions from open-cut coal mines should be developed as a priority and phased in over a sensible timeframe;
- the practicalities of achieving reliable, widespread measurement of underground mine fugitive emissions be jointly investigated by the industry and Government; and
- the implications of the current inaccurate and inconsistent estimation practices for the coverage of coal mine fugitive emissions under the ETS should also be jointly investigated, with a view to preserving the integrity of the ETS and emissions targets.

## **D. Other issues**

The ETS will require a sound legislative framework, an independent and well resourced regulatory body and secure property rights. In addition, it should not be undermined by overlaying uncoordinated, poorly targeted, and conflicting Commonwealth, State, Territory or Local Government policy interventions that will impede the efficient functioning of the market. Nor should the substantial compliance costs on business be exacerbated by allowing other policies to coexist that, while they may not contradict the ETS directly, add nothing additional or complementary and, therefore, act as an unnecessary distraction.

Existing policy interventions can be reviewed against the criteria for business programs established by the Productivity Commission (and set out in the **Appendix**) with a view to policy and program streamlining and, where necessary, removal on the introduction of an economy-wide ETS.

Where property rights have been established, for example under the NSW and ACT Governments' greenhouse gas abatement schemes, the ACA supports appropriate state/territory compensation if the schemes cannot be merged with the Commonwealth one.

Without the development of new technologies the only option for reducing emissions will be to reduce economic activity, clearly a very expensive outcome. The development of new technologies, however, will significantly lower the cost of abatement. The interaction between technologies and the cost of abatement under emissions trading provides a strong rationale for complementary measures.

Research, development and demonstration (R,D&D) must play a crucial role, particularly for the improvement of technologies to capture CO<sub>2</sub> from power generation. Such activity will be required over the next decade and beyond but it will take time and considerable public/private investment before the technologies are commercially available to the market. To facilitate this outcome government should seek to adopt transitional policy mechanisms that complement the emissions trading scheme and:

- reconcile R&D timelines with scientific and internationally agreed policy imperatives;

- support end-to-end (ie integrated) pre-competitive demonstration projects – not just sections of the whole;
- address how emissions from first of a kind demonstration projects are treated under the proposed ETS;
- are relevant to both fossil fuel and renewable projects; and
- provide clearly established deliverables and are flexible enough to be the foundation for technology applications to achieve sustainable, longer term abatement.

**CHECKLIST FOR ASSESSING PROPOSED OR EXISTING BUSINESS PROGRAMS**

**Threshold questions**

- Are there externalities, information deficiencies or policy impediments that warrant government involvement?
- Are there significant costs if nothing is done, and do they exceed the costs of government intervention?
- Is a business program the only, or the best, way to address the problem?

**Design and delivery questions**

If the answer to all of the above questions is *yes*:

- does the program target the problem explicitly;
- is its emphasis on supporting additional activity;
- is the program open to any firm and, if not, why not;
- is there scope to reduce compliance costs without adversely affecting broad outcomes, or reducing the capacity of the managing agency to monitor the program;
- does the program avoid duplication with other Commonwealth or state and territory programs;
- is the support provided to firms transparent;
- does the program have clear eligibility criteria which avoid undue administrative discretion;
- is there a requirement for public reporting of outcomes achieved and the beneficiaries of assistance;
- does the program have a sunset clause and is there provision for independent, periodic review; and
- when the program involves a service to business, is delivery contestable and are users required to contribute to costs?

**Source:** Productivity Commission's submission to the (Mortimer) Review of Business Programs, 1997, p. vii.