Submission by

Alternative Technology Association

To the

'Possible Design for a National Greenhouse Gas Emissions Trading Scheme' Discussion Paper

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ATA's submission to the National Emissions Trading Taskforce's Greenhouse Gas Emissions Trading Scheme Discussion Paper

The Alternative Technology Association (ATA) welcomes the opportunity to provide comment on the ***Possible Design for a National Greenhouse Gas Emissions Trading Scheme*** discussion paper (the Discussion Paper), as prepared by the National Emissions Trading Taskforce.

ATA is a not-for-profit organisation established in 1980 to promote the uptake of sustainable technologies in order to protect our environment. The organisation provides service to over 3000 members, who are actively promoting sustainability in their own homes by using good building design and implementing water conservation and renewable energy technologies. ATA advocates in both the government and industry arena for ease of access and continual improvement of these technologies, as well as the production and promotion of information and products needed to change the way we live.

ATA welcomes the initiative of the states and territories in addressing this vitally important issue and proposing a mechanism for reducing greenhouse gas emissions. In the absence of federal leadership on implementing strategies to curb greenhouse gas emissions, the process undertaken by states and territories is to be commended.

It is vitally important that the scheme be robust, ambitions and effective to ensure the primary goal of emissions reductions is met, and the ATA urges the National Emissions Trading Taskforce to carefully consider the views contained within this submission to ensure such a scheme eventuates.

This submission provides comment on a number of key aspects of the scheme. Recommendations follow detailed reasoning outlining the case for ATA's position. In brief, key recommendations of this submission are:

- ➔ **Early Action is an imperative**
- ➔ **All stationary energy be included from commencement**
- ➔ **All fugitive emissions be included in the scheme**
- ➔ **Caps be set to achieve emissions reduction of 80% from 1990 levels by the year 2050, with an interim target of a 25% reduction by 2025**
- ➔ **Banking be limited to 10% of permits over a 10 year timeframe**
- ➔ **Make-good provisions be included in the scheme, and penalties involve criminal charges**
- ➔ **Offset programs not be included in any scheme**
- ➔ **Permit allocation be conducted wholly though an auction process, with revenue raised redistributed to identified areas of need**
- ➔ **A broad range of significant complementary measures should be adopted to ensure that overall emissions reduction targets are met**

Need for Action

There can no longer be any argument that a significant imperative exists to take action on climate change. Internationally, nationally and locally there is almost universal consensus on the urgency of addressing the largest environmental, social and economic challenge of our time.

The recent findings of Nicholas Stern's report into the economic costs of climate change put the ongoing cost of mitigation at around 1% of GDP annually, in contrast to between 5% and 20% of annual GDP for the full economic impacts of un-abated climate change – with most predictions pointing towards the upper end of this range.[1]

Early Action an Imperative

It is important to note that climate change results from increasing concentrations of greenhouse gasses (GHG) in the atmosphere, and thus is a response to *cumulative* emissions of GHG over time. Therefore, it is important to consider not only long-term emission reduction targets, but also the path taken to achieve these targets. Early action through stringent short to medium-term targets is essential in reducing overall cumulative emissions over the longer term. Additionally, early action will stimulate the development of innovative industries and technologies, better placing the economy for transition to a highly carbon-constrained future.

Coverage

Stationary Energy

With stationary energy making up 50% of all of the nations GHG emissions, and electricity generation responsible for 35%, ATA accepts that this sector is an appropriate target for the initial stages of an emissions trading scheme. The quantification of emissions from the stationary energy sector is relatively straight-forward, mechanisms exist to achieve this and the proposed threshold limits the number of sites included in the scheme to a manageable level.

However, as mentioned above, an effective strategy for addressing climate change relies heavily on early action in order to reduce overall cumulative emissions. It is insufficient to merely aim for a target in 40+ year's time; *how* that target is achieved is of equal significance. All emissions between the present and a future target date will contribute to climate change; hence it is imperative that the scheme has the broadest possible scope, includes ambitious short and medium term targets and the earliest possible commencement date.

Thus, ATA calls for the inclusion of all stationary energy from the commencement of the scheme, including all electricity generation above 25 kt CO_2-e. This strategy enables the capture of an additional and significant 15% of the nation's emissions from commencement, and avoids the confusion of the transition between a 30 MWe and a 25 kt CO_2-e threshold resulting from the proposed phase-in of stationary energy at a later date.

Indeed, ATA believes a kt CO_2-e threshold is more appropriate than a MWe threshold, as the former has the ability to capture more polluting generating capacity with a lower electricity output, whereas a MWe level unfairly burdens cleaner technologies of a similar capacity with lower emissions intensity.

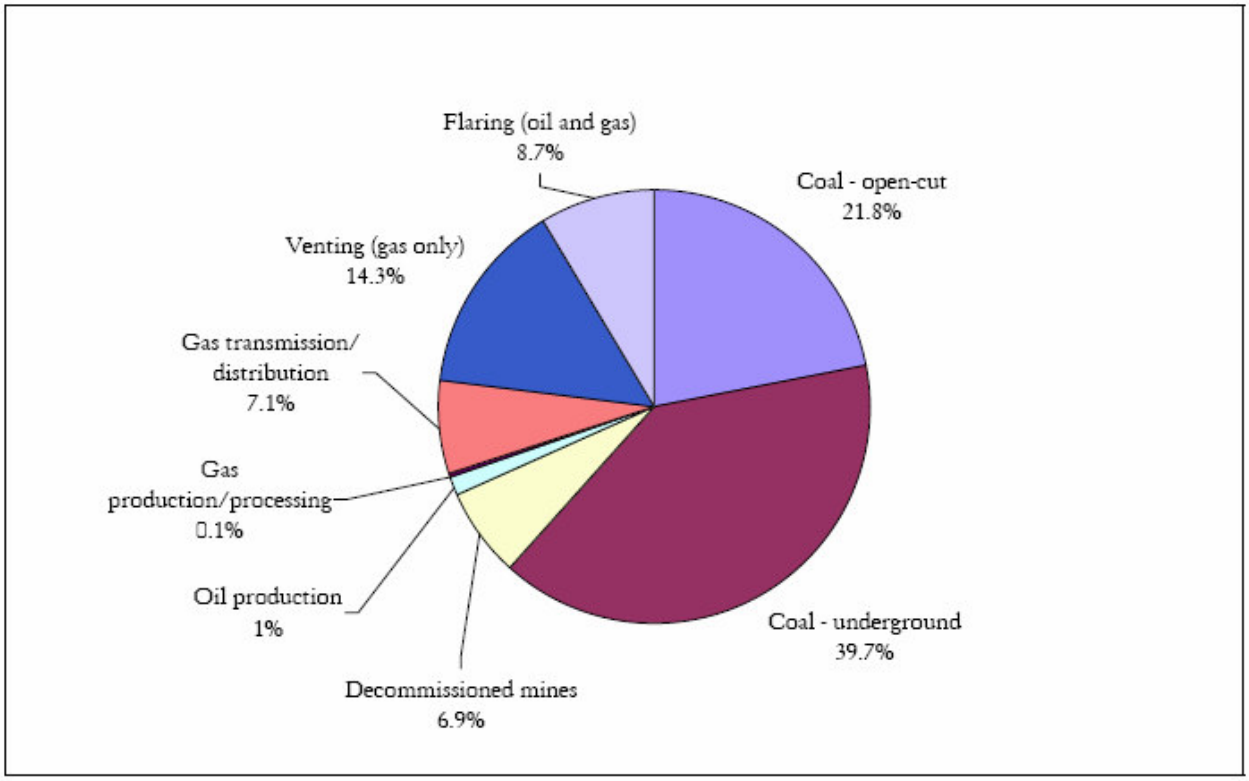
> ***ATA strongly believes that all stationary energy should be included in the scheme from the time of commencement in 2010***

Fugitive Emissions

ATA believes that the Discussion Paper's proposal to limit the inclusion of fugitive emissions to those from gas transmission and distribution is an error, and has significant concerns with the proposal to exclude fugitive emissions from coal mining and other sources from the scheme. Fugitive emissions are responsible for a significant 6% of Australia's GHG emissions annually, with emissions from coal mining accounting for 61.5% of this total. By comparison, gas transmission and distribution is responsible for only 7.1% GHG emissions[2].

[1] *Stern Review: The Economics of Climate Change.* 2006 (P. 143)
[2] *Possible Design for a National Greenhouse Gas Emissions Trading Scheme* 2006 (P. 26)

Figure 1: Australia's Fugitive Emissions in 2004.



[Reproduced from *Possible Design for a National Greenhouse Gas Emissions Trading Scheme*, P. 26]

The Discussion Paper states that "it appears unlikely that comprehensive coverage of fugitive emissions could be achieved under the emissions trading scheme without creating significant distortions between fuels or between different sources of the same fuel."[3] The Paper goes on to say that gas transmission and distribution fugitive emissions are relatively small and thus would not result in significant market distortions.

However, creating 'distortions', or, more accurately, 'market corrections', between fuel sources is precisely the objective of an emissions trading scheme. *Not* including all fugitive emissions will create real and significant market distortion, favouring coal-fired energy sources over less emission-intensive alternatives. The cleanest technologies such as renewable energy and efficient Combined Cycle Gas Turbine generation will have the most to lose from any proposal to limit the inclusion of fugitive emissions.

Whilst the Discussion Paper acknowledges difficulties in assessing these emissions, ATA believes that this is not a sufficiently significant barrier to exclude this major source of GHG. The use of generic emission factors for unmeasurable fugitive emission, whilst not entirely accurate and potentially distorting the market for a handful of sites, is vastly superior to omitting this important sector from the scheme. Market distortion resulting from not including all fugitive emissions would be significantly greater.

ATA strongly believes that all fugitive emissions should be included in the scheme, phased in within the shortest possible time frame

Scheme Cap

The success of a market based emission reduction mechanism in achieving its objective is intimately linked to the levels of caps set. Without deep cuts to GHG emissions brought about by the setting of

[3] *Possible Design for a National Greenhouse Gas Emissions Trading Scheme* 2006 (P. 27)

ambitious short, medium and long-term targets, the social, environmental and economic effects of climate change threaten to be disastrous.

Both the latest science on climate change, and recent emissions levels reported by the IPCC, point to an increasing urgency to strive for dramatic and immediate reductions in GHG emissions. With emissions growing at unprecedented rates, and climate scientists outlining dramatic implications resulting from projected temperature increases, Australia, as one of the largest per capita emitters in the world, has a moral imperative to take significant steps to curb emissions. The Discussion Paper proposes a long-term emissions cap of 60% compared with 2000 levels by the year 2050. ATA strongly believes that, in light of emerging science, this is insufficient.

Firstly, it is essential that any emissions reduction targets, and hence emissions trading caps, use 1990 as the baseline year, in order to be consistent with the United Nations Framework Convention on Climate Change (UNFCC) process. Secondly, the Stern Review claims that, in order to achieve climate stability, the international community needs to stabilise emissions over the long term at 80% below current levels.[4] Given this, and Australia's disproportionately high per capita emissions, Australia has a moral imperative to make deep cuts to current emission levels.

On this basis, ATA calls for caps limiting emissions to 80% below 1990 levels by 2050, with an interim target of 25% below 1990 levels by 2025. ATA supports the proposal for 5-year interim caps and gateways as a transitional arrangement to reach these targets.

Whilst acknowledging these are ambitions targets, and will be difficult to achieve, ATA believes that there is little choice other than to reach these levels. It is imperative that any target be ambitions and difficult to achieve, given the gravity of the global climate change situation.

> ***ATA strongly believes that ambitious short and medium-term targets be set in order to achieve an emission reduction of 80% from 1990 levels by the year 2050.***

Additional Sectors

ATA believes that the inclusion of additional sectors included in the scheme should result in an overall emissions trajectory consistent with that of the existing sectors, and thus capable of reaching the same overall medium and long-term targets.

However, ATA believes that this trajectory should be taken from the scheme's commencement in 2010 until 2030, with targets set beyond this date in order to achieve the minimum 80% reduction by 2050 (from 1990 levels). Whilst this could place significant burden on sectors joining in later years, sufficient notice of sectorial inclusion would provide significant warning for the adoption of structural adjustment within those sectors to enable compliance.

> ***ATA strongly believes that additional sectors be required to achieve similar targets to existing sectors, with significant warning given of inclusion in order to enable them to meet the targets***

Banking

ATA accepts the allowance for banking of permits in recognition of the ability to stimulate early action and a smoother transition for permit prices. However, we would encourage some limitation to banking in order to guard against gaming of the market for permits, particularly of auctioned permits. ATA proposes limiting banking to 10% of permits, with a 10 year lifetime. ATA is strongly opposed to any borrowing of permits due to the risk of non-compliance in future years.

> ***ATA strongly believes that banking be limited to 10% of permits over a 10 year timeframe, with no provision for the borrowing of permits***

[4] *Stern Review: The Economics of Climate Change* 2006 (P. 193)

Penalty and Make-Good Provision

Compliance with the emissions trading scheme is essential for its effectiveness and integrity, and hence should be encouraged in the strongest possible way. ATA believes that criminal penalties should exist for non-compliance, coupled with a make-good provision requiring non-compliant emitters to provide permits to the level of their non-compliance in the following year.

The Discussion Paper claims that setting a high penalty would sufficiently encourage compliance; however by stating that a make-good provision would create uncertainty, the Paper acknowledges that non-compliance would probably still occur in the absence of such a provision. A financial penalty for non-compliance without any requirement to make up excess emissions provides no mechanism for recovering excess GHG emissions released into the atmosphere. Limited financial penalties to non-compliant companies do nothing to ameliorate the damage caused by excess emissions and the cumulative impacts of GHG emissions beyond pre-defined targets.

Whilst ATA accepts that make-good provision increases uncertainty for investment in at-risk industries, such a provision is essential to encourage businesses to manage emissions in a manner such that non-compliance doesn't occur. A lesser financial penalty, coupled with criminal charges and a make-good provision, is the surest way to ensure compliance with the scheme, and thus reduce the chances of financial shock to the wider economy.

> ***ATA strongly believes that make-good provisions be included in the scheme, and that any financial penalty be coupled with criminal charges***

Offsets

The inclusion of offsets in an emissions trading scheme has the potential to provide cost-effective means of reducing emissions in place of abatement measures at the source of emission. However significant concern exists over the uncertainty, potential for miscalculation and complexity of offset mechanisms. The potential also exists for offset mechanisms to delay restructuring of the electricity generation and other emission intensive sectors, thus limiting the ability of these sectors to achieve desired emissions reductions.

Bio-sequestration

Of particular concern to ATA is bio-sequestration, or the planting of trees to capture atmospheric CO_2. Firstly, there are obvious distortions resulting from the allocation of a quantity of carbon emitted in a particular year, to be captured by a tree over a lifetime of growth. Assuming that the tree captures the majority of its carbon whilst vigorously growing in its first 40 – 50 years, a significant gap exists between the year of CO_2 emission and the complete absorption of that CO_2, during which the excess CO_2 remains in the atmosphere contributing to climate change.

Secondly, it is almost impossible to ensure that trees planted today will still be here in the required lock-up time under the proposed scheme – 100 years. Climate change has and will continue to increase the prevalence of bushfire in southeast Australia, and thus the risk of captured carbon being re-released into the atmosphere.

Thirdly, tree planting projects are intrinsically linked to other environmental issues and programs. Young trees in their early years of life consume considerable quantities of water, reducing run-off into catchments and water storages; tree planting has inherent benefits in other areas, such as reducing salinity and preventing soil degradation and erosion, thus linking tree planting carbon offset programmes could result in altered patterns of reforestation (i.e. delayed planting to take advantage of future offset opportunities); specific species of trees may be adopted for large-scale monocultures, due to quick growth rates or carbon storage capacity, rather than planting appropriate species in biologically-diverse patterns for the best ecological outcomes. This broad range of concerns needs to be taken into account when considering offset programs.

Finally, considerable scientific uncertainty exists surrounding the carbon abatement potential of trees. Offset programmes require the additional test of establishing a baseline and applying credits for

additions above this level. This raises a plethora of questions around the potential for misrepresentation and gaming, and the difficulty in verification.

Geo-sequestration

It is essential that any form of carbon sequestration remain secure in the long term and captured emissions are not subject to release at a later date. However, significant uncertainty also exists around geo-sequestration. In the absence of stringent scientific analysis of the permanence and safety of the storage, the inclusion of geo-sequestration projects should not be permitted for carbon offset under any emissions trading scheme.

Energy Efficiency and Small Scale Renewable Energy

Energy Efficiency is by-and-large a cost-neutral means of reducing energy demand, and small-scale embedded renewable energy generation technologies offer a range of benefits to the broader electricity industry and the stationary energy sector as a whole. However, ATA doesn't believe that the provision of offset credits for small-scale renewables and energy efficiency is the most effective means for achieving these benefits.

Whilst some opportunities will be achieved through price signals arising from an emissions trading scheme, ATA believes that existing energy market regulation and market structures impede the deployment of these technologies, and thus additional measures must be undertaken to ensure that these initiatives are adopted. Potential measures are outlined in the section on Complementary Measures, below.

> ***ATA strongly believes that offset programs should not be included in the emissions trading scheme, due to the difficulty in accounting and the potential for misrepresentation***

Permit Allocation

Allocation of permits to generators

The mechanism for the allocation of permits is an essential component for the success of the emissions trading scheme. There can be little argument that the most effective way to stimulate growth in low-emission technologies and promote the most efficient sectors of an industry is to auction all permits in the scheme. Thus, ATA calls for the allocation of permits to be entirely conducted through an auction process.

The Discussion Paper expresses concern that, in the absence of free allocation of permits to existing generators, certain sectors of the industry would be disadvantaged – obviously those with higher emissions intensities. However, ATA would argue that this is the primary objective of the scheme; again, creating 'distortions', or, more accurately, 'market corrections', between fuel sources is precisely the objective of an emissions trading scheme.

By allocating even a portion of permits based on historical emissions or potential economic losses, the scheme will be favouring emission-intensive industries over low emission technologies, thus negatively distorting an essential component of the scheme. It must be remembered that, whilst there may be economic losers from the introduction of an emissions trading scheme, there will also be economic winners.

In addition, the mechanism proposed for allocating free permits is complex and arbitrary, and potentially open to significant levels of legal challenge by unsatisfied businesses who feel as though they have been unfairly treated by the process. A blanket allocation of permits via auction would remove the complexity and uncertainty of the process as well as promoting clean energy technology – a fundamental goal of the scheme.

An essential additional benefit of the auctioning of permits is that revenue raised can be redistributed, via the states and territories, to support the most vulnerable consumers affected by any price increases resulting from the scheme, to regions and individuals affected by structural adjustments

following on from the scheme, and to complementary programmes and projects which can assist in reducing emissions and enhance the application of the scheme.

> ***ATA strongly believes that permit allocation be conducted wholly though an auction process in order to achieve the best outcomes for emissions reductions, and that revenue raised through the permit auction be redistributed to identified areas of need, such as low-income consumers and beneficial complementary programmes***

Complementary Measures

Even with the broadest possible scope for a national emissions trading scheme, significant sectors of the economy will still sit outside its coverage. Thus, it is essential that an emissions trading scheme is but one part of a host of measures designed to address the emission of GHG into the atmosphere, and that significant complementary measures exist along-side any scheme. Significant programs need to be adopted in the areas of transport, agriculture, land-use and waste to ensure that all sectors of the economy contribute to emissions reduction targets.

Energy Efficiency and Small Scale Renewable Energy

At present significant market failure exists within the National Electricity Market, failing to take in to account the range of benefits from demand-side measures. The adoption of an emissions trading scheme will not address these market failures, and a broad range of additional measures is required to capture the full benefits of this broad suite of possibilities.

Energy efficiency is a cost-neutral at worst – and, in most cases, cost-positive – means of reducing demand on energy supplies and hence reduce emissions of GHG into the atmosphere. Demand-side response, fuel switching energy conservation measures and small-scale embedded generation all have a range of environmental, social and economic benefits unrecognised by the current market structure.

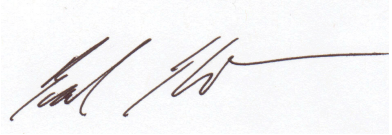
By providing significant incentives for a range of demand-side initiatives and embedded generation, governments will enhance the stationary energy sector's ability to meet its targets, providing benefits for the sector, improving environmental performance, enhancing energy security and enabling greater community ownership of electricity generation capacity.

> ***ATA strongly believes that a broad range of significant complementary measures should be adopted to ensure that overall emissions reduction targets are met***

Further Contact

ATA commends the ESC for undertaking this review of small scale licensing, and would welcome the opportunity to discuss any aspect of this submission or the licensing framework further. Please direct any questions or further correspondence to Brad Shone, Energy Policy Manager, on 9631 5406 or Brad.Shone@ata.org.au

Yours sincerely,



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