SUBMISSION TO THE HOUSE OF REPRESENTATIVES STANDING COMMITTEE ON ENVIRONMENT, RECREATION AND THE ARTS INQUIRY INTO THE REGULATORY ARRANGEMENTS FOR TRADING IN GREENHOUSE GAS EMISSIONS
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Introduction

The Kyoto Protocol provides for the establishment of an international emissions trading (ET) regime.

- Australia supports the landmark outcome on ET at Kyoto. If correctly implemented this can lead to the creation of a market in which individual market participants have an incentive to seek out the lowest cost means of abatement of greenhouse gas emissions, and therefore has the potential to substantially reduce the cost of such abatement.

- As a net energy exporter and intensive energy user, Australia has a clear national interest in the successful implementation of a comprehensive international ET regime which minimises emission abatement costs. If Australia is to be at the forefront of the international debate, it will also be necessary to have a thorough understanding of how any domestic ET regime might develop in step with the emerging international framework.

There are, however, several complex policy and technical issues that need to be resolved before wide scale ET can be implemented, either domestically within Australia or at the international level.

Issues for a domestic ET regime

Given in principle acceptance of ET, and indeed support for moving forward in this area, a number of fundamental policy issues remain to be resolved. These include the following.

- How quickly can a comprehensive ET be introduced? Minimising emission abatement costs requires that the ET regime cover all sectors of the economy as comprehensively as possible. However, there is a need to manage the transition to an ET market in order to minimise disruption.

- How should emission entitlements be allocated?
  Some “grandfathering” (ie allocation of rights to existing emitters) will

be necessary to make ET acceptable to industry, but too much will leave insufficient scope for entry of new competitors and insufficient flexibility to adjust to changing circumstances.

- Long term industrial planning would require some degree of certainty about access to emission rights several years into the future, but what provision should be made to facilitate the later entry of new industries and new firms over longer periods?

In addition to these open policy questions, numerous technical issues concerning measurement, monitoring and verification of emissions and enforcement of trading rules remain to be resolved. Where such issues pose difficulties for the inclusion in ET of agricultural or other activities at the producer level (as distinct from the aggregate level where measurement and verification are possible), the design of any domestic regime would require adjustment to take these difficulties into account.

There will be a key role for government, and particularly the Commonwealth, in facilitating an environment where trading can take place and in setting the roles for the ET market.

It will be important for administrative arrangements to be kept to a minimum in order to realise the full benefits from trading. A minimalist, non-bureaucratic approach is needed to keep transactions costs as low as possible.

Issues for an international ET regime

All the issues that need to be resolved for the domestic implementation of ET will need to be resolved by other countries for their own regimes, and many will become the subject of intense international negotiation. Issues of substantial national interest to Australia include:

- integration of sinks into the international ET system on terms that reflect the full value of carbon sequestration;

- finding means of engaging developing countries on equitable terms which deliver a better environmental outcome:

    - without the engagement of developing countries, emitting activities could be re-located to non-participating countries, resulting in no net reduction in total international emissions (and possibly substantial windfall gains for firms which receive allocations of emission rights in the industrial countries before they announce such re-locations); and

- how to provide an interface between an international ET system involving the industrial countries (as provided for in the Kyoto Protocol) and project-based carbon credits transferred between industrial countries (Joint Implementation) and between industrial and developing countries (Clean Development Mechanism), as also provided for in the Kyoto Protocol.

Building on existing initiatives

The National Greenhouse Strategy provides the framework for intergovernmental agreement on the policy approach and specific measures to achieve greenhouse outcomes. A new strategy is scheduled to be concluded by end June 1998, and it could provide an opportunity to build the support and involvement of States and Territories in developing ET arrangements.

In terms of the transition to an ET market, the possibility exists to gain experience in a partial way with some elements of an ET regime through some of the current greenhouse measures In particular:

- under the Greenhouse Challenge some diversified companies already include in their cooperative agreements offsets of their energy emissions against their forest growing activities;

- the Bush for Greenhouse program announced in the November 1997 Prime Minister's package provides a vehicle for companies to invest in vegetation projects of the Natural Heritage Trust and to gain recognition and offsets for revegetation activities , but at this stage without definite arrangements on future credits for the purposes of emissions trading;

- the Prime Minister's measure on Activities Implemented Jointly (in the post-Kyoto period now linked to the Clean Development Mechanism and Joint Implementation) provides for recognition of the emissions savings resulting from cooperative project investment in other countries, again with no definite arrangements on the future linkage to emissions trading arrangements;

- the above activities, as well as the National Greenhouse Gas Inventory and the Prime Minister's measure on national carbon accounting for land based sources and sinks, provide a basis for development of some of the methodological tools for measuring emissions and sinks needed for an ET system; and

- it has been proposed that in implementing the mandatory 2% target for the uptake of renewable energy in power supplies, electricity

retailers and other market participants may be allowed to trade their renewables quota requirement with other participants.

Allocation of the right to emit greenhouse gases

Definition of permit - unit of trade

The emission targets Annex B countries have agreed to under the Kyoto Protocol are expressed in terms of carbon dioxide equivalent emissions. Greenhouse gases other than carbon dioxide (methane, nitrous oxide and perfluorocarbons) can be converted to carbon dioxide equivalence based on their greenhouse warming potential (GWP).

Emission permits would grant the right to emit a given quantity (tonne) of carbon dioxide equivalent in a given time period (year). While permits could not be used earlier than the year specified, the trading system could be designed so as to allow their later use in order to accommodate the deferral of emissions. Some facility could also be provided for limited borrowing from future emission entitlements to accommodate fluctuations near the end of each emissions period.

Establishment of an appropriate framework for market operations

Emission permits only have a positive market value if the total quantity of emissions allowed by the permits is restricted below the level of emissions that would otherwise occur. This requires acceptance of some cap on total emissions, control over the quantity of permits issued, an agreed basis of measurement, a reliable reporting system to ensure that permits are cancelled when used (i.e by emitting the authorised quantity) and enforcement to prevent emissions that are not authorised under the permit system.

Many of these functions (eg. measurement, reporting, cancellation of permits) could be performed by the private sector within an appropriate regulatory framework and subject to audit.

Allocation of permits

Government will have a key role, *inter alia,* in controlling the total quantity of permits (within bounds set by the Kyoto Protocol) and in allocation of permits.

The options available with respect to allocation are grandfathering (i.e based on historical emission levels), auction and differentiation. Each of these options, on its own, poses problems in any real-world allocation environment.

- Full grandfathering is not possible, because of the necessarily restricted supply of permits. Even partial grandfathering places encumbents and mature firms at an advantage over new entrants and growing firms, and could potentially restrict competition.
  An expectation that grandfathering could be based on most recent emissions could encourage expanded emissions in the lead-in period, to secure a high base allocation of permits.

    - However, some grandfathering would be needed to prevent disruption in industries which could otherwise face sudden adverse cost movements.

- Allocation of all permits through an auction system would be unacceptable to industry, especially so for sectors (eg. electricity generation) where investments with a 30-40 year economic life have been made, and long-term supply contracts entered into, in the absence of any requirement to pay for emission rights.

    - Reserving some portion of permits for auction may be necessary to ensure access to permits by new entrants and growing firms, and would provide indications of an open market price as an information signal to market participants.

- Differentiation may be needed to accommodate circumstances that would not be addressed through the other options. In particular, some allowance may be needed:

    - to reward efforts to reduce emissions during the lead-in period in order to encourage such efforts. This could possibly be handled through early registration schemes building on existing programs such as the Clean Development Mechanism, Greenhouse Challenge or Joint Implementation; and

    - to recognise the status of major new investment projects, at various stages of commitment (or even completion), which would not have an operational history and would therefore not qualify for “grandfathering” on the basis of historical emissions. One State, Western Australia, accounts for around half of all the currently proposed energy-related investments in Australia.

These problems suggest that some hybrid system, incorporating elements of these options, is likely to be adopted. Clearly, many open policy issues remain to be resolved in reaching agreement on a satisfactory allocation system.

- In reaching such agreement, the interests of all stakeholders will need to be understood and taken into account. The AGO sees a key role for itself in providing an on-going forum to enable this to occur.

Mechanisms to integrate emissions trading with the development of carbon sinks

Under the Kyoto Protocol, Annex B countries will be able to claim increased carbon sequestration in their own country in meeting their net emissions targets.

Measurement of sequestration is currently an issue in international forums. Methodologies currently exist to enable reasonably accurate measurement of carbon sequestration, especially at the aggregate level, and further improvement and increased transparency of these methodologies would encourage wider acceptance of them.

Measurement at the producer level involves monitoring and verifying sequestration activities at a large number of sites spread over widely dispersed areas (and hence significant transaction costs). Care would need to be taken to ensure the integrity of monitoring and verification processes to ensure the continued credibility of sequestration credits. This could involve approval of proposals by the relevant authority before sequestration projects are commenced, as well as subsequent careful monitoring of actual outcomes.

Provided that estimation and verification difficulties can be satisfactorily resolved at reasonable cost, credits for sequestration could in principle be readily incorporated into an ET system. Each year as carbon is sequestered, emission permits could be issued by the relevant authority. There would be no need to limit the quantity of permits issued provided they were based on verified sequestration, since Australia's ability to meet its net emissions cap would not be affected (i.e the increase in gross emissions enabled by the permits would be fully offset by the increase in carbon sequestration). For trading purposes, such permits could potentially be indistinguishable from permits allocated on any other basis.

Possible emission traders, administration and transaction costs

The broadest possible participation provides greatest depth to the market and the greatest opportunities to identify and achieve the lowest cost means of abatement. Ideally, trading should involve comprehensive coverage: all sectors, all greenhouse gases and broad access for interested participants.

However, in practice, methodologies for the measurement and projection of different gases, sectors and sink activity at the producer level (as distinct from the aggregate level) are subject to widely varying levels of uncertainty. Some sectors are more obviously suited to inclusion in an enforceable trading system than others.

- Measurement and enforcement is much easier (low transaction costs) for sectors in which a large portion of emissions are concentrated at a small number of sites (e.g electricity generation), and much more difficult (potentially prohibitive transaction costs) where smaller quantities of emissions are dispersed amongst a large number of emitters (eg. the household sector).

- Where emissions are widely dispersed, other market mechanisms (appropriate price signals) can be used to influence behaviour, with substantial savings in transaction costs compared to direct inclusion in the emissions trading system.

- Broad coverage of gases across all sectors may substantially increase transactions costs because of the extent of monitoring and reporting that would be required (e.g methane emissions in agriculture may be difficult to measure, though such emissions in the energy sector may be more readily measurable).

These considerations suggest that a pragmatic approach may be to start up any domestic ET system using a step by step approach, starting first with sectors and / or gases most suited (through low transaction costs) to the implementation of ET, perhaps initially through pilot programmes, while keeping in mind the objective of achieving optimal market design in the long run. This would require careful balance in the allocation of emission permits in the early stages of implementation.

- An excessively generous allocation of permits to early participants could provide encumbents with a cost advantage that could raise the barriers to entry for later potential competitors.

- An inadequate allocation of permits could result in excessive disruption for participating sectors at a time when participation would not be required of others and, because of limited participation, the opportunity to purchase additional permits from low cost emission-abaters would be limited.

If a step by step approach to implementation of a domestic ET regime were adopted, care would also be needed to avoid the emergence of false price signals in the early stages. For example, if the first step were to include only those sectors in which costs of abatement are relatively high, then permits

would trade at an artificially high price until lower cost abaters (willing to sell permits at a lower price) were added to the trading system.

Roles and responsibilities of governments and other stakeholders

Role of the Commonwealth

The Commonwealth's role in establishing an ET system involves:

- overall policy development, including both design of the overall system and transitional issues in moving toward the overall system;
- setting the legislative / regulatory framework within which legally enforceable trading can occur, including both the rules under which the market should operate and provision for appropriate auditing and enforcement;
- progressing a range of complex technical issues related to measurement, verification and accreditation; and
- pursuing national interests in the development of an international ET regime, including compatability between the domestic market and the unfolding international system.

Role of the AGO

In line with the Prime Minister's statement of 20 November 1997, "*Safeguarding the Future: Australia's Response to Climate Change*", the AGO has responsibility for the coordination of domestic climate change policy and is the lead Commonwealth agency on greenhouse matters, including the issue of ET.

It will be apparent from the issues raised above that development of policy in relation to ET is a complex task with a large range of open policy issues yet to be resolved, but with potentially substantial benefits for Australia provided that key issues can be resolved in a manner that is sensitive to the needs of all relevant stakeholders.

The AGO will:

- commission and oversee necessary further analytic and development work in relation to the many open policy issues, including those identified in this submission;

- provide an on-going forum for liaison with key stakeholders, including businesses, State governments, industry and environment groups, and the wider community:

    - understanding the needs of stakeholders and ensuring that the policy development process takes these needs into account is crucial to gaining the acceptance that is needed to successfully develop and implement an ET regime; and

- coordinate the development of policy within the Commonwealth in relation to ET, involving options for:

    - overall system design, including legislative and regulatory requirements for the effective operation of a market and monitoring and compliance issues;

    - target setting and initial permit allocations;

    - effective implementation, including measures and strategies to minimise disruption in the transition to a fully fledged emissions market; and

    - influencing the international agenda and ensuring compatibility between the Australian regime and the unfolding international regime.

Role of other stakeholders

Other stakeholders should actively participate in liaison efforts by government to ensure that the policy development process is properly informed of their needs.

Once the policy development process is concluded, and the government has provided the framework for market trading to take place, successful market outcomes will depend on the integrity, ingenuity, entrepreneurship and effort of the various market participants.

- Responsibility for market administration should rest with the private sector in order to achieve efficient market operation

    - a market mechanism could be modelled on existing futures or stock exchanges as an efficient means of monitoring the flow of trade, providing a clearing house for trades and enforcing the integrity of exchange trading.

- Responsibility for compliance with monitoring and reporting rules, to ensure that actual emissions match up with the cancellation of emission permits (ie. no cheating) must also lie with the relevant market participants. Compliance would be subject to enforcement through audit (governments could accredit auditors and enforce audit standards) and appropriate penalties could apply for non-compliance.