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A Policy Without A Future
Australia's International Position on Climate Change

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Preface

The meeting of the parties to the Framework Convention on Climate Change in December 1997 may well have the most profound consequences for the future of the world, for the parties are to consider the introduction of mandatory targets for reducing emissions of the greenhouse gases that threaten to transform the earth's climate.

At this stage it seems likely that wealthy nations will agree to reduce their emissions by a uniform percentage. But the Australian Government has developed a 'differentiation' position that would allow countries that appear to be economically disadvantaged by uniform targets to be set more lenient targets. As a result Australia is coming under increasing criticism internationally by countries that view the Australian position as blatantly self-serving and possibly designed to sabotage the negotiations.

Within Australia, environmental campaigners and academic analysts have for some time been warning of the dangers to Australia, and to the climate change negotiations, of the Australian position. Now the concern is spreading to some sectors of industry and the bureaucracy. This discussion paper has been written by individuals who have a close knowledge of the development of Australia's climate change position and who are well placed to evaluate the likely implications for Australia of pursuing the current policy. Readers of this paper will agree that the unavoidable anonymity of the authors does not detract from the force of the arguments in it.

The paper argues that pursuit of the Government's differentiation position is based on entirely false reasoning, draws on misleading modelling evidence, and is severely damaging our longer -term interests. Moreover, if by some aberration the Convention agreed its position then the consequences for Australia's economy, for our international standing and for climate change outcomes would be disastrous.

Many people know that climate change is a looming and potentially catastrophic environmental problem. But very few people have a grasp of the various complex issues associated with climate change and the possible responses to it. As a result, analysis and policy development has been almost wholly dominated by narrow sectional interests in alliance with a small part of the Canberra bureaucracy. The Australia Institute hopes that this paper will assist the Government to find a way out of the policy imbroglio in which it is now caught.

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Executive summary

The Third Conference of the Parties to the Framework Convention on Climate Change will be held in Kyoto in December 1997. It appears likely that mandatory targets for reductions in greenhouse gas emissions will be agreed and possibly backed by trade sanctions against recalcitrant nations. The Australian Government's position is to oppose uniform emissions reduction targets for the wealthy countries, even though this is conceptually simple and could be relatively favourable to Australia.

Instead, Australia advocates differential targets based on the concept of equal economic costs per capita among Annex 1 (wealthy) countries. Australia proposes a number of indicators to be used in differential setting targets – GDP growth, population growth, emissions intensity of economic activity, fossil fuel trade and the emissions intensity of exports.

The universally accepted principle that serves as a guide for pollution control policies is the polluter pays principle. This maintains that those who are responsible for a problem should meet the cost of removing it; it is a principle that is both equitable and economically efficient. The Australian approach flies in the face of this principle and is deeply flawed. It not only has no basis in economic theory but, by insisting that countries which pollute less per capita should bear equal costs, it is fundamentally inequitable.

The Australian position is also unworkable as a general greenhouse formula because it requires agreement between countries on unreliable and conflicting estimates of economic costs, costs which will arise many years into the future. It presents a dangerous precedent for future climate change negotiations when developing countries are drawn into signing up for targets. Moreover, the Australian position seeks to use the irrelevant issue of population growth to reduce Australia's targets, so that Australia asks for permission to enjoy the benefits of population growth without meeting the costs. Moreover, according to the Australian position, whilst high population and economic growth rates in developing countries are reasons for insisting that those countries be required to reduce their emissions, the same factors are used to argue that Australia should be given more lenient targets.

Differentiation on the basis of fossil fuel exports would mean that the more other countries reduce their emissions the more Australia would be able to emit. The Government is thus advocating a perverse and unjustifiable policy in which the more effective are other countries' greenhouse policies the less effective ours would need to be.

The approach is therefore deeply flawed in principle and practice and, having no significant support from other countries, is not even useful as a basis for negotiation. It is a patently self-serving approach for Australia, and invites other countries to put forward self-interested approaches, thereby undermining prospects for agreement. *The sincerity of the Government in genuinely wanting agreement must be seriously questioned.*

Differentiation proposals from some other Annex 1 countries have been hailed by the Government as support for the Australian position. *But all of the alternative proposals for differential targets would have an effect precisely opposite to Australia's.* They call for *more stringent* targets for countries with *higher* emissions per capita and higher levels of GDP per capita. If these differentiation proposals were adopted, Australia would be set more demanding targets not easier ones.

Australia will play only a spoiling role in the international negotiations until it puts on the table a credible, workable proposal for targets which goes beyond a self-interested evasion of our responsibilities. Hints have been made about withdrawing from the Convention and accepting trade sanctions if differentiation on Australian terms is not agreed. This would be a foolish step causing great long-term costs to Australia, far greater than accepting any likely targets.

The arguments used to support the Australian position are highly tendentious. *Cost estimates of currently proposed uniform targets made by the Government's own model show that these costs are almost insignificant when compared to the expected growth of the Australian economy.* Furthermore, this modelling seriously over-estimates the size of some costs. The extremely small net costs to Australian living standards over the next few years are simply not significant enough to warrant undermining global agreement on this potentially catastrophic threat.

In addition, the argument that Australia would be disadvantaged by uniform targets is spurious. In the short term, our relatively poor performance to date in energy efficiency will mean that it is easier and cheaper for us to achieve savings in the future than almost any other country. In the longer term, when there are much more demanding targets and all industrialised and industrialising countries have to move away from fossil fuels, Australia will be in a stronger position than most other countries because of our natural endowments and technological leadership in alternative energy sources. *Far from Australia being almost uniquely disadvantaged by greenhouse gas targets, we are almost uniquely advantaged.* Developing this advantage, however, requires early and sustained measures to promote energy efficiency and alternative sources of energy.

Paradoxically, compared to uniform targets, it would be more costly for Australia in the longer term if its differentiation approach were adopted. Under the Government's proposal, Australia would become the outstanding global emitter of greenhouse gases per capita and lose all credibility. This diplomatic wound would cost us dearly in future dealings with Asia. Moreover, having specialised heavily in fossil fuel energy it would be all the more costly to restructure in a decade or two when more demanding targets are inevitably agreed. The Government's approach is thus a costly dead-end.

There are no good arguments for the Government's position in terms of principles, economic evidence, workability or as a basis for agreement. Whether it succeeds or fails, the Government's position is contrary to Australia's national interests. The principal reasons for this policy disaster are massive client capture of policy advisers by a few powerful industries and domination of policy on global affairs by a narrow trade perspective.

1. BACKGROUND

The Framework Convention on Climate Change (FCCC) was adopted in 1992 and came into force in 1994. In April 1995, the Berlin Mandate was agreed by the parties, that is, by the countries that have ratified their membership, including Australia and most other nations. Under this Mandate, agreement is to be reached by the end of 1997 on targets for reducing greenhouse gas emissions. These will be the first targets committing parties under the Convention. The final meeting to agree on targets is to be held in Kyoto, Japan in December 1997. Current negotiations and development of positions by parties is in preparation for this meeting.

There is now international scientific consensus that climate change caused by human activity is beginning to occur, that a wide range of profound effects to the globe will in all probability occur next century, and that action is essential if these effects are to be at least mitigated (IPCC 1996). Impacts of climate change include widespread dislocations to economic, social and environmental systems, including in particular effects on human health. These are the broad conclusions of the second assessment report of the Intergovernmental Panel on Climate Change (IPCC), the body of 2,500 top international climate scientists set up by the World Meteorological Organisation and the United Nations Environment Program.

However, individual scientists go beyond the cautious, consensus-based findings of the IPCC to state that change from the enhanced greenhouse effect, if not dealt with in time will almost certainly lead to catastrophic costs to the world. This is because much discussion of greenhouse, including the more specific findings of the IPCC, focuses on the effects of a *doubling* of carbon dioxide in the atmosphere, as though this were the final outcome. However, such a doubling is now almost certain to occur and, unless early action is taken well before the doubling point, will simply be a step to a trebling and an increased likelihood of catastrophes. Some credible estimates of the economic costs of a doubling of carbon dioxide in the atmosphere are huge (Sorensen 1997).

However, it will be argued in this paper that studies show that the costs of measures designed to head off these much higher levels are quite manageable for the global economy. Growing levels of economic welfare in the world are quite compatible with meeting the cost of greenhouse measures. The main requirements are a high level of international cooperation, and a steady course in gradually phasing out fossil fuel use beginning at an early date.

A major problem with discussing climate change is its enormous complexity. Tim Wirth, the leader of the US delegation to the Berlin conference on climate change, described this issue as 'probably the most complicated scientific, environmental, economic and political challenge in history' (*International Environmental Reporter,* 2 October 1996). Not only is the science of the greenhouse effect complex and still evolving, but this complexity is compounded enormously when the question of responses to the challenge and the economic impacts of these responses are introduced. Estimation of such impacts depends on the use of economic modelling which very few policy makers, let alone the general public, understand. Australian

Ministers responsible for greenhouse policy do not understand the modelling, but show no reluctance to quote its conclusions.

This obscurity has meant that Australian policy has been developed with no real involvement by the public. It has enabled the developers of the present government position to make highly dubious assertions almost without rebuttal. These assertions include:

- that proposed targets will impose unacceptable economic costs on Australia;
- that Australia faces far greater costs than other OECD countries; and
- that currently discussed targets will cost jobs.

The impression has been conveyed that Australia is being set upon by the other OECD countries and that it is in Australia's interests to oppose uniform targets. As we shall see, virtually every argument used to support the Australian position is deeply flawed, and the effect of the Australian position, whether it succeeds in international negotiations or not, is contrary to our long-term national interests.

2. THE AUSTRALIAN GOVERNMENT POSITION

Under the Framework Convention the parties have agreed that the first steps in reducing greenhouse gas emissions will be taken by the wealthy OECD countries, known as Annex 1 countries under the Convention. The Australian position is to oppose the imposition of 'uniform' reduction targets for emissions of carbon dioxide, the main greenhouse gas. Such uniform targets would be in the form of proportionate reductions from 1990 emission levels, reductions which until now have been supported by most Annex 1 countries.

Australian opposition to this position is based on the findings from economic modelling which purportedly show that the costs of reducing emissions for Australia, in the likely range of uniform reduction targets, are greater for Australia than for most other wealthy countries (ABARE & DFAT 1995). These costs have been determined as losses to national incomes against a 'business-as-usual' scenario, that is, against estimated growth in national incomes if no climate change measures had been taken (Fisher 1997).

This economic modelling has shown higher costs to Australia from uniform reductions than for most other developed countries. For instance, percentage costs to national income has been shown to be about three times greater for Australia than for the USA, and about five times greater than for European Union (EU) countries (BIE 1995). The significance of these figures is discussed later. These estimates have been the basis for the Australian proposal for a differentiation of targets between developed countries, so as to achieve 'equal economic costs' per capita.[1] It is argued

[1] At times the Australian position has been described in terms which seem to refer to an equal *financial* cost per capita, but in the official Australian position (DFAT 1996) the approach is to seek equal

that differentiation would result in a more equitable outcome and as such would make for a more workable set of targets.

Australia already has probably the highest levels of greenhouse gas emissions per capita in the world (Hamilton 1994). On top of this, the formula proposed by Australia to determine costs to countries would have the effect of giving Australia much less demanding emission targets than other Annex 1 countries. It would thus lead in all probability to Australia having much higher carbon dioxide emissions per head than any other country.

No doubt to simplify the Australian position, and therefore to attempt to make it seem more workable in negotiations, Australia is proposing that instead of requiring estimates of actual economic costs to countries as a basis for calculation of targets, certain 'indicators' (that is, factors) would be used to determine the size of emission reduction targets (Commonwealth of Australia 1996; DFAT 1996). It is believed that the use of these indicators would approximate the outcome from using economic costs to determine equal economic burdens per capita. Some other countries have also proposed the use of indicators to determine the size of emissions reductions for each country. Different indicators, which would have markedly different results for Australia, are proposed. The indicators proposed by Australia are:

- GDP growth;
- population growth;
- emissions intensity of the economy;
- fossil fuel trade; and
- emissions intensity of exports.

The Australian proposal has not been developed to the point of a formula in which these indicators would be used. In fact the actual negotiation of targets using these factors (even if they were agreed by other countries) would still be immensely complex. However, what this proposal means in simple terms is that an economy which

- is growing fast,
- has high population growth,
- has high levels of emissions per unit of GDP,
- exports fossil fuels heavily, and
- uses fossil fuels intensively in production of its exports,

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percentage reductions of national income, which would lead to somewhat different financial costs per capita because there are different levels of GDP per capita.

would be considered to incur heavier costs in reaching a uniform reduction target, and would consequently be able to have its target commensurately reduced. It is of course no coincidence that Australia already qualifies strongly under the last four indicators and aspires to the first.

3. FLAWS IN THE AUSTRALIAN POSITION

3.1 The polluter pays principle disregarded

The accepted guide for policy on pollution is the polluter pays principle (PPP), officially endorsed by the OECD in 1974 and universally adopted in principle since that time. Governments in Australia have firmly endorsed this principle for a range of domestic situations (Commonwealth of Australia 1992).[2] The PPP is both an equity and an economic efficiency principle:

- *equity* because it maintains that those who cause a problem should be responsible for the cost of removing it, and

- *economic efficiency* because, in accordance with economic theory, it leads to costs that are otherwise not borne by polluters in their operations being met by them, with consequent improvements in the overall efficiency with which all resources are used.

In theory the alternative approach of *victim pays* or beneficiary pays can be equally effective in terms of economic efficiency. This prevails where those who suffer from the effects of pollution pay the polluters not to pollute. However, there are two major objections to the victim pays approach: the obvious inequity of it, and the fact that the polluters have an incentive to continue to maintain the ability to pollute, because they are paid because of this potential. The victim pays approach therefore is never advocated.

Under the Framework Convention emissions reductions should be based on the polluter pays principle for reasons of both equity and economic efficiency. The approach most widely proposed has been to negotiate a uniform proportionate reduction in emissions from the agreed base year, 1990. Given that gradual steps must be taken to reduce this form of pollution, and that countries vary in the size of their emissions, this is a roughly equitable approach. It could be argued that a more equitable first measure might be to move to equal emissions per capita in each Annex 1 country, but nothing as equitable as that is being proposed in the negotiations.

The effect of 'uniform 1990 proportionate reduction' is that if country A had in 1990 twice the emissions of country B, then A faces emission reductions roughly twice that of B (depending on any changes since 1990), but at the end still emits at about twice the level of B. This hardly looks unfair to A. Yet Australia is in a country A position and claims unfairness. In fact, the base year of 1990 favours Australia

[2] ABARE has attempted to redefine the principle to incorporate equal marginal abatement costs in order to escape the contradiction (ABARE & DFAT 1995).

because, unlike some Annex 1 countries, Australia had very strong growth of emissions in the years up to 1990, but has had slower growth since then.

In place of this reasonably equitable and conceptually simple formula, Australia has proposed differential (non-uniform) targets among Annex 1 countries based on reductions causing equal 'economic costs per capita' between Annex 1 countries. This is claimed to be equitable and workable. As we shall see, it is quite clearly neither. The fundamental objections to the Australian position and to the general concept of equal economic costs are described in the following sections.

3.2 Inequitable and unworkable

Australia's differentiation approach is contrary to the basic equity and economic efficiency principle of polluter pays. In fact, to propose an equal economic cost per capita between countries which contribute differently to a pollution problem is fundamentally *inequitable*, rather than equitable, and clearly has no attraction whatever to less polluting countries.

Equal economic costs among polluters, even if it were accepted as the first step to reduce greenhouse emissions, would be unworkable in the longer-term in reducing emissions. This is because, used as a first step, it would probably accentuate already existing differences in per capita emissions. It would then be even more difficult to persuade low emission countries to agree that they should still face the same costs as very high emission countries for subsequent and more demanding targets.

Another reason why the Australian approach appears inequitable to many other countries is that it seeks a lighter burden for Australia because it is based on economic costs against a 'business-as-usual' base-case scenario. This means that Australia seeks easier targets because it was planning greater greenhouse emissions in the future, but must forgo these greater emissions at some economic cost. This is reflected in the indicators relating to expected economic growth, and the emission intensity of the economy. The Australian approach is thus intuitively unjust to countries which were not anticipating much larger emissions growth in the future.

3.3 Unreliable economic forecasts

Calculation using the indicators sought by Australia means estimating the size of economic developments well into the future, for instance in relation to the economic growth and structural change in the economy . There is no reliable way of estimating these variables even a few years ahead. Yet these economic forecasts are an essential part of the Australian proposal to calculate the size of emission targets for each country.

Several different economic models could be used to make these forecasts. Within each model there are many, often quite arbitrary, assumptions to be made in order to get results. For example, economic modellers usually must decide whether to hold real wage rates or money wage rates constant, and there is no 'correct' assumption. Yet alternative assumptions have major impacts on model results. Climate change negotiations between countries are complicated enough without bringing in arguments about which economic model is the right one, where every country will

have its own preference. For this reason alone the Australian approach seriously undermines the prospects for agreement.

3.4 Equal economic costs a dangerous precedent

Acceptance of equal economic costs based on income forgone (compared to business as usual) would set a dangerous precedent for both developed and developing countries. For developed countries, to accept such a basis for costs will be seen as setting the grounds for huge cost claims by developing countries when the time arrives for developing countries to begin meeting targets. Equalisation of economic costs would provide developing countries such as China and India with a powerful argument for extremely lenient targets. Before that stage, equal economic costs is an alarming concept for developing countries because they believe that the burden should be borne principally by developed countries with their high per capita emissions and high incomes.

3.5 Economically inefficient

Climate change measures will be economically efficient if they result in adoption of least-cost ways of reducing greenhouse emissions across the globe. The appropriate method of achieving this is the polluter pays mechanisms of a global carbon tax or globally traded emission permits. However, these are very unlikely in the foreseeable future and a uniform targets approach which leaves each country to develop its own policy responses is the next best solution. The Australian proposal would not result in achieving least-cost reductions in emissions, especially as it involves easier targets for countries which allegedly suffer economic costs due to reductions in fossil fuel exports (as discussed further below).

It is curious how economic policy advisers noted for hard-nosed, 'face-the-consequences' prescriptions based on economic theory – including user pays, removal of subsidies, divorce of equity from efficiency, and single-minded pursuit of efficiency – have abandoned these principles in the case of climate change and have discovered an entirely novel 'equity' principle as the sole basis for the national approach.

3.6 Population growth irrelevant

The Australian position also seeks higher emissions for Australia because of higher projected population growth. In effect we are saying that we expect higher population growth in the future than other developed countries, due to our past and expected immigration policy, and this will make achieving a fixed reduction target more difficult. We therefore seek to change the target to a per capita goal, so as to escape the responsibility for global climate impacts of our higher population growth. It is as though one part of our emissions should not be counted because of a completely unrelated policy. The Australian policy accepts the economic benefits of immigration but wants to absolve us of responsibility for the costs. Why should other Annex 1 countries find this a credible position?

The Australian position is mired in contradictions. The Government has been arguing that developing countries should be brought into any agreements to reduce

emissions because they will be responsible for the most of the emissions in the future due to their high rates of population and economic growth. So according to the Australian position, whilst high population and economic growth rates in developing countries are reasons for insisting that those countries be required to reduce their emissions, the same factors are used to argue that Australia should be given more lenient targets.

3.7 Perverse effects of fossil fuel trade

Special mention is needed of one of the more perverse aspects of the Australian position: its treatment of the fossil fuel trade. Interest in greenhouse measures in countries usually focuses on the costs of domestic measures to reduce emissions. However, the Australian proposal is to capture not only costs to Australia of domestic measures taken in Australia to reduce emissions, but also the costs to Australia of domestic measures in all Annex 1 countries, through changes in the demand for our fossil fuel exports. The effect of the proposal would be to make domestic targets in Australia even less demanding, as economic costs are increased if other countries import less coal in order to reduce their own emissions. Under the Australian position, to offset lower coal exports, higher emissions in Australia would be permitted.

This means that there are two pressures to have less demanding targets in Australia: high costs of domestic measures and lower exports of fossil fuels. In fact, the more ambitious are other countries' greenhouse measures, the less demanding Australia's would be. Thus if it were to be adopted, the effect of the Australian position is that as the rest of the industrialised world progressively shifted away from fossil fuels, Australia would become ever more firmly entrenched as a carbon dioxide emitter. In time, instead of being among the highest polluters, Australia would be the outstanding global emitter of greenhouse gases.

As a general approach to reducing greenhouse gas emissions, giving special relief on account of fossil fuel exports would lead to absurd outcomes. In the case of a country which had few opportunities for domestic emissions but relied heavily on fossil fuel exports, such as an underdeveloped oil exporting country, the Australian position could mean that in order to achieve equal per capita costs between countries, those countries cutting back on their imports of the fossil fuel for greenhouse reasons would have to *pay* such an exporting country for its loss of export income. Those making efforts to reduce their emissions would pay those doing nothing.

4. SABOTAGING THE NEGOTIATIONS

It is apparent that there are no grounds in general principles, equity or economic efficiency, why the Australian approach should be supported, and various strong reasons, in practice and in principle, why it should be rejected. It has little or no attraction for most other developed countries. It is therefore not even a workable approach in terms of providing a basis for agreement among a large number of countries. Every indication is that this particular approach will not succeed, and its

only practical effect will be to complicate an already very complex issue and make international agreement more difficult.

Why then was this approach adopted by Australia? It could well be a case of naive self-interest as it is a transparently self-serving approach for this country. In pushing forward with such a self-centred approach, however, doubts arise as to the sincerity of the Australian Government's claimed commitment to reaching an effective agreement among parties. By leading with such an approach Australia virtually invites all other Annex 1 countries to develop their own self-interested approaches unsupported by any other country, thus undermining the prospect of consensus.

Press reports from the December 1996 negotiations in Geneva suggested that 'differentiation' has won some converts among other Annex 1 countries, at the expense of the uniform reductions approach (*Australian Financial Review*, 24 February 1997). This may seem like a win for the Australian position. However, proposals by other countries for differentiation would have quite the opposite effects compared to the Australian differentiation position. Other countries that oppose uniform proportionate emission reductions want *smaller* reductions for countries with *low* emissions already, or *larger* reductions for countries with *high* emission levels.

Norway, for instance, which Australia seems to regard as a major ally in seeking differentiation, takes the following position:

> Parties should take their share of the burden in proportion to their relative contribution to the climate change problem. Those who currently emit more than their fair share should thus contribute more. Also, Parties that have greater capacity, economic or otherwise, to deal with the problem, should in principle do more than other Parties to reduce GHG emissions (Dovland 1997).

This is quite the opposite of the Australian position, as shown by the three indicators Norway proposes. Under the Norwegian proposal, a country would be required to reduce their emissions by *more* if:

- it has higher emissions per capita;
- it has higher GDP per capita; and
- it has higher emissions per unit of GDP.

The first and third of these three indicators are the precise opposite of Australia's proposed indicators, and the second (GDP per capita) is not helpful to the Australian position. In other words, although the adoption of differentiation by some other countries is hailed by the Australian Government as a vindication of its position, the effect of the adoption of the other differentiation positions would be much worse for Australia than the uniform reductions position.

Other developed countries which Australia claims as major allies on differentiation, like France and Japan (*Australian Financial Review*, 20 February 1997), are those

with low per capita emissions, and it is this that drives their concern. They want to see countries rewarded for their low levels of emissions rather than countries being given special treatment because of their high levels of emissions. Their differentiation approaches therefore, like Norway's, are generally in the direction of equal emission levels for all Annex 1 countries, and make the uniform 1990 approach seem relatively favourable for Australia. These approaches would have precisely the opposite effect from the Australian approach, which in reality is more isolated than ever. Claims by the Government that Australia is winning the intellectual argument on differentiation (*Weekend Australian*, 22 February 1997) are therefore curious, to say the least. The effect of Australia's whole stance in FCCC negotiations is to render Australia a player with only a negative influence on outcomes, because it is simply not putting on the table a credible, workable proposal which looks like anything more than a self-interested attempt to avoid reducing its own emissions.

The European Union has been criticised by Australian representatives for adopting differentiation among its member countries while seeking uniform reductions for other countries, as though this justified the Australian stance (*Australian Financial Review*, 26 February 1997, 7 March 1997). However, this is a shallow criticism for two reasons. Firstly, the EU is legally one party for the purposes of negotiations under the Convention and other international agreements, and is increasingly one economy. The Commonwealth Government will not require each Australian state to reduce its emissions uniformly. Secondly, the EU countries which have less demanding targets within the EU are not chosen for the reasons that Australia is claiming easier targets. Generally they are low GDP, low emitting, non fossil fuel exporting countries, such as Portugal, Greece, Spain and Ireland.

Developing countries are reported to dislike the proposal for uniform reductions, even though there is no obligation on them to reduce their emissions (*Australian Financial Review*, 26 February 1997). They apparently fear a precedent for obligations on all countries to reduce emissions equally. They are also suspicious of US support for tradeable emission rights as part of uniform targets, because they see this as a means by which wealthy countries will be able to buy their way out of reduction targets. Developing countries therefore look sympathetically at differentiation. However, their overwhelming view is that developed countries, with their high emissions and wealth per capita, should lead the way. The particular Australian approach is therefore likely to have no appeal to most developing countries and has attracted harsh criticism from the Pacific island states in particular.

Since Australia has no significant allies for its particular approach, developing or developed, the likely prospect is that Australia will have to accept a global regime brokered between the major developed and developing countries. Recently hints have appeared in the press that Australia might not take part in generally agreed targets unless they involved differentiation, and would be willing to face the consequences of trade sanctions against it (*Australian Financial Review*, 8 February 1997; *Weekend Australian*, 8 February 1997). This is curious if reported correctly because, as we have seen, differentiation is likely to be *more* demanding for Australia than uniform targets.

Why then does Australia support differentiation so strongly? The suspicion is that differentiation is being supported because, while there is only one uniform reductions proposal, there are several differentiation proposals. The real objective may be to weaken the prospect of agreement and thereby undermine the negotiations.

If Australia were so foolish as to withdraw from binding targets formally agreed by every other wealthy and major developing country, the long-term costs to Australia would be very large. The economic costs of trade sanctions, or even the threat of them, would quite likely be far greater than the small costs of complying with any foreseeable targets. Australia would of course lose all credibility on the greenhouse issue and the ability to influence the global debate any further. The commercial benefits of Australia's good environmental image, such as trading on our 'clean green' image for food exports and tourist income would be put in jeopardy. In fact Australia could forget about being taken seriously in international forums when calling for responsible measures on any issue. Australia's good name would be hijacked to protect very narrow but powerful interests.

5. ADDITIONAL FLAWS IN THE AUSTRALIAN POSITION

There are other flawed arguments that form part of the Australian position.

5.1 Absolute costs of emission reductions insignificant

It is a fundamental part of the Australian position, repeated constantly, that the costs of reducing carbon dioxide emissions are higher in Australia than in other Annex 1 countries. This is the basis of the argument that Australia has more to lose than almost any other developed country, justifying adoption of the differentiation position. However, this contention needs close examination, because overall it is highly misleading as regards the best long-term policy position for Australia.

The first issue is the actual size of these costs to the economy, rather than their size relative to other Annex 1 countries. Modelling by MEGABARE, the Government's own model used to justify its position (and partly funded by the coal industry), indicates that the impact of stabilisation of emissions at 1990 levels on the Australian economy would be minuscule – less than one half of one per cent of gross national expenditure by the year 2020 (ABARE & DFAT 1995). If the more demanding objective of reaching emission levels 20% below 1990 were the aim, then costs to the Australian economy would be a loss of 0.3% of economic activity in 2000, rising to a loss of 1% by the year 2010.

While these are greater than similar estimates for other Annex 1 countries, they are extremely small given the following:

- they take place against continuing growth of the Australian economy of about 3.5% per year. In other words, we will all on average be much better off in economic terms, even taking account of greenhouse measures. As one commentator expressed it, in the absence of emission reduction measures Australians will achieve double their per capita income around 1 January 2025.

If we stick to our international commitment to reduce emissions then that level of income will be deferred to around 1 March 2025 according to ABARE results (Professor John Quiggin, *Australian Financial Review* ;

- the MEGABARE model seriously over-estimates some costs of reducing greenhouse gas emissions (ABARE & DFAT 1995). It does so for at least two reasons. Firstly, it assumes a high level of efficiency in energy use already (few 'no regrets' opportunities) which is clearly not the case (Walker 1996). Indeed, the Government's much-touted Greenhouse Challenge Program is a testimony by the major emitting companies themselves to the existence of widespread no-regrets measures. Secondly, it is conservative on the technical possibilities for non-fossil fuel energy sources because it draws its evidence from past experience and does not allow for technological improvements, improvements that would undoubtedly be stimulated by emissions reductions measures.

A major instance of over-estimating costs of reducing emissions relates to land clearing in Australia. Greenhouse gas inventory figures show that about one quarter of carbon dioxide emissions in Australia can be attributed to land clearing (NGGIC 1996). The costs of eliminating these emissions in Australia's economic model MEGABARE are exaggerated both because clumsy economic instruments are assumed as the method to deal with the problem, and because major benefits from ceasing land clearing are ignored. For the most part land clearing is of little or no long-term economic benefit to Australia, while there are costs in terms of soil degradation, micro-climate changes, and biodiversity loss. Land clearing makes a very small contribution to overall agricultural production in Australia, and often amounts to the 'mining' of marginal land. The prohibition of further land clearing for greenhouse reasons would amount to a major costless 'no-regrets' measure, if all its effects are considered, and this step alone would, if properly included in the modelling, allow large reductions in emissions at no or insignificant cost.

Finally, it should be remembered that in assessing the 'costs' of greenhouse gas abatement measures for Australia, the MEGABARE model takes no account at all of the economic costs of climate change. The economic costs of climate change are equal to the economic benefits of avoided climate change. Thus the Australian position is based on a model which accounts for the costs of a policy but completely ignores the benefits.

In summary, while costs for the proposed target might be shown by the modelling to be higher in Australia than some other Annex 1 countries, so far as affecting Australian standards of living, the estimated costs – even allowing for the fact that the modelling seriously exaggerates them – are almost insignificant. They simply are not large enough to provide the basis for an Australian position which threatens to disrupt and further complicate global agreement on this vital issue. Moreover, as we will argue below, pursuit of the Australian position based on the modelled cost estimates would seriously disadvantage Australia in the longer term.

The very low estimates of costs of abatement measures by ABARE only reflect similar results from dozens of modelling exercises overseas. An extensive review of nearly 100 modelling studies by Grubb *et al*. (1993) concluded as follows:

> ...our study and analysis therefore suggests that keeping long-term global CO2 emissions to about current levels -- which is much more severe than current proposals to stabilize emissions in industrialized countries -- may if carried out in an efficient manner be expected to reduce global GNP towards the middle of the next century by no more than 1-1.5%, and average GNP growth rates over the period by less than 0.02-0.03% per year. (Grubb *et al.* 1993 p. 472)

5.2 Relative costs between countries irrelevant

Setting aside their small absolute level, are Australia's emission reduction costs greater than those of other Annex 1 countries? It is argued by the Government that Australia will be faced with higher costs than most other countries partly because a number of other major industrialised countries have immediate opportunities to reduce emissions at low or zero cost or even net economic benefit. In particular, Germany has opportunities to phase out very inefficient East German industry and very inefficient domestic coal mines supplying electricity. Britain has scope to phase out inefficient coal for gas. However, there are three major reasons why this is not a valid basis for Australia's overall greenhouse approach.

Firstly, the economic modelling for Australia fails to take into account the full potential for cost-effective reductions in carbon emissions from energy efficiency, fuel switching, demand management, and the use of new non-fossil fuel sources of power. It therefore exaggerates the comparative cost to Australia of uniform targets.

Secondly, since the absolute size of costs of the proposed targets would have an almost insignificant effect on Australian living standards, their size relative to some other countries' costs has very little relevance.

Thirdly, it assumes that Australia's 'comparative advantage' in fossil-fuel based industries is fixed and given. This reflects rigid and short-term thinking. A major theme of Australia's official position is that Australia's international competitive advantage lies in the use of fossil fuels, especially coal, to provide low-cost electricity to smelt metals from Australia's mineral reserves. It is argued that this is the optimal course both for Australia and the world. This advantage is part of the reason emissions reduction costs are said to be higher in Australia than in other industrialised countries which specialise in less energy-intensive activities, such as elaborately transformed manufactures.

However, we need to take a longer-term view. In a decade or two much more demanding greenhouse targets are likely and all industrialised and industrialising countries will be faced with the need to turn decisively to alternative energy sources. At this point a very different picture of competitive advantage emerges.

Consider the main alternatives to increasing fossil fuel usage. These include greater energy efficiency, solar energy, wind power, tidal power, geothermal sources, development of carbon sinks, preservation of sinks by stopping practices such as land clearing, biomass fuels, gas as a supplementary and interim fuel, nuclear energy and

hydroelectricity. In most of these Australia is very well placed compared to almost all European and industrialising Asian countries.

Australia has ground to make up in energy efficiency compared to measures already undertaken and thus not available to other industrialised countries. To illustrate, between 1970 and 1992 Australia's energy-related carbon dioxide emissions per unit of GDP fell by 13% while those of all OECD countries fell by 36% (Hamilton 1994). Thus Australia's relatively poor performance in the past provides it with relatively cheap and easy energy savings compared to countries which have a much better record of energy efficiency.

Australia's advantage in many alternative sources of energy is inherent, deriving from our large land area, sunny climate and long coastline per capita. Research and development is proceeding apace on technologies such as photovoltaics and wind power to make them commercially viable in the near future so that they will take a large and growing share of the power supply. The two main opportunities where Australia is conspicuously lacking are hydro and nuclear. However, these are the two where opportunities are most limited in the longer term.

In summary, Australia has the opportunity to develop a strong advantage compared with most industrialised or developing countries in energy efficiency and most alternative energy sources when more demanding targets are introduced, a situation which is highly likely to be the case in a decade or two. *Rather than being almost uniquely disadvantaged compared with other industrialised and developing countries, Australia is almost uniquely advantaged for the longer term greenhouse challenge.* Exploiting this advantage means seizing the opportunity at an early date to build on Australian expertise already acquired in areas such as solar technology and, more generally, moving early to reduce the long-term costs of conversion to non-fossil fuel sources. However, the Australian position on climate change thoroughly undermines such initiative and is therefore contrary to the national interest.

5.3 Carbon leakage insignificant

The possibility of carbon leakage is one of the arguments that is used to bolster the Australian position. If uniform reductions are taken in Annex 1 countries, it is argued, there will be leakage of carbon intensive industry to developing countries which do not have reduction targets, thus undermining the emission reduction objective. It is argued that this leakage will be reduced if Australia is allowed to specialise in its more fossil fuel-efficient production of metals, in accordance with the Australian proposal for equal economic costs among Annex 1 countries.

How significant is carbon leakage likely to be? Different modelling exercises show differing levels of likely leakage, including some that show it to be very low, a few percentage points of reductions only (BIE 1995).

The carbon leakage argument is based on the doubtful assumption that a changing pattern of energy sources in Australia to meet ambitious greenhouse targets (say one involving a gradual increase in non-fossil fuel sources and energy-efficiency, combined with an increase in gas as a supplement to these measures) cannot produce

power at prices to allow a globally competitive metal processing industry in Australia. This assumption is challenged by many experts in the energy industries.

In any case, all proposals for action by Annex 1 countries only, including the Australian position, run the risk of leakage to non-Annex 1 countries. It can also be argued that the Australian position amounts to officially agreed leakage activities by Australia, because it means that the more demanding are the targets for other Annex 1 countries, the more Australia will be allowed to emit.

The Government argues that Australia should be permitted to become a global specialist in the use of fossil fuels because Australia uses fossil fuels much more efficiently than Asian countries in producing, for example, metals. Therefore global emissions will be lower if Australia, rather than developing countries, carrying on such activities. It may be true that current electricity production from coal in Australia is 15-25% more efficient in use of coal and thus carbon dioxide emissions than installed capacity in typical Asian countries. However, the efficiency of electricity production in many of the relevant developing countries is rapidly catching up with that of Australia, and any new capacity installed anywhere to take up the slack offered by Australian withdrawal from new metal smelting is likely to use globally available state-of-the-art technology. Current relative efficiencies are no guide to future relative efficiencies.

Moreover, the efficiency advantage of Australian electricity production is often over-stated. The newly privatised Hazelwood power station in the Latrobe Valley has had its life extended by 30 years. Yet the thermal efficiency of Hazelwood is only 24%, less efficient than many existing coal-fired stations in developing countries.

6. BUT WHAT IF THE AUSTRALIAN POSITION WERE ADOPTED?

An even worse prospect for Australia than having no influence on the climate change negotiations would be if its approach were adopted. Paradoxically for a policy designed to reduce costs for Australia, adoption of the Australian differentiation position would be a very costly outcome for us in the longer term.

6.1 Long-term implications

The likely longer-term implications of adoption of the Australian position would be as follows.

1. Australia would become the outstanding global emitter of greenhouse gases per capita, with loss of credibility on the greenhouse issue and possibly other international issues.

2. In a decade or two there will almost certainly be much more demanding greenhouse targets. Having specialised so heavily in emitting activities, Australia would find it all the more costly to then reverse its course and move away from its specialisation. The general lesson of all industry restructuring is that the longer action is put off, and the quicker it must ultimately be taken, the higher are

the costs of such action. Thus in the longer term the proposed policy cannot be anything other than a costly dead-end.

3. Having less demanding targets will heavily undermine efforts in Australia to develop alternative energy sources, greater energy efficiency, carbon sinks, and other ways of reducing emissions. What would be the point of giving these measures any priority, urgency or resources if we have ample scope for continued high emissions? The authority of governments to act in any way to cut emissions and promote alternatives would be completely undermined. This would of course add greatly to the final cost of restructuring, and cut Australia out of what is likely to be the largest market for global technological innovation and exports in coming decades, where currently we are among the leaders.

4. Our stance has the potential to severely damage our relations with Asian-Pacific countries. Those who advocate the Australian approach like to emphasise our role as suppliers of energy-intensive exports to Asia, and how different our trade position is to that of European countries. However, our Asian-Pacific position carries with it other implications.

   If there is one firm view that developing countries take of the greenhouse problem it is that Annex 1 countries should lead the way in reducing emissions because of their wealth and their historical contribution to the problem. Pacific island countries already resent Australia's greenhouse position. All studies of the costs of climate change across the globe show that costs fall most heavily on poorer countries. As the effects of catastrophic weather events begin to impose huge costs on tens of millions of Asians living in low-lying areas (*The Australian* 10 April 1997), and as their governments begin to face the task of reducing their already low per capita emission levels, attention may quickly turn to an Australia is part of the region but which would have done less than any other wealthy country to reduce emissions and would be a world leader in per capita emissions.

An ironic aspect of Australia's greenhouse policy arises from that fact that Australia advocates a system of global tradable emissions quotas when this becomes feasible in the longer term. This gives a distant prospect of some economic respectability to the Australian position. What this means however is that we are striving to specialise in activities for which we are also advocating high prices for the right to emit once tradable permits are introduced. Whether tradable quotas are introduced or not, heavier reduction targets in the future will make restructuring in time all the more costly the more we specialise in emitting activities now.

6.2 No answer to unemployment

'Jobs' are always put forward as a justification for the Australian position. However, it is highly unlikely that if the Australian position were adopted there would be any significant impact on unemployment levels. The effect of the Australian policy would be that Australia would increasingly specialise in the production of metals smelted using coal. The current global trade patterns that push us towards this specialisation would be greatly strengthened as other industrialised countries withdraw from this activity. The type of projects that would arise under this approach are marked by very little employment for the huge investment involved in

massively mechanised mining operations, power plants and smelting works. As a rough rule of thumb such investments often generate one job for about $2 million in investment capital (Access Economics 1996) so that a $1 billion project creates about 500 jobs directly. Even if generous multipliers for employment created indirectly through tax revenue and service provision to such projects are used, a whole string of such projects would make almost no dent in the unemployment level.

By contrast, capital invested in renewable energy systems, energy efficiency measures, demand management schemes and more sophisticated manufacturing industry exporting renewable energy equipment and services would be likely to generate far more jobs for a given amount of capital because of the inherently greater labour-intensity of these activities.

7. CONCLUSIONS

There is no sound basis for the Australian Government's climate change position in terms either of economic principles, workability, equity or prospects of agreement between countries. It tends to undermine the likelihood of reaching international agreement. It is based on a far-fetched interpretation of questionable cost estimates, an interpretation which misreads Australia's economic interests in the short and the long term.

The Australian negotiating position is contrary to our national interests because it lacks credibility internationally and undermines global efforts to begin dealing with the climate change problem.

It is also contrary to the national interest because if it were to succeed it would tie us further to fossil fuel energy, it would generate little employment, it would undermine the development of new technologies and set back a number of burgeoning industries, and it would lead to Australia being the world's outstanding per capita emitter of greenhouse gases. This would seriously jeopardise our relations with Asia-Pacific countries and cost us dearly in the longer term.

Moreover, the Government's position is contrary to Australia's interests because in the end it would be a self-defeating policy. As tighter global greenhouse targets inevitably arrive Australia would be compelled to restructure after specialising in the wrong industries, ignoring the need to make the transition away from fossil fuels, and giving low priority to the technologies and approaches we will then need. It ignores our natural advantages in many alternatives to fossil fuels. It is, above all, myopic.

How has this policy disaster arisen? In addition to the difficulty the public has in grasping the issues, major reasons include:

- massive client capture of policy-advisers by a few industries. Policies in this area have been developed closely with domestic industry. 'Industry' however does not include industries which support greenhouse actions – such as the renewable energy and insurance industries – nor does it include the primary, manufacturing and service industries which employ most people and which can easily live with, and indeed benefit from, any envisaged greenhouse measures. 'Industry' means a small range of industries, notably the coal and aluminium industries, which see

themselves as adversely affected by such measures. As always, those who see themselves as threatened are far more active than the majority who do not;

- the domination of a broader understanding of global affairs by a narrow 'trade negotiations' and 'economic interests' outlook which interprets foreign issues largely in terms of short-term economic gain based on the existing economic structure. In this case, possible trade losses for a few industries and negligible economic welfare costs for Australia as a whole are being used to block Australia from contributing positively to meeting a global threat of the first magnitude; and

- the resurgence in the face of globalisation of the traditional view that Australia's main role in the world is to specialise in the production of bulk commodities. Faced with a technological and political challenge like climate change, the Government is retreating to a traditional role based on natural resources rather than human skills and technological know-how.

To be relevant to the global climate change issue, Australia must change its position to one that represents a credible contribution to international agreement and that recognises the reality that as a leading emitter per capita we must make our due contribution. We need a position that prepares us early for the long-term climate change challenge, so that the costs of adjustment are easily managed and we remain technologically advanced. This is quite within our capabilities, and is a political winner for the government with the courage to stand up to the fossil fuel-based industries.

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