CHAPTER 9

EMISSIONS TRADING

> *To deliver lower emissions, the cost of CO_2 needs to be internalised into investment and energy purchasing decisions. In other words, the emitters of greenhouse gas need to see the cost consequences of their actions.*[1]

Introduction

9.1 In a context where Australia's total emissions trends are already putting the ability of the country to meet its 2008-12 Kyoto target into doubt, and in which there are alarmingly rapid increases in the largest emissions sector - energy - many witnesses argued that Australia would need to progress from voluntary to mandatory measures. In particular, many argued that only an approach which placed a price on carbon emissions, either through taxation or a system of tradeable permits, would achieve the long term reductions necessary to meet Australia's international obligations.

9.2 A number of factors have led the Committee to conclude that voluntary measures are insufficient to achieve the required emission reductions. These include the impact of energy market reform on emissions from that sector, and the lack of progress in reducing transport emissions and the progress to date of voluntary measures, such as the Greenhouse Challenge. The key issue then becomes how measures can be designed to achieve effective levels of long term abatement at least cost to the economy, to ensure flexibility and provide investors with certainty, and to ease the burden on vulnerable regions or sections of the community.

9.3 The Committee has concluded that a system of tradeable emissions permits ('emissions trading') is likely to form part of any least cost approach to emissions abatement at both a national and international level. However, it heard a diversity of views as to whether there was a need for such a system, the best timing for its introduction and its coverage and design.

9.4 The Kyoto Protocol provides for the establishment of an international emissions trading system, a feature which received the strong support of the Australian Government at Kyoto. While the Commonwealth Government has begun consultation and design work on a possible domestic emissions trading scheme, it has deferred its introduction until 2008 and possibly later. In August 2000, Senator the Hon Nick Minchin, Minister for Industry, Science and Resources, announced that:

> The Government will only implement a mandatory domestic emissions trading scheme if the Kyoto Protocol is ratified by Australia, has entered

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1 Ric Brazzale, *Proof Committee Hansard*, Melbourne, 21 March 2000, pp 215-16.

> into force and there is an established international emissions trading regime. This decision does not rule out the subsequent introduction of such a scheme if further analysis demonstrates that this would be in the national interest.[2]

9.5 This statement by the Government is of serious concern to the Committee. Not only has the Government ruled out introducing a mechanism that could ease the transition to lower emissions for Australian consumers and industry, but it appears to be hedging its commitment to meet its undertakings given at Kyoto in 1997. Senator Minchin also said that 'We have given very firm commitments to industry that, while we intend to fulfil our Kyoto commitments, we are not prepared to sacrifice the competitiveness of Australian industry'. He says that the Government 'will avoid greenhouse gas abatement policies and measures that will distort investment decisions between particular projects and locations', and that it will 'avoid greenhouse gas abatement policies that unduly limit access to the most cost-effective greenhouse gas mitigation options'.[3]

9.6 In the Committee's view these statements are tantamount to an abdication of responsibility on the part of the Commonwealth Government. To avoid 'measures that will distort investment decisions between particular projects and locations' is to dismiss policy options that may be required if the greenhouse trends of current market structures in energy and transport are to be reversed. It is these structures, which reward environmentally irresponsible investments and technology choices, which are distorted. It is entirely rational to utilise flexible market-based instruments like emissions trading to promote and reward investment shifts that will be greenhouse beneficial.

9.7 Such policies are not likely to cause damage to business, if they are well designed and sensitively applied over an appropriate time frame. This chapter argues for an emissions trading system that is introduced gradually and takes account of a range of circumstances in which the concessional treatment of emitters would be justified, especially in the lead-up to the first commitment period and while developing countries are not subject to binding emissions reductions. With these features, emissions trading offers Australia the most flexible and efficient way of meeting its Kyoto commitments at least cost to the national economy. Deferring action only runs the risk of incurring much higher costs in later years.

9.8 Under Articles 3 and 17 of the Kyoto Protocol, Parties are allowed to trade unused emissions credits. That is, Parties whose net emissions are likely to fall below their assigned amounts can sell them to Parties who require additional credits. The detailed design and structure of the system - including rules for verification, reporting

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2 Senator the Hon Nick Minchin, Media Release, *Government Provides Greater Greenhouse Certainty For Industry*, 23 August 2000.

3 Senator the Hon Nick Minchin, Media Release, *Federal Government Guarantees No Premature Introduction of Greenhouse Gas Emissions Trading*, 4 September 2000; and Senator the Hon Nick Minchin, *Federal Government Greenhouse Commitments to Australian Industry*, 6 September 2000.

and accountability - was deferred for negotiation at later meetings of the Conference of the Parties (CoP).[4]

9.9 Agreement on the design and rules of an international emissions trading system may be achieved at the 6th CoP meeting at the Hague in late 2000 (CoP 6). Australia is part of the 'Umbrella Group' of countries (whose other members are Canada, Iceland, Japan, New Zealand, Norway, Russia, Ukraine and the US) which is seeking to progress discussion of such a system.[5]

9.10 The Commonwealth has already begun to explore options for the introduction of a domestic emissions trading system. The Australian Greenhouse Office (AGO) has released 4 discussion papers as part of an ongoing consultative process with industry and other stakeholders. The papers, listed below, respectively discuss:

- (1) *Establishing the Boundaries*. The coverage of greenhouse gases and sinks, and sectors of the economy;
- (2) *Issuing the Permits*. Options for the allocation of emissions permits, and their implications for fairness, efficiency, policy outcomes, abatement costs and competitiveness;
- (3) *Crediting the Carbon*. How an emissions trading system would calculate and credit the sequestration of carbon in 'sinks'; and
- (4) *Designing the Market*. How permits will be designed, penalties and administration, monitoring and measurement issues, and permit trading.

9.11 The AGO stated that it would use the consultation process to help it formulate advice to the Government, which was provided in the first half of 2000. It explained that:

> The AGO strategy for developing advice to the Government involves consultation with key experts, state and territory governments, industry (both sources and sinks) conservation groups, other interested parties and the general public through meetings, seminars and a series of discussion papers.
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> The AGO has established an Experts Group on emissions trading, which brings together a number of public and private sector experts who have made a contribution in the field of emissions trading and related areas. Also, an Emissions Trading Sub Committee of the Council of Australian Governments (COAG) High Level Group on Greenhouse has been established to consult with state and territory governments. Consultation

4 Michael Grubb, *The Kyoto Protocol: A Guide and Assessment*, The Royal Institute of International Affairs, London, 1999, pp 128-29.

5 Australian Greenhouse Office, *National Emissions Trading Discussion Paper 1: Establishing the Boundaries*, March 1999, p 7.

with other interested parties is occurring through peak industry organisations and other fora.[6]

9.12 The Committee commends the efforts of the AGO in acting early to consult on and develop detailed design and implementation options for a domestic system of emissions trading. The Committee does not intend to make detailed recommendations about the design of the system, much of which may depend on further consultation, trials and economic modelling. However, a number of key issues do face this inquiry:

- whether a domestic emissions trading system needs to be introduced, and whether it would be preferable to a tax on carbon;
- the best timing for its introduction;
- the scope and breadth of the system;
- key design principles, such as whether permits should be auctioned or given away at a reduced or zero cost; and
- whether emissions trading would need to be complemented by other policy, taxation or regulatory measures.

Why Introduce Emissions Trading?

9.13 In the Committee's view, there are a number of reasons why the introduction of a domestic emissions trading system is attractive:

- current policies and voluntary measures are failing to restrain the growth of Australia's emissions. This is particularly true for energy, which accounts for almost 80 per cent of national totals and is likely to reach 150 per cent of 1990 levels by 2010.[7] A measure such as emissions trading may be the only way of ensuring that we can meet our Kyoto commitments for 2008-12 and the potentially lower targets in later periods;
- emissions trading is favoured by many regulators, industry sectors and other stakeholders as a flexible, efficient way of achieving greenhouse emissions reductions across the economy, using the strengths and operations of the market itself. In particular, many experts believe that it will encourage abatement at least cost and with high efficiencies, because abatement in low cost opportunities will occur first, which would create a flow of permits to areas where abatement could only be achieved at high cost. By transforming the market for carbon-based products, emissions trading would ensure that the market rewards investment decisions in abatement;

6 Australian Greenhouse Office, Submission 169, p 1688.

7 Australian Greenhouse Office, *National Greenhouse Gas Inventory 1998*, p A-3; and McLennan Maganasik Associates, *Greenhouse Gas Emission Projections: Australian Electricity Generation and Natural Gas Combustion*, Report to Australian Greenhouse Office, 5 June 2000, p vi.

- emissions trading offers the potential to promote abatement in all the major emissions sectors, whereas current policies have very limited coverage. In particular, it would create scope to include crucial sectors such as transport and agriculture, and would also create a mechanism to include and encourage the development of carbon sinks; and
- a domestic emissions trading system would make it easier for individual firms to trade emissions credits internationally, reducing the administrative and financial burden on government, and helping limit the costs to Australia of reducing emissions.

Integrating with an international emissions trading system

9.14 Given the existence of an international emissions trading system, ratifying the Protocol would raise the question of how best to integrate the Australian economy with that system. An international emissions trading system would create scope for Australia to buy emissions permits on the international market in order to make up any shortfall in its total; however, the way in which those liabilities would be distributed within Australia is not clear. Dr Clive Hamilton argued that this could expose taxpayers, rather than polluters themselves, to such liabilities:

> I note [AGO Chief Executive] Gwen Andrews said yesterday that, if domestic emission measures fail, we can simply purchase credits on the world market. Who will purchase those credits? At the moment the major polluters in Australia have no obligation to do anything. Is she saying that the Australian Government, courtesy of the Australian taxpayer, will purchase those credits in order to bail out the polluters who fail to meet targets?[8]

9.15 The AGO has stated that, if a domestic emissions trading system is introduced, providing for its easy integration into the international system is a 'key requirement' and an important design criterion. For this reason, they prefer a 'cap and trade' to a 'baseline and credit' approach.[9]

9.16 The international system incorporated in the Kyoto Protocol is effectively a 'cap and trade' system, which caps the volume of emissions allowed and limits the available number of permits to that cap. Thus, whoever possesses permits, or however they are traded, no volume of permits greater than the targets agreed will exist. 'Cap and trade' thus creates a foolproof way of capping emissions, because no legal rights to exceed a given volume of emissions (either nationally or internationally) will exist.

9.17 In a domestic system the number of potential permits in circulation will be capped at the national target allowed under the Kyoto Protocol, which in Australia's case is 108 per cent of 1990 emissions. Within the 'cap and trade' system flexibility

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8 *Proof Committee Hansard*, Canberra, 10 March 2000, p 58.

9 Australian Greenhouse Office, *National Emissions Trading Discussion Paper 4: Designing the Market*, December 1999, p 6.

exists for permits to be traded among market participants, and allocated using either auctions or administrative or concessional methods.

9.18 In a 'baseline and credit' system each participant is assigned an emissions 'baseline' which represents a schedule of allowable emissions over time (often set to decline). When emissions fall below that baseline the unused credits can be traded; if they exceed the baseline, credits must be purchased on the open market. A feature of this system is that emitters are inherently allocated a free tranche of permits based on their expected emissions levels, which may explain the popularity of this approach in industry submissions to the AGO discussion papers.[10]

9.19 The AGO is unenthusiastic about 'baseline and credit' because: setting and graphing paths for individual firms would be administratively prohibitive; it would also limit the supply of available permits and cramp the market, because permits would only be created when emissions had fallen below the baseline; it could reduce policy flexibility in ameliorating the impacts on some sectors, because no permit revenues would be available to government; and it would not be compatible with an international emissions trading scheme.[11]

Ensuring Australia meets its Kyoto target

9.20 The AGO argues that emissions trading is a very dependable emissions control strategy and can minimise the potential costs of achieving a given level of emissions reduction. 'Implementation of an emissions trading system, or other market-based measures at the national level', it argues, 'would be likely to give Australia its best chance to fulfil its commitments under the Kyoto Protocol at least cost':

> Trade would occur between market participants who have different costs and opportunities for reducing their emissions output. The emergence of a permit market would allow emitters who have exhausted their lower-cost abatement opportunities to buy additional emission permits at the prevailing price. Conversely, emitters with substantial low-cost abatement opportunities would have an incentive to adopt them, and free-up permits for sale within the market. Equalising the costs of abatement across sources in this way would minimise the total costs of abatement.[12]

9.21 The AGO told the Committee that they favoured a 'cap and trade' system, and if that were implemented, it would be the 'most certain means' of achieving Australia's Kyoto target:

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10 Australian Greenhouse Office, *National Emissions Trading Discussion Paper 4: Designing the Market*, December 1999, p 16.

11 Australian Greenhouse Office, *National Emissions Trading Discussion Paper 4: Designing the Market*, December 1999, pp 26-27.

12 Australian Greenhouse Office, *National Emissions Trading Discussion Paper 1: Establishing the Boundaries*, March 1999, p 8.

> The key issue is the cap. The design that we would propose is a cap and trade system, which essentially says that if we have 108 per cent of our 1990 baseline and, to pick a figure out of the air, purely hypothetically, that represents 500 megatonnes per annum, then that would be the cap under an economy-wide system. Whatever population of emitters we had at that point that were covered by a trading system, together they could only emit that 500 mega-tonnes a year. So, in effect, emissions trading is not just a question of trading pieces of paper and permits around it; it is probably the most certain means of achieving a particular target because you cap it and then put a limited number of permits through the economy as a whole.[13]

9.22 It also argued that, given that emissions trading is a market-based mechanism, it would create an added incentive for market participants to reduce emissions to levels below the cap:

> If we find through such a system that we have cheaper abatement opportunities in this country than other countries do, then it is most likely that the market will act to, in effect, drive below the cap in order to generate credits that can be sold. So the abatement in this country may in fact be greater.[14]

9.23 The AGO also says that emissions trading is ideal because it:

- encourages the adoption and development of more efficient technologies, such as renewable energy, by using price incentives;
- limits the levels of government administration and control required; and
- creates flexibility within the system by not being prescriptive about how targets are met or who meets them. Rather, it spreads the task across the economy using market and price incentives to determine permit allocations.[15]

9.24 A number of witnesses suggested that emissions trading would be essential if the rapid growth in energy emissions was to be slowed or reversed. The former adviser to the US Administration, Ms Cathy Zoi, argued that 'emissions trading in concert with the 2 per cent renewables target' would move Australia 'into a more environmentally friendly energy arena more quickly'.[16] The Australia Institute argued that:

> The current suite of policies is quite inadequate for Australia to meet its emission targets… . If we are to meet, say, 108 per cent in our energy emissions, then the current suite of policies, including Greenhouse Challenge, is quite inadequate to do that. We really need a big bang policy,

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13 Ms Gwen Andrews, *Proof Committee Hansard*, Canberra, 22 June 2000, p 730.

14 Ms Gwen Andrews, *Proof Committee Hansard*, Canberra, 22 June 2000, p 731.

15 Australian Greenhouse Office, *National Emissions Trading Discussion Paper 1: Establishing the Boundaries*, March 1999, p 8.

16 *Proof Committee Hansard*, Sydney, 22 March 2000, p 304.

> like emissions trading or a carbon tax. If we have emissions trading, then Greenhouse Challenge will be redundant. Most policies will be redundant if we have a cap - and trade emissions trading system. That will be the essential policy that will enforce the meeting of our targets in the energy sector.[17]

9.25 Pacific Power also argued emissions trading was essential to any effort to reign in energy sector emissions:

> Coming to the solution as we see it, I mentioned that it is a two-pronged one, the first being emissions trading to value carbon. We believe it is the least costly approach to achieve emission reduction, to have an emissions trading regime. We believe it would be less costly to do that sooner rather than later and that it allows a transition to be undertaken more quickly and hence have a greater time frame over which to turn around what is otherwise a very difficult scenario for the electricity industry.[18]

9.26 Witnesses argued that crucial to promoting less emissions-intensive forms of energy was a price on carbon, which would enable the market to recognise the greenhouse advantages of lower emissions sources. The Australian EcoGeneration Association argued that:

> To deliver lower emissions, the cost of CO_2 needs to be internalised into investment and energy purchasing decisions. In other words, the emitters of greenhouse gas need to see the cost consequences of their actions. Until and unless they do, the electricity market, being competitive as it is, will continue to deliver high emission generation because coal is cheap, particularly in south Queensland. As a result, we advocate the early introduction of emissions trading into the stationary energy sector.[19]

9.27 Among submissions to this inquiry, emissions trading received the in-principle support of Pacific Power, Great Southern Energy, Boral Limited (now Origin Energy), the Australian Gas Association (AGA), the Australia Institute, the Australian Conservation Foundation (ACF), the Climate Action Network Australia (CANA), the Sustainable Energy Industry Association (SEIA), Cathy Zoi, the Stanwell Corporation, the Western Australian Greenhouse Council and BP Amoco. However, these individuals and organisations had diverse views on the timing and design of a system, and on the kinds of measures which may need to be combined with it. For example, BP Amoco supported an early voluntary pilot of emissions trading, but cautioned against implementing a mandatory scheme in isolation from in international system.[20]

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17 Dr Clive Hamilton, *Proof Committee Hansard*, Canberra, 10 March 2000, pp 58-59.

18 Dr Robert Lang, *Proof Committee Hansard*, Sydney, 22 March 2000, p 351.

19 Ric Brazzale, *Proof Committee Hansard*, Melbourne, 21 March 2000, pp 215-16.

20 Mr Merton Smith, *Proof Committee Hansard*, Sydney, 22 March 2000, p 312.

9.28 Emissions trading is also supported by the New South Wales and South Australian Governments. This support, however, is conditional on the satisfactory design and implementation of the system.[21] The Liquefied Natural Gas (LNG) exporter Woodside Energy holds a position midway, recognising the theoretical benefits of emissions trading but concerned that it not impose on exporters carbon costs that are not also borne by international competitors.[22]

9.29 Other industry groups remain sceptical of the benefits of emissions trading. The Australian Industry Greenhouse Network (AIGN), which represents 12 major industry bodies,[23] has stated that it supports the current consultation process being conducted by the AGO on emissions trading, but cautions against the early establishment of a national system. They argue that 'extensive further analysis of options and impacts is needed' before any definite move is made, and that 'the current uncertain state of global greenhouse policy does not… justify additional mandatory measures that could jeopardise Australia's economic growth and competitiveness'. They would prefer a continued focus on voluntary cooperative measures such as the Greenhouse Challenge.[24]

9.30 The AIGN's views were echoed by the Pulp and Paper Manufacturers Federation of Australia (PPMFA), the Business Council of Australia, the Australian Aluminium Council, and the Cement Industry Federation.[25]

Emissions Trading - Timing its Introduction

9.31 If and when a national emissions trading system will be introduced is unclear. The Minister for Environment and Heritage, Senator Hill, stated in July 1999 that Australia would introduce an emissions trading system when the Kyoto Protocol is ratified, which would be 2008 at the very latest and possibly sooner. However, the Minister for Industry, Science and Resources, Senator Minchin, has sought to downplay the need to go beyond 'no regrets' action, and in August 2000 announced that Cabinet had decided against the introduction of emissions trading 'until the Kyoto

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21 Pacific Power, Submission 98, p 801; AGL, Submission 128, p 1284; Great Southern Energy, Submission 150, p 1562; Boral Limited, Submission 184, p 1955; New South Wales Government, Submission 198, p 2095; and South Australian Government, Submission 199, p 2123.

22 Woodside Energy Ltd, Submission 129, p 1298.

23 Australian Aluminium Council, Australian Automobile Association, Australian Coal Association, Australian Institute of Petroleum, Australian Petroleum Production and Exploration Association, Business Council of Australia, Cement Industry Federation, Electricity Supply Association of Australia, Federal Chamber of Automotive Industries, Minerals Council of Australia, Plastics and Chemical Industries Association, and Pulp and Paper Manufacturers Federation of Australia.

24 Australian Industry Greenhouse Network (AIGN), Submission 113, p 959.

25 Bridson Cribb, Pulp and Paper Manufacturers Association, *Proof Committee Hansard*, Canberra, 23 June 2000, p 778; Dr John Tilley, *Proof Committee Hansard*, Canberra, 23 June 2000, p 794; Mr David Coutts, *Proof Committee Hansard*, Canberra, 10 March 2000, p 49; and David Buckingham, *Proof Committee Hansard*, Melbourne, 21 March 2000, p 183.

Protocol is ratified by Australia, has entered into force and there is an established international emissions trading regime'.[26]

9.32 The Committee heard a range of views on the best timing for the introduction of a domestic emissions trading system. Many submitters argued for its early introduction; others advocated waiting until closer to 2008, when an international system would be in place, but supported earlier voluntary trials; and others advocated a policy of allowing more time for voluntary abatement measures to work before a domestic scheme is considered.

9.33 The Australia Institute argued that a domestic emissions trading could, and should, be introduced in the near future:

> As we argued in our paper on business taxation and the environment, we believe that within a couple of years Australia could develop and implement a domestic emissions trading system which would prepare us for the introduction of an international system in the commitment period starting in 2008. The Government, through its discussion papers, is well advanced in thinking through the issue and we have some experience in emissions trading in Australia. There is no doubt that greenhouse gas emissions are a lot more complex than previous emissions trading systems, but in my view there are no obstacles to introducing such a system that cannot be overcome within a couple of years.[27]

9.34 A discussion paper prepared by the Institute argues for the introduction of a scheme in 2001, which would cover around 120 of the largest emitters (72 per cent of total net emissions) and involve the full auction of permits, with revenues being recycled back into the economy through cuts to businesses taxes (especially taxes on labour such as payroll tax), or through capital investment incentives (such as a targeted form of accelerated depreciation).[28]

9.35 Given the current sharply upward trend in Australian emissions, the Institute argued that: 'As the Federal Government has ruled out a carbon tax, a decision not to proceed with emissions trading (or to delay a decision by a few years) in effect signals an intention not to comply with the Kyoto Protocol'.[29]

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26 Nick Hordern, 'Libs at odds over greenhouse', *The Australian Financial Review*, 24 September 1999, p 7; and Nick Hordern, 'Carbon trade nod after Kyoto', *The Australian Financial Review*, 23 July 1999, p 24. 'No regrets' action is a phrase used by participants to denote voluntary (rather than compulsory) abatement actions by emitters, which allow them to choose the timing and scope of change, which will usually be dictated by an acceptable level of cost.

27 Dr Clive Hamilton, *Proof Committee Hansard*, Canberra, 10 March 2000, p 59.

28 Clive Hamilton and Hal Turton, *Business Tax and the Environment: Emissions trading as a tax reform option*, Discussion paper No. 22, The Australia Institute, 1999, pp ix-xv.

29 Clive Hamilton and Hal Turton, *Business Tax and the Environment: Emissions trading as a tax reform option*, Discussion paper No. 22, The Australia Institute, 1999, p x.

9.36 The early introduction of a scheme also received the support of the Australian EcoGeneration Association (AEA), SEIA, Pacific Power, the Australian Consumers Association, Stanwell Corp, Origin Energy, Greenpeace Australia, the Australian Conservation Foundation (ACF) and the Climate Action Network Australia (CANA).[30]

9.37 At hearings, the New South Wales Government was non-committal on the exact timing of emissions trading, but did say that 'it would be… useful if we were to signal that, at some time in the not too distant future, there will be a cap on Australian emissions and people had better start factoring the cost of that into their projections of project costs…'. However, their submission stated that:

> The NSW Government has consistently urged the Commonwealth to introduce a national emissions trading scheme by 2002 to ensure that Australia is well placed to participate in an international emissions trading scheme.[31]

9.38 The New South Wales Government's position statement on emissions trading, dated November 1998, suggests that a national emissions trading could be phased in from 2002 sector by sector, starting with energy and other industry sectors, and later extending to transport.[32] Such an approach, beginning with energy, was also advocated by the AEA.[33]

9.39 Pacific Power also supported the early introduction of emissions trading arguing that:

> Pacific Power is very supportive of emissions trading, and we see it as the least cost answer to what we believe is inevitable - a movement to a more carbon constrained world that we live in. From our point of view, we would rather have that opportunity early than late so we can start to respond to it and not have to wait until the last minute, find that the only short-term quick solutions are really expensive ones and be stuck. The more time we have to adapt, the better off we will be.[34]

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30 Mr Ric Brazzale, *Proof Committee Hansard*, Melbourne, 21 March 2000, p 215; Dr Alan Pears, *Proof Committee Hansard*, Melbourne, 21 March 2000, p 228; Dr Robert Lang, *Proof Committee Hansard*, Sydney, 22 March 2000, p 360; Lynette Thorsensten, *Proof Committee Hansard*, Sydney, 22 March 2000, p 370; Dr Kuan Chia, *Proof Committee Hansard*, Brisbane, 26 May 2000, p 525; Mr Andrew Stock, *Proof Committee Hansard*, Brisbane, 26 May 2000, p 541; Mr Don Henry, *Proof Committee Hansard*, Melbourne, 21 March 2000, p 189; and Climate Action Network Australia, Submission to the Australian Greenhouse Office regarding 'Issuing the permits', August 1999.

31 Mr Peter Stevens, *Proof Committee Hansard*, Sydney, 22 March 2000, p 282; and New South Wales Government, Submission 198, p 2095.

32 New South Wales Government, Submission 198, p 2103.

33 Australian EcoGeneration Association, Submission 196, p 2061.

34 Dr Robert Lang, *Proof Committee Hansard*, Sydney, 22 March 2000, p 360.

9.40 They also stressed that an early announcement of the key rules and design features would be of value to investors:

> We are conscious that there is a spectrum of views across Australian industry as to whether we need it and when, but I think we are much closer to consensus on the fact that, if we are going to have it, at least we need to know what the rules are going to be as soon as possible. People can then start making commercial decisions about how they are going to plan for the future, rather than not only leaving implementation to the last minute, but if we leave the clarification of the rules to the last minute, people will not have anywhere to move.[35]

9.41 A notable recent development has been the Position Statement on Climate Change released by industrial giant BHP on 2 August 2000. BHP argued that the current policy environment was failing to provide certainty for investors. Committing now to a future emissions trading scheme would go some way to reducing that uncertainty:

> It has become clear that the current policy environment is just too uncertain for BHP responsibly to commit to a further program of emissions abatement. If we are serious about meeting our targets, we believe this environment has to change sufficiently to provide incentives for early action by major emitters… In the corporate sector, managing the risk of the Kyoto Protocol requires an understanding of the future price of carbon - itself a product of the complex mix of associated economic, political and technological factors. The sheer scale of uncertainties around these issues is a major obstacle to industry investment, either in projects with major greenhouse gas implications or abatement projects that are not fully economic in their own right. Add the lack of agreement on key domestic policies, and there is no incentive for industry to act.[36]

9.42 While BHP argues that 'a legislated emissions trading regime should not be introduced until there is agreement on international actions to address greenhouse gas emissions', they advocate the immediate introduction of a system of incentives for early action, of a kind that will substantially affect the way a later emissions trading system would impact upon participants.[37]

9.43 Any mandatory scheme, BHP argues, should not be based on the grandfathering (concessional allocation) of permits, but on their full auction with revenues being recycled into business tax cuts. Early action should be encouraged by providing concessional tranches of permits for those who take early action to reduce emissions from January 2000 to 2005. A one tonne fall in CO_2-e emissions achieved in 2001 would qualify for four tonnes of permits during the first Kyoto commitment

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35 Mr Anthony Sproule, *Proof Committee Hansard*, Sydney, 22 March 2000, p 362.

36 Position Statement, *BHP and Climate Change*, p 1.

37 BHP Media Release, *BHP release position statement on climate change*, 2 August 2000.

period; a similar cut achieved in 2002 would attract three tonnes of permits, winding down to one tonne in 2004. Those companies who failed to achieve emissions falls would be forced to buy their full quota of permits once a mandatory scheme commenced.[38]

9.44 The Committee notes that the proposal would have a similar impact to the early introduction of a mandatory scheme, with the difference being its structure of incentives and its deferral of permit costs until later years. However, a number of witnesses have raised problems with an early reliance on auctions, which may impact harshly on trade-exposed industries or those, such as Liquified Natural Gas (LNG), which has high emissions during production and processing but an overall greenhouse benefit, when displacing more emissions-intensive fossil fuels. Nevertheless, the Committee is encouraged to see a bold and proactive proposal from industry which aims to stimulate significant early abatement.

9.45 Other witnesses, while supportive of emissions trading in principle, were more cautious about introducing it too early. While holding this view, BP Amoco has already trialed an internal emissions trading scheme, and advocated 'the establishment of a pilot voluntary domestic emissions trading scheme as soon as possible' which was also 'supported by a credit scheme for early action':

> BP Amoco believes that the establishment of an early pilot scheme will allow industry to learn and better manage over an extended time period any business restructuring that may be required. Large changes in a short time frame could cause significant changes to the Australian economy and economic wellbeing of the community. Implementation of a mandatory domestic scheme in isolation from an international ET scheme may also mean that we cannot take advantage of lowest cost reduction options that may be available overseas and so bias the value of a tonne of carbon dioxide reduction in Australia.[39]

9.46 The Australian Aluminium Council argued that a domestic emissions trading scheme should be delayed until an international scheme was also in place:

> We are opposed to a national one before an international one. We have not taken a final position on whether there should be a national trading scheme yet, anyway. That is part of the process that is going on with all these discussion papers and we are providing submissions to that. But we certainly do not believe it is appropriate to put that in place until the international scheme is in place because we do not consider that such a scheme could work effectively if it was not in harmony with that international scheme. The details of that scheme are far from clear at this stage.[40]

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38 Position Statement, *BHP and Climate Change*, p 2.

39 Mr Merton Smith, *Proof Committee Hansard*, Sydney, 22 March 2000, p 312.

40 Mr David Coutts, *Proof Committee Hansard*, Canberra, 10 March 2000, p 49.

9.47 The Minerals Council of Australia argued for the outright deferral of mandatory measures, saying that they should be 'a clear second preference' and that Government should 'fully assess their costs and competitiveness implications, including their cumulative impact on Australian industry, before implementing them'.[41]

9.48 The AGO, while having progressed discussion and consultation on the possible scope and design of a domestic emissions trading system, was cautious about introducing it ahead of Australia's trade competitors. On the other hand, they did recognise 'early mover' advantages:

> It must… be recognised that there would be considerable risk for Australia in moving ahead of the other Annex B countries to implement an emissions trading system. Effectively, this would mean that we were pricing carbon ahead of our developed country competitors, which could have a significant effect on our competitiveness. But there is an advantage in being an early mover in terms of design of an emissions trading system. The more we can develop our thinking on desirable features of such a system, the more likely we are to be able to influence the international negotiations.[42]

9.49 The AGA, while supportive of emissions trading as 'a very useful way of bringing about fuel switching in Australia', did not wish to see it introduced before an international system was in place:

> The preconditions [for our support] are that there is an international system in place because of impact on our competitive position as a country, if we are in isolation, if we went ahead as a country alone before the Kyoto treaty and before an international system was in place. Within our membership, we have some LNG producers which export to North Asia. We are really the only developed world economy that has large LNG exports and it is their view and it is a view I share as well from the association, that we would be tying one hand behind our back in terms of our export competitiveness if we were to proceed with an emissions trading scheme without our competitors being involved in some way.[43]

9.50 The AGO acknowledges that introducing emissions trading ahead of an international system may be necessary if a least-cost adjustment to emissions reductions is to be achieved leading up to the first commitment period 2008-12. They suggest that a path that avoids both large short term adjustments, or strict annual targets, will provide least cost outcomes. While they say that a 'wait and see' approach while international mechanisms are decided is a 'viable option', they also

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41 Dr Richard Wells, *Proof Committee Hansard*, Canberra, 10 March 2000, p 70.

42 Ms Gwen Andrews, *Proof Committee Hansard*, Canberra, 9 March 2000, p 4.

43 Mr William Nagle, *Proof Committee Hansard*, Sydney, 22 March 2000, p 393.

comment that 'there is a risk that delaying domestic action now may result in lost opportunities and higher costs in the future'.[44]

9.51 The AGO argues that a serious commitment to emissions reduction will force structural change in the economy and that 'managing these pressures for the long term advantage of the community is an ongoing challenge for policymakers'. They suggest one possible approach might be to post interim targets for the domestic economy in the lead up to 2008:

> Adoption of interim targets could provide emitters with a short term target to aim for, and would also highlight emerging sectoral or regional adjustment problems that might require targeted government action.[45]

9.52 One option the AGO does suggest is a transitional program of voluntary emissions trading.[46]

9.53 The Committee notes with some concern that the Commonwealth Government appears to have ruled out the early introduction of a domestic emissions trading system. In August 2000, Minister for Industry, Science and Resources, Senator Minchin, announced that:

> The Government will only implement a mandatory domestic emissions trading scheme if the Kyoto Protocol is ratified by Australia, has entered into force and there is an established international emissions trading regime. This decision does not rule out the subsequent introduction of such a scheme if further analysis demonstrates that this would be in the national interest.[47]

9.54 The Committee believes this announcement is a retrograde step that will only cause industry to defer action to reduce emissions and will lead to higher abatement costs in the future.

Recommendation 96

The Committee recommends the early introduction of a domestic emissions trading system, with the aim to build capacity and experience, encourage uptake of fuel switching and energy efficiency, and position Australia to lead the international debate in the development of a global trading scheme.

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44 Australian Greenhouse Office, *National Emissions Trading Discussion Paper 2: Issuing the Permits*, June 1999, p 19.

45 Australian Greenhouse Office, *National Emissions Trading Discussion Paper 2: Issuing the Permits*, June 1999, pp 20-21.

46 Australian Greenhouse Office, *National Emissions Trading Discussion Paper 2: Issuing the Permits*, June 1999, pp 22-23.

47 Senator the Hon Nick Minchin, Media Release, *Government Provides Greater Greenhouse Certainty For Industry*, 23 August 2000.

Recommendation 97

The Committee recommends a phased introduction of an emissions trading scheme, with the possible introduction of a voluntary scheme in advance of a mandatory scheme, designed to direct the economy on a path to meeting Australia's Kyoto target in the first commitment period, and to meet potentially lower targets in the subsequent and later commitment periods.

Australian Democrats Recommendation 12

The Australian Democrats recommend that the Commonwealth Government, in advance of a domestic emissions trading system, phase in a small carbon levy from 2003 to provide a signal to Australian industry. Where industry can demonstrate that this levy adversely affects its international competitiveness some or all of those payments could be rebated or returned as a contribution to fund investment in emissions abatement actions within that industry.

Australian Democrats Recommendation 13

The Australian Democrats recommend that the Commonwealth Government use the revenue from the carbon levy to fund a 'Reverse Carbon Tax' incentive program. The program should provide financial incentives linked to the size of lifecycle emissions savings (at a rate of $x/tonne of CO_2 avoided) for the manufacturers of low greenhouse impact appliances and equipment and builders of energy-efficient buildings and other approved projects.

Designing an Emissions Trading System - Debate and Principles

9.55 The Committee heard a diversity of views about the ideal design of a system, with a particular concerns being:

- the potential cost to trade exposed industries, or to consumers;
- the allocation method - ie whether permits should be auctioned or 'grandfathered' at reduced or zero cost to emitters;
- the scope and coverage of the scheme - whether it takes in a large number of both small and large emitters, or a smaller number of large emitters; and
- credit for early action to reduce emissions.

9.56 How these issues are decided will affect: the adjustment pressures faced by some industries, along with employment and profitability; how fairly the abatement burden is distributed; and the effectiveness of emissions trading in bringing about emissions reductions.

Boundaries and coverage

9.57 The breadth and scope of a domestic emissions trading system was a strong concern for witnesses. While it does present some difficulties, the Committee believes it important as a factor which could have an important influence on the effectiveness of emissions trading as a policy tool for greenhouse gas abatement. It will also influence the costs of compliance and administration. These issues have also been described as the 'upstream or downstream' problem.

9.58 The AGO has proposed, as a general principle, that emissions trading be as comprehensive as possible, covering all greenhouse gases from all sources and incorporating all carbon sinks.[48]

9.59 A comprehensive system presents a number of advantages, including:

- ensuring that there is effective price competition for permits and thus increasing their effectiveness in encouraging the reduction of emissions;
- ensuring that low-cost abatement opportunities, available to small energy users, are taken up; and
- minimising the potential for the abatement burden to be spread unevenly, or for emissions sources to be missed.[49]

9.60 However, absolute comprehensiveness presents some problems, such as:

- monitoring equipment costs, currently estimated at several thousand dollars per source, could be prohibitively expensive for smaller emitters;
- monitoring emissions from households and vehicles would present major cost, administration and technical challenges; and
- the measurement of emissions from agriculture and land use change is technically unresolved, as are monitoring emissions from some smaller industrial enterprises.[50]

9.61 Given that the bulk of Australia's emissions are in the energy sector the AGO has proposed locating the requirement to hold and acquit emissions permits further 'upstream' in the emissions chain. This would target a series of 'focus points' in the emissions chain (smaller groups of emitters whose production has a strong link with the more numerous and dispersed emitters further downstream). The AGO suggests that targeting the 260 sites of oil, coal and gas production, rather than the emissions

48 Australian Greenhouse Office, *National Emissions Trading Discussion Paper 1: Establishing the Boundaries*, March 1999, p 12.

49 Australian Greenhouse Office, *National Emissions Trading Discussion Paper 1: Establishing the Boundaries*, March 1999, p 16.

50 Australian Greenhouse Office, *National Emissions Trading Discussion Paper 1: Establishing the Boundaries*, March 1999, pp 17-21.

from the several million users of such products, would offer such advantages. This approach is also advocated by the Australia Institute.[51]

9.62 In such a case, coverage would be theoretically comprehensive (CO_2-equivalent emissions from fuel by weight or volume can be accurately calculated, without having to monitor actual emissions) and cover all possible emissions points at which the fuel is consumed. Emissions would simply be estimated according to the carbon content of fuels, most probably at the point of sale. This would also help minimise compliance and monitoring costs and streamline administration.

9.63 Other witnesses, however, argued for the scheme to be as comprehensive as possible, and thus incorporate more elements of a downstream approach. The New South Wales Government stated that: 'For an emissions trading scheme to be as efficient and equitable as possible, it should include as many sectors and sources as can be adequately verified, subject to acceptable transaction costs'.[52]

9.64 While some industry groups did not advocate the introduction of domestic emissions trading system, they did emphasise that emissions reductions needed to be borne by all sectors. For example, Electricity Supply Association of Australia (ESAA) argued that: 'the burden sharing of emission tasks is very important. It needs to be equitable, and it cannot be loaded on the most prominent emission sectors… there is a trend to try to do that at the moment'.[53]

9.65 The Committee accepts the administrative convenience of using an 'upstream' approach, but notes that the policy objective of reducing emissions would then rely on more indirect incentives such as price, which could not always be assumed to provide clear or effective signals.

9.66 For example, the principal incentive for electricity producers to reduce emissions would be an increased price for coal (as they themselves would not be required to hold permits). While this may reduce the competitiveness of brown coal or increase the competitiveness of gas and some renewables as alternative fuel sources, the effect on emissions would be delayed because substantial reductions would have to wait for new capital investment in gas-fired and renewable power. The price increases caused by the need for coal producers to hold permits may be delayed also by the extent to which they are grandfathered (issued at little or no cost), and they will be only one element of a complex market environment.

9.67 Price increases could theoretically encourage small energy users and householders to use less electricity, but that too is an indirect signal. The reduced or

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51 Australian Greenhouse Office, *National Emissions Trading Discussion Paper 1: Establishing the Boundaries*, March 1999, pp 17-20; and Clive Hamilton and Hal Turton, *Business Tax and the Environment: Emissions trading as a tax reform option*, Discussion Paper No. 22, The Australia Institute, 1999, p xi.

52 New South Wales Government, Submission 198, p 2095.

53 Mr Keith Orchison, *Proof Committee Hansard*, Sydney, 22 March 2000, p 333.

more efficient use of electricity would depend on the cost, awareness and availability of technological alternatives such as solar power, energy-efficient appliances, and improved house design. The ability of householders to make substantial capital investments (as is required for solar energy or house renovations) is further dependent on variables such as income, property prices and rents, interest rates and other market complexities.[54]

9.68 In the case of oil, incentives for vehicle owners to reduce emissions would again rest on increased fuel prices. However, this too would be only one element of a market mix which includes world prices, regional distortions and excise. In the road transport industry it may increase the cost of freight without necessarily resulting in reduced travel or emissions. Whether freight is transferred to rail, or fuel alternatives such as Compressed Natural Gas (CNG) become more viable, will depend on further technological innovation and would need to be carefully modelled. This is a dilemma recognised by BP Amoco, which told the Committee that:

> For the ultimate consumer, the car driver, I do not think emissions trading in my view works in that small, small market. Again, a levy also only really works if they have options. If you put a levy on fuel and they do not have public transport, a cleaner fuel to go to or something, all you are actually doing is knocking up the cost of that family's budget.[55]

9.69 In the Committee's view, this is a telling point. While 'upstream' emissions trading would be likely to stimulate a stronger move to smaller engined and more fuel-efficient vehicles, in the absence of viable public transport alternatives, a dramatic reduction in emissions may not occur. Additional policy measures, such as to promote the manufacture of CNG fuelled vehicles, investment in public transport infrastructure, or limits to new road-building, may be needed in such circumstances.[56]

9.70 Sustainable Energy Industry Association (SEIA) also believes that an upstream approach could blunt the behavioural signals that will be needed for effective abatement:

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54 In December 1999, the Government announced a new rebate for householders who installed rooftop photovoltaic systems for solar energy, up to a maximum of $8250 per installation. Press release, Senator, the Hon Robert Hill, *Major boost for clean, green energy*, 15 December 1999.

55 Mr Merton Smith, *Proof Committee Hansard*, Sydney, 22 March 2000, p 320.

56 Compressed natural gas currently runs in 1.4 billion vehicles worldwide and emits 50 per cent fewer greenhouse gases than petrol and diesel alternatives. An environmental life-cycle study of CNG-fuelled buses found a 9 per cent reduction in CO_2 emissions. CNG also has associated environmental benefits through the elimination of sulphur and lead emissions and the reduction of noxious carbon monoxide and particulate emissions. Car, truck and bus engines which run on CNG are currently available, but have achieved low penetration in the Australian market. The AGO is currently running the Greater Western Sydney Natural Gas vehicles trial and the Commonwealth has committed $7.6 million over four years to assist with the establishment of CNG refuelling stations. The $75 million Alternative Fuels Conversion Program will provide grants of up to 50 per cent of the cost of upgrading to, or replacing conventionally fuelled vehicles over 3.5 tonnes with CNG. Australian Greenhouse Office, *Fact Sheet: Compressed Natural Gas Infrastructure Program*, http://www.greenhouse.gov.au/transport/cng.html.

> Essentially, we support emissions trading but we think that the focus on large emitters means that we will actually not directly influence the behaviour of about 60 per cent of the emissions from energy use in Australia - the cars, the end users of electricity and so on. More importantly, emissions trading will not influence the behaviour of market intermediaries like the building industry, the car manufacturers and other people who will, in fact, hardly see any signals whatsoever from emissions trading.[57]

9.71 The AGO recognises the uncertainties in this area, saying that: 'If the point of acquittal is divorced from the source of emissions, this can dilute the incentive for actual emitters to pursue the full range of emissions abatement opportunities'. They argue that decisions about the location of permits should be made by balancing administrative costs, ease of measurement and 'the degree of abatement incentive and opportunity'. The changing nature of this balance across the economy would 'suggest an indirect approach for some types of emissions and a direct approach for others... for some emissions sources implementation of either approach could be problematic, and more work will be needed to assess the feasibility of these and alternative approaches'.[58]

9.72 The AGO suggests that where the costs of including emitting activities in an emissions trading system outweigh the potential benefits (due to prohibitive monitoring and administration costs or measurement difficulties) it may be necessary to encourage abatement through other policy measures. 'In such cases,' they say, 'it may be necessary to establish a permit reserve to act as a buffer against the output of these emission sources' - that is, to ensure that there are not more permits in circulation than the capped emissions amount allowed under the Kyoto Protocol and subsequent international agreements.[59]

9.73 The Committee acknowledges the administrative problems in setting up an emissions trading scheme which takes in a large number of dispersed 'downstream' sources. It agrees that an 'upstream' approach could be effective, and that administrative costs and complexity are factors. However, the key policy objective ought to be to use emissions trading to stimulate greenhouse abatement by encouraging markets to internalise the costs of greenhouse pollution.

9.74 The Committee recommends that a future emissions trading scheme be as comprehensive as administratively feasible, taking in a wide range of sources and emitters. In this sense, whether an upstream or downstream approach is taken, it should be able to produce clear abatement responses, not only in energy and industrial processes but also in land use, transport and agriculture. The broader the scheme the more acceptable it would be to the community and to affected industries; it will also

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57 Mr Alan Pears, *Proof Committee Hansard*, Melbourne, 21 March 2000, p 229.

58 Australian Greenhouse Office, *National Emissions Trading Discussion Paper 1: Establishing the Boundaries*, March 1999, p 22.

59 Australian Greenhouse Office, *National Emissions Trading Discussion Paper 1: Establishing the Boundaries*, March 1999, p 26.

be more equitable and increase the potential for abatement to occur with greatest efficiency and least cost across the economy. If it is not possible to include some sources or emitters, policy must ensure that they do not attract unfair advantages in relation to other emitters and that they are also subject to policies which promote abatement.

Recommendation 98

The Committee recommends that a future emissions trading scheme be as comprehensive as administratively feasible, taking in a wide range of sources and emitters.

The Committee acknowledges that an emissions trading scheme will not achieve all desirable emission reductions, and recommends that consideration be given to complementary policy measures.

Australian Democrats Recommendation 14

The Committee recommends that a future domestic emissions trading system be designed so that the environmental costs of transport are internalised into market decisions and consumer behaviour. The Committee recommends that, if necessary, emissions trading be supplemented by a range of policies which reward more responsible technologies, investments and behaviour, and which can ensure the availability of high quality transport alternatives that are less emissions-intensive.

Permit allocation - Grandfathering or auctions?

Grandfathering

9.75 Under an administrative (grandfathered) allocation method permits are distributed free or at a price below their market value. While this tends to increase the administrative complexity involved in the allocation of permits, it is attractive as a method of easing the adjustment burden of emitters by reducing the cost of emissions. The AGO argues that grandfathering is attractive to ensure that 'past investment and production decisions, taken in good faith, are not excessively penalised by emerging greenhouse commitments'.[60]

9.76 A number of industry witnesses favoured grandfathering as a way limiting the costs of abatement action.

9.77 Pacific Power supported grandfathering over auctioning, with permits allocated on a once only basis:

60 Australian Greenhouse Office, *National Emissions Trading Discussion Paper 2: Issuing the Permits*, June 1999, pp 26-27.

> What we have considered with emissions trading is that we probably should have a once and for all allocation of permits, because to provide the permits piecemeal does not give options to existing emitters. In fact, if we have a once and for all allocation, which is also tradeable, it would mean that existing emitters can in fact exit the market if they want to, or they can change their technology. For instance, also permits are auctioned. This is another issue. If in fact they are auctioned, we may find that they are auctioned at a higher price than perhaps permits would be available internationally. There is an issue there, because then we will end up paying too much for our permits in Australia. Emissions trading is a good idea, but we need to be careful how it is implemented.[61]

9.78 BP Amoco argued for the grandfathering of permits as way of ensuring that export-competing industries were not burdened with costs that competitors did not face:

> We believe it is imperative for Australian industry that a grandfathering system be implemented for allocation of emissions allowances. We say this because a system of yearly auctions could place an intolerable burden on our industry, especially when large Asian companies in the refining sector are not subject to greenhouse gas emissions reduction constraints because they are not part of Annex 1.[62]

9.79 Other stakeholders point out drawbacks to grandfathering. BHP's Position Statement on Climate Change states that:

> We have serious problems with grandfathering - allocating permits free on the basis of current or future emissions. The community at large can see this as rewarding emitters by giving them an asset. More importantly, it generates huge disagreements about who should receive the permits and is a powerful incentive to do nothing, or even to increase emissions.[63]

9.80 The AGA was concerned that an excessive reliance on grandfathering would have perverse effects in greenhouse policy terms. They worried that the concessional allocation of permits could actually work against the introduction of less emissions-intensive energy sources by creating new barriers to entry:

> Our biggest fear is that people would say, post-Kyoto, 'Let's have an emissions trading scheme; let's use these design rules,' and we would get this perverse outcome that actually entrenches coal and locks out gas. If you have to buy permits as a new emitter, as a new entrant, and if you have an historic set of emitters in there with freely allocated permits, basically all those economic disadvantages that we have talked about already about gas

61 Mr Anthony Sproule, *Proof Committee Hansard*, Sydney, 22 March 2000, p 361.

62 Mr Merton Smith, *Proof Committee Hansard*, Sydney, 22 March 2000, p 312.

63 Position Statement, 'BHP and Climate Change', p 1.

> versus coal just get magnified because there is a new entry price into power generation.[64]

9.81 The AGA argued against both the predominant grandfathering or auction of permits. Instead they suggested a policy-focused hybrid:

> An initial administrative allocation process that is constructed to achieve desired policy determined outcomes. This would rule out an auction system that could lead to economic shocks without gaining the desired outcomes. It would also rule out allocations based on compensating fully for historical emissions alone, as this would create a perverse outcome in the quest for lower emissions.[65]

9.82 The AGA recommended 'the differential treatment of energy sources in the initial allocation of permits':

> For instance, there would be an initial allocation of say 60-70 per cent of permits based on historical emissions with the remaining permits kept in reserve for free allocation to gas and other low emissions energy options in the future.[66]

Auctions

9.83 In a system where permits were auctioned, the number of permits released would still be capped at (or below) Australia's allocation of emissions under the Kyoto Protocol, but market forces (supply and demand) rather than administrative decision would determine their allocation and cost. This would occur within a context where government is still likely to regulate the emitters who would be required to acquire and acquit permits, and set in place other rules for trading, monitoring and acquittal.

9.84 Auctioning permits is appealing because it utilises market forces both to allocate permits among emitters efficiently, and to provide incentives for abatement action. Permit prices respond to the available opportunities for abatement and the demand to emit greenhouse gases, thus theoretically maintaining a price incentive for abatement action in all circumstances. Where permits are plentiful (in a context where Kyoto targets are being met or overachieved) prices will be lower and abatement action rewarded by lower emissions costs. Where emissions are close to, or exceed, target levels and permits relatively scarce, prices will increase and thus enhance the cost-effectiveness of abatement actions over emissions.

9.85 In this way the auction of permits provides a flexible market mechanism that rewards effective abatement actions, while increasing the pressure (and rewards) for abatement as emissions reach unsustainable levels across the economy. It is

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64 Mr William Nagle, *Proof Committee Hansard*, Sydney, 22 March 2000, p 400.

65 Australian Gas Association, Submission 205, p 2451.

66 Australian Gas Association, Submission 205, p 2451.

administratively simpler than other forms of allocation, and provides an innately efficient way of achieving policy goals that utilises autonomous market dynamics. For these reasons, auctioning is a theoretically superior method of allocation to grandfathering or other administrative methods.

9.86 Auctions received the support of the Australia Institute, the Australian Conservation Foundation, the Climate Action Network Australia, the Australian EcoGeneration Association, the South Australian Government and Greenpeace.

9.87 The Australia Institute argued that auctioning was a fairer way of allocating the wealth associated with the creation of tradeable emissions permits, and was consistent with the 'polluter pays principle':

> What happened at Kyoto was that, by fixing caps on emissions, the international community created a valuable commodity, the right to emit up to that cap. At the moment, nations - governments - own that commodity, that asset. What has been proposed with an emissions trading system is that those assets be handed on, passed on to the polluters themselves, which makes sense. After all, you will get the incentives to change as a result of doing that. So we have an asset owned by the Australian Government and the question is how it should be distributed to private potential asset holders. In my view, the only just and economically effective… way of doing that is by a full auction… . That way, some of the external costs of pollution are internalised, as the economists have it. So it is very consistent with the polluter-pays principle. The only reasons for diluting that… would be purely political reasons, to try and get on board some of people in industry who will kick up a fuss.[67]

9.88 However, Dr Hamilton did concede that the circumstances of some industries, including their exposure to non-Annex B competition, may justify some special consideration, which he argued could come in the form of 'border-tax adjustments' or a tax rebate on permits:

> There are certain industries which do meet the criteria where their competitiveness may be affected. The aluminium industry is one, although, as we have argued, they are subject to such huge subsidies it is hard to justify another subsidy. Another and perhaps more important one where there is a stronger case for some special consideration are LNG exports. LNG is an energy-intensive process through liquefaction. It is mostly exported. It is good for greenhouse, at least in the next 10 to 20 years, and should not be disadvantaged.[68]

9.89 Ms Carrie Sonneborn, a renewable energy expert, argued that auctions would provide a greater boost to renewables:

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67 Dr Clive Hamilton, *Proof Committee Hansard*, Canberra, 10 March 2000, p 59.

68 Dr Clive Hamilton, *Proof Committee Hansard*, Canberra, 10 March 2000, p 59.

> I would suggest… that in designing emissions trading with renewable energy in mind, auctioning of permits is certainly preferable to grandfathering because it would create revenue that could go back into promoting renewable energy and other greenhouse gas reduction technologies. Auctioning also makes renewables more cost effective than grandfathering because the beneficiaries of grandfathering only need to purchase emission permits that are additional to their allocation.[69]

9.90 Ms Sonneborn felt that supporting renewables was a crucial complement to emissions trading:

> We can… direct revenue from the sale of permits to renewable energy promotion or other greenhouse gas technologies that are critical. I see this as a critically important complement to emissions trading, particularly under an auctioning system of allocation. For example, financial incentives could be provided for products and services that facilitate greenhouse gas reduction. For example, a one-off cash rebate linked to the quantity of greenhouse gases avoided over the life of a system would be a one-off boost to a new project. The other thing we can do is hold back permits for new entrants.[70]

9.91 Pacific Power, who had concerns with auctioning, argued strongly for auction revenues to be recycled back into the development and promotion of renewable energy:

> One of the big concerns with auctioning is what happens to the money. It actually takes money out of the industry and it goes somewhere else. We say that that money is actually needed to help us make the transition to cleaner energy forms.[71]

9.92 The South Australian Government also argued for 'a policy linkage between renewable energy and emissions trading, by establishing expansion of the renewable energy sector as Australia's primary long term greenhouse policy goal and structurally locking in its expansion by allocating a component of the proceeds of emissions trading auctioning to research and industry development in the sector'. They also advocate a system of 'tiered eligibility for trading credits' wherein fully renewable sources such as solar wind and biomass would have 'long term eligibility' and energy from 'non-renewable waste sources with a greenhouse benefit' (such as cogeneration or coal seam methane) have a limited eligibility (50 per cent or renewable sources or between 2008-12 only).[72]

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69 Ms Carrie Sonneborn, *Proof Committee Hansard*, Perth, 17 April 2000, p 537.

70 *Proof Committee Hansard*, Perth, 17 April 2000, p 538.

71 Mr Paul Flanagan, *Proof Committee Hansard*, Sydney, 22 March 2000, p 362.

72 South Australian Government, Submission 199, p 2125.

9.93 BHP advocated the auction of permits, with concessional allocations only for early action prior to 2005:

> We prefer auctioning, coupled with revenue recycling to reduce other taxes on business. It is a simpler and fairer approach that removes the disincentive to early action.[73]

9.94 BHP's approach, which stresses auctions but also advocates the concessional allocation of permits to those emitters who achieve reductions between 2000 and 2004, could be seen as a form of combined allocation. Ms Carrie Sonneborn, while acknowledging the benefits of auctions, felt that a full auction may be less desirable than some combination of auctioning and grandfathering:

> Grandfathering, as we have heard, could also create barriers to new and innovative companies, as these new emitters would need to pay for all of their emissions up-front. Grandfathering could also be seen as an incentive to maximise emissions now in order to get a large number of permits once emissions trading comes into play. Auctioning may also be objected to by some because it is effectively a transfer of public wealth - that is, access to the atmosphere - to the private sector. So it would seem that some combination of auctioning and grandfathering would be a fairer approach.[74]

9.95 The AGO raised the problem that a full auction of permits could rob Government of the flexibility needed to manage the unequal distribution of costs throughout the economy:

> The costs associated with emissions permits will have a pervasive effect on domestic prices and incomes. Even though such changes could be tolerable in an overall setting, there may be cases where the impacts of change are more intense and localised. Importantly, the economic implications of Australia's climate change response at a disaggregated level can be out of proportion to the emissions output of a particular industry, business group or region.[75]

9.96 Thus, while theoretically ideal, during the period when economic and social adjustment is occurring, auctioning presents a number of equity and economic concerns. For this reason the AGO suggests phasing in auctioning through a combined auction and administrative allocation of permits in the short-to medium-term, with a greater proportion of permits auctioned over time. The AGO has suggested a phasing schedule which reduces the allocation of concessional permits during the second commitment period (2103 to 2018) by half, by 3/4 in the second (2019 to 2023), and thence to zero after 2023. An alternative method of phasing out

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73 Position Statement, *BHP and Climate Change*, p 2.

74 Ms Carrie Sonneborn, *Proof Committee Hansard*, Perth, 17 April 2000, p 538.

75 Australian Greenhouse Office, *National Emissions Trading Discussion Paper 2: Issuing the Permits*, June 1999, p 38.

grandfathering could be to increase the price charged for concessional permits towards the market price, using a predetermined scale.[76]

9.97 The AGO acknowledges that auctioning all permits from the outset will create greater incentives for abatement action and force a more rapid greenhouse response. They warn, however, that the cost and urgency of these changes are likely to be spread unevenly across the community. Of particular concern are trade-exposed businesses and some regional areas. On the other hand, auctioning would also provide revenues which could be used to compensate those affected or assist with abatement efforts.

9.98 The Committee acknowledges the many benefits of auctioning emissions permits: the fidelity to the polluter pays principle, the avoidance of potentially unfair allocations of wealth to incumbents and the consequent erection of barriers to entry; the administrative efficiencies gained by allowing the market to allocate permits; and the clarity of price signals as a spur to abatement. Auctions are by far the most effective way of ensuring that the market internalises the costs of greenhouse pollution and rewards investment in emissions reductions. For these reasons, the Committee finds auctions an attractive principle for the allocation of permits under a domestic emissions trading system.

9.99 The Committee also acknowledges that auctions have drawbacks. Until developing countries have agreed to binding emissions reductions and are imposing on their emitters the same kind of costs faced by Australia, export competing industries could face costs which are not borne by the competitors. While the Committee does not suggest that every exporting industry should receive a large concessional allocation of permits, in some cases there may be grounds for doing so. In the case of the industries such as LNG, which could potentially demonstrate their greenhouse benefits on a life-cycle basis, the arguments would be stronger.

9.100 Emissions trading based on auctions would also be regressive in its impact. While these costs could be borne by many consumers without too much difficulty, they could also increase the disadvantage faced by those on low or fixed incomes, or those who lack access to public transport or live in regional areas. In other cases cost increases could be indiscriminate - for example, increases in petrol prices could force increases in public transport fares. It may also be possible that changing market conditions could cause job losses in industries in transition, which may impact upon particular communities or regions more than others.

9.101 It is incumbent upon government to ensure that they are sensitive to such potential impacts and be willing to ameliorate them. This could be achieved in a range of ways. Auction revenues could be used to fund compensation or increase welfare payments, or to invest in new public transport alternatives and to subsidise the

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76 Australian Greenhouse Office, *National Emissions Trading Discussion Paper 2: Issuing the Permits*, June 1999, pp 45-6.

costs of operating such systems. In other cases, grandfathered allocations could be used to soften a transition.

9.102 The Committee believes that auctions are in principle the best way of allocating permits and should be the underlying basis of a domestic emissions trading system. However, it acknowledges that there may be cases where the administrative allocation of permits may be warranted. The Committee stresses that such concessional allocations should be discrete, be made on principle, and not be used as a blanket form of allocation. In the lead up to 2008, and while information is still being gathered about the likely social and economic effects of adjustment, some concessional allocation of permits may be justifiable. However, in the Committee's view, the fundamental policy objective ought to be to move to an environment where the costs of greenhouse emissions are fully and transparently recognised by the market.

9.103 The Committee suggests that the Government consider the following principles for the concessional allocation of permits:

- where an exported product can be demonstrated to have overall greenhouse benefits, and where it has been shown that the full cost of permits will undermine the competitiveness of that product vis-à-vis exports of the same product from nations that do not have comparable emissions-related costs. Greenhouse benefits should be demonstrated through a scientifically verified life-cycle analysis;

- where an industry can substantively demonstrate that activity is 'leaking', or likely to leak, to countries not subject to Kyoto targets or is being disadvantaged in the short term relative to the circumstances it would face under the 'ideal' international situation, it may have a case for assistance through a rebate on permit/carbon levy costs in exchange for undertaking to pursue abatement efforts. This would see each industry compared with 'best greenhouse practice' in its industry globally;

- where the imposition of full emissions costs would have very negative employment or income impacts on a region or community. In such cases, companies could be asked to commit to a transitional strategy for reducing emissions utilising the wealth embodied in the concessional allocation. Adherence to that strategy should influence future allocations. Due regard for the affected community should also be required - the option of simply closing down plant and selling the grandfathered permits should be explicitly proscribed;

- where the incorporation of a sector into an emissions trading scheme could be demonstrated to result in unacceptably high adjustment costs in relation to incomes and social welfare. Agriculture, or some agricultural producers, may constitute such a case because of the methane emissions from livestock, which have a very high global warming potential. In the absence of affordable solutions (such as the vaccines being developed by the CSIRO) permit prices could be suppressed through grandfathering or rebates on the price of permits as

part of a transitional strategy for the sector. In any case, coverage under an emissions trading scheme should be extended in order to stimulate lower cost abatement through changes in land use, tillage and livestock management;

- where it can be demonstrated that an industry competing with imports (or in export markets) with producers who are not subject to binding emissions reductions would be undermined by the having to bear the full costs of emissions. Again, such allocations should be accompanied by a binding agreement on a transition path to reducing emissions; and
- where concessional allocations may encourage early abatement actions, such as in BHP's proposal. If this path is chosen, reductions must be verified against a credible baseline and the time in which concessions are available should be strictly limited.

Recommendation 99

While recognising that a hybrid approach to permit allocation may be desirable in the short term, the Committee recommends that allocation of permits by auction be considered as the basis for a domestic emissions trading system.

Where interim concessional allocations are made, the Committee recommends that they be made on the basis of clear and widely accepted principles (such as life-cycle greenhouse benefits, a severe loss of international competitiveness, or credit for early action) and require recipients to agree to emissions reduction targets.

Recommendation 100

Where carbon leakage is likely because an activity competes with activities in countries not bound by emissions reduction targets, the Committee recommends that measures be implemented to minimise the disadvantage. This may include the allocation of concessional permits on the basis of clear and transparent criteria.

Credit For Early Action

9.104 In discussions about the potential for mandatory policy measures, like emissions trading, a common theme among industry witnesses was a need to ensure either that emitters are rewarded (or not punished) for having taken early action to reduce emissions.

9.105 The Australian Industry Greenhouse Network (AIGN) argued that this issue was important, both for progressing the Greenhouse Challenge, and for ensuring that companies who took no action to reduce emissions would not seek unfair advantage later:

> The expansion of participation and extension of the [Greenhouse Challenge] action plans would be greatly enhanced by a clear commitment from government that organisations will not be disadvantaged for taking voluntary actions now relative to those not taking such actions. This is particularly important as we see a lot of debate in measures such as emissions trading and so on. So organisations which are working on trying to reduce their emissions should not feel that there is some sort of jeopardy there, that they might be disadvantaged compared with others.[77]

9.106 For Great Southern Energy, credit for early action is a matter of certainty:

> We would also like to see recognition for early action. That will avoid the potential for companies to defer measures which otherwise they could be taking as part of their business practices at the present time. We see that as quite a valuable point that needs to be recognised as quickly as possible so that companies can at least have some degree of certainty as they go forward.[78]

9.107 However, the Committee also heard concerns about the uncertain verification of emissions reductions. The uncertainty around the baselines being used in the Greenhouse Challenge has already been discussed in chapter 8, and this uncertainty would translate into assessing the scope of early reductions for the purposes of an emissions trading system. The Australia Institute, which was very critical of the assumptions used in assessing emissions reductions under the Greenhouse Challenge, was thus sceptical of claims for reward for early action:

> The Greenhouse Challenge Program is explicitly based on no regrets - that is, companies are being encouraged to undertake actions that are commercially beneficial, and, as we have seen, for the most part would have been done anyway. So it would be extraordinary if these companies were rewarded for undertaking activities that have been in their own commercial interests. The attempt by big polluters to double dip in this way is a salutary reminder of just how insincere Australia's fossil fuel industries have been throughout the whole greenhouse debate.[79]

9.108 If *rewards* for early action were to be considered, such as concessional or cut-price allocation of emissions permits as BHP suggests, they would have to be completely and transparently verifiable, and available from a point in the near future rather than in the past. Verification would have to be in place for all potential emitters, otherwise distortions and inequities would be created. The viability of such an approach would also depend on the coverage of a future emissions trading system and thus be only available to those who were later liable. This may limit the applicability of such a scheme.

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77 Mr John Eyles, *Proof Committee Hansard*, Melbourne, 20 March 2000, p 137.

78 Mr John Smith, *Proof Committee Hansard*, Canberra, 23 June 2000, p 688.

79 Dr Clive Hamilton, *Proof Committee Hansard*, Canberra, 10 March 2000, p 57.

9.109 Ensuring that early action is *not penalised* is however a far more simple matter. This could easily be incorporated into the design of an emissions trading scheme. Emissions trading could also work to reward early action. It could also be argued that announcing the introduction of an emissions trading scheme now, with some key design principles, will create incentive for early action. Early action would be rewarded by future market conditions because it would reduce the emissions costs firms faced once emissions trading came into force. This would be clearer where the majority of permits were auctioned; however if grandfathering were to be widely used as an allocation method this would create the danger that early actions could be penalised vis-à-vis emitters who had not taken early action.

9.110 The AGO argues that it would be easy to guard against such problems with grandfathering by adopting rules early that preclude them - such as choosing an allocation date that has already passed, rewarding early abatement efforts by allocating more permits to those who make faster progress, or by calculating allocations on the basis of an emission 'standard' relative to activity levels. This last option would reward facilities with a lower emissions relative to carbon inputs or production output with a larger allocation of permits. This, says the AGO, 'has the advantage of being outcomes focused, and practicable in terms of data requirements'.[80]

Recommendation 101

The Committee recommends that Government seek to ensure that a future emissions trading system does not penalise early action to reduce greenhouse emissions.

Recommendation 102

The Committee recommends that any use of permit allocation to reward early action to reduce greenhouse emissions be treated with caution, and ensure that reductions are verifiable and calculated from a date following the announcement of a reward for early actions scheme.

Recommendation 103

The Committee recommends that businesses that comply with specified accounting practices and protocols should be guaranteed that the emissions reduction actions will be considered in future policy development.

80 Australian Greenhouse Office, *National Emissions Trading Discussion Paper 2: Issuing the Permits*, June 1999, pp 34-35.

Is Emissions Trading Enough?

9.111 A number of witnesses, while supportive of emissions trading, argued that it would need to be supplemented by a range of other measures. For example, Pacific Power argued it may not, of itself, be enough to stimulate the renewable energy sector:

> However, we do recognise in addition to emissions trading there may be other policy measures that will need to the done to capture those things that naturally fall outside an emissions trading scheme. At the end of the day, though, emissions trading will not necessarily create a renewables market. We believe other initiatives are needed, and ultimately renewables is going to be the long term solution to this issue, not a short term one. Renewables will benefit regional Australia by the very simple fact that most wind, biomass, solar and other resources are not usually found in the middle of cities but rather in regional locations. Certainly our experience to date has reflected that.[81]

9.112 Carrie Sonneborn suggested that the development of renewable energy will in turn, reduce the price of permits:

> Renewable energy is also central to emissions trading and greenhouse gas reduction because it will have a key influence on the evolution of the price of carbon. The price of carbon permits and credits will depend on the technological progress in renewable energy and energy efficiency technologies. Rapid progress in renewable energy will create surplus permits, reducing demand and dropping the price of a tonne of CO_2. So the price of carbon and the price of renewables and other greenhouse gas reduction measures are indelibly linked.[82]

9.113 Ms Sonneborn argues that the Kyoto flexibility mechanisms, including emissions trading, may not stimulate renewables alone, a problem which could be exacerbated by the design of a domestic system:

> There are also some concerns that the flexibility mechanisms will not be all good for promoting this new energy economy that the world needs to move towards. I would suggest that, in the short to medium term, it is unlikely that renewables will benefit without concerted effort by government to ensure that there are industry policies in place and there is removal of contradictory subsidies and market signals… .
>
> The flexibility mechanisms may also make it easier to avoid politically difficult measures such as removing subsidies from fossil fuels. It can promote sinks to the detriment of investment in renewable energy, and it can also fail to deter extensive new fossil fuel developments such as natural gas. If it had to be a carbon - a fossil fuel - you would want it to be natural gas, that is for sure. But if there is a total shift there and not an equal shift to

81 Dr Robert Lang, *Proof Committee Hansard*, Sydney, 22 March 2000, p 351.

82 *Proof Committee Hansard*, Perth, 17 April 2000, p 535.

> renewables, we can see infrastructure in place for a very long time. There may be manipulation of base lines; it is better to have a high level of emissions when the permits are handed out or to estimate a higher level of emissions if you are doing a CDM project.[83]

9.114 SEIA also recognised that emissions trading may not be able, through price signals alone, to stimulate emissions reductions. The main problem would come if an upstream approach was taken, which could blunt price signals to the end users of energy or market intermediaries like the building industry or car manufacturers. To counter this problem, they propose including market intermediaries through a 'reverse carbon tax':

> It is for that reason that SEIA has put up a proposal for what we call a reverse carbon tax concept where market intermediaries would be able to be paid a rebate equal to the life-cycle carbon savings multiplied by a reasonable price for carbon for each product or piece of equipment they sell or install… . We believe that that program would cost in the hundreds of millions of dollars a year, but that would be a small percentage of the revenue that will be generated by emissions trading sales of permits.[84]

9.115 SEIA argues that this approach 'compensates for the adverse impacts of introduction of a GST on the sustainable energy industry, while providing immediate market signals consistent with a carbon tax or emissions trading to purchasers of energy-related systems'. Their detailed proposal is for:

> … an 'emission reduction credit', in the form of a once-off rebate linked to the quantity of greenhouse gas emissions avoided over the life of the system, be provided to suppliers of specified sustainable energy solutions. Essentially, this is the reverse of a carbon tax or purchase of an emission permit: instead of charging those who emit greenhouse gas emissions an extra amount, those who invest in systems that avoid emitting greenhouse gases are paid an incentive. This avoids the negative impacts of a carbon tax or purchase of emission permits, while providing a positive financial incentive for those who choose to reduce emissions.[85]

9.116 They then propose that the rebate be applied at two rates:

- at least $10 per tonne of carbon dioxide emissions avoided over the specified lifetime of the system installed where it substitutes for natural gas or electricity generated from sources other than diesel fuel (or other oil-based fuels). This is based on the lower end of values discussed for the

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83 *Proof Committee Hansard*, Perth, 17 April 2000, p 537.

84 Alan Pears, *Proof Committee Hansard*, Melbourne, 21 March 2000, p 229; and Alan Pears, *Proposal: Rebate scheme for sustainable energy systems/services that reduce greenhouse gas emissions*, Sustainable Energy Industry Association, Revised January 2000.

85 Alan Pears, *Proposal: Rebate scheme for sustainable energy systems/services that reduce greenhouse gas emissions*, Sustainable Energy Industry Association, Revised January 2000.

value of emission credits for greenhouse sinks. It could be varied with the actual price of emission permits; and

- $135/tonne of CO_2 where the sustainable energy solution replaces diesel fuel eligible for exemption from excise and other subsidies. This higher rate is intended to be equivalent to the financial benefit offered to users of non-transport diesel fuel in rural areas. At this rate, this rebate is equivalent to a diesel fuel rebate of approximately 40 cents per litre. If diesel rebates are varied, this rebate rate should be adjusted.[86]

9.117 They argue for paying the rebates to the manufacturer or importer rather than the consumer, and could be applied to energy saving domestic and commercial appliances, local renewable energy systems, energy-efficient building systems and even motor vehicles.[87]

9.118 Such a scheme could generate considerable complexities, and may be easier to apply in a more discrete rather than a very broad way. However, the Committee believes it is a valuable suggestion and urges government to explore its possibilities seriously. It may be of particular value in promoting renewable energy, energy efficiency and low emissions vehicles in the years before policy-induced market changes began to make such developments cost effective. It may also be a way of providing assistance to groups such as farmers to pursue abatement when costs such as fuel are rising under the impact of greenhouse reduction policy.

9.119 In terms of the broader problem of promoting downstream efficiencies and behavioural changes, a range of policies would need to be considered. The Government's 2 per cent renewable target in electricity is one such policy, as are others such as the rebates for household solar and other renewable programs. Tax incentives for R&D in renewable energy should also be considered, as should a removal of tax incentives for greenhouse unfriendly fuels and vehicles.

9.120 Major investments in public transport and a sustainable approach to investment in road infrastructure also need to be a priority, to provide travellers with less emissions-intensive alternatives and reduce the number of trips. In short, there needs to be a creative effort by government to ensure that emissions trading is complemented by a wide range of policies to reduce emissions in all sectors of the economy. In the Committee's view, emissions trading is one highly desirable element in an overall policy mix.

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86 Alan Pears, *Proposal: Rebate scheme for sustainable energy systems/services that reduce greenhouse gas emissions*, Sustainable Energy Industry Association, Revised January 2000.

87 Alan Pears, *Proposal: Rebate scheme for sustainable energy systems/services that reduce greenhouse gas emissions*, Sustainable Energy Industry Association, Revised January 2000.

Recommendation 104

The Committee recommends that a national emissions trading system be supplemented by a range of policies which will stimulate emissions reductions in sectors for which it is difficult to provide coverage or which do not respond to price signals.

In particular, policies to provide public transport alternatives to the use of private motor vehicles, and to promote the development and takeup of renewable energy, need to be a priority.