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A slow burn: the emergence of climate change law in Australia

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Abstract

Following more than a decade of intransigence on climate change policy, the Australian Government is beginning to yield to sustained pressure from the community and business to enact comprehensive climate change legislation. As the environmental, economic and security implications of global warming are better understood, there are growing calls to place emissions reduction targets within a binding legislative regime that contains both market-based measures (such as emissions trading) and regulatory interventions (such as mandatory efficiency standards). Adding impetus for national climate law reform are initiatives by other governments (including several Australian states) to enshrine emissions reduction targets in law. This chapter critically examines the patchwork of existing legislation having a bearing upon climate change policy in Australia. It also speculates on the future shape and content of Australian climate change law as negotiations on a strengthened international climate regime gather pace.

Introduction

After a decade of opposition to binding national and international measures to address climate change,[1] the Australian Government is under sustained pressure to participate constructively in international climate change negotiations and to enact comprehensive national climate change legislation. The pressure points for national law reform have been numerous, and have included better understanding of the threat of climatic change;[2] growing public awareness and concern;[3] business advocacy for investment certainty; fuller appreciation of likely impacts on Australia's environment, economy and security;[4] the rapid increase in Australia's greenhouse gas emissions; and legislative initiatives by the states and territories.[5]

As in many other areas of environmental management, in addressing climate change there appears no substitute for clear and enforceable goals set within a statutory scheme.[6] Indeed the Australian Government now appears to recognise that its voluntary industry and consumer programs have failed to deliver any substantial emissions reductions. In July 2007 the Howard government announced that it would set a long-term 'aspirational' target for reducing Australia's emission in 2008 and would implement a national carbon trading scheme by 2012.[7] For its

[1] See Clive Hamilton, *Scorcher: The dirty politics of climate change* Black Inc, 2007. Hamilton argues that the Howard government has not been content to refuse to take measures on climate change, but has actively set out to sabotage the Kyoto Protocol. (at p. 221). See also Guy Pearse, *High and dry: John Howard, climate change and the selling of Australia's future* Viking, 2007.

[2] Respected climatologists and other scientists now speak of civilisation being in imminent peril and call for immediate action to be launched in aid of planetary rescue: James Hansen et al, 'Climate change and trace gases', *Philosophical Transactions of the Royal Society,* 2007 (A) pp. 1925–1954. See also James Lovelock, *The revenge of Gaia: why the Earth is fighting back – and how we can still save humanity,* Basic Books, 2006.

[3] One recent poll conducted by World Public Opinion found that Australians were the most likely to favour measures to combat global warming: http://www.worldpublicopinion.org/pipa/articles/home_page/329.php?nid=&id=&pnt=329&lb=hmpg1, viewed 23 March 2007.

[4] See, e.g. Alan Duport & Graeme Pearman, *Heating up the planet: climate change and security,* Lowy Institute, 2006.

[5] See, e.g. *Climate Change and Greenhouse Emissions Reduction Act 2007* (SA) (discussed below) which aims to reduce by 2050 greenhouse gas emissions in South Australia by between 60 and 40 per cent below 1990 levels.

[6] Rosemary Lyster, 'The implications of electricity restructuring for a sustainable energy framework: what's law got to do with it? *Environmental and Planning Law Journal* vol. 20, 2003, pp. 359, 367. See generally Rory Sullivan, *Rethinking voluntary approaches in environmental policy,* Elgar 2005.

[7] Australian Government, *Report of the Prime Ministerial Task Group on Emissions Trading* Commonwealth of Australia, Canberra, 2007; and Australian Government, *Australia's*

part, the federal opposition has committed a Labor government to ratifying the Kyoto Protocol, to emissions cuts of 60 per cent below 2000 levels by 2050, and to establishing, as soon as possible, an internationally-consistent emissions trading scheme.

Against this background, this chapter offers a critical assessment of the limited efforts that have been made to devise and implement an effective Australian climate change law. The first section examines the current state of climate science, the regulatory challenges posed by climate change, and Australia's emissions profile. The achievements of the United Nations Framework Convention on Climate Change (UNFCCC) and the accompanying Kyoto Protocol are discussed, as are the prospects of a new regime post 2012. In the second section, the chapter assesses the value of existing and proposed Australian laws relating to climate change. It is seen that this inchoate Australian climate change law remains a considerable distance from what is required to deal with the existential threat of climate change.

Climate change science and regulation

Climate change science

The 2007 Fourth Assessment Report (AR4) of the Intergovernmental Panel on Climate Change (IPCC) offers the most comprehensive scientific assessment to date of climate change. The four central messages from the AR4 are: that climate change is almost certainly the result of human activity; that substantial increases in temperature this century can be expected; that temperature rises above 2°C will devastate the physical and biological systems upon which humanity depends; and that considerable reduction in carbon emissions is required to stabilise climate systems.

The AR4 reports that emissions of greenhouse gases from human activities are responsible for a rise in global average surface temperatures

climate change policy: our economy, our environment, our future, Commonwealth of Australia, Canberra, 2007.

of approximately 0.75°C between 1906 and 2005.[8] The world is now warming at approximately 0.13°C per decade, roughly twice the rate recorded over the previous century. The AR4 projects that temperatures will increase by between 1.1°C and 6.4°C by 2100. As a consequence, sea levels will rise by between 0.18 and 0.59 metres and the oceans will become increasingly acidic. Disturbingly, these projections do not factor in the risk that positive feedback processes may lead to rapid, runaway climate change.

In relation to impacts, the AR4 concludes that climate change has already had a discernable influence on environmental systems.[9] Moreover, the resilience of many ecosystems is likely to be exceeded this century by an unprecedented combination of climate change and other human disturbances. According to the IPCC, Australians can expect water security problems from reduced precipitation and increased evaporation, significant loss in biodiversity, particularly in the ecologically-rich sites of the Great Barrier Reef and Kakadu, and major declines in agricultural productivity. This analysis tends to confirm that Australia is the developed country most at risk from climate change.

The third focus of the IPCC is upon mitigation, that is, the emissions reductions required to avert the worst climate change impacts. Greenhouse gas emissions have risen globally by 70 per cent between 1970 and 2004, and are projected to continue to grow.[10] However, there is substantial economic potential to reduce emissions over the coming decades through the deployment of available technologies, such as renewable modes of energy production. In line with the findings of *The economics of climate change: the Stern review*,[11] commissioned by the British

[8] Intergovernmental Panel on Climate Change, *Climate Change 2007: The physical science basis,* summary for policymakers, contribution of Working Group I to the Fourth Assessment Report, 2007.

[9] Intergovernmental Panel on Climate Change, *Climate change 2007: climate change impacts, adaptation and vulnerability,* summary for policymakers, contribution of Working Group II to the Fourth Assessment Report, 2007.

[10] Intergovernmental Panel on Climate Change, *Climate change 2007: mitigation of climate change,* summary for policymakers, contribution of Working Group III to the Fourth Assessment Report, 2007.

[11] Nicholas Stern, *The economics of climate change: the Stern review,* Cambridge University Press, 2007.

Treasury, the economic costs of cutting emissions appear relatively small in the medium to long term (especially in comparison with the high costs of inaction).

The IPCC presents a choice of stabilisation pathways[12] (see Table 1). For instance, to retain concentrations of CO_{2e}[13] at between 445 and 490 parts per million (ppm), and thereby keep temperature increases between 2.0°C and 2.4°C, will require emissions to peak by 2015, and then to be reduced by between 50 and 85 per cent by 2050.[14] A 2°C rise on pre-industrial temperatures is probably the upper limit beyond which we should not step, as it could stimulate irreversible processes, including the melting of the Greenland ice sheet. For this reason the 2°C target has been adopted by the European Union in its climate change strategy.[15]

Table 1.1 Stabilisation Pathways

CO_{2e} concentration (ppm)	Global mean temperature increase (above pre-industrial level) (°C)	Peaking year for CO_2 emissions	CO_2 emissions changes (from 2000 levels) (%)
445–490	2.0–2.4	2000–2015	-85 to -50
490–535	2.4–2.8	2000–2020	-60 to -30
535–590	2.8–3.2	2010–2030	-30 to +5
590–710	3.2–4.0	2020–2060	+10 to +60
710–855	4.0–4.9	2050–2080	+25 to +85
855–1130	4.9–6.1	2060–2090	+90 to +140

Source: Adapted from Intergovernmental Panel on Climate Change, *Climate change 2007: mitigation of climate change,* summary for policymakers, contribution of Working Group III to the Fourth Assessment Report, 2007, p. 23

[12] The notion of stabilising greenhouse gas emissions is that a steady concentration can be maintained over time by ensuring that emissions of gases are equal to removals.

[13] A tonne of CO_{2e} (carbon dioxide equivalent) means one metric tonne of CO_2 or a volume of another greenhouse gas with the identical warming effect.

[14] See also Nathan Rive et al 'To what extent can a long-term temperature target guide near term climate change commitments?' *Climatic Change,* vol. 82, 2007, pp. 373–391

[15] Council of the European Union, Information Note 7242/05, 11 March 2005.

Australia's emissions profile

Neither as a matter of law nor policy has Australia committed to the emissions reductions necessary to keep temperatures below 2°C. Indeed, Australia's current and projected greenhouse gas are wholly inconsistent with a pathway of a 50 to 85 per cent reduction in global emissions by 2050 required to meet this temperature target.

Australia shares the dubious distinction of being one of the highest per capita emitters of greenhouse gases. In response to this fact, it is often said that Australia's emissions are small in global terms, at 1.5 per cent. However, in reality Australia is both a major per capita and aggregate emitter. Australia's emissions are equal to those of much larger industrialised countries, such as South Korea and France (both with 1.5%) and only slightly lower than others such as Italy (1.6%) and the United Kingdom (1.9%).[16]

While Australia's emissions increased by only around 2.3 per cent between 1990 and 2004, this was largely because of reduced rates of land clearing. Now that this one-off windfall has been achieved, emissions are beginning to rise rapidly. The government estimates that emissions will reach 109 per cent of 1990 levels by 2008–2012,[17] thereby overshooting the Kyoto Protocol target of a 108 per cent increase over this period. By 2020, emissions are projected to reach 127 per cent of 1990 levels, due mostly to rapid increases in emissions from the stationary energy and transport sectors. This takes into account all abatement measures currently in place at federal and state levels.

The political and regulatory challenges of climate change

Australian climate change policy and law must be made in the context of international efforts to constrain emissions. Improved climate science has clarified the parameters for global policy choices, but it cannot determine what choices should be made.

[16] Baumert KA, Herzog T & Pershing J, *Navigating the numbers: greenhouse gas data and international climate policy,* World Resources Institute, 2006.

[17] Department of the Environment and Heritage, *Tracking to the Kyoto target 2006: Australia's greenhouse emissions trends 1990 to 2008–12 and 2020*, 2006.

Two main choices now confront the international community. The first, and most important, is what global average temperature increase is to be tolerated. As has been seen, 2°C appears the most scientifically defensible target if the more serious effects of climate change are to be avoided, which in turn implies a global goal for reducing emissions of between 50 and 85 per cent on 1990 levels by 2050. This then leads to a second and more difficult decision: how is the burden of reducing emissions to be distributed fairly among nations? The fairest approach is that of 'contraction and convergence', under which total global emissions are reduced over time (contraction), while per capita emissions are gradually equalised among nations in the North and South (convergence). However, this approach stands at odds with the national interests of Australia and other fossil-fuel reliant economies, and is therefore in competition with a range of other models posited as a replacement for the Kyoto Protocol which pay greater deference to national circumstances.

Coupled with these difficult geopolitical choices are equally challenging regulatory challenges. Anthropogenic climate change is unlike any environmental problem that has been subject to national or international regulation, for four main reasons. First, climate change is a global process of environmental change driven by emissions from activities central to human livelihoods and industries across the planet. To ensure effective reductions and avoid free-riding, global coordination to reduce emissions is indispensable. Second, climate change is a phenomenon driven by activities across almost all economic sectors. As a consequence, climate change calls for an expansive regulatory regime that encompasses all sources of greenhouse gas emissions. The third special feature of the problem is the time lag between the causes and effects of climate change. While some change has already taken place, the most serious impacts are yet to be felt, and their magnitude will be directly determined by the policy choices governments make today. Fourth, there remains considerable uncertainty as to how serious will be the impacts of climate change. Although there is good scientific evidence that climate change is the most serious threat to the planet's biodiversity

(rivalling, or exceeding deforestation),[18] when it comes to impacts upon human civilisation there is considerable uncertainty as to which societies will bear the most serious effects of change, and whether they will be able to adapt to a radically altered climate.[19]

International climate change law

The existing international legal framework does not establish anything like a comprehensive system to deal with the political and regulatory challenges of climate change. Nonetheless, it does set out important parameters and principles that form the foundations for an effective international climate change law.

The building blocks for an international climate change law

The UNFCCC was agreed at the 1992 Rio Conference on Environment and Development, and now has almost universal membership with 189 parties, including Australia. The provisions of the UNFCCC have been well documented,[20] and for the purposes of this chapter only several key features need be noted. The foremost of these is the overarching goal to stabilise emissions at a level that will prevent dangerous anthropogenic interference with the climate system.[21] Second, the UNFCCC introduces the notion of common, but differentiated responsibilities. This is the concept that while all states have a shared duty to combat climate change, industrialised nations responsible for most carbon wastes emitted to the atmosphere are to take the lead in cutting emissions, with developing countries to contribute according to their capacity to do so. Third, the UNFCCC emphasises that the precautionary approach is to structure the global response to climate change, so that scientific uncertainty should not justify inaction. Finally, while all parties took on a commitment to reduce emissions, industrialised states are encouraged,

[18] Malcolm JR, et al 'Global warming and extinctions of endemic species from biodiversity hotspots' *Conservation Biology*, vol. 20, no. 2, 2006, pp. 538–548, 545.
[19] Arrow KJ, 'Global climate change: a challenge to policy' *The Economists' Voice,* June 2007, p. 1.
[20] See, e.g. Bodansky D, 'The United Nations Framework Convention on Climate Change: A Commentary' (1993) 18 *Yale Journal of International Law* 451.
[21] UNFCCC, Article 2.

but not required,[22] to limit their greenhouse gas emissions to 1990 levels by 2000.

In the face of rapidly rising greenhouse gas concentrations in the atmosphere, it was the task of the Kyoto Protocol to give concrete effect to the broad objectives of the UNFCCC by setting binding emission reduction targets. Although agreed in 1997, it was not until February 2005 that the Kyoto Protocol attracted the required ratifications from industrialised countries to enter into force. As with the UNFCCC, it is now a very widely supported agreement, with 172 parties ranging from the most highly developed to least developed nations.

The Kyoto Protocol operationalises the central bargain agreed in the UNFCCC, namely that developed countries would take on legally-binding emissions reduction or limitation targets and, in providing technological and other assistance to developing countries would help these countries to develop less carbon-intensive economies. As with the Montreal Protocol on Substances that Deplete the Ozone Layer, the expectation was that once developed countries had demonstrated real progress in reducing emissions in several commitment periods, developing countries would begin to assume similar obligations.

This bargain was repudiated by the United States and Australia, the only industrialised nations not to join the Kyoto Protocol. Both of these states maintain that they will not participate in an internationally-binding framework until key developing countries, such as China and India, have committed to do so. Australia's refusal to ratify Kyoto is perplexing in a number of respects. Australia won major concessions in the 1997 negotiations, namely the so-called 'Australia clause' that permitted countries with net emissions from land use change and forestry in 1990 to include net land use change emissions in their 1990 baseline, and an emissions increase (to 108% of 1990 levels) rather than the reduction that most other states were required to implement (such as the 92% of 1990 levels required of the European Union). Moreover, despite refusing to ratify the Kyoto Protocol, the government has consistently argued that it is working towards meeting the emissions limitation target set for

[22] Gillespie A, *Climate change, ozone depletion and air pollution,* 2006, p. 181.

Australia. This sits at odds with the government's claim that to join Kyoto would destroy the Australian economy.

The future climate change regime

Whereas the UNFCCC set out important governing principles, the Kyoto Protocol laid much of the institutional groundwork for international action on climate change. This is particularly through the so-called 'flexible mechanisms' of joint-implementation, clean-development mechanism, and emissions trading.[23] However, the emissions reductions agreed in 1997 are not a comprehensive climate change solution. Even if fully implemented, they will produce global emissions reductions of around one per cent, a fraction of the 50 to 85 per cent cuts that are required. As a consequence, there is a need to build a new international consensus on emissions reduction targets.

The first phase of the Kyoto Protocol will conclude in 2012 when the end of the 'first commitment period' is reached. The essential choice facing the international community is whether to rollover Kyoto and adopt a follow-up framework that sets new emissions targets and that includes a wider range of emitters with greater stringency, or whether to discard Kyoto and adopt a new regime altogether. Given the international commitment to Kyoto and its long and difficult gestation, it is naïve in the extreme to think that a new agreement can be concluded quickly. As Hamilton has noted, the Kyoto Protocol represents 'the most complex and ambitious international treaty process ever attempted'.[24]

Although it has been subject to considerable criticism by the Howard government, the Kyoto Protocol is in fact a remarkably pliable agreement, and can accommodate a whole range of modifications consistent with the basic principles of the UNFCCC. For instance, a second commitment period could include binding targets for developed countries, and for developing countries binding policy commitments (e.g. obligations to reduce deforestation rates) and

[23] See, in particular, Stokke OS, Hovi J & Ufstein G (eds), *Implementing the climate regime: international compliance,* Earthscan, 2005.
[24] Clive Hamilton, 'Building on Kyoto', *New Left Review,* vol. 45, 2007, pp. 91, 96.

binding sectoral commitments (e.g. obligations to reduce emissions in a certain economic sector).[25]

Such issues are already being floated in negotiations on a post-2012 framework. In 2005 the parties to the Kyoto Protocol established an Ad Hoc Working Group to consider future emissions reductions. As a non-party to Kyoto, Australia has no formal voice in this process. However, parallel with the Kyoto-track negotiations have been a more general dialogue under the UNFCCC in which Australia has participated. Both processes come to a head in December 2007 when the parties to UNFCCC and Kyoto meet in Bali to discuss the future of international climate change law. The Bali meeting has been given particular impetus following the declaration of the G8 at the 2007 Heiligendamm summit. The G8 declaration acknowledges that "the UN climate process is the appropriate forum for negotiating future global action on climate change", that "further action should be based on the UNFCCC principles of common, but differentiated responsibilities and respective capabilities", and that a global agreement "under the UNFCCC" should be agreed by 2009.[26]

The Howard government has sent mixed messages concerning the importance of the United Nations as a venue for determining global climate policy. As with the Bush Administration in the United States, it was initially highly critical of any UN-led process for establishing a new post 2012 consensus. Instead it has championed alternative arrangements, such as the non-binding 2006 Asia Pacific Partnership on Clean Development and Climate. AP6, as it is known, comprises the United States, China, India, Japan, Korea and Australia, which together emit 50 per cent of global emissions. AP6 sets no targets, timeframes or benchmarks for emissions reductions, but places its faith in promoting technological innovation through direct government subsidy.[27]

[25] Claussen E & Diringer E, 'A new climate treaty: US leadership after Kyoto', *Harvard International Review,* vol. 29, no. 1, 2007, p. 80.
[26] G8 Summit Heiligendamm 2007, *Growth and responsibility in the world economy: summit declaration,* http://www.g-8.de/Content/EN/Artikel/__g8-summit/anlagen/2007-06-07-gipfeldokument-wirtschaft-eng,property=publicationFile.pdf, viewed 27 June 2007.
[27] See http://www.asiapacificpartnership.org/, viewed 27 June 2007.

Unfortunately, it appears unlikely to deliver any substantial emissions reductions, according to recent economic modelling by the Australian Bureau of Agricultural and Resource Economics.[28]

The meagre achievements of the voluntary AP6 stand in stark contrast to the mandatory approach taken in Europe through the European Union Emissions Trading Scheme (EU ETS) that is effectively harnessing market forces to reduce emissions across the EU within a Kyoto-compatible framework.[29] The EU ETS forms the basic mechanism for pricing carbon in European economies and will be an important tool for achieving the binding 20 per cent by 2020 emissions reduction target agreed by European heads of government in early March 2007.[30]

In light of recent statements by the G8, the Howard government now appears to accept that the United Nations remains the central forum when it comes to climate negotiations. Hence, in the Australian Government's Climate Change Policy, released in July 2007, it is said that Australia "will pursue an effective international framework through all available avenues, including the United Nations Framework Convention on Climate Change."[31]

[28] Fisher B et al *Technological development and economic growth:* ABARE research report 06.1, Australian Bureau of Agricultural and Resource Economics, 2006, p. 34. See also Clive Hamilton 'The political economy of climate change', Milthorpe Lecture, Macquarie University, June 2006, http://www.tai.org.au, viewed 27 June 2007.
[29] The EU ETS was designed to assist in achieving the EU's eight per cent emissions reduction target under the *Kyoto Protocol*. Its coverage includes energy production, and metals, minerals, pulp and paper production industries. It establishes a cap and trade system under which eligible companies are given an emissions allocation (calculated on the basis of the member state's emissions reduction target). They may purchase additional allocations or sell surplus allocations on the EU market. See http://ec.europa.eu/environment/climate/emmission.htm, viewed 27 June 2007.
[30] See http://europa.eu/rapid/pressReleasesAction.do?reference=PRES/06/58&language=en, viewed 27 June 2007.
[31] op cit.

Australian climate change law

It is against the backdrop of uncertain international agreement that Australia and other states must make regulatory decisions concerning their emissions levels. The announcement that a national emissions trading system will be established signals some willingness on the part of the Australian Government to promulgate a national climate change law. However, there is no sense of urgency in this law reform agenda. The emissions trading system will not be in place for another five years, and legislation on relatively minor energy efficiency measures, such as the phasing-out of incandescent light globes, has not even been introduced in the parliament.[32]

This exceptionally sluggish legal response places Australia at odds with many other jurisdictions where the pace of climate law reform is quickening. 'Climate change law' is a new and burgeoning field of practical action and scholarly inquiry as attempts are made to grapple with the legal dimensions of global warming. In the courts, governments and civil society actors are litigating climate change cases.[33] In parliaments throughout the world, legislators are beginning to debate and pass climate change laws. The breakneck speed of developments in some jurisdictions is astonishing, including in the United States where several bipartisan bills currently being debated in Congress would require emission cuts of 60 to 80 per cent by 2050.[34]

Federal climate change law

In deciding not to ratify the Kyoto Protocol, the Howard government asserted its opposition to the main pillars of the agreement, and argued

[32] The Hon Malcolm Turnbull, 'World First! Australia slashes greenhouse gas emissions from inefficient lighting', Media Release, Parliament House, Canberra, 20 February 2007, http://www.environment.gov.au/minister/env/2007/pubs/mr20feb07.pdf, viewed 27 June 2007.

[33] See Peel J, 'The role of climate change litigation in Australia's response to global warming' *Environmental and Planning Law Journal,* vol. 24, 2007, p. 90.

[34] See the discussion in Lyster R, 'Chasing sown the climate change footprint of the private and public sectors: forces converge', *Environmental and Planning Law Journal,* vol. 24, 2007, p. 281.

instead that Australia would meet its Kyoto Protocol target on a 'no regrets' basis. This preference for a voluntary approach to emissions reduction internationally has been closely tracked by a similar fondness for voluntary schemes at the domestic level. The argument has been that no legal regulation of emissions is required, as optional schemes for business and consumers, government spending programs and research funding can produce sufficient emissions reductions without damaging the economy.[35]

Commonwealth funding for climate mitigation

In pursuit of its voluntarist climate policy, the government has unveiled a collection of administrative and funding packages in the area of climate change since 1996.[36] Key programs were announced in 1997 in Safeguarding the Future: Australia's Response to Climate Change and in 1999 in Measures for a Better Environment with a total value of $1.8 billion. Among other things, these two packages established Greenhouse Challenge (a voluntary industry program to cut emissions) and the Greenhouse Gas Abatement Program (financial support for activities likely to result in emissions reduction). Subsequently, in 2004, the Prime Minister released a white paper on energy and climate, Securing Australia's Energy Future, which included additional funding programs.[37] These included the Low Emissions Technology Demonstration Fund (to support commercial demonstration of low carbon energy production technologies), and the Solar Cities Program (to demonstrate use of solar power and energy efficiency measures in urban locations). More recently, in July 2007, the government announced a $200 million Global Initiative on Forests and Climate, $336 million Green Vouchers for Schools Programme (to fund installation of solar hot water systems and rainwater tanks in schools), and a $252 million Solar Hot Water Rebate scheme (to provide rebates to households replacing electric hot water systems with solar systems).

[35] Chris McGrath, 'Setting climate change targets to protect the great barrier reef' *Environmental and Planning Law Journal,* vol. 04, 2007, pp. 182, 192.

[36] For an overview of these initiatives see Rosemary Lyster & Adrian Bradbrook, *Energy law and the environment*, 2006 p. 85–87.

[37] Australian Government, *Securing Australia's Energy Future,* Canberra, *2004;* Australian Government, *Low Emissions Technology Demonstration Fund Policy Framework,* Canberra, 2005.

In aggregate the federal government has set aside a substantial $3.6 billion for addressing climate change. However, it should be noted that only a fraction of this amount has actually been expended. Moreover, there is considerable lack of rigour in terms of objectives and benchmarks,[38] which is one reason for the critical review of Commonwealth greenhouse funding packages by the Australian National Audit Office.[39] In any event, the best measure of their effectiveness is Australia's actual and projected emissions, and the government has freely admitted that there are no signs of any reductions in Australia's carbon footprint in the foreseeable future.

Federal climate change laws

We are left with the conclusion that although national funding of climate programs has increased dramatically under the Howard government, this has not been accompanied by an institutional framework to implement well-defined sustainability objectives.[40] As Christoff has noted, the Commonwealth has been exceptionally reluctant in the area of climate change policy to assert its constitutional capacity to erect a strong legal foundation for national environmental management.[41] Lyster and Bradbrook similarly argue in their recent work on energy law that despite "[possessing] constitutional powers to regulate energy and climate change matters [the government] has done very little to bring these issues within its jurisdiction."[42]

The only federal legislation currently in place which is expressly directed to addressing climate change is the *Renewable Energy (Electricity) Act 2000* (Cwlth) which establishes the Mandatory Renewable Energy Target (MRET). The MRET program seeks to reduce greenhouse gas emissions

[38] C Parker, 'The Greenhouse Challenge: Trivial Pursuit?' *Environmental and Planning Law Journal,* vol. 16, 1999, pp. 63, 64.
[39] Lyster and Bradbrook, op cit., pp. 36, 89.
[40] See Peter Christoff, 'Out of chaos, a shining star? Toward a typology of green states' in John Barry & Robyn Eckersley (eds), *The state and the global ecological crisis*, MIT Press, Cambridge 2005, pp. 25–52.
[41] ibid, 36.
[42] Lyster & Bradbrook, op cit., p. 92. Also see Graeme Dennis, 'Climate change: Australian legislative responses', *AMPLA yearbook,* 2002, p. 71.

through the imposition of a mandatory target for electricity retailers to obtain an additional two per cent of their electricity from renewable sources by 2010. The two per cent target was in fact met more than five years ahead of schedule. Although the Howard government initially refused to extend or increase the target to match more ambitious targets adopted in many other countries, in September 2007 the Prime Minister reversed its opposition to an expanded scheme. The new Clean Energy Target (CET) will require around 15 per cent of energy to come from 'clean sources' by 2020, and will effectively roll the renewable energy targets already adopted by several states into a replacement federal scheme.[43]

In addition to the *Renewable Energy (Electricity) Act 2000* (Cwlth) there is a miscellany of legislation having some bearing on climate policy. This includes the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* (Cwlth) which was the Commonwealth's legislative response to the Vienna Convention and Montreal Protocol on Substances that Deplete the Ozone Layer. While primarily directed at addressing ozone depletion, it also achieves climate change mitigation objectives as many ozone-depleting substances are also powerful greenhouse gases. There is also the *Energy Efficiency Opportunities Act 2006* (Cwlth) which seeks to improve the identification of opportunities for businesses with large energy demands to improve their energy efficiency.

The Commonwealth's landmark environmental scheme, the *Environment Protection and Biodiversity Act 1999* (Cwlth) (*EPBC Act*), is conspicuously silent on climate change. That Act, which is designed to safeguard Australia's biological diversity and other matters of national environmental significance, prohibits certain activities unless approved by the minister following a specified environmental assessment process. This process is triggered if the activity in question has a significant impact on matters of national environmental significance. However, activities that result or are likely to result in substantial emissions of greenhouse gas emissions (such as land-use changes, or a new coal-fired power plant) are not included – there is no so-called 'greenhouse trigger'. Repeated attempts by opposition parties to

[43] http://www.pm.gov.au/media/Release/2007/Media_Release24577.cfm, viewed 19 October 2007.

introduce an amendment to the same effect in the *EPBC Act* have been rebuffed by the government.

National emissions trading scheme

Regardless of the outcome of the 2007 federal election, we can now expect a steady stream of legislation on climate change. Central to this legislative agenda will be a national emissions trading scheme, which both the federal government and opposition are committed to implementing. However, important points of difference in policy between the two major parties remain, and these are likely to be reflected in the detail of their carbon trading schemes when they are released for public scrutiny. In particular the Australian Labor Party is committed to ratifying the Kyoto Protocol, and to crafting a carbon trading scheme consistent with the agreement.

If re-elected, it will be some time before the fine points of the Howard government's legislative program on climate change are released. However, on the basis of policy announcements to date, it is possible to identify what are likely to be its main features. *Australia's Climate Change Policy,* released on 17 July 2007, states that the government will introduce legislation establishing a mandatory energy and greenhouse gas emissions reporting scheme for participants in the national trading scheme, or other entities that intend to provide offsets. Legislation will also be passed to underpin the national emissions trading scheme, and in this regard *Australia's Climate Change Policy* sets out several key design features that will require legislative elaboration:

- 'cap and trade' model of emissions trading
- maximum practical coverage of all sources and sinks, and of all greenhouse gases (with the aim of covering more than 70 per cent of Australia's emissions)
- initial exclusion, but eventual inclusion, of emissions from agriculture and land use from the scheme
- a mixture of free allocation and auctioning of single-year dated emissions permits

- up-front, once-and-for-all, free allocation of permits as compensation to businesses likely to suffer disproportionate loss of value because of introduction of carbon price
- a safety-valve emissions fee designed to limit unanticipated costs to business and the economy, especially in the early years of the scheme
- recognition of a wide range of carbon offsets both domestically and internationally
- capacity to link, over time, to other comparable national and regional schemes
- incentives for firms to undertake abatement in the lead-up to the commencement of the AETS, including through the purchase of offset credits.

State and territory regulation of greenhouse gas emissions

With the Commonwealth a reluctant legislator in relation to climate policy, and with business clamouring for investment certainty, it has been left to the states and territories to adopt a range of legislative responses to climate change over the last decade. There have been a plethora of actual and foreshadowed legislative developments at a state and territory level, the most ambitious being the proposal for a National Greenhouse Gas Emissions Trading Scheme that was scheduled to commence operation by 2010 if the federal government had not committed to a similar scheme.[44]

With the exception of this emissions scheme proposal, the state-level schemes have mostly been developed in a piecemeal way in the absence of federal leadership, and most have been directed to the electricity sector. For instance, in 2003 the New South Wales Government introduced a 'baseline-and-credit' emissions trading scheme through amendments to the *Electricity Supply Act 1995* (NSW). The ACT subsequently introduced a similar scheme through the *Electricity (Greenhouse Gas Emissions) Act 2004* (ACT). Also of note in relation to the electricity sector is the *Victorian Renewable Energy Act 2006* (Vic) which

[44] Possible Design for a National Greenhouse Gas Emissions Trading Scheme, 2006.

requires 10 per cent of end use consumption to be sourced from renewable means by 2016. Other relevant laws have included legislation to recognise carbon rights in forest plantations, which is an important element in establishing a carbon trading scheme.[45]

The most ambitious legislative initiative has been that of the South Australian Government through its *Emissions Reduction Act 2007* (SA). The act sets a target to reduce greenhouse gas emissions by 60 per cent from 1990 levels by the end of 2050. It also requires the proportion of renewable energy generated and used in South Australia to rise to 20 per cent. The main objective of the legislation is to provide an overall framework for achieving emissions reductions. But while it enshrines reduction targets in law, it is short on detail as to how these targets are to be achieved; such as by elaborating a system of emissions trading.

Outside the electricity generation sector, most of the states and territories have limited, if any, specific climate change legislation. However, efforts have been made in several cases to consider the greenhouse implications of developments under environmental planning and environmental protection legislation. Although planning legislation makes no reference to climate change, or greenhouse gas emissions, these acts do require broad consideration to be given to environmental impacts and values.[46] Fisher has noted that "even in the absence of such arrangements the current arrangements in Australia are able to address – perhaps obliquely – some of these issues'."[47] This has allowed some courts and tribunals to conclude that, in making planning decisions, authorities need to consider not only the greenhouse gas emissions directly arising from a particular development, but also indirect emissions. Hence, in considering whether approval should be granted to a new coalfield, it is relevant to consider not only the emissions arising

[45] See *Carbon Rights Legislation Amendment Act 1998* (NSW); *Forestry and Land Title Amendment Act 2001* (Qld); *Forestry Property Act 2000* (SA); *Forestry Rights Registration Amendment Act 2002* (Tas); *Carbon Rights Act 2003* (WA); F*orestry Rights (Amendment) Act 2001* (Vic).
[46] D F Fisher, 'The statutory relevance of greenhouse gas emissions in environmental regulation', *Environmental and Planning Law Journal*, vol. 24, 2007, pp. 211, 215.
[47] ibid, p. 236.

from the actual extraction of the coal, but also in its combustion to produce energy.

In *Australian Conservation Foundation v Latrobe City Council* [48] the Civil and Administrative Tribunal of Victoria held that an enquiry into the environmental impacts of a new brown coal field to supply the Hazelwood Power Station had to include emissions generated from the use of the coal to generate electricity. Similarly, in *Gray v Minister for Planning*[49] the New South Wales Land and Environment Court found that an environmental impact assessment needed to consider the broad implications of the proposed Anvil Hill coal mine in the Hunter Valley for global warming, including the emissions resulting from burning exported coal in Japan and other likely destinations for the coal, and could not be restricted to the emissions from the mining process itself.

It is important to recognise the limitations of these decisions. They were concerned with the considerations that must be included in the assessment process, and were not reviewing a decision to approve or reject the project. Indeed, following a fresh assessment in conformity with the decision in the *Anvil Hill Case,* the New South Wales Government has given approval to the mine, and there are no apparent grounds for challenging this under New South Wales law.

Conclusions

To date the Australian Government has not assumed legislative authority to restrain Australia's greenhouse gas emissions in any systematic or comprehensive way. Indeed, much federal legislation having a bearing on climate and energy matters has had quite the opposite effect. Taxation arrangements, for instance, have resulted in generous subsidies being provided for the exploration, production and use of fossil fuels rather than renewable alternatives. This suggests that, when embarking on any program of climate law reform, there should also be complete audit of all federal, state and territory laws to assess their impact upon Australia's emissions profile.

[48] *Australian Conservation Foundation v Latrobe City Council* (2004) 140 LGERA 100 ('Hazelwood Case').
[49] *Gray v Minister for Planning* (2006) NSWLEC 720 ('Anvil Hill Case').

Existing Australian law that is designed to address climate change is characterised by its disjointed and patchwork character, with effect across different jurisdictions and economic sectors. There is a range of legislative regimes, including environmental planning and protection legislation. This fragmented situation is likely now to change, at least partially, with the federal government and opposition embracing the need for broad legislation to implement a mandatory Australia-wide emissions trading scheme. There are also some hints that a more heavy-handed regulatory approach may be in the offing, particularly in the area of energy efficiency. However, this foreshadowed involvement by the Commonwealth in this critical arena of environmental policy does not mean that the states and territories will no longer have a role to play. Particularly in the areas of development control, they will have the capacity to contribute constructively to Australian climate change law.

Debate over the shape and content of Australia's emerging climate change law cannot take place in isolation from broader discussions concerning the global legal response. Yet the fact that international negotiations are in a state of flux, with many options presented for post-2012 compact,[50] does not relieve Australian governments of their responsibility to legislate to address climate change. As was explained in the Stern Review, "codifying and passing commitments into domestic law can reinforce current and future commitments for action on a global public good [as it] sends a strong signal that a country is sincere in pledging action."[51] To this end, the clear challenge now confronting Australian legislators, after a period of studied intransigence, is to establish a world-leading legal regime that advances shared national and global interests in addressing the climate change crisis.

[50] For a survey see Niklas Höhne, Dian Phylipsen & Sara Moltmann, Factors Underpinning Future Action: 2007 Update, DEFRA, 2007; Daniel Bodansky, 'International Climate Efforts Beyond 2012: A Survey of Approaches', 2004.

[51] Stern Review, op cit., p. 462. To this end the United Kingdom's recently released Draft Climate Change Bill 2007 (UK), that makes 60% reductions in emissions by 2050 legally binding, is expressly presented as a unilateral commitment to stimulate international negotiations on the next phase of the Kyoto Protocol. For commentary see Tim Stephens, 'The United Kingdom's Emissions Reduction Legislation' *Environmental and Planning Law Journal*, vol. 24, 2007, pp. 249–252.

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