Chapter 5

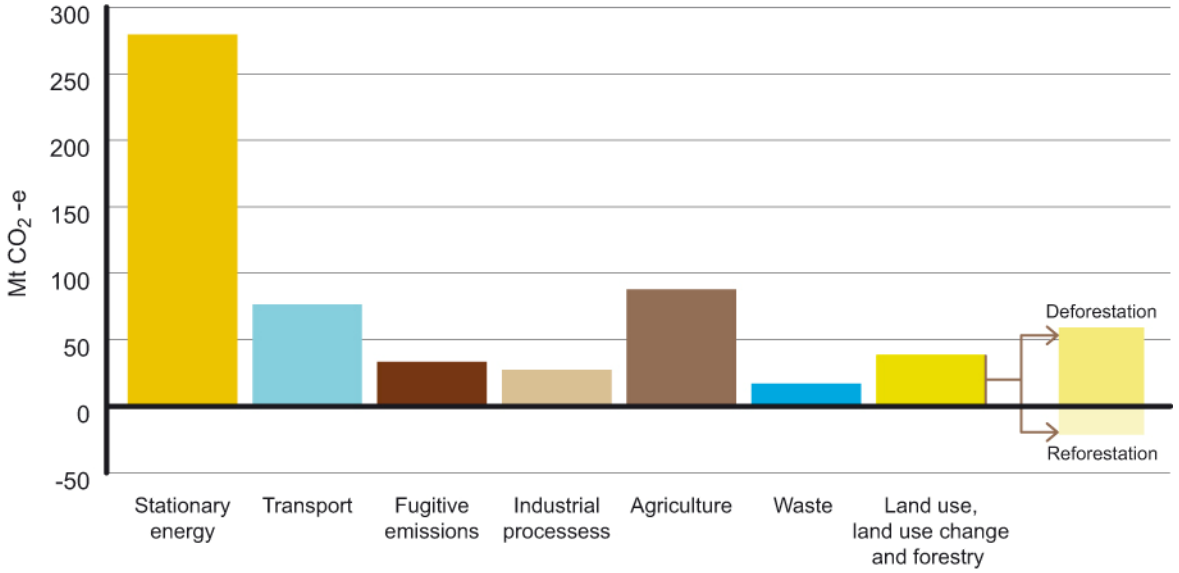
Targets in the CPRS

Emissions covered by targets

5.1 The CPRS will cover all greenhouse gases listed under the Kyoto Protocol; carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, hydroflurocarbons and perflurocarbons; all expressed in carbon dioxide equivalents (CO_2e).[1] The latter three gases are referred to as 'synthetic greenhouse gases'.

5.2 The main cause of emissions in Australia is stationary energy, notably coal-burning power stations. Chart 5.1 shows the contributions of various sectors to the 576 million tonnes of CO_2e emitted by Australian entities in 2006.[2]

Chart 5.1: Australian emissions in 2006



Source: *White Paper*, p 6-3.

5.3 The CPRS aims to cover around 75 per cent of Australian emissions. This is a very high proportion compared to emissions trading schemes in other countries.

---

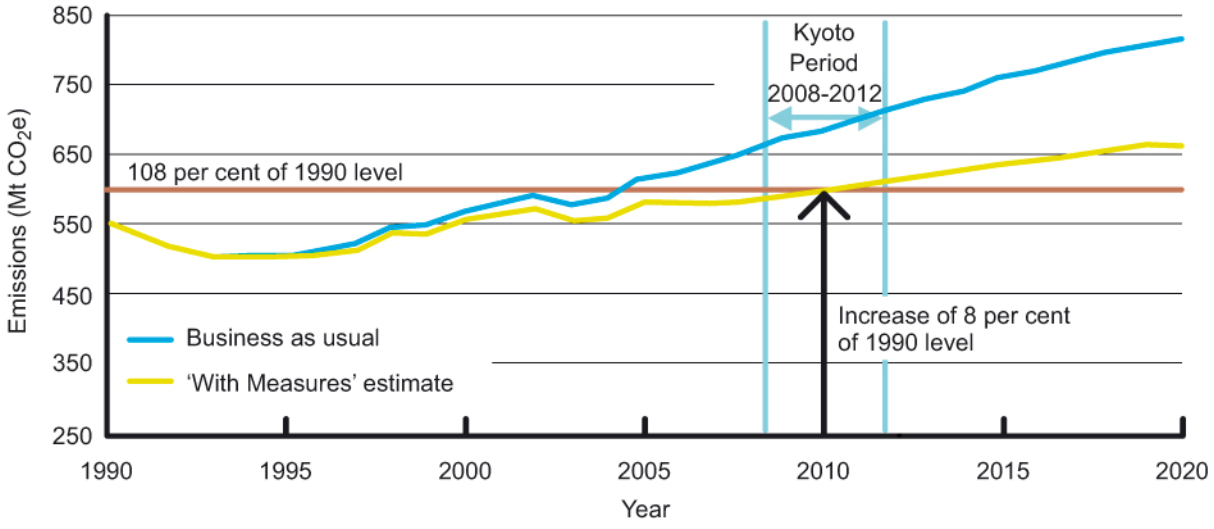
1 The internationally agreed conversion factors, reflecting the impact on global warming of the various gases, are given in *White Paper*, p 6-2. While, for example, nitrous oxide is emitted in much lower volumes than carbon dioxide, its global warming impact is 310 times as high.

2 Definitions of the sectors are given in *White Paper*, pp 6-2 and 6-3.

5.4 Australia, unlike some other signatories, is on track to meet its Kyoto targets (Chart 5.2). This reflects a combination of factors:

- Australia was set a realistic target, an 8 per cent *increase* in emissions from 1990 to 2008-2012[3];
- the early 1990s recession reduced Australia's emissions in the early years;
- there have been one-off reductions in land clearing.

Chart 5.2: Australian emissions 1990 to 2020



Source: *White Paper*, p 4-5.

5.5 There are variations in emissions from year to year for various reasons:

> …changes in economic activity, population and commodity prices; the characteristics of coal, oil and gas being extracted; and natural climate variability. For example, emissions change during drought mainly because there are fewer cattle and sheep, but also because there is less water available for hydro-electricity generators, which increases emissions from fossil-fuelled stationary energy generation.[4]

5.6 Abstracting from these fluctuations, if nothing is done the upward trend in Australian emissions will continue. By 2020 they are projected to be around 120 per cent of 1990 levels.[5] It will therefore take a significant effort just to prevent emissions rising further.

---

3 The average requirement was a 5 per cut from 1990 levels: *White Paper*, p C-1.

4 *White Paper*, p 4-6.

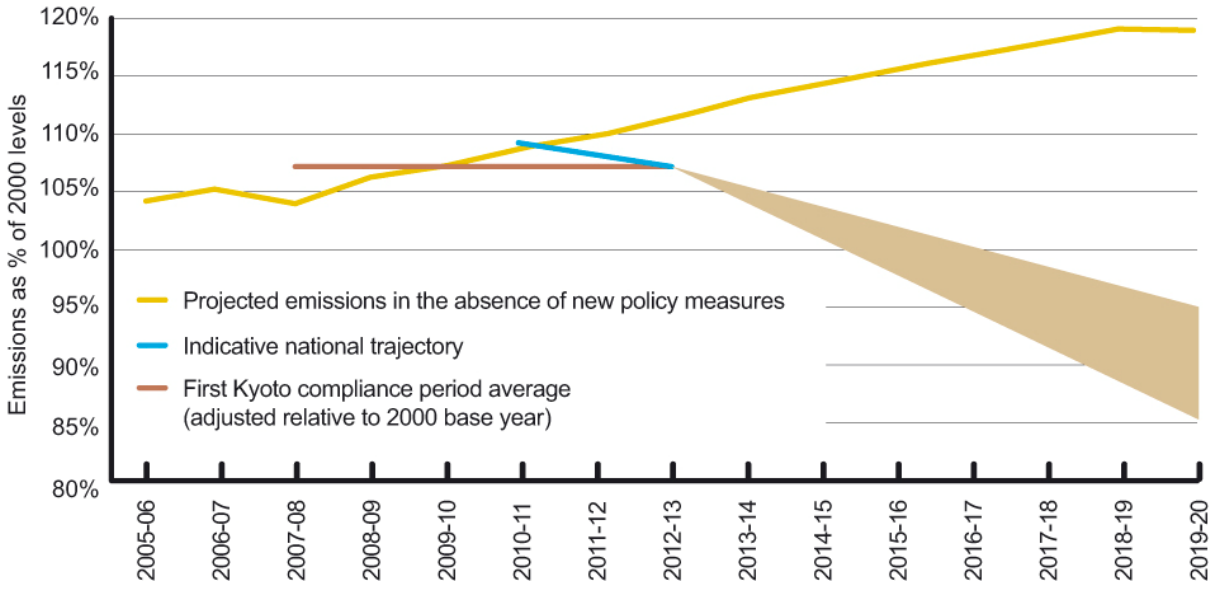
5 *CPRS Bill Commentary*, p 8.

The emissions targets and gateways in the CPRS

5.7 The Government have committed to a reduction of between 5 and 15 per cent in carbon emissions from 2000 to 2020. A 5 per cent reduction would bring down Australian emissions from 109 per cent of 2000 levels in 2010-11, to 108 per cent in 2011-12, and 107 per cent in 2012-13.

5.8 Once the scheme starts, annual caps will be announced for five years ahead, rolling out an extra year each year. For the period beyond five years, 'gateways' – a range within which future caps would be set – would be announced 'as a guide to the Government's longer-term cap-setting intentions'.[6] These gateways would be gradually extended over time.

Chart 5.3: CPRS targets



Source: *White Paper*, p 4-23.

5.9 The 5 per cent reduction is an unconditional target. The Government has said it would go to 15 per cent if there were a global agreement 'where all major economies commit to substantially restrain emissions and all developed countries take on comparable reductions to that of Australia'.[7] The Government regards the target as representing a 'balancing [of] the need to make a strong contribution to international efforts with ensuring a balanced and measured start to the Scheme'.[8]

---

6 *White Paper*, p 10-7.

7 *CPRS Bill Commentary*, p 14. The *Garnaut Review* had also advocated a 5 per cent unconditional cut but recommended an offer of a 25 per cent cut in the context of an international agreement that added up to sufficient cuts to reach a CO_2 concentration of 450 ppm.

8 *White Paper*, Executive Summary, p 5.

5.10 This 2020 target is 'a milestone on the way to the Government's stated long-term target of a 60 per cent reduction in greenhouse gas emissions by 2050'.[9]

5.11 Further, the Government has indicated that it accepts the findings of Professor Garnaut that a fair and effective global agreement centred on stabilising long term atmospheric concentrations of greenhouse gases at or below 450 parts per million of carbon dioxide equivalent is in Australia's national interests. Should such an agreement emerge, the Government has indicated it would seek an electoral mandate for setting tougher post-2020 emissions reduction targets to ensure that we play our full part in achieving this goal.[10]

Comparable action

5.12 Given the strong growth in Australian emissions that has already occurred since 2000, and the projected further increases, even the 5 per cent cut represents a 20 to 30 per cent reduction from what 2000 emissions would be under 'business-as-usual'.[11] A number of submitters described the targets as ambitious:

> Australia is doing its part in leading the way in setting emission reductions and in establishing policies to balance the competing demands of industries, workers and consumers in this respect.[12]
>
> … 5 percent may not sound like much but it is a sea-change.[13]
>
> We are also seeing a recognition that actually achieving the five per cent target will be no mean feat when you take into account current emissions growth, particularly in the energy sector in Australia.[14]
>
> Rather than proposing "comparable" commitments, in both the -5% and -15% cases the Government intends committing Australia to taking on targets that are stronger, in terms of reductions per capita, than other more wealthy countries including the EU, the USA and the UK.[15]

---

9 *White Paper*, p 4-8.

10 Prime Minister's speech at National Press Club, 14 December 2008?

11 Energy Supply Association of Australia, *Submission 21*, p 2.

12 Australian Workers Union, *Submission 27*, p 5.

13 Professor Joshua Gans, *Submission 1*, p 1.

14 Ms Emma Louise Herd, Director Emissions and Environment, Westpac, *Proof Committee Hansard*, 27 March 2009, p, 28.

15 Australian Industry Greenhouse Network, *Submission 54*, p 8. (The EU, and the UK part of it, are not actually wealthier than Australia.)

5.13 Comparisons of public announcements about emissions reductions across countries are complicated by often referring to different base periods. For example, the US 2009 Budget proposes a 14 per cent reduction in emissions by 2020, but as this is from 2005 levels, it represents only a return to 1990 levels. Table 5.1 attempts to put the various targets on a comparable basis.

Table 5.1: Comparison of carbon pollution reduction targets for 2020

	% change from 1990	% change from 1990 per capita	per capita emissions (tonnes of CO_2e)
Australia	-4 to -14	-34 to -41	17 to 15
European Union	-20 to -30	-24 to -34	9 to 8
United Kingdom	-26 to -32	-33 to -39	8 to 7
US (2009 budget proposal)	0	-25	16
Canada	0	-25	18
Germany	-40	-41	9
Netherlands	-30	-39	9
Norway	-30	-43	6
Switzerland	-20 to -30	-32 to -40	5

Sources: Secretariat calculations based on *White Paper*, p 3-3; *Garnaut Report*, p 177; Department of Climate Change Fact Sheet – Emissions, target and global goal; 'Economic cost as an indicator for comparable effort'; 'A new era of responsibility: renewing America's promise' (US 2009 Budget), p 21; United Nations, *World Population Prospects*. Final column calculated by applying percentage changes to 1990 per capita emissions (including land use change and forestry) from World Resources Institute, *Climate Analysis Indicators Tool*.

5.14 Another way of assessing the comparability of effort is in terms of economic cost. Australia's costs of mitigation are higher than in most other developed countries. The Government's view is that that the cost of mitigation needs to be considered in the context of a country's capacity to pay, and alongside other relevant indicators.[16] Table 5.2 compares the costs of equivalent per capita reductions in emissions in various countries.

[16] Australian Government submission to the Ad hoc Working Group on Long Term Cooperative Action under the United Nations Framework Convention on Climate Change.

Table 5.2: Cost of achieving emissions (% change from reference 2020 GNP)

	5 per cent target	15 per cent target
Australia	-1.1	-1.6
Canada	-1.1	-1.5
Japan	-0.2	-0.4
United States	-0.3	-0.4
European Union	-0.4	-0.6
Russia and CIS	-3.6	-5.3
World	-0.7	-0.9

Source: 'Economic cost as an indicator for comparable effort', Australia's submission to the Ad Hoc Working Group on Long Term Cooperative Action under the United Nations Convention on Climate Change.

5.15 The economic costs of mitigation for Australia are a product of its particular national circumstances, including its population growth, industry profile, resource endowment and mitigation potential.

Population growth

5.16 Australia has a fast-growing population for an advanced economy. A significant part of this is due to high immigration, which means we are hosting people who would otherwise be adding to emissions in other countries.

5.17 By contrast population has been almost static in parts of the European Union and is projected to decline in Japan. In *per capita* terms, even Australia's 5 per cent target implies a *reduction* of 34 per cent in emissions from 1990 to 2020. This is a comparable *percentage change* in emissions to that proposed by our peers (Table 5.1).[17] However, even after this reduction the *level* of Australia's per capita emissions will be well above those in most other countries.

Structure of the economy

5.18 Australia has a relatively large share of emission- and energy-intensive industries and a dominance of low-cost coal in electricity generation, which determines the extent of economic restructuring and/or technological transformation required.

5.19 While Australia has the potential in the long run to make more use of renewable power, most renewable projects are some time from reaching large-scale commercial application and some do not have the potential to generate baseload power or respond to peaks in energy demand.

17 It has been suggested the *White Paper* could be understating likely European population growth; Tim Colebatch, 'Rudd's defence of target contains some telling omissions', *The Age*, 17 December 2008.

5.20 It is important to note that international linking allows national targets to be achieved at lower cost, through overseas abatement as well as domestic emissions reductions. As a result, countries that have fewer opportunities for low cost domestic mitigation may meet ambitious targets at low cost to the economy as a whole by purchasing credits in the market.

Science and the targets

5.21 The exposure draft says that Australia's emissions targets are set with regard to:

> (i) the principle that the stabilisation of atmospheric concentrations of greenhouse gases at around 450 parts per million of carbon dioxide equivalence or lower is in Australia's national interest.[18]

5.22 As discussed in Chapter 2, the scientific evidence suggests that the global concentration of greenhouse gases needs to be kept to 450 ppm to avoid the dire consequences following from increases in average temperatures of over 2 degrees. Some submitters argued that Australia should therefore make an offer consistent with its fair share of a global effort to the world stabilising concentrations at 450 ppm. As Professor Garnaut says:

> …to make an unrealistically low offer in the international negotiations is to negate the prime purpose of our own mitigation, which is to facilitate the emergence of an effective agreement.[19]

5.23 Australia currently has per capita emissions well above the global average and some submissions regard it as neither fair nor realistic to expect the world to accept Australia being allocated a disproportionate share of emissions entitlements forever. The *Garnaut Review* assumes every country in the world agrees to allocate remaining allowable global emissions, and through emissions trading, to eliminate differences in per capita emissions gradually over the period to 2050 ('contract and converge'). Under this arrangement, Australia's contribution would be about a 25 per cent reduction from 1990 levels.[20]

5.24 The logic of limiting the Australian offer to a maximum reduction of 15 per cent was questioned by some witnesses:

> …having the option of a 25 per cent reduction or thereabouts at 2020 on the table would make sense, seeing that it can be computed as somewhere like the fair share that Australia would contribute to an ambitious global

---

18 *Carbon Pollution Reduction Scheme Bill 2009, Exposure Draft*, (hereafter *CPRS ED*), section 14, p 30.

19 *Garnaut Review*, p 278.

20 A similar calculation in a report by Ecofys gives a 22-28 per cent reduction as Australia's contribution; Dr Paul Twomey, *Proof Committee Hansard*, 27 March 2009, p 116. This is also about a 25 per cent reduction from 2000 levels, as in Australia there was little net increase in emissions over 1990-2000 (see Chart 5.2).

> agreement—that of course being more and more realised as Australia's true national interest in a climate change debate.[21]
>
> I think it would be helpful to our place in these international discussions if we kept on the table the chance of a 25 per cent reduction by 2020, conditional on others doing comparably stringent things.[22]

Committee comment

5.25 The Committee believes that once allowance is made for Australia's faster population growth and the structure of the economy, its plans at least match those proposed by other advanced economies. The targets are a responsible start to the scheme.

5.26 The Committee believes it is important to calibrate Australia's national commitments to reflect scientific evidence, the availability of low emissions technologies and the scope of international action on climate change. This could enable Australia to consider adopting stricter emissions targets past 2020.

5.27 Our ambition should be to accelerate development of renewable energy alternatives and improve energy efficiency. The goal would be to reach a position where even more ambitious targets could be adopted without causing economic hardship for households, resulting in carbon leakage or endangering energy security.

21 Dr Frank Jotzo, *Proof Committee Hansard*, 19 March 2009, pp 29-30.

22 Professor Ross Garnaut, *Proof Committee Hansard*, 23 March 2009, p 65.