

Australia's Indefensible Climate Change Targets

Summary

- The Australian Government proposes an unconditional target of reducing 2000 year net emissions by 5%, and would make a 15% cut if other developed nations make similar commitments. The 5% cut is consistent with greenhouse gases rising in concentration to 550 ppm globally, and the 15% cut is consistent with stabilisation at 510 ppm. These targets are indefensible on the basis of the latest science.
- Australia gained the most generous emissions allowance of any developed nation under the Kyoto Protocol (108% of 1990 levels) when the agreement as a whole was to cut to 95% of 1990 gross levels.
- For the purpose of assessing equitable burden sharing, if Australia's targets are re-expressed in terms of their relationship to 1990 gross emissions, the unconditional target represents a 13% rise over 1990 levels and the conditional target a 1% rise on 1990 emissions.
- In other words, Australia is positioning to still emit at a rate above 1990 gross levels under any circumstances when the IPCC affirms that industrialised nations as a group need to cut to between -25% and -40% below 1990 levels (a position New Zealand supports) to target a 450 ppm concentration.

Avoiding Dangerous Climate Change

Governments of the world have been obliged to avoid "dangerous" climate change since signing the Framework Convention on Climate Change (UNFCCC) in 1992.¹

In its most recent review, the IPCC set out a series of alternative greenhouse gas concentration targets that governments could aim for, and the reductions that developed nations as a whole would need to achieve by 2020 to deliver on these. The one which has been central to discussions is that designed to ultimately achieve a 450

¹ The UNFCCC, article 2, states that the ultimate objective is to: "stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system".

ppm (CO₂e) target. For this the IPCC estimates industrialised nations need to cut gross emissions by 2020 to between –25% and –40% of 1990 levels.²

New Zealand first stated in Bali in December 2007 that it agreed industrialised nations, as a group, should target cuts in gross emissions to these levels by 2020.³

In contrast, the Australian Government's recent White Paper states that the following will be its emissions target for the period from 2012 to 2020:⁴

The target range for emissions reductions to be achieved by 2020 will be from 5 per cent to 15 per cent below 2000 levels. The range represents:

- a **minimum** (unconditional) commitment to reduce emissions to **5 per cent below 2000 levels by 2020** (projected to be a 27 per cent reduction in per capita terms)
- a commitment to reduce emissions by up to **15 per cent below 2000 levels by 2020** (projected to be a 34 per cent reduction in per capita terms) in the context of global agreement under which **all major economies** commit to substantially restrain emissions and advanced economies **take on reductions comparable to Australia**.⁵ (Emphasis added)

Australian Government modeling associates the 5% reduction with a target concentration of 550 ppm and the 15% reduction with a 510 ppm concentration.⁶ Both of these are indefensible relative to the UNFCCC objective of avoiding dangerous climate change.⁷ It is significant that a lead IPCC author, Professor Chris Field of Stanford University, said the IPCC's 2007 fourth assessment report had underestimated the rate of climate change. He noted in particular that greenhouse gas emissions between 2000 and 2007 increased far more rapidly than expected and said:

we're basically entering a domain of climate science that has not been explored by the
rent trajectory of emissions and therefore an unknown
trajectory of warming.⁸

Notwithstanding such concern that even 450 ppm is likely to be too weak a target, Australia also indicates that it is unwilling to commit to anything much below that proposed (and 450 ppm in particular) until after 2020.

In the event that a comprehensive global agreement were to emerge over time, involving emissions commitments by both developed and developing countries that are consistent with long-term stabilisation of atmospheric concentrations of

² See review of the issues surrounding “ by Michel den Elzen and Niklas Höhne, *Reductions of greenhouse gas emissions in Annex I and non-Annex I countries for meeting concentration stabilisation targets*, Climatic Change, 91, 2008.

³ New Zealand confirmed this policy for the Poznan meeting in December 2008.

⁴ Australia also has a longer term target of reducing emissions by 60 per cent below 2000 levels by 2050.

⁵ Australian Government, *Carbon Pollution Reduction Scheme: Australia's Low Pollution Future*, White Paper, Volume 1 December 2008, p 4-17.

⁶ “Australia's low pollution future locates CPRS -5 in a global scenario that would stabilize global atmospheric greenhouse gases at around 550 ppm CO₂-e by the end of the century; and CPRS -15 in a global scenario with stabilisation at around 510 ppm CO₂-e.” White Paper, Volume 1 December 2008, p 4-11.

⁷ See: IPCC, *Climate Change 2007: Synthesis Report*, Fourth Assessment, November 2007, together with the writings of James Hansen and colleagues in particular.

⁸ Chris Field speaking on Checkpoint, Radio New Zealand, 17 Feb 2009.

greenhouse gases at 450 ppm CO₂-e or lower, Australia is prepared to establish its **post-2020 targets** so as to ensure it plays its full role in achieving the agreed goal.⁹ (Emphasis added)

Thus if developed nations are to collectively cut to between –25% and –40% of 1990 levels, other countries are going to have to pick up the proportionate share of the burden that Australia indicates it will not accept. When asked at a recent presentation which countries were expected to do this, a representative of the Australian Treasury responded that Europe and Japan would be looked to.¹⁰

Australia’s Targets Relative to 1990 Levels

To quantify the difference between the IPCC range and Australia’s targets, it is necessary to translate the Australian targets, expressed with reference to the year 2000 into emissions for the year 1990 (the Kyoto base year). This can have two expressions.

Australia accounts in net emissions and expresses the target with reference to net emissions.¹¹ On this basis, a 5% or a 15% reduction on Australian 2000 levels translates to much the same as a 5% and 15% reduction on 1990 levels.¹²

However, as nearly all industrialised nations other than Australia had net emissions in 1990 that were lower than their gross emissions, for the purposes of examining what degree of global emissions reduction is required from developed nations, the IPCC used gross emissions. (This is also the conventional measure for expressing country emissions). The following table sets out Australia’s new targets, expressed with respect to 1990 emissions, in net and gross terms.¹³

Target	Relative to Net 1990	Relative to Gross 1990
“5% below 2000 levels”	- 4%	+ 13%
“15% below 2000 levels”	- 14%	+ 1%

The major reason for the wide difference between the two measures is that in 1990, Australia recorded a very high level of forest clearing. This meant that its net emissions (which add land use changes to gross emissions) were considerably higher than its gross emissions (by about 100 Mt - or a quarter greater). However, after 1990, forest clearing plummeted (as the graph below shows¹⁴).

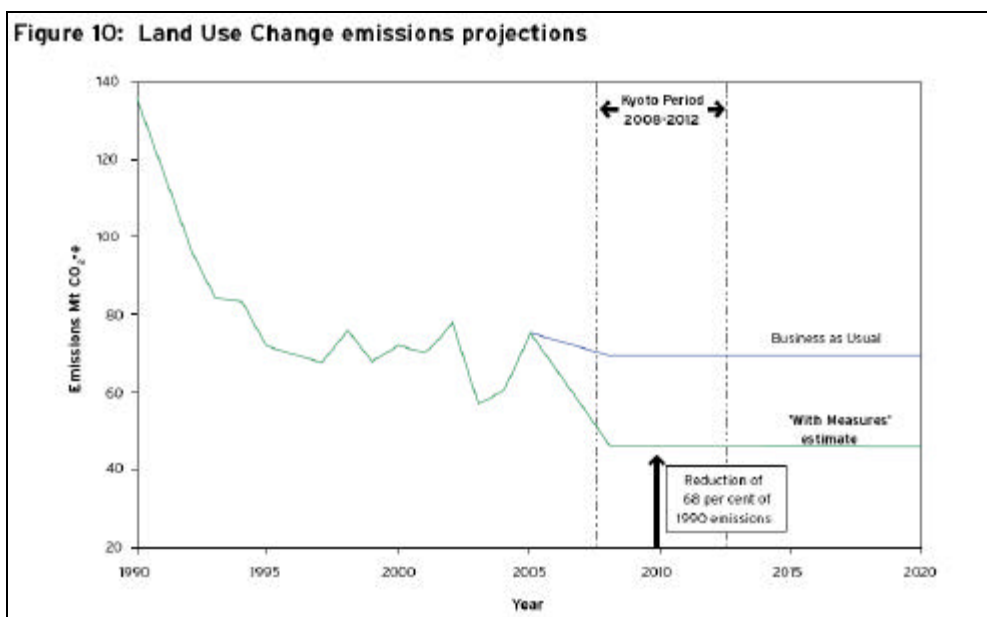
⁹ Australian Government, *Carbon Pollution Reduction Scheme: Australia’s Low Pollution Future*, White Paper, Volume 1 December 2008, p 4-17.

¹⁰ IPS Wellington Seminar, 27 February 2009.

¹¹ Neil Ferry, Australian Climate Change Department, 2 March 2009, Personal communication.
¹² The precise figures are 96% and 86% of 1990 levels respectively, where 1990 = 515 Mt.

¹³ Derived from: UN, *National greenhouse gas inventory data for the period 1990–2006*, November 2008.

¹⁴ Department of Climate Change, Australia, *Tracking the Kyoto Target: Australia’s Greenhouse Emissions Trends 1990 to 2008–2012 and 2020*, February 2008, p13.



This change brought Australia’s net and gross emissions much closer together and this has continued to be the case since the mid 1990s. The following compares net and gross emissions since 1990 and 1995, showing that from 1995, net and gross emissions increased at much the same rate.

	1990 to 2005	1995 to 2005
Net Emissions	7%	17%
Gross Emissions	27%	19%

It was essentially the falling away of the high rate of forest clearing during the early 1990s that gave Australia its modest rate of emissions growth when measured in net terms from 1990, not any afforestation. Further, the fall in forest clearing of some 60 Mt¹⁵ per year of emissions by the mid 1990s was equivalent to Australia starting with an 11% discount on its Kyoto target.

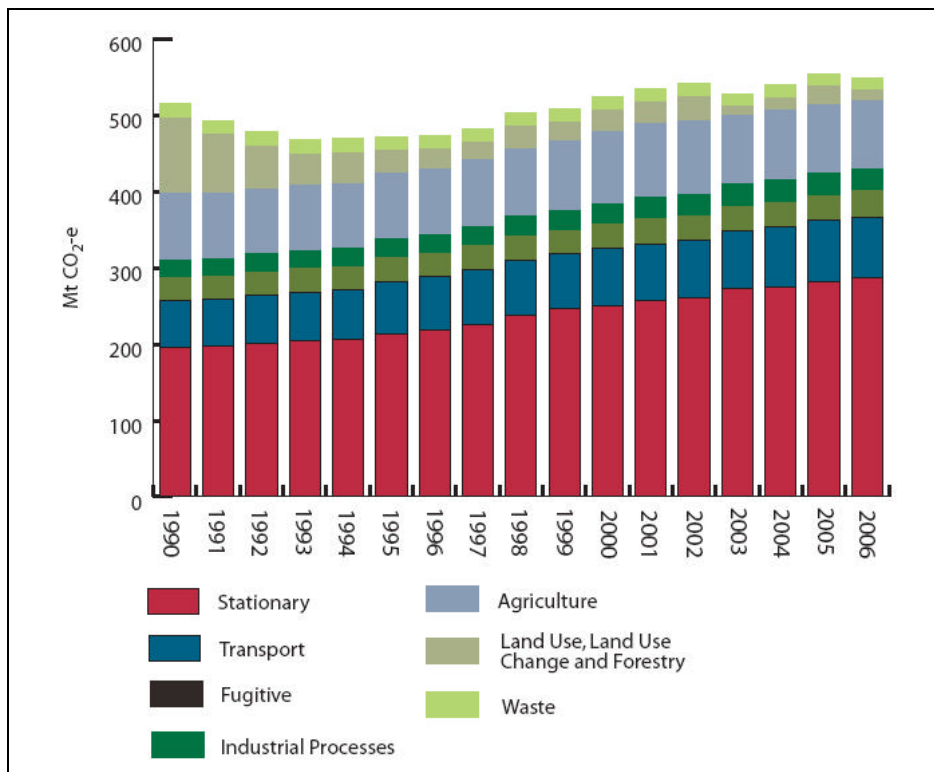
Burden Sharing

This is significant when examining what ‘burden’ nations have taken on in the past, and propose to take on in the future. For although reduced emissions (such as less forest clearing) are positive for stabilisation whatever the source, how they came about is also important when considering burden sharing. Australia did not apply any greenhouse specific policy to engender the fall in forest clearings.¹⁶ Indeed, the levels had crashed two years before the Kyoto Protocol was negotiated in December 1997.

¹⁵ From 136Mt in 1990 to some 75 Mt in the mid 1990s.

¹⁶ See graph on page 1 of: Department of Climate Change, Australia, *Tracking the Kyoto Target: Australia’s Greenhouse Emissions Trends 1990 to 2008 2012 and 2020*, February 2008.

Australia's Net Emissions by Sector¹⁷



Other western nations also had similar sized windfalls arising from the early 1990s – the UK and Germany in particular as a result of new gas-fired power stations displacing old coal stations. However, the UK and Germany took on lower targets in recognition of this (92% of 1990 levels) and also ended up sharing the benefits of the switch to gas with other EU nations. In that way, they still took on burdens relative to their starting positions.

Australia negotiated for the reverse: taking the past gains as a margin for future growth and then seeking a further margin on top of that. During the final difficult negotiations of the Kyoto Protocol, Australia was the last holdout and insisted on receiving a far more lenient target than any other developed nation. Against the target for the Protocol as a whole of a reduction to 95% of 1990 levels, Australia secured a 108% target (8% over 1990 levels). It was, however, one of only two nations (along with the US) that stood aside from ratifying the treaty before it became operative. Australia finally ratified a decade after the negotiations, in December 2007, following a change of government.

Australia has made full use of its handsome Kyoto allowance. On the latest UNFCCC figures, its gross emissions rose by 29% between 1990 and 2006.¹⁸ This is the highest percentage change of those countries that signed in Kyoto as Annex 1 parties and do not have prior arrangements to share emission targets as part of the EU block.¹⁹

¹⁷ Australian Government, *National Inventory Report 2006*, Vol 1, p 22.

¹⁸ UN, *National greenhouse gas inventory data for the period 1990–2006*, November 2008. This is the most recent year for which data is available

¹⁹ The EU operates as a block for the purpose of delivering on Kyoto Protocol commitments. Turkey joined subsequent to the Kyoto meeting and has no Annex B target but its growth in emissions is significantly higher than Australia's.

Australia projects that after it has applied the mitigation policies now planned, its gross²⁰ emissions will average 38% above 1990 levels over the first commitment period ending in 2012.²¹ Yet a combination of the advantageous 1990 position and the generous 108% target means that Australia is “on track to meet this target”²² without having to purchase carbon credits.²³

What the history underlines however is that Australia’s performance relative to its Kyoto target is not a good measure of whether it has taken on any significant burden in the past. Its gross emissions record is a much better indicator of this.

Australia frequently cites the relatively high per capita burden any carbon reductions would have as a reason for it not accepting proportionate responsibility with other industrialised nations (it being the highest per capita emitter). However, higher use per capita in the past also means that relatively greater financial gains were enjoyed per capita, while other nations suffer in relative terms from the ongoing effects of those emissions. The per capita allocation of future entitlements is an admirable principle but translates only weakly into a rationale for easing the burden during the transition to such an allocation.

In summary, when it comes to assessing equitable burden sharing, Australia’s net 1990 emissions are not an appropriate benchmark. The conventional IPCC benchmark of gross 1990 emissions is a better (though not optimum) way of measuring real progress and effort to date, or lack thereof. If Australia’s medium term targets are re-expressed in terms of their relationship to 1990 gross emissions, the unconditional target represents a 13% rise over 1990 levels and the conditional target a 1% rise on 1990 emissions.

In other words, Australia is positioning to still emit at a rate above gross 1990 levels under any circumstances when the IPCC believes that industrialised nations as a group need to cut to between –25% and –40% below 1990 gross levels to be on track for a 450 ppm target.

²⁰ Net emissions are projected to be 10% for the Kyoto first commitment period. Australian Government, *Fourth National Communication*, p 68

²¹ Department of Climate Change, Australia, *Tracking the Kyoto Target: Australia’s Greenhouse Emissions Trends 1990 to 2008–2012 and 2020*, February 2008, p16.

²² Australian Government, *Australia’s National Emissions Target*, Fact Sheet, December 2008.

²³ The terms of the Kyoto Protocol allow Australia to use the net emissions figure in order to determine its 1990 base year emissions. The rules raise its 1990 base for Protocol compliance to 547 Mt (vs 515 for UNFCCC accounting). In particular, Article 3.7 (known as the “Australia clause”) allows it to count deforestation that took place in 1990 as a part of the base. While this is a technically correct baseline, the target awarded Australia in light of them and the fall in forest clearance by the time of the 1997 negotiations highlights how far Australia pushed for others to take on the burden of emissions reduction in the Protocol. Article 3.7 states: “In the first quantified emission limitation and reduction commitment period, from 2008 to 2012, the assigned amount for each Party included in Annex I shall be equal to the percentage inscribed for it in Annex B of its aggregate anthropogenic carbon dioxide equivalent emissions of the greenhouse gases listed in Annex A in 1990, or the base year or period determined in accordance with paragraph 5 above, multiplied by five. Those Parties included in Annex I for whom land-use change and forestry constituted a net source of greenhouse gas emissions in 1990 shall include in their 1990 emissions base year or period the aggregate anthropogenic carbon dioxide equivalent emissions by sources minus removals by sinks in 1990 from land-use change for the purposes of calculating their assigned amount”.