

Chapter 2

Climate change and the Kyoto Protocol

Climate change

2.1 Human activities such as the burning of coal, oil and natural gas, the logging of forests, land clearance and industrial processes have increased emissions of carbon dioxide and other greenhouse gases, which in turn have contributed to global warming and climate change. Atmospheric levels of carbon dioxide are predicted to double from their pre-industrial levels during this century, if emissions continue at their current rate, and could triple by 2100 if no abatement measures are taken. This will lead to global warming of between 1.4 and 5.8 degrees Celsius over the next 100 years.

2.2 These are findings from the most recent generally accepted authoritative statement on climate change, issued in 2001 by the Intergovernmental Panel on Climate Change (IPCC).¹ Its Third Assessment Report states that climate change will result in large and possibly irreversible changes to the earth's systems. Human-induced climate change will lead to changing weather patterns, increased temperatures, more frequent droughts, sea level rise, more frequent extreme weather events and the wider distribution of certain insect-borne diseases.

2.3 Expert witnesses to the inquiry confirmed this assessment. The Bureau of Meteorology observed that 'there is a high level confidence in the expert climate community that a large part of the observed [global] warming is due to the enhanced greenhouse effect'.²

2.4 The potential impacts on Australia have been outlined in *Climate Change: an Australian Guide to the Science and Potential Impacts*, published in 2003. The Guide observes that Australia will be vulnerable to changes in temperature and precipitation projected for the next 50 to 100 years as it already has extensive arid and semi-arid areas, relatively high rainfall variability and existing pressures on water supplies in many areas. Greater frequency of droughts will impact adversely on agriculture. Warming of one degree Celsius would threaten coral reefs and alpine regions and endanger various species. There is a lack of consensus on the extent of future emissions, their effect on temperature, and the reversibility of climate change.

2.5 There is bipartisan support, however, for the proposition that the problem of global warming is real and one that cannot be ignored. The key question for the Committee to consider in this inquiry is the extent to which the ratification of the

1 <http://www.ipcc.ch>

2 Bureau of Meteorology, Submission 15, p. 1.

Kyoto Protocol will contribute to the resolution of the problem of global warming and the mitigation of the future risks associated with climate change.

2.6 The Committee unequivocally accepts the need to reduce greenhouse gas emissions. It notes that the witnesses to its inquiry were unanimous in accepting the need to slow global warming, and the need to substantially reduce greenhouse gas emissions in order to stabilise atmospheric concentrations of those gases.³

2.7 It also notes evidence which suggests that such a reduction will take a very long time to effect. As the CSIRO observed:

even if the Protocol were to come into force, it would represent just a small, first step towards slowing global warming. Thus the real issue is not whether or not we sign Kyoto, but whether or not there is a genuine commitment (nationally and globally) to curtail greenhouse gas emissions, and (in the long term) bring them down to levels significantly below current.⁴

2.8 In the remainder of this chapter, the Committee will outline the background to the Kyoto Protocol, what the Protocol entails, the key flexibility measures and operational details which have emerged from the Conferences of the Parties, and the Australian Government's response thus far.

The United Nations Framework Convention on Climate Change

2.9 The international community has long been aware of the dangers posed by climate change and has taken steps to address it. At the United Nations-organised Rio Earth Summit, the United Nations Framework Convention on Climate Change (UNFCCC), a non-binding overarching agreement to deal with climate change was adopted on 9 May 1992, and entered into force on 21 March 1994 following ratification by 50 parties, including Australia, which ratified on 30 December 1992.⁵ There are now 188 parties to the Convention.

2.10 The central objective of the Convention is to achieve the 'stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system ... within a time-frame that is sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed

3 See, for example, Submissions 35, 29, 23, 32, 31 and 36 from the Australian Chamber of Commerce and Industry, the Australian Aluminium Council, the Plastics and Chemicals Industries Association, the Minerals Council of Australia, and Woodside Energy Ltd, respectively.

4 CSIRO, Submission 16, p. 1

5 <http://www.unfccc.int/>

in a sustainable manner'.⁶ The IPCC has an objective of 60 per cent reduction on 1990 emissions by 2100.

2.11 Targets and timetables for reducing greenhouse gas emissions under the UNFCCC have been the subject of negotiations via Conferences of the Parties to the Convention, and have been included through protocols to the Convention. The third Conference of the Parties (COP3) was held at Kyoto in 1997. At Kyoto, an implementation plan for reducing global greenhouse gas emissions was agreed upon, a plan known as the Kyoto Protocol.

The Kyoto Protocol

2.12 Under the Kyoto Protocol, developed nations and countries with economies in transition (the Annex 1 Parties) would accept binding greenhouse gas emission targets for the first commitment period (2008-2012), calculated as a percentage of their 1990 emission levels. Developing nations were exempted. While for the most part, targets were set at 95% of 1990 emissions, Australia was one of only three countries (the other two being Norway and Iceland) to negotiate an increased target, namely 108% over its 1990 levels. This was an acknowledgement of the fact that Australia was experiencing high population growth and was particularly dependent on carbon intensive technologies such as coal-fired electricity and hence would have to bear considerable economic cost to achieve greenhouse gas reductions. This 8% increase was about 30% below expected 'business as usual' emission levels.⁷

2.13 The specific policies to be used to reduce emissions were left to the discretion of each country. Reductions in excess of the commitment could be carried forward and used to count towards compliance in future periods. A failure to comply with the set emissions reduction target was to be penalised by a reduction in permitted emissions for the period following 2012 (for which emissions targets have not been set). Targets for the second and subsequent commitment periods will be the subject of negotiations starting in 2005.

2.14 For the Kyoto Protocol to come into force, it must be ratified by 55% of its signatories, and they must jointly account for at least 55% of 1990-level emissions from Annex 1, or developed, countries. To date, 120 parties have ratified, representing some 44% of developed country emissions. Only two countries, the USA (with some 36 % emissions) and Russia (with some 17.4% emissions) can influence whether the Kyoto Protocol comes into force, and its targets become legally binding under international law. President George W. Bush indicated, in March 2001, that the USA would not ratify the Kyoto Protocol. Thus, in practical terms, the Kyoto Protocol will only come into effect if Russia ratifies it. Australia, with only 2.1% of Annex 1

6 UNFCCC, Article 2.

7 Chamber of Commerce and Industry, Western Australia, Submission 28, p. 4.

greenhouse gas emissions, cannot affect the entry into force of the Protocol, whether it ratifies it or not.

Kyoto Protocol flexibility measures

2.15 Specific Protocol operational and compliance details continue to be worked through at each successive COP, as set out below.

Joint Implementation provisions (JI) (article 6)

2.16 Developed (or Annex 1) countries may transfer or acquire Emission Reduction Units (ERUs) between one another by investing in emissions reduction projects in another jurisdiction.

Clean Development Mechanism (CDM) (article 12)

2.17 Developed countries may earn Certified Emission Reduction Units (CERs) by undertaking emission-reducing projects in developing (non-Annex 1) countries, thus assisting those countries to achieve economic and social development with clean technology. A number of eligibility requirements are involved: for example, projects are only eligible to earn CERs if the resulting reductions in emissions are additional to any that would occur in the absence of the certified activity. The price of CERs is to be set by the market, and their use limited to 2.5% of party's initially assigned target. Nothing in the rules expressly excludes non-ratifying countries from participation as a project proponent but such countries *may* be discriminated against.

Emissions trading (article 17)

2.18 The 'least cost' emissions reduction scenario. To meet its Kyoto emissions target, each party has the choice of taking abatement action at home or purchasing extra emissions permits from countries which reduce their emissions below target and have excess permits to sell on the international market. Being so highly dependent on fossil fuel intensive industries, Australia could potentially benefit from an international emissions trading regime.

Carbon sinks (articles 3.3, 4)

2.19 Removal unit (RMUs) credits may accrue for 'sink' activities: afforestation, reforestation or land use change.

The Australian Government position on the Kyoto Protocol

2.20 Australia signed the Kyoto Protocol on 29 April 1998, thus signalling its support for the broad principle of global action to counter climate change. Since that time, the consequences of ratification have become clearer, as has the international response to the Protocol. On 5 June 2002, in response to a question without notice in the House of Representatives chamber, Prime Minister the Hon John Howard MP stated:

It is not in Australia's interests to ratify the Kyoto protocol. The reason it is not in Australia's interests to ratify the Kyoto protocol is that, because the arrangements currently exclude-and are likely under present settings to continue to exclude-both developing countries and the United States, for us to ratify the protocol would cost us jobs and damage our industry. That is why the Australian government will continue to oppose ratification.⁸

2.21 In a joint media release by the Hon Dr David Kemp MP, Minister for the Environment and Heritage, and the Hon Alexander Downer MP, Minister for Foreign Affairs, on 15 August 2002, the Government stated its view that the Kyoto Protocol was not an effective response to climate change:

[The Kyoto Protocol] will make only a modest contribution – around 1% - to reducing the growth of global emissions. Even as a first step, it does not provide a clear path towards developing countries' commitments and the US has indicated it will not ratify. Together, these countries already produce most of the world's greenhouse gas emissions.⁹

2.22 The Government is committed to meeting its Kyoto Protocol emissions target of 108% over 1990 levels, however, and in addressing climate change more broadly. Four elements underpin the Government's climate change strategy:

Australia will strive for a more comprehensive global response to climate change;

Australia will position itself to maintain a strong and internationally competitive economy with a lower greenhouse signature;

Domestic policy settings will balance flexibility with sufficient certainty to allow key decisions on investment and technology development, and also emphasise cost effectiveness; and

Australia will implement policies and programs that assist adaptation to the consequences of the climate change that is already unavoidable.¹⁰

2.23 In order to do this, the Government has contributed some \$1 billion to greenhouse gas abatement measures. These measures are expected to deliver emission abatement of around 67 million tonnes by 2008-2012.¹¹ It supports work through the CSIRO program 'Energy Transformed' on, amongst other things, zero-emission coal

8 House of Representatives *Hansard*, 5 June 2002, p. 3163.

9 Hon Dr David Kemp MP, Minister for the Environment and Heritage, and the Hon Alexander Downer MP, Minister for Foreign Affairs, Joint Media Release, 15 August 2002

10 Hon Dr David Kemp MP and Hon Ian Macfarlane MP, Joint Media Release, 14 April 2003.

11 Hon Dr David Kemp MP, Speech, *Australia's Domestic Climate Change Approach*, Renewable and Sustainable Energy Roundtable Side-event, COP 9, Milan, 9 December 2003, p. 2.

technologies involving gasification and geosequestration of greenhouse gas by-products. It also supports a greater role for the renewables sector, through the Mandatory Renewable Energy Target (MRET) scheme. A Climate Change Forward Strategy is in preparation.