

The Senate

Standing Committee on Economics

Exposure draft of the legislation
to implement the Carbon Pollution
Reduction Scheme

April 2009

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Senate Standing Committee on Economics

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Chapter 1

Introduction and conduct of the inquiry

The challenge of climate change

1.1 Climate change has become a matter of global concern. The United Nations Framework Convention on Climate Change has been ratified by almost 200 countries. The Kyoto Protocol commits most advanced economies to limit their greenhouse gas emissions. Scientists from around the world have contributed to the Intergovernmental Panel on Climate Change.

1.2 Australia has decided to play its fair share in this global endeavour. Indeed, as one of the world's highest per capita emitters of greenhouse gases, one of the world's wealthiest countries, one of the major beneficiaries of past greenhouse gas emissions, one of the countries best endowed with renewable energy sources and one of the countries that would suffer most from further climate change, there is a strong case that Australia should be willing to make a more than proportionate contribution to this global effort. It is trying to join the leading countries in action, rather than waiting for the lagging countries, in recognition of these factors.

The Carbon Pollution Reduction Scheme (CPRS)

1.3 In many aspects, the CPRS design follows, and in some cases extends, world's best practice for emissions trading schemes.

1.4 The consultation and development process has had a long history in Australia. In 1998 the former government established the Australian Greenhouse Office, the world's first government agency dedicated to cutting greenhouse gas emissions. The Office published a series of papers setting out how an emissions trading scheme might work and invited submissions in response.

1.5 In 2004 the National Emissions Trading Task Force was established by state and territory governments, resulting in a discussion paper being released in 2006 outlining the possible design of a national greenhouse gas emissions trading system. Further extensive consultation followed with a final report being released in December 2007. The same year premiers and chief ministers announced that if there was no commitment to an ETS federally they would implement their own national scheme by 2010.¹

1.6 In December 2006 the former government established its own task group on emissions trading, which reported in May 2007. Further extensive public consultation

1 Dr Martin Parkinson, Secretary, Department of Climate Change, *Proof Committee Hansard*, 18 March 2009, p 2.

ensued and that task group also recommended that emission trading schemes should be implemented in Australia.

1.7 This has been followed by the *Garnaut Review* commenced by Professor Garnaut in April 2007 and completed in September 2008, involving its own extensive consultation process, and the release of the Government's *Green* and *White Papers* on the scheme. The result is a policy framework over a decade in the making.

1.8 The progressive public release of these reports has shown a commitment to openness and consultation.

1.9 The timetable for the establishment of the Australian Climate Change Regulatory Authority and finalising of the details of the CPRS is ambitious and reflects the seriousness of the problem and the government's determination to play its part to mitigate climate change domestically and internationally. (Table 1).

Table 1.1: Timetable for introduction of CPRS

Mar- April 2009	Consultation on exposure draft legislation; Senate committee inquiry
May 2009	Bills introduced into parliament
June 2009	Desired passage of bills
Sept qtr 2009	Regulator established
Dec qtr 2009	Legislative instruments tabled in parliament Copenhagen UN Climate Change Conference
Mar qtr 2010	Scheme caps to 2014-15 and gateways for 10 following years set
First half 2010	First auction of permits
July 2010	Start of first compliance year
June 2011	End of first compliance year
Oct 2011	Deadline for lodging of emissions reports for first year
Dec 2011	Deadline for surrender of permits for first year

Source: from *White Paper*, table 16.2; Minister for Climate Change, *Press Release*, 47/09, 27 February 2009

Outline and coverage of the scheme

1.10 The Carbon Pollution Reduction Scheme Bill 2008 will establish a national emissions trading scheme, the Carbon Pollution Reduction Scheme.

1.11 The quantity of greenhouse gas emissions for which liable entities are responsible will be monitored, reported and audited. At the end of each year, each liable entity will need to surrender an eligible emissions unit for every tonne of greenhouse gas emissions for which they are responsible.

1.12 Emissions units will be issued by the Australian Climate Change Regulatory Authority and the number will be limited each year by a scheme cap.

1.13 Liable entities will compete to purchase the number of units that they require. Certain categories of entities will receive an administrative allocation of units as a transitional assistance measure. For many liable entities it will be cheaper to reduce emissions than to buy permits.

1.14 At the end of each year, each liable entity will need to surrender an eligible emissions unit for every tonne of greenhouse gas emissions for which they are responsible in that year.

1.15 The Scheme will include all greenhouse gases under the Kyoto Protocol and will include around 75 per cent of Australia emissions.

1.16 According to estimates in the *White Paper*, liable entities (those with mandatory obligations) will comprise approximately 1000 businesses. They will be, under the structure of the CPRS, principally larger companies and principally those in the energy industry and energy intensive industries.

1.17 This means the vast majority of Australia's 7.6 million registered businesses will not face new regulatory obligations as a result of the Scheme.²

1.18 The Committee commends the Department of Climate Change for designing a scheme with broad coverage and the innovative way it deals with the problem of effectively dealing with small emitters.

The conduct of the inquiry

1.19 The Senate referred the exposure draft of the legislation to implement the CPRS to the Senate Standing Committee on Economics on 11 March 2009. The Senate required the Committee to report by Tuesday 14 April 2009.

1.20 The Government released exposure drafts of six bills, along with 'commentaries' (essentially a draft Explanatory Memorandum) on each;

- Carbon Pollution Reduction Scheme Bill: the main bill;
- Carbon Pollution Reduction Scheme (Consequential Amendments) Bill: covers changes to taxation and reporting arrangements;
- Australian Climate Change Regulatory Authority Bill: establishes the agency to administer the CPRS
- three technical CPRS (Charges) Bills, namely 'general', 'customs' and 'excise' bills, in case the emissions permits are considered taxation, excise or customs

² *CPRS Fact Sheet: Scheme Coverage*, Department of Climate Change.

duties under section 55 of the Constitution, which requires that bills imposing such charges do not also deal with other matters.

1.21 There are other elements of the CPRS which were discussed in the *White Paper*, such as reforestation and the household assistance package, which will form part of the final legislation but are not included in the exposure drafts.

1.22 The Committee advertised the inquiry in the national press and invited written submissions by 25 March 2009. Details of the inquiry were placed on the Committee's website and the Committee also wrote to a large number of organisations and stakeholder groups inviting written submissions.

1.23 The Committee received over 140 submissions. These are listed in Appendix 1.

1.24 Public hearings were held in Canberra (18, 19, 25 and 30 March 2009), Perth (23 March), Melbourne (24 March) and Sydney (27 March). Some witnesses from other locations were heard via teleconference. A list of the witnesses appearing at the hearings is in Appendix 2.

1.25 The Committee thanks those who participated in this inquiry.

Structure of the report

1.26 A brief description of how the underlying science makes the case for change is provided in Chapter 2. This chapter does not delve into the science in depth as it is the subject of a separate inquiry by the Senate Select Committee on Climate Policy. Their report is due to be tabled by 14 May 2009. (Some issues related to the CPRS are also being canvassed by the Senate Select Committee on Fuel and Energy.)

1.27 The reasons why the committee found the case for proceeding with the proposed timetable for introduction of the CPRS, rather than delaying, are given in Chapter 3. The Treasury modelling that underpinned the report is described in Chapter 4 along with other modelling exercises, and the specific implications for employment of the scheme in Chapter 7. The targets and gateways in the CPRS is the subject of Chapter 5. The report then turns to some of the key design issues raised during the inquiry, such as transitional assistance payments (Chapter 6), the interaction of the CPRS with voluntary abatement efforts (Chapter 8) and complementary measures (Chapter 9). The market for permits and international linkages are described in Chapter 10. A range of alternative approaches to restraining greenhouse gas emissions was presented to the committee and Chapter 11 explains why the committee believes the cap-and-trade approach (of which the CPRS is an example) is the preferable one. Legal and governance issues, including the role of the Australian Climate Change Regulatory Authority, are then discussed in the final two chapters.

Chapter 2

The case for change

2.1 In recent years the science of climate change has become increasingly well-understood due to the efforts of the world's scientists. As public interest and debate over the issue has grown, many of the important concepts and debates in climate science have effectively become accepted by the mainstream scientific community. It is interesting to note in this respect that Australia's 2007 election has been described as 'the first election in history in which climate change...was among the top three voting issues'.¹

The greenhouse effect

2.2 Carbon dioxide (CO₂) is a gas that occurs naturally in the atmosphere. It and other greenhouse gases absorb and re-radiate heat from the Earth's surface, which maintains the Earth's surface temperature at a level necessary to support life.²

2.3 This 'greenhouse effect' involves the sun's light energy travelling through the Earth's atmosphere to reach the planet's surface, where some of it is converted to heat energy. Most of that energy is re-radiated towards space—however, some is re-radiated towards the ground by the greenhouse gases in the Earth's atmosphere.

2.4 Human activities such as burning fossil fuels (coal, oil, natural gas), agriculture and land clearing release large quantities of greenhouse gases (particularly CO₂, nitrous oxide and methane) into the atmosphere, which trap more heat and further raise the Earth's surface temperature.

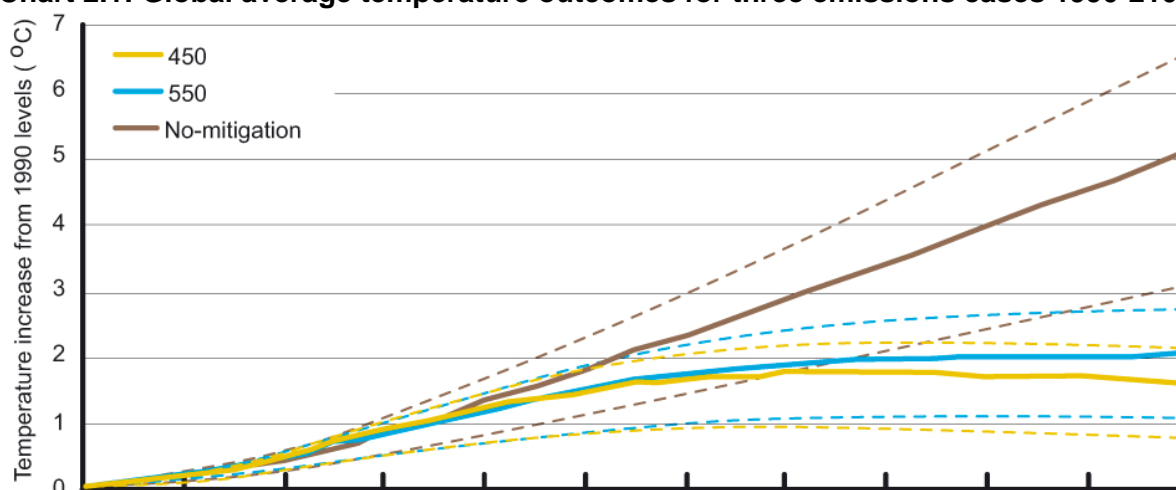
Global warming

2.5 Since modern measurements began in the late 1800s, global average surface temperature has increased by around 0.7°C – 0.8°C.

2.6 The *Garnaut Review's* projections for temperatures if nothing is done, or if CO₂e is stabilised at 450 and 550 parts per million, are shown in Chart 2.1. Stabilisation at 450 ppm, which Garnaut concluded was in Australia's interests, requires significant reductions in emissions starting very soon.

1 Thomas Friedman, *Hot, Flat and Crowded*, 2008, p 128.

2 The other greenhouse gases are water vapour, methane, nitrous oxide, halocarbons and tropospheric ozone. Greenhouse gases are often expressed as a carbon dioxide equivalent (CO₂e) due to the different warming potential of the various gases.

Chart 2.1: Global average temperature outcomes for three emissions cases 1990-2100

Note: Temperature increases from 1990 levels are from the MAGICC climate model (Wigley 2003). The solid lines show the temperature outcome for the best-estimate climate sensitivity of 3°C. The dashed lines show the outcomes for climate sensitivities of 1.5°C and 4.5°C for the lower and upper temperatures respectively. The IPCC considers that climate sensitivities under 1.5°C are considered unlikely (less than 33 per cent probability), and that 4.5°C is at the upper end of the range considered likely (greater than 66 per cent probability).

Source: R Garnaut, *The Garnaut Climate Change Review: Final report*, Cambridge University Press, 2008, p. 92.

Scientific consensus on climate change

2.7 An overwhelming majority of the world's scientists, particularly climate scientists, have concluded that greenhouse gases are the main factor contributing to climate change since the 1950s.

2.8 The pre-eminent international body studying climate change is the Intergovernmental Panel on Climate Change (IPCC). The IPCC has concluded that warming of the climate system is unequivocal;³ and, with a very high confidence (at least a 9 out of 10 chance of being correct) that the increase in global average temperature since the mid-20th century is due to anthropogenic greenhouse gas concentrations. In a 'business as usual' world the IPCC's best estimate is that average temperatures will rise four degrees by 2100.⁴

2.9 As an exercise in global scientific consensus the IPCC is unparalleled, and the IPCC 2007 report is 'probably the most scrutinised scientific document in the world'.⁵ John Holdren, now President Obama's chief science adviser, said of its conclusions:

They are based on an immense edifice of painstaking studies published in the world's leading peer-reviewed scientific journals. They have been vetted and documented in excruciating detail by the largest, longest, costliest,

3 IPCC 2007, *Climate Change 2007: The Physical Science Basis*, p. 5.

4 Cited in *White Paper*, p 1-2. This may not sound a lot, however, 5 degrees is the difference between now and the last ice age.

5 *White Paper*, p 2-1.

most international, most interdisciplinary, and most thorough formal review of a scientific topic ever conducted.⁶

2.10 The IPCC makes clear that there is a range of uncertainty around the projections. Prudent risk management would balance the risk of doing nothing when the climate scientists are right – which would involve very severe and irreversible damage to human welfare – against the outcome if action is taken unnecessarily, which would just mean that remaining fossil fuel supplies would last longer.

Impacts on Australia

2.11 The IPCC has predicted with high confidence (an 8 out of 10 chance of being correct) that without mitigation, by 2100 a temperature rise of over four degrees in Australia would lead to water security problems, and risks to coastal development and population growth from sea-level rise and increases in the severity and frequency of storms. It predicts with very high confidence that Australia would suffer a significant loss of biodiversity in such ecologically rich places as the Great Barrier Reef and the Queensland Wet Tropics, as well as the Kakadu wetlands, south-west Australia, the sub-Antarctic islands and alpine areas.

2.12 Notably in the light of the recent bushfires in Victoria, the IPCC predicts with high confidence that risks to major infrastructure are likely (66% to 99% probability) to increase, and that by 2030 the criteria for extreme events that have been used for designing buildings and infrastructure are very likely (90% to 99% probability) to be exceeded more frequently. There will be greater risk of failure of floodplain protection, increased storm and fire damage and more heatwaves.

2.13 The IPCC predicts with high confidence a decline in production from agriculture and forestry by 2030 over much of southern and eastern Australia due to increased drought and fire.⁷

2.14 The Secretary of the Department of Climate Change warned:

Australia can expect higher temperatures, reduced rainfall in the south and east of the country, rising sea levels and more frequent or intense extremes, including drought, heatwaves, storm surge, extreme rainfall and cyclones. Under a no-mitigation emissions scenario, average temperatures across Australia are expected to rise by around five degrees Celsius by 2100.⁸

2.15 The effects of climate change also carry significant national security implications:

6 John Holdren, Professor of Environmental Policy, at Harvard University and former president of the American Association for the Advancement of Science, cited in Thomas Friedman, *Hot, Flat and Crowded*, 2008, p 125.

7 IPCC 2007, *Impacts, adaptation and vulnerability*, p. 509.

8 Dr Martin Parkinson, *Proof Committee Hansard*, 18 March 2009, p 4.

...the cumulative impact of rising temperatures, sea levels and more mega droughts on agriculture, fresh water and energy could threaten the security of states in Australia's neighbourhood by reducing their carrying capacity below a minimum threshold, thereby undermining the legitimacy and response capabilities of their governments and jeopardising the security of their citizens. Where climate change coincides with other transnational challenges to security, such as terrorism or pandemic diseases, or adds to pre-existing ethnic and social tensions, then the impact will be magnified.⁹

Committee comment

2.16 The Committee heard from a broad cross section of stakeholders and the vast majority agreed that policy needed to be adopted to address the challenges of climate change.

2.17 The Committee believes that any policy that aims to deal with this challenge should meet the following objectives:

1. Lower Australia's emissions and contribute to a global solution.
2. Avoid economic disadvantage or hardship whilst encouraging households to become more energy efficient.
3. Transition industry to a low carbon economy by providing assistance to avoid carbon leakage, and ensure energy security.
4. Fast track investment and research into renewable energy technologies.

2.18 The following chapters will examine the proposed CPRS legislation in regards to achieving the above objectives.

9 A Dupont & G Pearman, 'Heating up the planet: Climate change and security', *Lowy Paper*, no 12, Lowy Institute for International Policy, 2006, cited in *White Paper* p 1-2.

Chapter 3

Timing

3.1 The Committee heard a variety of views about whether the CPRS should be introduced soon or delayed; and whether the legislation itself should be delayed or just the starting date.

3.2 Those urging prompt action stressed the urgency of dealing with climate change, the need for Australia to present a clear position at the Copenhagen conference in December, the benefits to business of providing them with greater certainty and possible 'early mover' advantages.

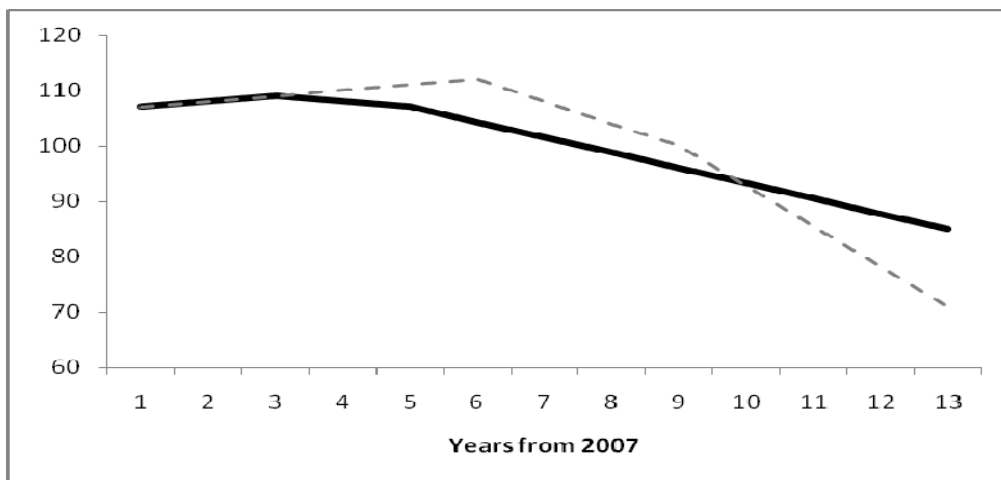
3.3 Those urging delay argued that the scheme needed further development, that Australia should not be 'acting alone' or 'moving ahead' of other countries, that industry was not ready, that the global financial crisis made this the wrong time to introduce the scheme, or just saw action on climate change as unnecessary and repeated delay a way of avoiding it.

3.4 This chapter addresses each of these arguments in turn.

Urgency of dealing with climate change

3.5 The science of climate change, summarised in Chapter 2, showed the importance of stabilising greenhouse gas concentrations. Reaching a given target of cumulative emissions by 2020 or 2050 becomes harder, and requires steeper cuts in annual emissions, the later the process gets underway. Chart 3.1 illustrates: the solid line is (roughly) the path of emissions under the conditional offer in the CPRS (measured as a percentage of 1990 emissions) and the dashed line shows a path to achieve the same cumulative emissions if action is delayed three years.

Chart 3.1: the consequence of delay on emissions reduction



Source: Secretariat.

3.6 Australia was applauded at Bali for its conversion to being a forceful advocate of action to address climate change. Building on this role at the Copenhagen conference in December 2009 will require Australia to have a clear plan for dealing with its own emissions. This approach will be more credible if it is embedded in legislation passed by the parliament:

..climate change problem is probably the perfect example of a collective action problem where the actions of a single state cannot possibly protect citizens from the effect of worst consequences of climate change... (this) puts a real premium on the credibility that you bring to the negotiating table, so what you are doing with your own legislation is of profound importance to the future outcome of the global agreement and people are paying attention to your efforts.¹

3.7 It is important for Australia to be able to play this role at Copenhagen as the more countries that can be encouraged to adopt an emissions trading or similar scheme, the more effective will be the impact on greenhouse gas concentrations.

Providing greater certainty for business

3.8 There is strong evidence that failure to pass the legislation would have an adverse effect on certainty for business in making their capital expenditure decisions:

We totally agree that the certainty is required. We totally agree that the passage of the legislation would give that certainty.²

Without regulatory certainty there will be delays in investment, and security of energy supply could be compromised in the medium term.³

...Prime Minister Howard's task group report noted the real costs of deferred investment, for example, where they said: "... waiting until a truly global response emerges before imposing an emissions cap will place costs on Australia by increasing business uncertainty and delaying or losing investment. Already there is evidence that investment in key emissions-intensive industries and energy infrastructure is being deferred."⁴

3.9 Mr Paul Curnow, a partner in the global climate change practice of the international law firm of Baker and McKenzie commented:

Even some of our clients who do not fully agree with the government's scheme policy or design are now starting to realise that they still need some policy certainty in order to move ahead with key investment and operating

1 Mr James Cameron, Vice Chairman and Executive Director, Climate Change Capital, *ProofCommittee Hansard*, 19 March 2008, p. 25.

2 Dr Peter Burn, Australian Industry Group, *Proof Committee Hansard*, 27 March 2009, p 82.

3 Mr Tim Nelson, AGL Energy, *Proof Committee Hansard*, 25 March 2009, p 1.

4 Mr John Connor, Climate Institute, *Proof Committee Hansard*, 27 March 2009, p 42.

decisions...delay in the longer run is just going to lead to higher costs for a lot of businesses.⁵

3.10 Renewable energy firms would be particularly adversely affected by delay.

The one thing that kills investor confidence, and we are seeing this at the moment in the global financial crisis, is uncertainty...We will always look to invest where the resource is aligned with the best economic incentives available. So we would be obliged to move to wherever those factors align themselves and, certainly, Western Europe has some very attractive regimes at the moment.⁶

Hydro Tasmania supports a scheme design that ensures the full cost of carbon is reflected in all investment decisions as soon as practically possible, providing investment certainty.⁷

...I would have to question why you would want to further delay it. It is not just the geothermal industry that needs that certainty, it is anybody operating in the clean energy sector.⁸

3.11 The Committee also heard from financial institutions that this uncertainty was a deterrent to investment in companies with significant greenhouse gas emissions:

We would argue that the uncertainty that is created by not proceeding from our experience and our perspective would be worse because it will stifle the flow of capital...without legislation passing, the level of uncertainty would simply add such a degree to the risk profile of any investment that sits within that carbon scheme impact that we simply would not allocate capital because we cannot understand the metrics around the impacts of that scheme.⁹

AFMA supports the existing timetable for the start of the CPRS on 1 July 2010. It is very important that certainty be provided as soon as possible to other existing markets that are currently being affected by the proposed Scheme. In particular, the market for term electricity contracts (for both electricity supply and electricity derivatives) is hindered by an inability to properly factor in a carbon price. Likewise, the extension of term finance facilities has the added difficulty of not knowing with any precision how and when a carbon price may affect credit terms.¹⁰

5 Mr Paul Curnow, *Proof Committee Hansard*, 27 March 2009, p 15.

6 Mr Ottaviano, Carnegie Corporation, *Proof Committee Hansard*, 23 March 2009, p 36.

7 Mr Andrew Catchpole, Hydro Tasmania, *Proof Committee Hansard*, 24 March 2009, p 15.

8 Ms Susan Jeanes, Chief Executive Officer, Australian Geothermal Energy Association, *Proof Committee Hansard*, 25 March 2009, p, 50.

9 Ms Amanda McCluskey, Colonial First State Global Asset Management, *Proof Committee Hansard*, 25 March 2009, p, 50.

10 Australian Financial Markets Association, *Submission 114*, p, 4.

IGCC supports the introduction of the CPRS,...and emphasises its view that placing this legislation with a start date of 2010 is essential for the Australian economy and in particular for investors. For investors to invest, we need to know the rules.¹¹

3.12 Concerns were expressed that delay could be destabilising:

Delaying action also runs the risk of locking us into longer term carbon pollution and inefficiency. This can expose the Australian economy and in particular vulnerable communities to the impact of higher energy prices when the economies rebound. Artificially pumping up high carbon and inefficient industries and ignoring portfolio climate risks will create a 'sublime' bubble that is sure to burst...¹²

Rule certainty versus scheme commencement

3.13 The Australian Industry Group argued that investment certainty could be provided by passing the CPRS legislation this year, even if commencement of the scheme were delayed.

But the certainty would apply whether the start date was 2010 or 2012 because people would then be certain about the start date. So the certainty will be achieved when the legislation is passed regardless of the start date.¹³

3.14 A counterargument was that businesses had already made significant investments on the assumption of a 2010 start date. Those companies that have done most to prepare for the introduction of a carbon price will have the most to lose from a delay in scheme commencement.

...there is an underestimation, I believe, of the amount of investment that has already gone into this. There are thousands of people working in companies around the country and have been for quite some time preparing for it. To delay it would be to have all those people sitting idle... Most of the work and preparation that has been done has been geared towards the start date of the scheme... there is also potentially a lack of understanding about how much the price of carbon has already been factored into investment decisions made. So if you delay the start date of the scheme by one or two years, those investment decisions will be undermined—the foundations will be removed.¹⁴

11 Mr Steve Gibbs, Investor group on Climate Change, *Proof Committee Hansard*, 27 March 2009, p 86.

12 Mr John Connor, Chief Executive Officer, Climate Institute, *Proof Committee Hansard*, 27 March 2009, p 42.

13 Dr Peter Burn, Australian Industry Group, *Proof Committee Hansard*, 27 March 2009, p, 40.

14 Mr Geoff Rousel, Executive Director, Global Head Commodities, Carbon and Energy, Westpac, *Proof Committee Hansard*, 27 March 2009, p 27.

Possible 'early mover' advantages

3.15 Delaying action here risks Australian industry making further investments that will prove inappropriate in a carbon-constrained world. There were also suggestions that delay would mean missing the benefits could accrue to 'early movers':

...if we delay then we will also miss some of the economic opportunity that this change will actually create.¹⁵

3.16 This view was supported by some of the econometric modelling, which suggests there are benefits in commencing the transition to a low carbon economy sooner rather than later:

In the scenarios modelled, economic costs in 2050 for early movers are around 15 per cent lower than when everyone acts together, while costs for late movers are around 20 per cent higher.¹⁶

...the Treasury modelling finds that early action is in Australia's interests if we expect emissions constraints to expand gradually across the world over time, and this gradual expansion was a key conclusion of the previous government's task group.¹⁷

Need for further analysis

3.17 Some submitters supported timely action on climate change in principle, but argued that introduction of the CPRS should be delayed to allow for more analysis of different aspects of scheme design, and further economic modelling.

What worries me in the case of the CPRS is that I am not totally convinced that there is enough information or a strong enough information base to understand some of the particular design decisions that have been made.¹⁸

3.18 Origin Energy expressed scepticism about such views

We are concerned to ensure the debate about choice of scheme design does not get used as a reason to defer tough decision that will need to be made eventually. The current government has invested significant time and resources into developing a sophisticated, comprehensive and detailed scheme design, which is reflected in draft legislation. Similar effort – and

15 Dr Ray Wills, Chief Executive Officer, Western Australian Sustainable Energy Association, *Proof Committee Hansard*, 23 March 2009, p 45.

16 Dr David Gruen, 'The economic costs of reducing greenhouse gas emissions: understanding the Treasury modelling', *Treasury Economic Roundup*, no. 4, 2008, p 27.

17 Dr Martin Parkinson, Secretary, Department of Climate Change, *Proof Committee Hansard*, 18 March 2009, p 4.

18 David Pearce, Executive Director, Centre for International Economics, *Proof Committee Hansard*, 25 March 2009, p. 87

similar time – would be required in relation to any alternative scheme design.¹⁹

3.19 The claim that there has been insufficient discussion is hard to sustain given that the design of an emissions trading scheme has been debated in Australia for at least twelve years. (See Chapter 1 for a chronology). Indeed, one witness referred to being 'inquired out'.²⁰

Regulations

A related argument was that there were still details to be specified in regulations, and that these should either be included in the legislation or that consideration of the legislation should await the preparation of these regulations. Others thought the legislation could be introduced but the starting date needed to allow sufficient time for developing the regulations:

We have no problem with the 2010 deadline as long as it allows time for the regulations to be developed properly.²¹

3.20 These aspects are discussed in more detail in Chapter 13.

Australia 'going it alone'

3.21 It is sometimes suggested that Australia would be acting alone if it introduced an ETS starting in 2010:

Do we want to do that [mitigate climate risk] alone and put our businesses at risk if others are not?²²

3.22 However, the evidence shows that Australia is not leading on climate change.²³ Twenty seven European countries have had an emissions trading scheme in place since 2005. Twenty-three US states and four Canadian provinces currently participate in regional trading schemes.

Australia is not taking the lead. Australia is following the actions of others and it is certainly not acting alone because the European Union is several years ahead, other governments have put in place national legislation that is broadly equivalent, and you see in the US, finally now in Canada, Japan and indeed in many of the developing

19 Origin Energy, *Submission 113*, p.2.

20 Dr Paul Simshauser, AGL Energy, 27 March 2009, p 9.

21 Mr Gregg Rowley, Group Executive, Clean Energy, Santos Limited, *Proof Committee Hansard*, 24 March 2009, p 31.

22 Mr Ben Fargher, Chief Executive Officer, National Farmers' Federation, *Proof Committee Hansard*, 19 March 2009, p 12.

23 This point is made by, among others, Mr James Cameron, Executive Director, Climate Change Capital (UK), *Proof Committee Hansard*, 19 March 2009, p 23 and Dr Martin Parkinson, Secretary, Department of Climate Change, *Proof Committee Hansard*, 18 March 2009, p 5.

countries, China included, significant efforts to reduce greenhouse gas emissions through a variety of methods.²⁴

It is seriously misleading to pretend that Australia is somehow ahead of the rest of the developed countries²⁵

3.23 Australia is part of a group of fast following developed countries, including Canada, New Zealand, the United States and Japan that are currently developing and implementing emissions trading schemes to meet emissions targets. The Canadian Government is working to introduce a national scheme, and US President Obama has confirmed that he will introduce a cap-and-trade scheme. Japan has trialled a voluntary scheme and is discussing the introduction of a full-scale domestic scheme. New Zealand's government will review the design of its emissions trading scheme by late 2009, but has affirmed its commitment to the introduction of emissions trading.

3.24 The Scandinavian countries have long had carbon taxes and South Africa has announced that it will peak its emissions between 2020 and 2025, stabilise them for a decade, and then reduce them towards 2050. In China they have mitigation policies which include promoting greater energy efficiency and reducing emissions in the energy sector. China has a target of reducing energy consumption per unit of GDP by 20 per cent on 2005 levels by 2010, and a renewable energy target of up to 10 per cent by 2010. Other policies include promoting greater energy efficiency in China's top 1000 enterprises, reducing energy use through more stringent National Building codes for residential and commercial buildings and establishing energy efficiency appliance standards. China will also impose fuel economy standards for motor vehicles higher than those of many other countries including the US.

3.25 Impact of the global financial crisis

3.26 Some witnesses cited the global financial crisis as a reason to delay either the passage of the CPRS legislation or the starting date for the scheme:

The other reason [for delaying the starting date] is the impact of the global financial crisis on businesses—businesses cash flow and businesses ability to access credit. These are putting obstacles in the way of businesses preparing for a 2010 start date.²⁶

[the CPRS] it should be implemented fully when economic times return to normal.²⁷

3.27 However, other witnesses saw at least as many advantages as disadvantages in starting during a period when the economy is likely to be emerging from recession:

²⁴ James Cameron, *Climate Change Capital*, *Proof Committee Hansard*, 19 March 2009, p11

²⁵ Dr Martin Parkinson, *Proof Committee Hansard*, 18 March 2009, p11

²⁶ Dr Peter Burn, Australian Industry Group, *Proof Committee Hansard*, 27 March 2009, p 76.

²⁷ Caltex, *Submission 128*, p 1.

Is it a good or a bad time in a recession to introduce mitigation measures? It is a very good time to introduce support for new low-emissions technologies because the opportunity cost of labour and capital is low... my judgment would be that, by the time an ETS was introduced in the middle of next year, we would be beyond a recession; we would be in an expansionary phase. We do not know that for sure, but if this were the case then that is actually a good time for structural change.²⁸

As to whether it is a good time or bad, I do not think that an economic slowdown or a recession is in itself a good reason to postpone those kinds of forward looking policies, in particularly because of the point about the investment. If you hold back the scheme you will also be holding back investment in the newer lower carbon technologies and industries.²⁹

It is a good time to make long-term investments. Asset prices are low. Interest rates are low. The capital costs of the clean energy infrastructure, which we must invest in around the world, are lower than they have been for some time.³⁰

... as we come out of the recession, we are going to have a lot of new investment in the energy sector, and that provides a golden opportunity for the government to introduce policies to ensure that a very large portion of that new investment goes into low- and zero-emission forms of energy generation.³¹

Industry readiness

3.28 The committee heard a range of views about industry readiness. The Australian Industry Group suggested:

There are considerable administrative difficulties imposed by the proposed 1 July 2010 start date that are becoming increasingly apparent.³²

3.29 However these concerns about preparedness may be overstated. The Australian Industry Group presented evidence that some firms that may not feel ready for the Scheme may not even be required to participate:

Interestingly, we are currently doing a survey of our members and a very large proportion of them—much larger than we would expect—have an expectation that they will have a direct liability. We think a lot of businesses think they will have a direct liability when they will not.³³

28 Professor Ross Garnaut, *Proof Committee Hansard*, 23 March 2009, p 64.

29 Dr Frank Jutzo, *Proof Committee Hansard*, 19 March 2009, p 34.

30 Mr James Cameron, Executive Director, Climate Change Capital, *Proof Committee Hansard*, 19 March 2009, p 20.

31 Professor Clive Hamilton, *Proof Committee Hansard*, 25 March 2009, p 19.

32 Australian Industry Group, *Submission 90*, p 2.

33 Dr Peter Burn, Associate Director Public Policy, Australian Industry Group, *Proof Committee Hansard*, 27 March 2009, p 81.

3.30 As mandatory obligations will only apply to around 1,000 businesses the majority of registered businesses, who have concerns regarding readiness, will not face regulatory obligations as a result of the scheme. The companies that are covered will mostly have specialists within the organisation who have been building expertise on various aspects of emissions trading over some years.

3.31 Some other witnesses suggested that industry were well prepared:

We have been in dialogue with companies for a long period of time about their preparedness for emissions trading and for climate change as a whole... I certainly get a sense that companies understand the scheme. Companies generally tell us that they have a good understanding of the abatement cost curves across their organisation. That signals to us that they are ready for the scheme, they know how it is going to impact their business and they know how they need to respond. So I think some of those calls for delay are perhaps misguided.³⁴

So we do not support the view that the scheme should be delayed because of issues with data or data management. We think those things are readily surmountable and have already been overcome by most of the companies that are targeted under the scheme.³⁵

Overall opinions

3.32 Taking these factors into account, many experts believed the stronger case was established for moving forward rather than delaying:

...it is important to get it running for next year...There is a lot of learning...And the sooner we get everything in place, the sooner the learning begins.³⁶

My personal recommendation is that you pass this scheme for all of its faults... get our industry into the best shape we can early by making it value energy and assisting it in whatever ways we can to make that transition but do not delay, because delay is dangerous.³⁷

... there is no justification for delay in setting the policies in place.³⁸

3.33 The Australian Council of Social Service, while not happy with every detail of the scheme, also wanted to start moving:

...the longer we wait, the more expensive it is going to get. Early action is better than delayed action. While we certainly see flaws in the CPRS as it is

34 Ms Amanda McCluskey, Colonial First State Global Asset Management, *Proof Committee Hansard*, 25 March 2009, p, 55.

35 Mr Sibley, Energetics, *Proof Committee Hansard*, 25 March 2009, p 70.

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

37 Professor Tim Flannery, *Proof Committee Hansard*, 27 March 2009, p 112.

38 Dr Frank Jotzo, *Proof Committee Hansard*, 19 March 2009, p 34.

proposed, and with the measures that sit alongside it, notably in support of low-income households, we think that it is about making a start. Our concern is that if we do not make a start in the short term, we will not be making a start for a long time to come.³⁹

3.34 There are divided views among environmental groups, although generally even those who would like to see the bill amended do not want it delayed. The Climate Institute said:

...failure to pass effective legislation this year and delay further action on climate change would be economically irresponsible...⁴⁰

3.35 This was also the view of the World Wildlife Fund who stated:

We would support a 2010 start date.⁴¹

3.36 An exception was the Australian Conservation Foundation who in their evidence to the committee said:

...we do not support the introduction of the scheme as it currently stands⁴²

Committee comment

3.37 The Committee appreciates the urgency of addressing climate change and the additional costs of delaying doing so. It does not accept that Australia is acting in advance of other countries, but feels we should take responsible action now to reduce Australia's carbon pollution and contribute to a global agreement. This would leave Australia better placed to argue in Copenhagen for other countries to take the bolder action that will be in the world's, and particularly Australia's, interests. Being in a strong position to strongly argue for international co-ordinated action is in the national interest and will contribute to reducing the threat of damaging environmental, economic and social implications within Australia.

3.38 There are arguments on both sides about when in an economic cycle is the best time to introduce an ETS and, as always, it is difficult to predict whereabouts in an economic cycle Australia will be two years hence. But the Committee does not view this as a reason for delay.

3.39 The Committee notes that while the exposure draft has only been available for a short period, it is essentially just a legislative expression of the *White Paper*, which business has had for months, and this in turn builds on discussions about emissions

39 Mr Tony Westmore, ACOSS, *Proof Committee Hansard*, 23 March 2009, p 19.

40 The Climate Institute, *Submission 105*, p 6.

41 Mr Paul Toni, World Wildlife Fund, *Proof Committee Hansard*, 27 March 2009, p 68.

42 Mr Owen Pascoe, Australian Conservation Foundation, *Proof Committee Hansard*, 24 March 2009, p 46. The reasons for this are that ACF view the targeted emissions reductions are too small, the number of free permits as excessive and the support for renewable energy and voluntary action as inadequate.

trading schemes have been continuing for years. The evidence shows that the firms which will face obligations under the scheme, mostly large companies, have had staff working on the matter for a considerable period and are well prepared. The current timetable does not require lodging of emissions reports until October 2011 (Table 1.1).

3.40 Reducing carbon pollution at least cost, providing business certainty and the potential for green jobs are overwhelming reasons for putting the legislative framework in place promptly.

Recommendation 1

3.41 The Committee recommends that the bills should be passed without delay.

Chapter 4

Economic modelling

Treasury modelling

4.1 Treasury released a lengthy paper called *Australia's Low Pollution Future: The Economics of Climate Change Mitigation*, on 30 October 2008. It reports the modelling work they had undertaken in conjunction with leading climate change economists on the impact on the Australian economy of climate change mitigation. The Treasurer and Minister for Climate Change described the report as 'one of the largest and most complex economic modelling projects ever undertaken in Australia'.¹ The work drew on a range of models with differing characteristics.²

4.2 The key conclusions reached are that:

...early global action is less expensive than later action; that a market-based approach allows robust economic growth into the future even as emissions fall; and that many of Australia's industries will maintain or improve their competitiveness under an international agreement to combat climate change.³

4.3 The key quantitative conclusion is that:

From 2010 to 2050, Australia's real GNP per capita grows at an average annual rate of 1.1 per cent in the policy scenarios, compared to 1.2 per cent in the reference scenario.⁴

4.4 Permit prices are assumed to increase by 4 per cent a year in real terms, reflecting a real risk-free interest rate of 2 per cent and a risk premium for permits of 2 per cent.⁵

1 Treasury, *Australia's Low Pollution Future: The Economics of Climate Change Mitigation*, October 2008, p iii. This report is hereafter referred to as Treasury (2008). Similarly, the Secretary of the Department of Climate Change commented 'the Treasury modelling is the most significant and comprehensive exercise ever undertaken in Australia'; Dr Martin Parkinson, *Proof Committee Hansard*, 18 March 2009, p 8.

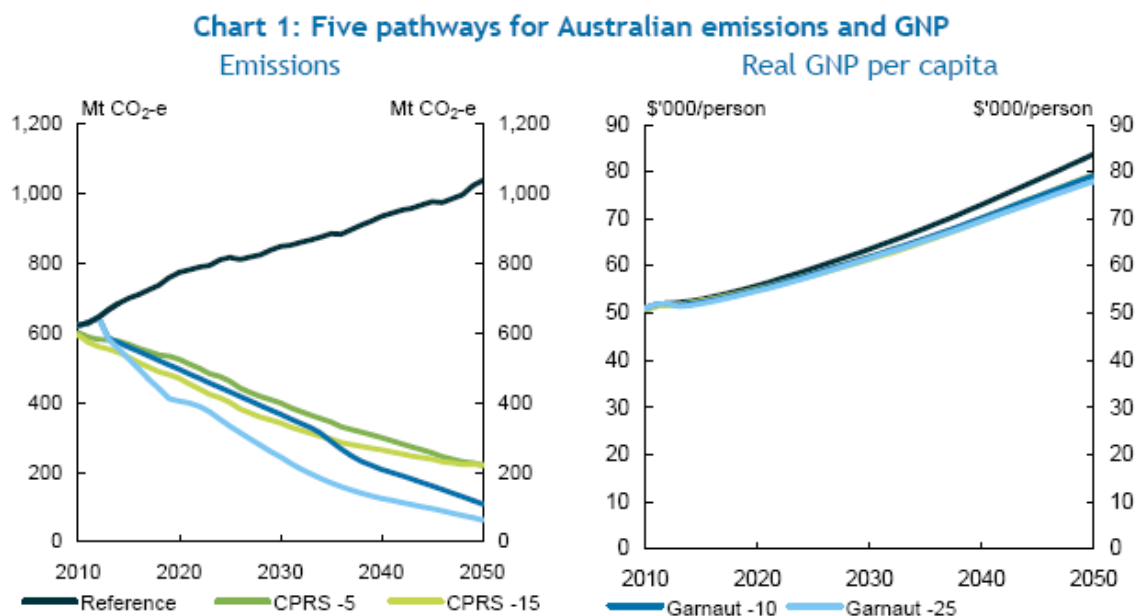
2 The three main computable general equilibrium models used were the Global Trade and Environment Model (GTEM) developed by ABARE, the G-cubed model developed by Professor Warwick McKibbin of the Australian National University and the Monash Multi-Regional Forecasting (MMRF) model. They were supplemented by industry-specific models. The impacts on households were modelled using Treasury's Price Revenue Incidence Simulation Model (PRISMOD). Treasury (2008, pp 12-14).

3 Treasury (2008, p ix).

4 Treasury (2008, p xi).

4.5 The impacts on real income of various proposals for reducing emissions are illustrated in Chart 4.1.

Chart 4.1



4.6 The White Paper includes modelling results comparing six possible regimes, assuming differing Australian and global targets, with a baseline projection based on doing nothing. In all scenarios real incomes continue to grow strongly. The modelling neglects the benefits from action on climate change. For simplicity, Table 4.1 below shows only three results; the baseline; the CPRS proposal of a 5 per cent cut in Australian emissions and a more ambitious regime where there is global agreement on targeting 450 ppm. In the second scenario it is assumed that there is a phased introduction across countries⁶ whereas in the third scenario it is assumed all countries participate from 2013.

5 Treasury (2008, p 78).

6 Advanced economies from 2010, China from 2015, India from 2020 and poorer countries from 2025; Treasury (2008, p 82).

Table 4.1: Modelling results

	No action	CPRS proposal	450 ppm target
Australia			
Change in Australian emissions 2000 to 2020	+40%	-5%	-25%
Change in per capita emissions 2000 to 2020	+8%	-27%	-44%
2010 carbon price	0	\$23	\$52
2020 carbon price (2005 dollars)	0	\$35	\$60
Real GNP per capita increase 2010 to 2020	+9.6%	+7.8%	+8.3%
Real GNP per capita average annual growth rate; 2010 to 2050	1.2%	1.1%	1.1%
Change in Australian emissions 2000 to 2050	+[50]%	-60%	-90%
Change in per capita emissions 2000 to 2050	+[30]%	-77%	-93%
Global impacts			
Change in emissions 2000 to 2020		+32%	+29%
Change in emissions 2000 to 2050		-9%	-50%
2020 carbon price (2005 dollars)		US\$31	US\$52
Real GDP average annual growth rate; 2010 to 2050	3.5%	3.4%	3.4%
Potential stabilisation of CO ₂ e	Not stabilised	550 ppm	450 ppm
Expected (median) increase in global average temperatures	+[8]°C	+3°C	+2°C

Sources: *White Paper*, pp 4-12, 4-25; Treasury (2008, pp xii, 76, 77, 93)

Criticisms and commentary on the Treasury modelling

No modelling of 'Australia going alone'

4.7 There has been criticism that Treasury has not modelled a 'worst case scenario':

Probably the biggest concern would be that there has been no modelling undertaken that factors in Australia going alone. All the modelling scenarios assume that the rest of the world will also take action...⁷

Given the nature of the collective action problem and the historical record of slow, partial and fragmented action, it is difficult to conceive why Treasury did not model and publicly release at least one policy scenario where comprehensive and coordinated global action fails to develop in the next decade.⁸

4.8 Treasury has responded that such a scenario would be very unlikely, especially given that many countries are already implementing an ETS. (See the discussion in Chapter 3). Furthermore, Treasury has defended the assumption by arguing that:

To assume otherwise — that is, to presume that the world's major emitters will not act at any time to decisively reduce greenhouse gas emissions — is to presume that the world will gradually succumb to potentially catastrophic damage to the global environment...The prehistoric peoples of Easter Island took this path, and paid the price (*Collapse*, Jared Diamond, 2005). We would do well not to follow their lead. Another logical possibility is that majority scientific opinion is simply misguided and will turn out to be a fad. However, to invoke such a possibility as a basis for deciding on public policy seems to me extraordinarily foolhardy.⁹

4.9 The Australian Industry Greenhouse Network indicated they agree with the Government's general assumptions regarding international climate change action:

AIGN agrees with the Government's assessment of the likely direction on international negotiations on mitigation of climate change.¹⁰

4.10 Indeed, the Treasury modelling already covers very pessimistic scenarios:

...it was judged that having China take on no targets until 2015, despite currently doing quite a lot in the greenhouse gas space to reduce emissions,

7 Mr Andrew Canion, Senior Adviser, Industry Policy, Chamber of Commerce and Industry of Western Australia, *Select Committee on Fuel and Energy, Committee Hansard*, 17 November 2008, p 5.

8 Dr Brian Fisher, 'A peer review of the Treasury modelling of the economic impacts of reducing emissions', *Concept Economics*, 30 January 2009, p 20.

9 Dr David Gruen, 'The economic costs of reducing greenhouse gas emissions: understanding the Treasury modelling', *Treasury Economic Roundup*, no. 4, 2008, p 27.

10 Australian Industry Greenhouse Network, *Submission 54*, p, 7.

we are being more pessimistic than current government policies out to 2015. Then from 2015, China's emissions allocation continues to grow until 2030, which was judged to be realistic. Similarly, India does not do anything at all in the greenhouse gas space until 2020 and then its emissions allocation continues to grow until 2040. Other developing low income countries do not do anything until 2025.¹¹

4.11 However, even critics of the Treasury modelling concede that China is taking some steps:

There is little doubt that the Chinese government has adopted an ambitious climate change related domestic policy program...¹²

4.12 Treasury drew the Committee's attention to some modelling for the Garnaut Review that did look at Australia acting alone:

In a situation in which Australia continues to act on climate change and there is no action other than existing arrangements in the current Kyoto protocol, going forward, the economic cost to Australia in that world was lower than any of the scenarios we looked at.¹³

Revised modelling to incorporate the global economic crisis

4.13 Treasury has also been criticised for not redoing the modelling to use a baseline incorporating the impact of the global financial crisis. Treasury explained:

The economic analysis modelling was undertaken over 18 months...There was no explicit decision to exclude the implications of the global financial crisis. It was judged in the context of the knowledge at the time that it would not materially affect the analysis in the report...in the context of looking at trajectories and targets over 20, 30, 40 and 50 years, we do not feel that it is material to the analysis in the report.¹⁴

The economic modelling focuses on changes in the economy resulting from climate change mitigation policies. In principle, even if the reference scenario was different, the direction and scale of these changes should be broadly unchanged.¹⁵

11 Ms Meghan Quinn, Treasury, *Select Committee on Fuel and Energy, Committee Hansard*, 19 November 2008, p 63.

12 Dr Brian Fisher, 'A peer review of the Treasury modelling of the economic impacts of reducing emissions', Concept Economics, 30 January 2009, p 36.

13 Ms Meghan Quinn, Treasury, *Proof Committee Hansard*, 25 March 2009, p 12.

14 Ms Meghan Quinn, Treasury, *Select Committee on Fuel and Energy, Committee Hansard*, 19 November 2008, p 63.

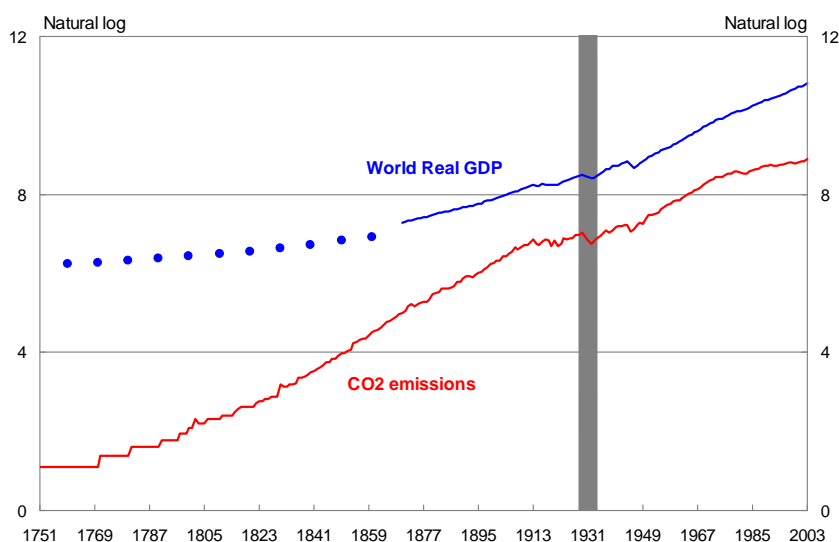
15 Treasury (2008, p xvi).

4.14 While Treasury has not redone all their modelling since the crisis, it is possible to derive an indication of how much the results would differ. As the previous statement from Treasury explains, the financial crisis is unlikely to change significantly the 'counterfactual results': that is, if in a world without a CPRS the crisis means that GDP will increase by X per cent less by 2050 than if there had not been a crisis, then in a world *with* a CPRS GDP will also increase by around X per cent less by 2050 as a result of the crisis.

4.15 Given this, an approximate result can be calculated by applying the simple and conservative—many would say pessimistic— assumption that real GDP will now be flat in 2009 and 2010 rather than growing by 3 per cent each year and that the economy thereafter grows at its long term trend rate of growth, never making up any of what it lost. This would imply that real GDP in 2050 will be 6 per cent lower than it otherwise would have been due to the crisis. The implication is that if the Treasury modelling exercise were redone now, instead of the modelling concluding that the CPRS might reduce annual average growth in real per capita incomes from 1.2 to 1.1 per cent, it would be reducing it from 1.1 to 1.0 per cent.

4.16 Another perspective can be gleaned from looking at real GDP and emissions over a long term. The slump in emissions during the Great Depression is evident in Chart 3.2. Also evident is that even such a large economic disruption as the Great Depression has a relatively modest impact on long-term economic growth.

Chart 4.2: CO2 emissions and world real GDP



Dr Fisher's criticism

4.17 Dr Brian Fisher of Concept Economics, a former head of the Australian Bureau of Agricultural and Resource Economics, attacked the Treasury modelling as 'unrealistic' and 'stretching credulity' within a day of its release.¹⁶ He was subsequently

¹⁶ 'Garnaut's myths of emission', *The Australian*, 31 October 2008.

commissioned by the Senate Select Committee on Fuel and Energy to review the Treasury modelling. His review questions Treasury's modelling assumptions and claims that:

...the interaction of these assumptions is likely to result in the Treasury modelling seriously under-estimating the economy-wide and sectoral challenges associated with particular emissions reduction targets...¹⁷

4.18 In general, no quantification is provided of any under-estimation. An exception is the LNG industry, where Dr Fisher comments:

Modelling work by Concept Economics suggests that under plausible ETS scenarios LNG output is likely to be between a third and a half less than it otherwise would be by 2030. This is the case regardless of whether or not the government offers to shield the industry with assistance for a period of time.¹⁸

4.19 Many of Dr Fisher's complaints that modelling is a simplification of a complex reality would apply to any modelling work, not just to this specific modelling exercise. Dr Fisher also calls for more details of the Treasury modelling to be released, but Treasury says some of the information requested was provided on a commercial-in-confidence basis.

A comment by Dr Parkinson

4.20 Dr Parkinson reminded the Committee that while the focus of the Treasury modelling is on the costs of introducing an emissions trading scheme, regard should also be given to the costs of deciding not to introduce one at this time:

...existing models do not capture the impact of ongoing uncertainty in climate policy frameworks. Business now knows that climate action is inevitable. Work done for the Task Group on Emissions Trading shows that uncertainty over climate action produced real costs to the economy, in particular in the electricity sector. This was one of the reasons why that group agreed that emissions trading should not be dependent on developments internationally.¹⁹

CSIRO modelling

4.21 In addition to the Treasury modelling, the CSIRO conducted modelling of the employment impact of introducing an ETS, using both their in-house biophysical model and Monash University's CGE model. The results, reported in a June 2008

17 Dr Brian Fisher, 'A peer review of the Treasury modelling of the economic impacts of reducing emissions', Concept Economics, 30 January 2009, p 6.

18 Dr Brian Fisher, 'A peer review of the Treasury modelling of the economic impacts of reducing emissions', Concept Economics, 30 January 2009, p 29.

19 Dr Martin Parkinson, Secretary, Department of Climate Change, *Proof Committee Hansard*, 18 March 2009, p 7.

report, *Growing the Green Collar Economy*, from the two models were similar to each other and also similar to those from the Treasury modelling. One of the authors told the committee that:

...achieving a rapid transition to sustainability would have little or no impact on national employment.²⁰

4.22 He also made the point that the creation of new 'green jobs' is not restricted to new firms or new industries. It also covers workers in existing firms who contribute to economising on their energy use:

...green jobs will be found in many sectors of the economy from energy supply to recycling, and from agriculture and construction to transportation. Green jobs, essentially, help to cut the consumption of energy, raw materials and water through high efficiency strategies.²¹

4.23 Quantifying this, Dr Schandl cited the estimate from his modelling:

...the number of jobs will grow, both in business-as-usual and in a scenario which takes into consideration all the things that have been described in the green paper that would happen in the emissions trading scheme. Overall, the number of jobs will increase over the next two decades—2.5 to 3.3 million new jobs, and 230,000 to 340,000 of these new jobs are in those sectors which we have identified as high-impact sectors, with regard to resource use, energy use and emissions.²²

The Garnaut Review modelling

4.24 The Treasury modelling built on work done for the *Garnaut Review*. That modelling assumed all countries act from 2013 and all money raised from the sale of permits is distributed to households, with no compensation payments to industry. In contrast to the Treasury modelling, it considered some of the costs of *not* addressing climate change. In particular it covered impacts on primary production, human health, infrastructure, tropical cyclones and international trade.²³ By 2100 real GNP, GDP, consumption and wages are 6-10 per cent lower than they otherwise would be as a result of climate change and the impact is continuing to grow.²⁴ Adding in the increased risk of absolutely catastrophic outcomes, and the non-market impacts, would raise these estimates considerably. Garnaut notes that other modelling has

20 Dr Heinz Schandl, CSIRO, 25 March 2009, p 24.

21 Dr Heinz Schandl, CSIRO, 25 March 2009, p 25.

22 Dr Heinz Schandl, CSIRO, 25 March 2009, p 33.

23 *Garnaut Review*, p 253.

24 *Garnaut Review*, p 253.

shown that costs in the 22nd century will be dramatically higher – perhaps approaching 70 per cent of global GDP by 2300.²⁵

4.25 The Garnaut modelling finds the cost of Australia's share of the costs of mitigating climate change are about a 0.1 per cent a year reduction in economic growth – the costs will depend on what new technologies are developed in response to carbon prices soaring into the hundreds of dollars.

4.26 The net costs of mitigation appear manageable and after 2060 they have become negative (ie GDP growth is stronger with mitigation than under business-as-usual). Agriculture is the big winner (as crops are more sensitive to temperature than manufacturing) but by the latter half of the century mining also is doing better.

4.27 The modelling also throws some light on the difference between aiming to stabilise at 450 and 550 ppm. The more ambitious target costs an extra 0.7-0.9 per cent of GDP (in net present value terms). Given the environmental benefits and the insurance value of reducing the risk of catastrophic impacts, Garnaut:

...judges that it is worth paying less than an additional 1 per cent of GNP as a premium in order to achieve a 450 result.²⁶

4.28 Garnaut's conclusion is that:

The costs of well-designed mitigation, substantial as they are, would not end economic growth in Australia, its developing country neighbours, or the global economy. Unmitigated climate change probably would.²⁷

4.29 He also comments that modelling of large changes to the structure of the economy is likely to overstate the costs of these changes:

Experience shows that once consumers and producers have accepted the inevitability of change, and face predictable incentive structures, they will alter their behaviour to account for the new conditions more efficiently and effectively than previously predicted. This experience suggests that economic models are more likely to underestimate the benefits or overestimate the costs of changes in economic conditions, so long as the change is to stable institutional arrangements and predictable incentives. This bias may be further exacerbated by lack of data about the full costs of climate change impacts and a corresponding downward bias in the estimated benefits of avoided climate change.²⁸

25 *Garnaut Review*, pp 262-3.

26 *Garnaut Review*, p 272.

27 *Garnaut Review*, p 268.

28 *Garnaut Review*, p 306.

Allen Consulting Group modelling

4.30 The Allen Consulting group was commissioned by a group of large Australian companies to model the effect of policies to induce large cuts in Australian emissions, either rapidly or slowly. The main conclusions were:

Under the early action scenario the deep cuts in GHG emissions are delivered while GDP grows strongly at an average 2.1% pa over the period to 2050, in comparison with the base case in which GDP grows on average by 2.2% pa. This early action scenario would provide an estimated \$2 trillion GDP in 2050, meaning that Australia would then be about three times wealthier than in 2002...Delaying for just nine years has a significant negative impact – under the delayed action scenario, the deep cuts are achieved but on a steeper trajectory from 2022 which in turn limits GDP growth to an average 1.9% pa over the period to 2050...A total of over 3.5 million jobs are created in the period from 2013 to 2050 under the early action scenario...Under the early action scenario, electricity costs are lower as business invests earlier in a wide range of low and zero emission technologies. Early market uptake of technology leads to cost reductions through greater economies of scale and market experience.²⁹

Frontier Economics modelling

4.31 Frontier Economics conducted some modelling for the NSW Treasury, which focused on the results at a regional rather than national level, but was otherwise broadly comparable with the Treasury modelling. The modelling has not been publicly released at this stage but reports on it have appeared in the media.

4.32 The modelling indicates, unsurprisingly, that the CPRS will lead to employment growing by less (but still growing) in areas with a heavy dependence on emissions-intensive industry, such as Gippsland, central-west Queensland, the Hunter Valley, Illawarra and the Kimberley while employment will grow more in other areas, especially Tasmania with its hydro-electric power.³⁰

Reserve Bank analysis

4.33 While only partly informed by formal models, the Reserve Bank have also commented on the likely impact on economic growth of the CPRS:

Overall, assuming an emissions permit price of \$25 per tonne of CO₂-e, it is estimated that the net result will be to reduce GDP growth by less than 0.5 percentage points in total, spread over the first couple of years following the introduction of the CPRS, with a reduction of about 0.1 percentage points per year thereafter. These effects, however, must be

29 Australian Business Roundtable on Climate Change, *The Business Case for Early Action*, April 2006, p 5.

30 *The Australian*, 26 March 2009; see also Danny Price, Frontier Economics, *Proof Senate Select Committee on Fuel and Energy Hansard*, 2 April 2009, p 19.

considered against the longer-term costs of not taking steps to ameliorate the negative effects arising from climate change.³¹

4.34 This modest effect is partly due to the Bank's view that it will not be tightening monetary policy (ie raising interest rates) in response to the one-off impact on prices of the CPRS:

As with other structural changes affecting prices (such as the introduction of the GST in mid 2000), monetary policy will be set with a focus on medium-term price stability as a means of promoting sustainable growth in output and employment. Given that the increase in the price level is expected to be largely one-off, the Bank should be able to look through the initial increase in inflation.³²

31 Reserve Bank, *Statement on Monetary Policy*, February 2009, p 69.

32 Reserve Bank, *Statement on Monetary Policy*, February 2009, p 69.

Chapter 5

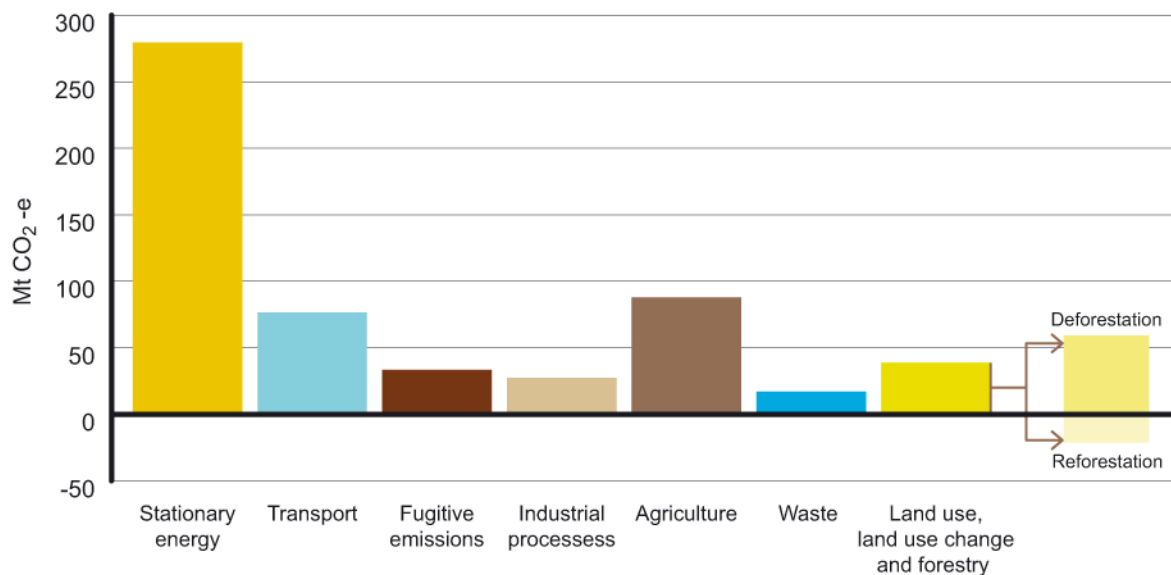
Targets in the CPRS

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, hydrofluorocarbons and perfluorocarbons; all expressed in carbon dioxide equivalents (CO₂e).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 CO₂e 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.

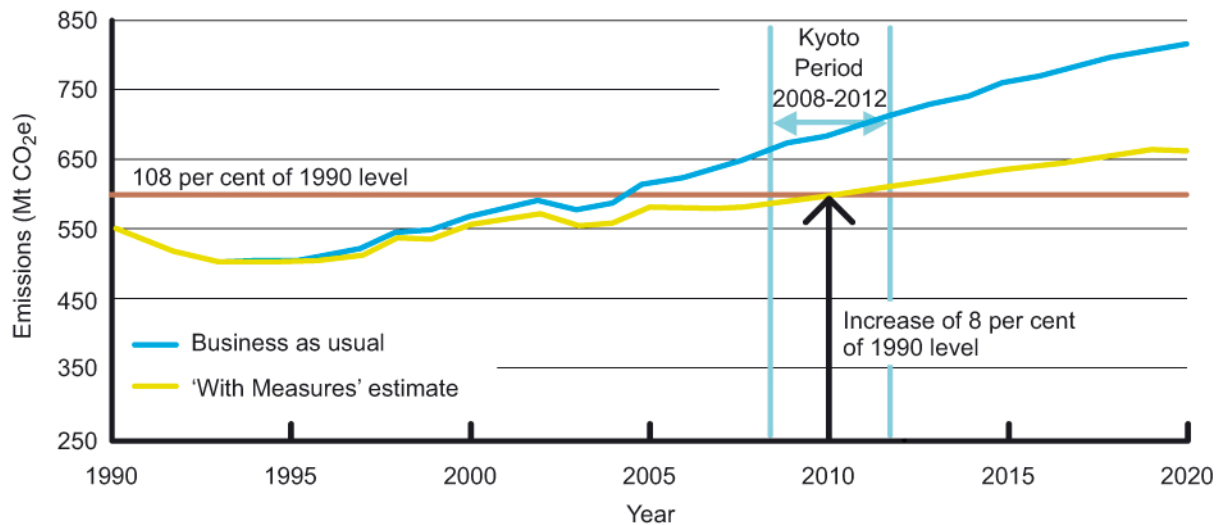
1 The internationally agreed conversion factors, reflecting the impact on global warming of the various gases, are given in *White Paper*, p 6-2. While, for example, nitrous oxide is emitted in much lower volumes than carbon dioxide, its global warming impact is 310 times as high.

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 2008-2012³;
- 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 cent cut from 1990 levels: *White Paper*, p C-1.

4 *White Paper*, p 4-6.

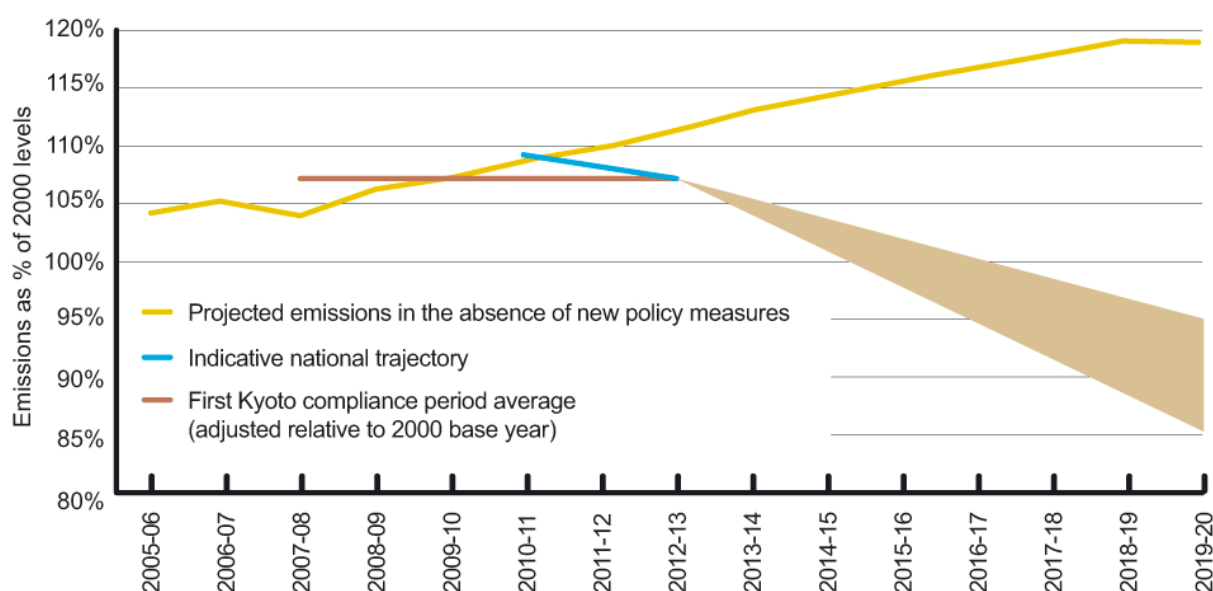
5 *CPRS Bill Commentary*, p 8.

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 CO₂ 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 ₂ e)
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.

Chapter 6

Transitional assistance

6.1 The CPRS package involves transitional assistance to companies heavily affected by the CPRS. There are two primary reasons. The first is to avoid 'carbon leakage'. The second is to assist firms to transit to operation in a carbon-constrained environment whilst maintaining energy security.

6.2 Firms engaged in emissions-intensive-trade-exposed activities may be constrained in their ability to pass through the increases in the carbon cost because they are price takers on the world market. Introducing carbon constraint ahead of other countries could lead to a loss of competitiveness for these industries and lead to 'carbon leakage'.¹

Carbon leakage

6.3 Carbon leakage is most commonly expressed as a fear that having strict rules in Australia will lead to emissions-intensive industries shifting to countries without emissions caps and with the result of increased emissions or no global reduction in emissions occurring.

6.4 There are a number of conditions that must be in place before carbon leakage in this narrow sense would be likely to occur:

- the emissions permit price in Australia is a significant proportion of costs;
- there is no similar price currently being imposed in an alternative production centre;
- there is unlikely to be a similar price imposed in an alternative production centre for a significant proportion of the life of the project;
- there are not large relocation costs;
- there are not significant damages to the company's reputation from being seen to avoid responsibility for its greenhouse gas emissions²;

1 Department of Climate Change, *Assistance for EITE industries*, Fact Sheet, December 2008.

2 As a British expert witness put it of a firm relocating to avoid a carbon price, 'what they are saying is they would prefer not to take the responsibility as a member of society to reduce their emissions, to take their business somewhere else and freely to admit that which will cause harm to their own citizens. I cannot see that as evidence of leadership of any kind. I regard that as weak.'; Mr James Cameron, Executive Director, Climate Change Capital, *Proof Committee Hansard*, 19 March 2009, p 19.

- shifting production does not lead to offsetting increases in other ongoing costs (eg the transport of raw material from Australia, or higher prices for raw materials in the other centre); and
- the production process in the alternative centre is more emissions-intensive.

6.5 Another variant of 'carbon leakage' is where the Australian producer does not move offshore, but loses market share to an overseas competitor as a result of Australia introducing a price for greenhouse gas emissions. The relocation costs argument above does then not apply, but importantly the final point still does.

6.6 A number of witnesses asserted that there remains a risk of 'carbon leakage', notwithstanding assistance for emissions-intensive, trade-exposed industries (EITEs):

A decay in the assistance rate over time will make cement produced in Australia uncompetitive compared to imported cement. If this leads to lower output from, or even the closure of Australian cement plants, offshore plants would increase production – hence carbon leakage.³

The apparent cap on the allocation of permits to EITE industries (or activities) is inconsistent with the objective of preventing carbon leakage. This restrictive allocation is artificially circumscribing the extent of assistance available under the EITE measure.⁴

This high cost impost poses a real risk of investments moving offshore, resulting in an economic loss to the Australian economy without any net environmental benefit as emissions would merely shift elsewhere.⁵

6.7 Other witnesses argued there was a widespread view that the problem of carbon leakage was greatly overstated.

6.8 As noted by the *White Paper*, work by the International Energy Agency suggests there has been little carbon leakage from the EU since their ETS was introduced.⁶ The Committee asked an expert witness, James Cameron, from the United Kingdom about the European experience and was told:

We are not experiencing significant competitiveness issues in any sector, even those most exposed to international competition...On the whole people do not move their businesses for these reasons...carrying the cost of carbon is not a significant factor.⁷

3 Cement Industry Federation, *Submission 14*, p 4.

4 Australian Plantation Products and Paper Industries Council, *Submission 36*, p 2.

5 Ms Aileen Murrell, Chamber of Minerals and Energy of Western Australia, *Proof Committee Hansard*, 23 March 2009, p 3.

6 *White Paper*, p xxxiii.

7 Mr James Cameron, Executive Director, Climate Change Capital (UK), *Proof Committee Hansard*, 19 March 2009, p 22.

6.9 An ABARE study in 2007 found that only about an eighth of the reduced emissions in Australia may be offset by increased emissions abroad, even if Australia moved ahead of the rest of the world.⁸ The Department of Climate Change summarised the evidence as follows:

If you look at the experience in Europe, there is very little evidence to suggest that carbon leakage was a significant problem and, in the Treasury modelling, there is a suggestion that carbon leakage is unlikely to be a significant issue.⁹

6.10 A number of witnesses, including to this and other inquiries, have also questioned the likely extent of carbon leakage:

Those [carbon leakage] arguments need to be robustly challenged, because they very rarely stand up to scrutiny.¹⁰

We have a report...by independent experts...which looked in particular at aluminium and LNG, for example, and concluded that the concerns about carbon leakage were grossly overstated.¹¹

As for carbon leakage, the chance of this happening on any significant scale is virtually nil. As John Hewson once memorably told me, "You just don't throw an aluminium smelter in a backpack and take it off to Indonesia."¹²

Attempts to estimate carbon leakage empirically show significant variation...some studies report higher results...others point to minimal carbon leakage occurring.¹³

6.11 Alcoa indicated that, although they were seeking some further assistance for the most electricity intensive EITE industries, they were willing to work with the challenge of climate change imperatives:

In terms of the efficiency of operating here in Australia, these are very, very long-life assets. I think the replacement value of the assets we have in Australia would be in excess of \$20 billion. So they are not something that we would want to undermine, run down or walk away from easily. We have been here for more than 40 years. We want to stay for decades to come. So

8 A study by the Australian Bureau of Agricultural and Resources Economics, cited in Prime Ministerial Task Group on Emissions Trading, [Shergold] *Report*, May 2007, p 95.

9 Dr Martin Parkinson, Secretary, Department of Climate Change, *Proof Committee Hansard*, 18 March 2009, p 26.

10 Mr James Cameron, Executive Director, Climate Change Capital (UK), *Proof Committee Hansard*, 19 March 2009, p 26.

11 Mr Connor, Climate Institute, *Proof Committee Hansard*, 27 March 2009, p 45.

12 Dr Guy Pearse, 'Quarry vision: coal, climate change and the end of the resources boom', *Quarterly Essay*, no 33, 2009, p 55.

13 Dr Brian Fisher, 'A peer review of the Treasury modelling of the economic impacts of reducing emissions', Concept Economics, 30 January 2009, p 26.

we will do whatever we can to maintain the competitiveness of the Australian industry.¹⁴

6.12 Dr. Richard Dennis from the Australia Institute believes that the argument that if emissions trading is introduced, there will be carbon leakage and corporations will exit the country as "absurd" arguing that if they were that mobile they would have been more likely to leave when our exchange rate was at US90c.¹⁵

6.13 The Department of Climate Change notes that the quantum of assistance in the CPRS can not be justified by carbon leakage arguments:

...there is more support being proposed than is necessary to deal solely with the issue of carbon leakage.¹⁶

Transitional adjustment assistance

6.14 As noted above, the Department of Climate Change agreed that the assistance to EITEs was not based solely on the grounds of climate leakage. The other goal was described as follows:

...the government is attempting to smooth the transition for individual firms, rather than just have them take a hit on their profit.¹⁷

6.15 Other submitters made an argument for transitional assistance:

The draft legislation clearly demonstrates to us an appreciation of the fact that the Australian economy will require a period of transition to become a low-carbon economy. There is also a recognition of the potential competitiveness at threat for some aspects of the Australian industry. We can also see evidence in the legislation that the government has considered the emissions trading schemes in other jurisdictions and has looked to learn from the mistakes and some of the challenges that have been experienced with those schemes.¹⁸

The overriding consideration for the AWU has been to ensure that the EITE industries most exposed to the impacts of the ETS, and least able to pass on costs associated with participation in the Scheme have the maximum level of assistance during the transition to an international framework for

14 Mr Timothy McAuliffe, Alcoa, *Proof Committee Hansard*, 23 March 2009, p 67.

15 Dr Richard Denniss, Australia Institute, *Proof Committee Hansard*, 25 March 2009, p 75.

16 Dr Martin Parkinson, Secretary, Department of Climate Change, *Proof Committee Hansard*, 18 March 2009, p 26.

17 Dr Martin Parkinson, Secretary, Department of Climate Change, *Proof Committee Hansard*, 18 March 2009, p .

18 Ms Amanda McCluskey, Colonial First State Global Asset Management, *Proof Committee Hansard*, 25 March 2009, p 48.

emissions trading (which includes both developed and developing countries) on a true burden sharing basis.¹⁹

6.16 The transitional assistance is aimed at maintaining business confidence during the process of adjustment to a carbon-constrained economy and maintaining energy security.

6.17 The exposure draft legislation proposes to provide free permits to some EITEs. The permits provided will be based on the industry's historic average emissions intensity, avoiding penalising individual firms who are lower than average polluters and retaining an incentive for firms to cut emissions. Assistance will be linked to production: expanding firms will receive an increased number of permits and contracting firms will receive fewer permits. A firm which ceases to operate in Australia will no longer receive permits. To some extent this part of the CPRS operates like a 'baseline and credit' or 'intensity' system.²⁰

6.18 Trade exposure will be assessed based on either having trade share (average of exports and imports to value of domestic production) greater than 10 per cent in any year 2004-05 to 2007-08 or a 'demonstrated lack of capacity to pass through costs due to the potential for international competition'.²¹ Emissions intensity refers to emissions relative to either revenue or value added, averaged over the lowest four years from 2004-05 to 2008-09.

6.19 Initial assistance will comprise permits to the value of 90 per cent of the allocative baseline for activities with emissions intensity above 2000 t CO₂e per \$million of revenue or 6000 t CO₂e per \$million of value added. Permits to the value of 60 per cent of the allocative baseline for activities with emissions intensity of 1000 to 2000 t CO₂e per \$million of revenue or 3000 to 6000 t CO₂e per \$million of value added.

6.20 The *White Paper* suggests that, for example, aluminium smelting and integrated iron and steel manufacturing are likely to qualify for the 90 per cent assistance and alumina refining, petroleum refining and LNG production as likely to qualify for 60 per cent assistance. If the CPRS is extended to cover agriculture, it is likely that beef cattle, sheep, dairy cattle, pigs and sugar cane would qualify for assistance.²²

6.21 Firms that are able to produce the same quantity of output with fewer permits than are provided will be able to sell the difference. In effect, they will receive credit for performance above the baseline. Firms with emissions above the baseline level will have to buy additional permits.

19 Australian Workers Union, *Submission 27*, p 3.

20 The operation of 'baseline-and-credit' systems is described and critiqued in Chapter 11.

21 *White Paper*, p lxxv.

22 *White Paper*, p 12-45.

6.22 The 60 and 90 per cent assistance rates will be gradually scaled down over time, by 1.3 per cent a year.²³ However, the Government concedes that 'the share of permits provided to EITE industries will increase over the first 10 years of the scheme', perhaps to around 45 per cent.²⁴ As other countries introduce broadly consistent carbon pricing schemes, the assistance programme will be reviewed, but in general five years' notice will be given of any changes. The reviews may be informed by Productivity Commission reports on the Scheme's impact on particular industries.

6.23 The argument for concentrating assistance on the EITEs is that other industries should not be adversely affected:

...if they are not emissions intensive then the costs they will face will be very low. If they are not trade exposed, that means that all participants in that industry in Australia will face similar costs and they can raise prices and pass it on to the community.²⁵

6.24 In addition, there will be calculations of the impact of higher electricity prices resulting from the CPRS on various industries and if required further permits will be allocated to firms based on this.

6.25 In designing the assistance package, the Government is aware of the need to avoid subsidies that would place it in breach of WTO rules or undertakings under bilateral trade arrangements.

6.26 As with all redistributive measures, there will be differing perceptions of what is fair. The Secretary of the Department of Climate Change put it this way:

This issue of balance is critical to achieving long-term sustainability for the scheme. The carbon market we are seeking to create is created by regulation, and ultimately rests on social consensus. Hence, a sense of fairness is absolutely critical, not only in its own right but because it contributes to the longer term policy goal. The value of permits in the emissions trading scheme can be used to help householders and businesses adjust to a carbon price. However, we need to bear in mind that assistance that we provide to one group is assistance that cannot be provided to another.²⁶

23 The reduction is 1.3 *per cent*, not *percentage points*. So the rate in the second year is $60 \times (1 - 0.13) = 59.2$ per cent, not $60 - 1.3 = 58.7$ per cent. This also means the rate will never reach zero.

24 *White Paper*, p xxxv. This is considerably above that in the *Garnaut Review*, which envisaged the proportion being less than 30 per cent and falling over time (p xxxii).

25 Dr Martin Parkinson, Secretary, Department of Climate Change, *Proof Committee Hansard*, 18 March 2009, p 17.

26 Dr Martin Parkinson, *Proof Committee Hansard*, 18 March 2009, pp 5-6.

Criticisms of assistance provided to EITEs

6.27 There have been two main groups critical of the assistance: companies who believe they should receive more assistance than envisaged under the CPRS and those who feel an excessive proportion of the (potential) revenue from the sale of permits is being returned to large polluters.

6.28 Some examples of the claims from aggrieved companies are:

...all EITE activities should maintain their initial allocations of permits (ie 60 per cent and 90 per cent) until 80 per cent of all carbon emissions globally are covered by a comparable carbon constraint.²⁷

...trade exposed operations should receive up to 100% of scope 1 permits and up to 100% of permits needed to fully offset costs passed-through by non-trade exposed industry...remove allocation 'decay'...²⁸

...assistance measures for EITE industries in the CPRS should be amended to reduce the unbearable cost burden on the domestic steel industry...²⁹

...full allocation of permits for Australia's natural gas exports until competitor countries impose similar carbon costs; and removal of the 1.3% annual reduction in permit allocations.³⁰

6.29 Many industry submissions argue that Australian firms will be unable to compete internationally if they are required to meet the cost of their carbon emissions while foreign competitors in the third world are not.³¹

6.30 Arguing that industry should be 'compensated' for the impact of the CPRS on competitiveness implicitly assumes Australia still has a fixed exchange rate so that any increase in costs must hurt competitiveness. However:

you would expect a modest exchange rate depreciation as a result of the introduction of a scheme like this, so those that are not relatively emissions-intensive can in fact gain more from the exchange rate effect than they will face in additional costs.³²

...the Australian economy as a whole is not affected very much by whether we compensate trade-exposed industries. One of the things that happens is

27 Rio Tinto, *Submission 63*, p 2.

28 Australian Industry Greenhouse Network, *Submission 54*, p 3.

29 Blue Scope Steel and OneSteel, *Submission 66*, p 2.

30 Woodside Energy, *Submission 95*, p 3.

31 See, for example, Ms Belinda Robinson, APPEA, *Proof Committee Hansard*, 24 March 2009, p 3; Cement Industry Federation, *Submission 14*, p 2; Alcoa, *Submission 44*, p 1; and BlueScope/Onesteel, *Submission 66*, p 2.

32 Mr Blair Comley, Acting Secretary, Department of Climate Change, *Proof Committee Hansard*, 30 March 2009, p 5.

that we end up with a lower exchange rate, or a different exchange rate, so you end up encouraging some other export industries.³³

The Garnaut approach

6.31 Professor Garnaut has a different proposal for industry assistance which is elaborated in the *Garnaut Review*. The key prescription is:

For every unit of production, eligible firms receive a credit against their permit obligations equivalent to the expected uplift in world product prices that would eventuate if our trading competitors had policies similar to our own.³⁴

6.32 Professor Garnaut's view is supported by his colleague Dr Jotzo. One of his criticisms of the CPRS approach is that, unlike that advocated by Professor Garnaut:

...the scheme encourages continuation or indeed expansion of high emissions activities in Australia that would not be competitive in a world with comprehensive carbon pricing.³⁵

6.33 A criticism of Professor Garnaut's suggestion is that calculating what price would prevail were foreign countries to adopt differing policies would be difficult in practice and could be seen as a matter of judgement. Dr Betz, an expert in emissions trading schemes, warned:

The difficulty of this approach is in modelling that... Being an economist and knowing some of these models I know that they are all based on an assumption. So the difficulty is in practically implementing it.³⁶

6.34 Furthermore, Professor Garnaut's approach would result in no assistance being provided to those firms whose emissions intensity is higher than the global average, for example aluminium produced with brown coal fired electricity.

6.35 Another criticism of giving away free permits to some industries is that it necessarily raises the burden on the rest of the community:

...shielding trade-exposed industries also has the effect of redistributing the abatement burden to the non-shielded sectors within Australia, roughly doubling the carbon price required to achieve the same abatement and leading to an additional 0.4 percentage point reduction in GDP...³⁷

...the substantial share of the total permits is being allocated for free and that share is set to rise over time without any upper bound to the share of permits given out for free as total permits. That share given out for free will

33 Professor Ross Garnaut, *Proof Committee Hansard*, 23 March 2009, p 64.

34 *Garnaut Review*, p 345.

35 Dr Frank Jotzo, *Proof Committee Hansard*, 19 March 2009, p 30.

36 Dr Regina Betz, *Proof Committee Hansard*, 27 March 2009, p 121.

37 Prime Ministerial Task Group on Emissions Trading, [Shergold] *Report*, May 2007, p 95.

be greater the stricter the target is. The upshot is, of course, that less money is available for assisting lower income households with higher energy bills and less money is available to invest for government investment in lower carbon technologies.³⁸

Committee comment

6.36 The Committee supports the manner in which the issue of free permits to companies does not expand with their emissions, which retains incentive to reduce them. This is not a feature of the assistance provided in some other countries' assistance schemes.

6.37 The Committee notes that the many assertions by companies of the extent of carbon leakage have not been matched by much evidence that it will be as serious a problem as they claim. Payments of assistance can be justified to guard against carbon leakage and support emissions intensive trade exposed industries during the transition.

Additional assistance to the coal mining industry

6.38 The great majority of the coal mining industry is not emissions-intensive. There are a small minority of mines, the so-called 'gassy mines', which are very emissions-intensive. (Chart 6.1). The coal mining industry is unique in having such large within-industry variation in emissions intensity. This implies:

Were you...to treat them as an emissions intensive trade exposed industry, you would provide a massive windfall gain to very large parts of the coal industry and you would not actually deal sufficiently with the problems that the gassy mines face.³⁹

6.39 The Government accordingly decided to treat coal as a special case. This reasoning was not accepted by the black coal industry's representatives:

Coal is eligible under the white paper rules for 60 per cent transitional assistance under the arrangements for emissions intensive trade exposed industries. Coal is well above the 1,000 tonnes of CO₂ per million dollars of revenue eligibility threshold, and we maintain that the decision to exclude it was a political decision. The coal industry is, therefore, seeking fair treatment not special treatment.⁴⁰

6.40 The Australian Coal Association argued for additional support:

I will just tell you that \$5 billion over five years is our estimate of the cost of the CPRS to the coal industry. What we are being provided with is \$750

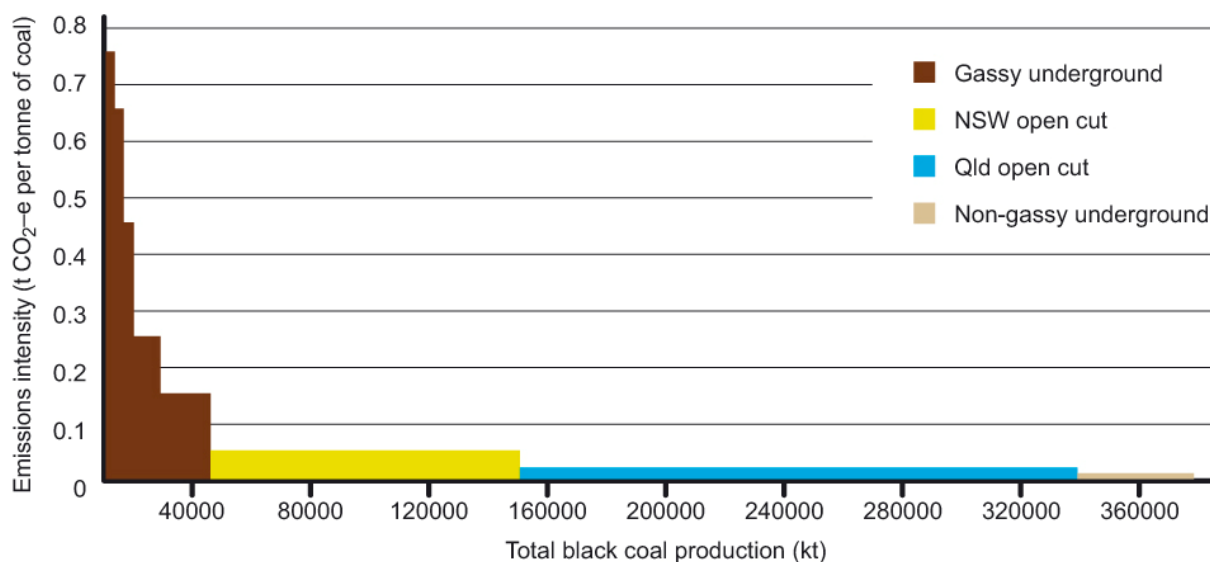
38 Dr Frank Jotzo, *Proof Committee Hansard*, 19 March 2009, p 30.

39 Dr Martin Parkinson, Secretary, Department of Climate Change, *Proof Committee Hansard*, 18 March 2009, p 14.

40 Mr Ralph Hillman, Executive Director, Australian Coal Association, *Proof Committee Hansard*, 25 March 2009, p 108.

million...we are getting 10 per cent of our costs, LNG is getting 60 per cent, cement is getting 83 per cent and aluminium is getting 90 per cent. We believe we should be in there at the EITE with 60 per cent.⁴¹

Chart 6.1: Black coal mine fugitive emissions intensity (2006-07)



Source: *White Paper*, p 12-46.

6.41 The black coal industry's response to the issue of 'windfall gains' was to suggest:

...you just have to slightly adjust the white paper methodology to allocate the permits mine by mine, according to actual emissions rather than production, and the problem of windfall gains will immediately go away.⁴²

6.42 However, adopting this approach would also mean that coal was being treated in a different way to other industries. Furthermore, if free permits were allocated in proportion to actual emissions, it would be eroding the incentive for coal mines to reduce their emissions intensity. A better approach is to ensure there are incentives for the gassy mines to introduce the available or support new abatement technologies, to reduce their emissions by concentrating and capturing, flaring or using coal mine methane.

6.43 The Government intends to allocate up to \$750 million in targeted assistance to the coal industry, around two-thirds of which will go to 'gassy mines' to assist in the installation of abatement equipment.⁴³

41 Mr Ralph Hillman, Executive Director, Australian Coal Association, *Proof Committee Hansard*, 25 March 2009, p 110.

42 Mr Ralph Hillman, Executive Director, Australian Coal Association, *Proof Committee Hansard*, 25 March 2009, p 110.

6.44 An industry spokesperson has decried this level of assistance as inadequate:

The coal industry was...offered token compensation of \$750 million...the Government needs to urgently reconsider this decision.⁴⁴

Committee comment

6.45 The Committee believes that a cogent case has been presented to explain why the form of assistance provided to the more homogenous EITE industries would have perverse effects in the coal industry due to the wide variety in the emissions intensities of individual mines. The proposed assistance is more appropriate than the suggestion of treating coal as an EITE industry. The application of the EITE thresholds broadly across the coal industry would put a disproportionate burden on other energy consumers including small business and households, including pensioners and low income households.

Additional assistance to industries producing lower emissions fuels and products

6.46 The liquid natural gas (LNG) industry made the point that natural gas is a cleaner burning material than other fuels. Although the industry uses energy to convert natural gas to LNG in Australia (thus increasing emissions locally), they argue that the CPRS does not take into account that LNG has the capacity to reduce greenhouse gases globally. LNG is 100% exported. The industry recognises that the industry has been given EITE status (at the 60% level) but put the case they should receive increased transitional assistance or complete exemption from the scheme on the grounds that they lower global emissions, will generate employment or other benefits to Australia and are highly trade exposed:

LNG has been characterised as an anomaly within the emissions trading scheme design. Although producing LNG is emissions intensive and adds to greenhouse gas emissions in Australia, natural gas makes a substantial net contribution to reducing global greenhouse gas emissions. As the world inevitably shifts to a preference for cleaner burning fuels, the substantial strategic value of Australia's natural gas assets can only increase. APPEA therefore recommends that the draft Carbon Pollution Reduction Scheme Bill 2009 be amended to ensure that the LNG industry does not face any costs associated with a domestic emissions trading scheme while ever our competitors and our customers are not subject to similar imposts.⁴⁵

43 *White Paper*, p 12-46.

44 Mitch Hooke, Chief Executive, Minerals Council of Australia, cited in *The Australian*, 23 January 2009, p 1.

45 Ms Belinda Robinson, Australian Petroleum Production and Exploration Association, *Proof Committee Hansard*, 24 March 2009, p, 3.

6.47 There are also proposed LNG projects that will be more emissions intensive than the North West Shelf gas fields that the CPRS will use as the base to calculate the rate of EITE assistance for other projects.

Committee comment

6.48 The Government has set up an expert advisory committee, chaired by Mr Dick Warburton, to provide advice on arrangements for EITE assistance.⁴⁶ The Warburton Committee will provide advice on activity definitions and the delineation of boundaries around each activity for the purposes of EITE assessment. This will enable the LNG industry to put a case for individual projects.

Assistance to electricity generators

6.49 The Government will assist electricity generators through the Electricity Sector Adjustment Scheme (ESAS), which will provide an amount of free permits, worth about \$4 billion over five years.

6.50 This assistance can not be justified to avoid carbon leakage as the power generators serve the domestic market and do not compete with overseas companies. They should be substantially able to pass on the cost of permits to customers (who in the case of low income households will be able to pay out of the assistance payments), but there may be some reduction in the value of their assets.

6.51 The Energy Supply Association of Australia argue that the \$4 billion in assistance is not enough, and pointed to figures suggesting more than twice that amount:

The proposed \$3½ billion of assistance is insufficient and considerably lower than the consensus of modelling reports, which include two sets of government modelling reports, which suggest at least \$10 billion of assistance is required in the first 10 years.⁴⁷

Insufficient assistance is likely to result in an immediate reduction in generators' credit ratings and/or breaches of financial ratios (due to the immediate loss in asset value). At the very least, a number of generators would be unable to meet the prudential requirements of their Australian Financial Services Licence and would be unable to trade.... This may result in a series of financial defaults throughout the market.⁴⁸

6.52 No other submissions shared this view of steeply declining asset values. In the *White Paper*, the Government concluded that:

46 Minister for Climate Change and Water, *Media Release*, 27 February 2009.

47 Ms Clare Savage, Chief Executive Officer, ESAA, *Proof Committee Hansard*, 24 March 2009, p 35. A similar view is put by Mr Wayne Trumble, Griffin Energy, *Proof Committee Hansard*, 23 March 2009, p 13.

48 ESAA, *Submission 21*, p 5.

.....given the advice of the energy market institutions regarding the likely impact on the energy market, and the provision of assistance to the most affected generators through ESAS, it is very unlikely that the actions of creditors will pose a risk to energy security, as it will not be in their interests to take aggressive enforcement action, or to withdraw an asset from the market when prices would justify continued generation.⁴⁹

6.53 The CPRS bill commentary notes that, in regard to ESAS assistance, the CPRS:

...will impose a new cost on fossil fuel-fired electricity generators...relatively emissions-intensive generators are likely to face a greater increase in their operating costs than the general increase in the level of electricity prices...[and] lose profitability...if investors consider that the regulatory environment is riskier...all investments in the sector could face an increased risk premium.⁵⁰

6.54 Some commentators have criticised the proposed assistance as unjustified handouts:

There is no risk and there is no threat to those industries. In fact there is no doubt that if you did due diligence before you purchased such an asset, you would find that the due diligence suggested there was a risk in buying these assets of a significant carbon price. And given that most of the coal fired power stations in Australia have changed hands since that became obvious, the notion that anyone who bought those assets has been taken by surprise I think suggests that other people have failed in their duties. So to give billions of dollars to those groups is, I think, an egregious waste of taxpayers' money.⁵¹

...with the electricity sector in both Victoria and New South Wales, if you did not see this coming, then you were asleep; if you did not see this coming, you were not doing your due diligence. In the case of Victorian generator owners, you were both greedy and silly.⁵²

Committee comment

6.55 There is a legitimate concern that the provision of power to households not be disrupted during the transition to less carbon-intensive energy supplies. It is noted that no renewable energy sources are currently able to provide baseload power or rapidly increase production to meet peak demands. Therefore it is necessary that industry

49 *White Paper*, p

50 *CPRS Bill Commentary*, pp 133-4.

51 Dr Richard Deniss, Executive Director, Australia Institute, *Proof Committee Hansard*, 25 March 2009, p, 74.

52 Mr Tony Westmore, Australian Council of Social Service, *Proof Committee Hansard*, 23 March 2009, p 25.

assistance is provided to ensure energy security whilst the renewable energy sector develops.

Climate Change Action Fund

6.56 The Fund will receive \$2.2 billion over five years which will be deployed to smooth the transition. Among activities to be supported from the Fund are informing people about the operation of the Scheme, assisting small businesses and community organisations invest in more energy efficient equipment, competitive grants for low emission technologies, structural adjustment for workers and communities adversely affected by the Scheme and special assistance to gassy coal mines.

6.57 A stakeholder Consultative Committee will be formed in 2009 to advise on the design of the Fund.

6.58 Some witnesses thought the fund would play an important role:

...if used wisely, the Climate Change Action Fund may be as important as the carbon price...[it should be increased and used] to deliver an additional range of business engagement and emission reduction programmes.⁵³

Support for our workers, communities and regions will also be vital and that the full weight of the Climate Change Action Fund be devoted to this end. The CCAF may need to be supplemented if necessary (beyond \$200 million) to ensure adequate coverage in the context of the transition during the GFC and to share the benefits of new infrastructure investment and industry assistance measures.⁵⁴

6.59 It may be too soon to be definitive about its operations:

the details of the...climate change action fund are not there.⁵⁵

The precise details of that scheme have not been finalised; there are consultations going on.⁵⁶

6.60 There were various suggestions made about priorities for the fund. The Australian Geothermal Energy Association suggested some modest allocations to help renewable energy companies demonstrate their commercial viability by building pilot plants.⁵⁷ The Energy Users Association of Australia thought it could fund measures to

53 Ms Anna Reynolds, Energetics, *Proof Committee Hansard*, 25 March 2009, p 39.

54 Australian Workers' Union, *Submission 27*, p 9.

55 Mr Peter Burns, Australian Industry Group, *Proof Committee Hansard*, 27 March 2009, p 84.

56 Mr Blair Comley, Acting Secretary, Department of Climate Change, *Proof Committee Hansard*, 30 March 2009, p 6.

57 Ms Sue Jeanes, Chief Executive, Australian Geothermal Energy Association, *Proof Committee Hansard*, 25 March 2009, p 39.

encourage energy efficiency.⁵⁸ The Australasian Railway Association called for targeted rail investment and programmes to inform transport choices.⁵⁹

The impact on, and assistance for, households and small business

6.61 About half the revenue raised from selling permits will be dedicated to assisting households.

6.62 Assistance measures for households will be initially based on an assumed carbon price of \$25 a tonne. This will increase the average household's electricity bill by around \$4-5 per week and gas and other household fuel bill by \$2 per week (assuming no behavioural response).⁶⁰

6.63 The total impact on the CPI is estimated at 1.1 per cent in 2010-11.⁶¹ This is also the average increase in prices facing the average household. The impact will vary across households depending on their expenditure patterns, from 1.4 per cent for the average low-income sole parent or pensioner household to 0.9 per cent for the average high-income single income childless household.⁶²

6.64 This is an upper bound for the impact on household budgets, as consumers 'shift household consumption towards goods that become relatively cheaper because they require fewer emissions to produce'.⁶³

6.65 Benefit recipients will automatically receive assistance for these price increases as the benefits are indexed. Indeed, given the possibility of substituting away from the products that have become dearer, they will be overcompensated by the indexation arrangements.

6.66 In addition, the Government's plan involves additional payments to pensioners, seniors, carers and people with disabilities of around 1½ per cent. There will also be additional support to low- and middle-income households, through increases in the low income tax offset, family tax benefits and dependency tax offsets and a transitional payment of \$500 for some low-income singles.

6.67 Assistance to households is premised on the notion that, while most households will be able to adjust their behaviour to minimise the impact of the scheme on their standard of living, those who have a low capacity to absorb or avoid the

58 EUAA, *Submission 74*, p 14.

59 Australasian Railway Association, *Submission 73*, p 2.

60 *White Paper*, p 17-2; Treasury (2008, p xv).

61 *White Paper*, p 17-2. Treasury (2008, p xv) refers to 'a one-off rise in the price level of around 1-1.5 per cent'. The Reserve Bank refers to a 'total effect of around 1 per cent'; *Statement on Monetary Policy*, February 2009, p 68. See also the discussion of impact on inflation below.

62 *White Paper*, p 17-2.

63 *White Paper*, p 17-1.

effects of the scheme should be provided with direct assistance.⁶⁴ The proposed assistance comprises:

- pensioners, seniors, carers and people with disability will receive additional support, above indexation, to fully meet the expected overall increase in the cost of living flowing from the scheme;
- other low-income households will receive additional support, above indexation, to fully meet the expected overall increase in the cost of living flowing from the scheme;
- around 89 per cent of low-income households (or 2.9 million households) will receive assistance equal to 120 per cent or more of their cost of living increase;
- middle-income households will receive additional support, above indexation, to help meet the expected overall increase in the cost of living flowing from the scheme. For middle-income families receiving Family Tax Benefit Part A, the Government will provide assistance to meet at least half of those costs;
- around 97 per cent of middle-income households will receive some direct cash assistance. Around 60 per cent of all middle-income households (or 2.4 million households) will receive sufficient assistance to meet the overall expected cost of living increase; and
- motorists will be protected from higher fuel costs from the scheme by 'cent for cent' reductions in fuel tax for the first three years.⁶⁵

6.68 Additional household assistance is provided not only to ensure that those who can least afford the cost of living increase are not disadvantaged but also to ensure additional support through the introduction of energy efficiency measures and consumer information to help households take practical action to reduce energy use and save on energy bills.⁶⁶ This should enable households, particularly those that also modify their behaviour, to pay for energy saving appliances and equipment.

6.69 Furthermore, the Government will bring forward the indexation around the time of the CPRS' introduction so that the additional payments are available to meet additional energy costs at the time the scheme commences.

6.70 The Australian Council of Social Service is guardedly satisfied with the proposed assistance:

... whether or not the compensation proposed is sufficient. We are concerned that it may not be but we are relying on Treasury modelling. Other modelling suggests that the flow-through to cost of living will be

64 *White Paper*, Executive Summary, p 3.

65 *White Paper*, Executive Summary, p 4.

66 Department of Climate Change,
<http://www.climatechange.gov.au/greenpaper/factsheets/pubs/fs7.pdf>

higher than 1.1 per cent, particularly for certain kinds of households, notably single pensioners and sole parents. But we are going with the Treasury modelling and with the promise of reviews and indexation subsequently.⁶⁷

Committee comment

6.71 The Committee believes the assistance programme for low income households strikes the right balance between ensuring they are not disadvantaged but retaining incentives to lower greenhouse gas emissions. Furthermore, additional assistance than what is required will support households to invest in energy efficient measures for their homes.

Transitional fuel tax offset

6.72 The impact of the CPRS on petrol prices will be offset by cuts in other fuel taxes.

6.73 A transitional offset is not the same as temporarily excluding transport emissions from the scheme, for a number of reasons. First, coverage should still provide a signal to motorists that carbon prices will affect their long-term transport decisions.

6.74 Second, scheme coverage means that fuel suppliers will be required to participate fully in the scheme, including establishing the administrative mechanisms required to determine and allocate liabilities for liquid fuels.

6.75 Further, coverage ensures that transport emissions are included within the scheme cap. If transport emissions grow, more abatement will be required in other sectors of the economy.

6.76 As a higher fuel price leads people to buy more fuel-efficient models when they replace cars, and prefer to live nearer to public transport, the long-run response to an increase in fuel prices is much more than the short-term response.

We find price elasticities of -0.13 (short term) and -0.20 (long term).⁶⁸

The short-term elasticity is usually considered as about negative 0.1, and the long-term elasticity is more in the realm of minus 0.3 to minus 0.5...⁶⁹

The green paper last year by the Bureau of Infrastructure, Transport and Regional Economics... seemed to indicate that short-run elasticity is around

67 Mr Tony Westmore, ACOSS, *Proof Committee Hansard*, 23 March 2009, p 23.

68 Dr Robert Breunig and Carol Gisz, 'An exploration of Australian petrol demand: unobservable habits, irreversibility and some updated estimates', *Economic Record*, vol 85, no 268, March, pp 73-91.

69 Mr Michael Roth, Royal Automobile Club of Queensland, *Select Committee on Fuel and Energy, Committee Hansard*, 20 February 2009, pp 3-4.

0.1 to 0.2 and long-run elasticity—perhaps five to 10 years out—is around about 0.4 to 0.5.⁷⁰

Committee comment

6.77 The Committee regards carbon leakage and the need to smooth the adjustment process to a low-carbon economy as good reason for some government assistance to industry. It is also important that low income households are not unduly disadvantaged. The CPRS structures these assistance measures in a manner that retains incentives to take measures to reduce emissions of greenhouse gases.

6.78 The committee notes the persistent advocacy of industry groups for further assistance under the scheme. On the other hand other stakeholders have criticised the scheme for being too generous to polluting industries.

6.79 The committee believes that the Bill has the balance right, retaining strong incentives to reduce carbon intensity while enabling important economic assets to remain viable throughout the adjustment. This is fundamentally important to protecting jobs and enabling jobs in the green economy to grow.

70 Mr Topham, Caltex, *Select Committee on Fuel and Energy, Committee Hansard*, 20 February 2009, p 56.

Chapter 7

Employment and retraining

7.1 A common argument of opponents of the CPRS is that it will lead to massive job losses (in both net and gross terms).

7.2 There are always companies laying off workers, and there will be larger than usual numbers in the near term given the global financial crisis.

7.3 The Treasury modelling (discussed more in Chapter 4) identifies industries whose *share* of employment will be lower than it otherwise would be as a result of placing a price on carbon emissions (and the results would be unlikely to vary much regardless of whether this is done by various types of ETS or a carbon tax). Some of the industries are shown in Table 7.1.

7.4 The Department of Climate Change gave evidence that a gradual shift in employment between regions and sectors is the most likely outcome of the scheme:

The broad story here is that we would not expect the total number of jobs gained or lost to be very large at all. I think what people often are referring to is the estimates of a particular gain or reduction in one sector.

The Treasury modelling demonstrates that over time the employment levels are broadly unchanged; there is just a switch from some areas of employment to other areas of employment when we move away from high-pollution ways of conducting those activities.

That switch is relatively gradual because the scheme has been deliberately designed with a trajectory that is taking account of that economic transition. Broadly you would not expect a large change in employment over all.

The Treasury modelling does not pick up precisely the detail of the skill mix level, but there are a number of areas where you would expect the skill mix to be broadly similar. For example, if you are building less coal fired power stations over time, those engineering skills would be readily adaptable to either a lower pollution gas turbine or the renewables sector.¹

7.5 In all scenarios modelled by Treasury, total employment in the economy grows strongly over the years to 2020 and 2050, both with and without the CPRS. So even in industries whose share of total employment falls, the absolute numbers employed in the industry can continue to grow. The jobs spoken of as 'lost' are in fact just jobs that will never be. It will not be necessary to dismiss existing workers from adversely affected industries. Instead these industries will just absorb a smaller share

1 Mr Blair Comley, Acting Secretary, Department of Climate Change, *Proof Committee Hansard*, 30 March 2009, p, 7.

of new workers than they otherwise might, allowing industries growing faster to employ a larger share of workers than they otherwise would.

Table 7.1: Estimated employment effects, selected industries, 2050

	Share of employment		Impact on share
	Reference case	CPRS (-15%)	
Sheep & cattle	1.0	0.9	-0.1
Dairy cattle	0.2	0.3	+0.1
Grains	0.9	1.0	+0.1
Coal mining	0.2	0.1	-0.1
Other mining	0.5	0.4	-0.1
Metal manufacturing	0.2	0.1	-0.1
Electricity	0.2	0.2	0.0
Construction	6.8	6.5	-0.3
Trade	13.7	13.8	+0.1
Transport	2.7	2.7	0.0
Business services	23.3	23.4	+0.1
Public services	21.1	21.1	0.0
Total	100.0	100.0	0.0

Source: based on industry share projections in Table 6.12, Treasury (2008), p 165.

7.6 Similarly, CSIRO modelling concluded:

...achieving a rapid transition to sustainability would have little or no impact on national employment.²

7.7 Colonial First State Asset Management when asked what estimates about what types and numbers of jobs would be created through the introduction of the scheme noted:

our modelling is more on a case by case, company by company, sector by sector, asset by asset level. The actual whole of economy view on jobs is not something we have done detailed analysis on, but the size of the pie analysis that we have seen and accepted in terms of it not getting any

2 Dr Heinz Schandel, Senior Science Leader, CSIRO Sustainable Ecosystems (and author of *Growing the Green Collar Economy*), *Proof Committee Hansard*, 25 March 2009, p 24.

smaller means that it is just a redeployment of the capital to different sectors and new and emerging investment opportunities.³

7.8 The amount of natural turnover in labour markets is often underappreciated. It is very high even in years when the economy is booming. For example, over a million workers employed in February 2005 were no longer with the same employer a year later, and over half of these changed industry.⁴ This illustrates that the process of shifting employment from contracting to growing industries can occur with far fewer additional layoffs than might be imagined from a simple comparison of employment levels in a subsidised industry before and after the removal of a subsidy.

7.9 Even in the coal industry, which has been portrayed as one of the most severely affected, the industry representatives told the Committee:

...it will involve a lower rate of growth over time.⁵

Green jobs

7.10 Many witnesses without ties to existing companies spoke of the potential for growth in green jobs:

...there are very significant opportunities for enterprise and employment, provided a signal is sent to assure people who might be prepared to make those investments and take people on—that there is a future for them. I do think there is going to be a transition, and I do think there is going to be some time where communities go through some changes, but there have to be huge chances for employment.⁶

I think the Clean Energy Council estimated that around 50,000 jobs were required just for the 20 per cent renewable energy target.⁷

The model actually has rapid growth in green jobs, because when we did the modelling the renewable scheme increased the requirement for renewable generation, which meant that there are more green jobs.⁸

7.11 A number of witnesses noted that much of the growth in green jobs would result from a greening of traditional industries, rather than jobs growth in new green industries.

3 Ms Amanda McCluskey, Colonial First State Global Asset Management, *Proof Committee Hansard*, 25 March 2009, p 53.

4 Australian Bureau of Statistics, *Labour Mobility* (cat. No. 6209.0), February 2006.

5 Mr Ralph Hillman, Executive Director, Australian Coal Association, *Proof Committee Hansard*, 25 March 2009, p 111.

6 Mr Tony Westmore, Australian Council of Social Service, *Proof Committee Hansard*, 23 March 2009, p 24.

7 Dr Ottaviano, Carnegie Corporation, *Proof Committee Hansard*, 23 March 2009, p 33.

8 Danny Price, Frontier Economics, *Proof Fuel and Energy Select Committee Hansard*, 2 April 2009, p 18.

...the number of jobs will grow, both in business-as-usual and in a scenario which takes into consideration all the things that have been described in the green paper that would happen in the emissions trading scheme. Overall, the number of jobs will increase over the next two decades—2.5 to 3.3 million new jobs, and 230,000 to 340,000 of these new jobs are in those sectors which we have identified as high-impact sectors, with regard to resource use, energy use and emissions.⁹

We know that in traditional areas of the resources industry, in value-added areas like steel and aluminium, we can actually green up. And of course in addition to that we can create new green jobs. It is not an either/or, and we are not prepared to lose jobs in traditional industries. What we want to see is industry policy that makes those jobs the cleanest and most competitive in the world.¹⁰

7.12 A British expert witness, Mr James Cameron, commented that in the United Kingdom:

...there is a confidence that there will be positive job creation associated with the implementation of policies associated with reducing greenhouse gas emissions, encouraging energy efficiency and renewable energy generation.¹¹

Regional impacts and retraining

7.13 There will be regional implications of the CPRS. Employment *growth* will be weaker than otherwise in regions where there is an over-representation of emissions-intensive industry. The Hunter, Illawarra, central Queensland and La Trobe regions have been suggested as areas that may be particularly affected.¹² Of course, even if an ETS is not introduced, there will be regional differences in employment growth, as there always has been. Furthermore, if no action is taken on climate change, the adverse consequences of that would also hit certain regions disproportionately, such as farming areas that would suffer more frequent droughts.

7.14 Nonetheless, there is a case for some assistance programmes to assist some workers to move from brown jobs to green jobs. In some cases this may involve retraining. In other cases it may involve helping them move from regions dominated by high-emissions industries to regions with low- or no-emissions industry.

9 Dr Heinz Schandl, Senior Science Leader, CSIRO Sustainable Ecosystems, *Proof Committee Hansard*, 25 March 2009, p, 33.

10 Ms Sharran Burrows, *Proof Committee Hansard*, 24 March 2009, p, 87.

11 Mr James Cameron, Executive Director, Climate Change Capital (UK), *Proof Committee Hansard*, 19 March 2009, p 21.

12 Mr Daniel Price, Frontier Economics, *Proof Select Committee on Fuel and Energy Hansard*, 2 April 2009, p 19.

7.15 The committee recognises that it is difficult to predict exactly what kinds of skills base will be required in the future for emerging green industries.

Recommendation 2

7.16 The Committee recommends that the Government coordinates and advances a whole of government approach to jobs and skills in emerging low pollution industries.

7.17 The Committee further recommends that a process be developed which ensures effective implementation of all Government programs and policies which support green jobs and skill development throughout all sectors of the economy.

7.18 The Government should also develop Australia's current and future skills base to ensure it has sufficient skills to take advantage of emerging employment opportunities driven through the CPRS and other complementary climate change policies.

Chapter 8

Voluntary abatement efforts under the CPRS

8.1 Households are major emitters, responsible through their energy and fuel use for around 25 per cent of emissions covered by the CPRS. Commercial services and government sectors are responsible for a further 10 per cent as a result of their electricity use.¹ Reductions in these emissions will be necessary to achieve deep cuts in emissions.

8.2 A matter of concern brought to the committee's attention is the implication for total emissions under the CPRS of 'voluntary' action by households (and also by business and state and local governments). In this context 'voluntary' action refers to things that are done for (or primarily motivated by) altruistic concerns about the environment rather than (just) in response to a price signal. It is sometimes termed in the literature 'additionality'. Arguably the clearest example of a voluntary action is electricity consumers who opt to pay more for electricity derived from renewable sources rather than fossil fuels. Installing solar panels will save on power bills but when, as is often the case, the installation costs exceed the savings on power bills they can also be regarded as voluntary action in this sense.

8.3 Many submitters are concerned that under the currently proposed design of the CPRS, such voluntary actions do not lead to a reduction in Australia's emissions of greenhouse gases.² For example, a household choosing Green Power will lead their electricity supplier to make fewer emissions and need fewer permits, but this just means that there are more permits available so that, for example, an aluminium smelter can increase its emissions. The total emissions are unchanged.

8.4 The committee heard a range of views on this issue. It was variously characterised as a fundamental flaw or an appropriate consequence of the scheme's design, or just a distraction.

A fundamental flaw?

8.5 Some examples of criticisms of how voluntary reductions are treated under the current proposal are:

¹ Energy related emissions will be included in the CPRS by applying permit obligations to electricity generators, gas retailers and upstream fuel suppliers. These entities are expected to pass carbon costs through to consumers, creating an incentive for firms and households to reduce their energy use. If households and firms fail to respond to the price signal as expected, more abatement will need to occur in other parts of the economy.

² Submissions making this point include Submissions 3, 5, 21, 33, 35, 42, 49, 52, 55, 74, 79, 82, 84, 87, 93, 93, 97, 107, 110, 111, 112, 116 and 122.

... no government scheme should take away the volition of the individual to do good, and this scheme has considerable potential to do that by capping all emissions at five per cent. I believe that individual actions should be additional to that target because if I go out and decide to plant a tree or do something with my own money I do not want that to be seen as insignificant.³

...the current design of the CPRS will ...kill the incentive for Australian businesses, households and individuals to voluntarily make a difference to greenhouse emissions.⁴

The draft legislation renders voluntary consumer action meaningless. It denies consumers the opportunity to act to further reduce Australia's emissions, and in doing so also threatens the viability of a number of emerging industries.⁵

In its current form the legislation fails the many hundreds of thousands of individuals and businesses, as well as local and state governments that have engaged with the carbon offset, GreenPower and energy efficiency markets.⁶

The current design of the CPRS disempowers the community by sending a clear message that local action under covered sectors does not make a difference to Australia's net emissions...⁷

Government campaigns

8.6 Dr Richard Denniss of the Australia Institute has been a prominent critic of the CPRS and the voluntary abatement issue in particular.⁸ Dr Dennis argues that as well as rendering voluntary actions initiated by households ineffective, it makes government campaigns encouraging households to undertake voluntary action ineffective, and arguably disingenuous. He gave the example of the Government's recent initiative to spend \$4 billion on home insulation:

...the Prime Minister...said that the \$4 billion expenditure on insulation would reduce...Australia's emissions by 50 million tonnes. This is demonstrably untrue. If we spend \$4 billion on installation, under the CPRS all we do is reduce the household demand for electricity and we free up 50

3 Professor Tim Flannery, *Proof Committee Hansard*, 27 March 2009, p 101.

4 Voluntary Carbon Markets Association, *Submission 116*, p, 2.

5 Australian Consumers Association, *Submission 93*, p, 2.

6 Total Environment Centre, *Submission 79*, p, 5.

7 Greenfleet, *Submission 82*, p, 5.

8 Dr Richard Dennis, 'Fixing the floor in the ETS: The role of energy efficiency in reducing Australia's emissions', The Australia Institute, *Research Paper No. 59*, November 2008; 'Wong must cap and slice', *The Australian*, 2 March 2009, p. 8.

million tonnes worth of permits by which the aluminium industry or some other industry would expand.⁹

8.7 Other witnesses expressed concern at the contradictory message that the CPRS would send about government campaigns for voluntary abatement efforts:

...at the very least where there is discrete government policy in place, one that directly stimulates and motivates individuals to take steps to reduce their greenhouse profile, that needs to have the integrity of that action preserved...We are concerned that if a perception evolves in the marketplace that putting PV on the group [roof?] does not actually make any difference—it just reduces the cost of carbon permits for major emitters in the economy—that will undermine the enthusiasm and incentive for those households and small businesses to deploy the technology. That will in turn undermine a developing market.¹⁰

Size of the impact

8.8 Views differ about the quantitative importance of reductions in voluntary actions.

8.9 Households and local governments have been the main participants in voluntary abatement action, particularly through purchasing GreenPower. Professor Hamilton extrapolated:

...if we estimate that perhaps 10 per cent of households are interested in taking significant action on a voluntary basis to cut their emissions and they succeed in cutting their emissions in their households by half, overall those voluntary actions would cut Australia's emissions by 0.5 per cent. So the symbolic value of voluntary action by households might be important but in practice they have very little impact indeed. That is why mandatory measures such as an emissions trading system will have a much greater effect, because they will apply to everyone rather than that perhaps 10 per cent of the population that is sufficiently worried and motivated to take voluntary action.¹¹

8.10 Purchases of GreenPower by households, governments and business resulted in abatement of around 1.3 million tonnes in 2007–08.¹² To put this into context, Australia will need to reduce its emissions by 135 million tonnes per annum to achieve a 5 per cent reduction in emissions, and 195 million tonnes per annum to achieve a 15 per cent target.¹³

9 Dr Richard Denniss, *Proof Committee Hansard*, 25 March 2009, p. 77.

10 Mr Matthew Warren, Chief Executive Officer, Clean Energy Council, *Proof Committee Hansard*, 24 March 2009, p. 61.

11 Professor Clive Hamilton, *Proof Committee Hansard*, 25 March 2009, p. 20.

¹² Analysis by the Department of Climate Change.

¹³ Mr Blair Comley, Department of Climate Change, *Proof Committee Hansard*, 30 March 2009, p 2

A benefit of the scheme's design

8.11 Mr David Pearce of the Centre for International Economics told the committee that far from being a problem, the voluntary abatement issue was in fact a benefit of the CPRS scheme. He argued that voluntary action that households undertake lowers the demand for permits, which lowers the price of permits and thereby makes abatement less costly for everybody.¹⁴

8.12 The Australian Industry Group are opposed to recognition of voluntary action:

Ai Group does not understand what of substance is intended by including among the factors that may be taken into account in setting caps the "voluntary action"... Our understanding is that an ETS (or a carbon tax) would encourage households and businesses to reduce emissions by imposing a price... Ai Group submits that the concept of voluntary action should be removed from the list of factors that can be taken into account in setting caps.¹⁵

A distraction?

8.13 One view is that this debate is over-emphasising voluntary action. Prior to adoption of a national cap on emissions, all abatement action delivered an additional environmental outcome, by reducing emissions below what they would otherwise have been. Yet total emissions continued to rise because voluntary abatement was offset by rapidly increasing emissions elsewhere in the economy.

8.14 Professor Clive Hamilton, while acknowledging the presence of the voluntary action problem, views it as a 'distraction from much more important issues with the CPRS, in particular the lack of ambition of the target'. In this context, Professor Hamilton added that if the target had been set at 25 per cent by 2020, everybody would be cutting their emissions for financial rather than altruistic reasons.¹⁶ Furthermore, he regards voluntary action as quantitatively unimportant (see below).

8.15 Dr Frank Jotzo, a Research Fellow at the Australian National University, described the voluntary action issue as 'misleading' and claims that it unnecessarily 'feeds into rising public frustration about climate policy'.

I think that argument as it has been put by some sides in the (voluntary action) debate recently is rather misleading and in my view unnecessarily feeds into rising public frustration about climate policy.

14 Mr David Pearce, *Proof Committee Hansard*, 25 March 2009, p. 92.

15 Australian Industries Group, *Submission 90*, p 5.

16 Professor Clive Hamilton, *Proof Committee Hansard*, 25 March 2009. A similar linkage was put by Dr Richard Denniss: 'when you combine emissions trading with a target that is too low from a scientific point of view, you have an understandable desire on the part of individuals and communities to "do their bit" to "take an extra step" and the design features of a CPRS literally prevent that from occurring; *Proof Committee Hansard*, 25 March 2009, pp. 74–75.

The argument...ignores that there is in fact a national emissions target, such as the five per cent, 15 per cent or 25 per cent reduction, and that is in the end what will determine Australia's contribution to the global effort to reduce emissions.

It is not a design fault of the emissions trading scheme or the particular way in which it is spelt out under CPRS. It is simply a consequence of in fact having a national target, quite irrespective of what domestic policy instrument is to be used to meet that target. If we have a national target then that is the national target.

Is this voluntary personal action to reduce energy use and emissions futile with a national target? No, of course it is not—not at all. It is in fact an integral part of achieving the overall outcome at least cost, and personal action will be encouraged by rising energy prices under the emissions trading system.

The more we do individually the easier it will be to collectively meet the national target, and that in turn will make it possible to go for more ambitious targets further down the track. That, of course, requires that targets will, in fact, be ratcheted down if and when we find that it is easier to reduce emissions as anticipated, or if the signs and other countries actions indicate that a stronger target for Australia will be needed.¹⁷

Treatment of voluntary action under the CPRS

Voluntary reductions and future caps

8.16 The commentary on the *Exposure Draft* lists a number of 'additional domestic factors' to which the Minister *may* have regard when setting targets and caps for national greenhouse gas emissions. One of these factors, listed in clause 14(5)(c)(iv) of the bill, is 'the extent of actions voluntarily taken by Australian households to reduce Australia's greenhouse gas emissions'. The commentary notes that:

Voluntary action to reduce greenhouse gas emissions can help ameliorate the economic implications associated with various levels of national scheme caps, making it more likely that more stringent caps can be set over time.¹⁸

8.17 This argument has been reiterated by the Minister for Climate Change, who argued that the voluntary abatement issue had been misunderstood. Rather than simply free up carbon pollution permits for others to use:

...individual and community action to be more energy efficient not only saves them money, it will contribute directly to Australia meeting our

17 Dr Frank Jotzo, *Proof Committee Hansard*, 19 March 2009, p. 31.

18 Exposure draft, *Commentary*, p. 89.

emissions reductions targets. Strong household action also helps make it easier for governments to set even more ambitious targets in the future.¹⁹

8.18 In evidence to this inquiry, the Secretary of the Department of Climate Change, Dr Martin Parkinson was asked how voluntary actions would be accounted for under the CPRS. He responded that there are two ways in which voluntary action undertaken by households can be recognised under the scheme; by purchase of permits (discussed below) and :

...the minister and future ministers have in their capacity of setting future caps the ability to take account of likely voluntary action when they set the caps.²⁰

8.19 However, the caps are fixed five years in advance. Furthermore, there is no obligation on the then minister to take account of voluntary action in setting future caps. It is just something that *may* be considered.

'Ripping up' permits – an alternative form of household action

8.20 The Secretary of the Department of Climate Change explained that another way concerned citizens could contribute to emissions reductions was:

...the scheme allows anyone to purchase permits and essentially submit them to the regulator to have them torn up. If they do that, the government will take out of operation an assigned unit, under Kyoto.²¹

8.21 It is not clear how practical it will be for individuals to buy single permits. If the minimum permit refers to a tonne of emissions, it may cost about \$25, but if they refer to a thousand tonnes of emissions they would cost around \$25,000 which would be out of reach of a typical household. The Authority is expecting to be dealing with about 1,000 permit users and may not relish having to deal with possibly millions of individuals entering the market (with their numbers swelling if in addition to individual environmentalists making purchases, so do individual speculators).

8.22 The organisation *Sandbag*, based in the United Kingdom, encourages individuals to voluntarily retire permits by aggregating donations from individuals and buying and retiring permits. It concedes that 'a very large number of individuals (or a few individuals with lots of money) would be needed to materially affect the price but it is theory at least an immediate action'.²²

19 The Hon. Penny Wong, 'ETS is better than tax', *The Australian*, 23 February 2009, p. 8.

20 Dr Martin Parkinson, *Proof Committee Hansard*, 18 March 2009,

21 Dr Martin Parkinson, *Proof Committee Hansard*, 18 March 2009, p 21.

22 'Carbon crumbling – Part 2', *Sandbag*, <http://sandbag.org.uk/node/132>

8.23 Professor Pears notes that while individuals could buy and surrender permits, this is 'not very emotionally satisfying'.²³ He argues that taking permits out of the system leaves the additional abatement action to the liable entities, not those who surrender the permits. This effectively takes from them the ability to reduce emissions in a manner that also achieves other goals.

Possible ways of recognising voluntary emission reductions

8.24 A number of submitters proposed that the bill be amended to allow scheme permits and Kyoto units to be cancelled for voluntary abatement, what is sometimes referred to as a 'cap and slice' scheme:

While the draft legislation allows future caps to be set with consideration to the level of voluntary action, the exposure draft does not allow immediate recognition of voluntary action under the CPRS. For an example of how this could be achieved, the purchase of additional renewable energy through green power could be converted into tons of CO₂ equivalent avoided and CPRS permits retired accordingly.²⁴

The CPRS legislation must not be passed without a mechanism that guarantees the extinguishment of equivalent Australian emission units and Kyoto units for every tonne of greenhouse emissions abated voluntarily.²⁵

8.25 Dr Denniss has argued that the Exposure Draft of the CPRS bill should be amended to allow the number of permits to be reduced each year directly in line with the amount of pollution saved by voluntary action. The creation of a secondary market of permits based on households' emissions reductions would enable household emission reduction permits to be exchanged for CPRS permits. To account for difficulties in the accuracy of household emissions measurements, Dr Denniss proposes that secondary market permits be exchanged for CPRS permits at a fixed rate of 2 to 1. If two tonnes of household permits was exchanged for a tonne of CPRS permits, 'it is impossible for the secondary market in household efficiency permits to dilute the value of CPRS permits so long as the measurement error is less than 50 per cent'.²⁶

8.26 Professor Pears, in his submission on the Green Paper, argued for a scheme that provides 'immediate and clear' recognition for abatement efforts that go 'beyond reasonable expectations'. Energy retailers would account for the quantities of Green Power sold, which is deducted from the cap when sales are reported. Moreover, all individuals and companies that commit to reduce emissions through energy efficiency

23 Adjunct Professor Alan Pears, *Submission to the Green Paper*, p 4.

24 Mr Andrew Catchpole, Hydro Tasmania, *Proof Committee Hansard*, 24 March 2009, p. 15.

25 Total Environment Centre, *Submission 79*, pp 4,5.

26 Dr Richard Dennis, 'Fixing the floor in the ETS: The role of energy efficiency in reducing Australia's emissions', *Research Paper No. 59*, The Australia Institute, November 2008, p. 10.

improvement would be required to report under NGERS. If the reductions exceed those of the cap trajectory, they will be acknowledged as additional abatement.²⁷

8.27 However, he concedes there are complexities involved in determining what constitutes 'voluntary' action under the CPRS, and in trying to translate every form of voluntary action into tonnes of abatement:

In the discussions we have had with the department, the concern that they have, which we are sympathetic to, is about creation. I should go back a step. When it comes to individuals doing various actions, there are a range of motivations for those actions and they vary as to deciding to ride a bike or walk to work, rather than driving, or catching public transport. They go through to purchases of white and brown goods, and what sort of car you drive. It does open a Pandora's box if you try to account for every one of these voluntary actions.²⁸

8.28 Mr Pearce of the Centre for International Economics referred to:

...white certificate type schemes, those things where you recognise abatement in the built environment. It is probably more important in the commercial sector than in the household sector, but you recognise that abatement and you get some form of reward for it. It could be linked to the CPRS or to some sort of trading scheme in the sense that what you could get is actually permits under that scheme for abatement.²⁹

8.29 In its submission on the Green Paper, the Carbon Reduction Institute suggested creating a system of carbon debits which would cancel out CO₂ units through greenhouse abatement projects and Green Power:

It could work similarly to a GreenPower Right, in that a retailer of GreenPower or project proponent that creates a carbon credit would be required to purchase a carbon debits and apply this to the relevant sector of our national greenhouse accounts. For example, if a project proponent created a carbon credit from a project that diverted organic waste from landfill into a composting scheme and sold a carbon credit from this into a voluntary scheme then they would need to register a carbon debit into the waste sector of the national greenhouse inventory. When reconciling its accounts, the government would quantify the emissions from the waste sector and would capture the reduction from the project during this process.³⁰

8.30 Dr Regina Betz suggested:

27 Adjunct Professor Alan Pears, Submission on the Green Paper, p. 7.
<http://www.climatechange.gov.au/greenpaper/consultation/pubs/0331-pears.pdf>

28 Mr Matthew Warren, *Proof Committee Hansard*, 24 March 2009, p. 60.

29 Mr David Pearce, *Proof Committee Hansard*, 25 March 2009, p. 92.

30 Carbon Reduction Institute, *Submission on the Green Paper*, p. 2.
<http://www.climatechange.gov.au/greenpaper/consultation/pubs/0547-carbon-reduction-institute.pdf>

...there could be an option to introduce an additional action reserve, which would mean that we are setting aside part of the allocation that would otherwise go to industry into a reserve and we would allow units in the reserve to be cancelled based on specific actions that are part of a positive list.³¹

Committee comment

8.31 While relying on voluntary action will not solve the problem of climate change, this does not mean that the contribution of voluntary action should be dismissed.

8.32 People want to feel that they are making a contribution, even if only in a small way, to saving the planet. The growing perception that the CPRS negates actions taken by individual households to reduce emissions is eroding support for the scheme. This must be addressed.

8.33 The size of voluntary actions to cut emissions is hard to measure. It may be only a modest proportion of total national emissions, but it may already be reasonably large and, if encouraged, may increase further as awareness of the impact of climate change grows.

8.34 The Committee supports the ability of concerned citizens to buy and cancel permits but do not believe that on its own this mechanism provides a sufficient outlet for voluntary action.

8.35 The Committee therefore believes that introducing some measures to continue encouraging voluntary action is a worthwhile initiative.

8.36 Some 'voluntary' or 'altruistic' reductions in emissions can be readily measured, such as customers signing up to Green Power or sales of solar panels. Other indications could be derived from publicly available data such as reduced energy consumption by households. The difficulty of defining 'voluntary action' and the diverse, sometimes complex proposals for methods of recognition make it difficult to prescribe one course of action.

Recommendation 3

8.37 The Committee recommends that the government develop policies complementary to the CPRS to encourage voluntary action.

Recommendation 4

8.38 The Committee recommends that the wording of section 14(5) of the CPRS Bill 2009 be amended so that in making recommendations on emissions

31 Dr Regina Betz, *Proof Committee Hansard*, 27 March 2009, p 118.

caps the Minister "shall have regard" rather than "may have regard" to "voluntary action".

Chapter 9

Complementary measures

9.1 The committee heard evidence of a variety of views on the role of complementary measures in achieving climate change reductions and what these measures should be.

9.2 The Department of Climate Change noted:

Everyone recognises that price is not the only mechanism you use. That is why there is a suite of other complementary measures – for example, the insulation measure that was in the stimulus package.¹

9.3 The draft legislation under consideration does not specifically put in place any complementary measures, although revenue raised by the scheme will be used to fund some initiatives (such as the Climate Change Action Fund). However, the *White Paper* clearly identifies that the government's climate change strategy includes a number of complementary measures. The interaction between the legislation and these measures should therefore be considered.

What are 'complementary' measures?

9.4 In the *White Paper*, the government identifies a number of measures which will complement the scheme in achieving the scheme's goal of reducing emissions. 'While the Scheme will be the primary mechanism to achieve low-cost abatement, additional measures will be needed to assist the transition to a low-carbon economy.'² The principles the government has adopted towards identifying complementary measures are:

- measures should be targeted at market failures not expected to be addressed by the scheme or that impinges on its effectiveness;
- complementary measures should adhere to principles of efficiency, effectiveness, equity, and administrative simplicity;
- complementary measures should be 'tightly targeted' to market failures which are amenable to government action, and in the case of regulatory measures, be guided by best practice regulatory principles;
- complementary measures may be targeted to manage impacts for particular sectors of the economy; and

1 Mr Blair Comley, Department of Climate Change, *Proof Committee Hansard*, 30 March 2009, p. 29.

2 *White Paper*, p. 19-1.

- measures should be implemented by the level of government best able to deliver the measure.³

9.5 According to this approach, a 'complementary' measure may be seen as an activity which either targets a sector not covered by the scheme, or which is intended to improve its effectiveness.

The Government's measures to complement the CPRS

9.6 In the *White Paper*, the Government announced that the main complementary measures it will pursue would include energy efficiency, the Renewable Energy Target, and carbon capture and storage.

9.7 The Committee notes that these measures are not specifically provided for in the exposure draft legislation. However the *White Paper* indicates that some measures will be funded from the sale of permits under the scheme, and to that extent, will be affected by the passage or non-passage of the legislation. For example, the Climate Change Action Fund is expected to have an allocation of \$300 million in 2009-10, rising to \$700 million in 2010-11 and 2011-12, respectively.⁴

9.8 Other complementary measures (such as the Global Carbon Capture and Storage Initiative announced in September 2008, or Energy Efficient Homes package announced in February 2009) are not listed in the *White Paper* budget summary and do not appear to be dependant on the proceeds of sale of permits.

Energy Efficiency Measures

9.9 Several submissions highlighted the role that may be played by energy efficiency initiatives in achieving carbon abatement. For example, the Energy Users Association of Australia noted the role complementary measures, including energy efficiency, can play in mitigating emissions:

In order to reconcile the need for emission reductions with the desire to limit the economic impact, complementary measures may therefore be useful, beyond their commonly accepted role in compensating for market failure.

For this reason, the EUAA suggests that there may be a role for complementary measures including building and product standards to reduce energy demand, energy efficiency programs, and policies to promote low emission electricity production.⁵

9.10 However, whilst providing incentives for energy efficiency was generally supported, some questioned the cost of mandating such schemes. The Housing Industry Association noted:

3 *White Paper*, p. 19-2.

4 *White Paper*, Budget Summary, p. E-1.

5 Energy Users Association of Australia, *Submission 74*, p. 14

...it is vital that any complementary environmental regulation or measures linked to the CPRS be considered in greater detail. In respect to the building products and residential construction industry, there remains a lack of detail on the potential impact for businesses and on the cost of housing... HIA recommends that greater industry consultation be undertaken to assess the potential impact of complementary environmental measures and their interaction with the CPRS on business activity and the cost of supplying new housing product.⁶

9.11 Other submissions argued that more could be done through the introduction of the scheme to promote energy efficiency:

the strategic use of the CPRS auction revenue may be as important in driving emission reductions from energy use as the carbon price signal itself. It will be an extremely important tool and, if used wisely, the Climate Change Action Fund may be as important as the carbon price. The business sector consumes approximately 75 per cent of Australian energy, and therefore it is business that will initially feel the impact of the carbon price and pass it on to consumers, and efforts to improve efficiency of business will pay off in terms of there being less of an inflationary impact of the CPRS. So we believe that a larger proportion of the permit auction revenue needs to go to the Climate Change Action Fund to deliver an additional range of business engagement and emission reduction programs.⁷

9.12 The committee notes that the government has undertaken other initiatives to promote energy efficiency, including through the National Strategy for Energy Efficiency adopted by COAG in October 2009. Given the not insignificant demands being placed on permit revenue from other sources, the committee regards this strategy and other measures as being the best avenue for pursuing energy efficiency goals, rather than through the further hypothecation of permit revenue.

Renewable Energy Target

9.13 Several submissions questioned the compatibility of the Government's proposed increase of the Renewable Energy Target (RET) to 20 per cent of Australia's energy to be sourced from renewable resources by 2020 with the Scheme. Such submissions argued that as the purpose of the Scheme is to impose a price on the emission of carbon, then this should be sufficient to make less carbon intensive forms of energy attractive without imposing an additional obligation on industry. For example, the Australian Industry Group argued:

...it is a comparatively expensive approach to emissions reduction; because it adds an additional layer of costs to business and because there is no current proposal to protect Australia's trade exposed businesses from these additional costs.⁸

6 Housing Industry Association, *Submission 37*, p. 2.

7 Ms Anna Reynolds, Energetics, *Proof Committee Hansard*, 25 March 2009, p. 66.

8 Australian Industry Group, *Submission 90*, p. 3.

9.14 This does not take into consideration the main goal of the RET, which may be seen as development of an industry which will play a critical role in mitigating climate change, rather than bringing down emissions in itself:

The RET is an important transitional measure that will support the development of a domestic renewable power industry and prepare the electricity sector for its contribution to the significant emission reductions needed to tackle climate change. The measure will help ensure that renewable energy technologies can be readily deployed when the price signal under the Scheme makes those technologies more competitive.⁹

9.15 Several submissions and witnesses representing the renewable energy sector supported this goal:

I think a 20 per cent MRET by 2020 is a fair and challenging target and will drive a lot of investment in this sector. And, again, we are seeing that already through the large utilities making investments in this sector.¹⁰

The Renewable Energy Target (RET) is essential to support the immediate deployment of least cost renewable energy technology until the full cost of carbon is reflected in the wholesale electricity market. This is essential to meet the Government's emission reduction objectives.¹¹

9.16 However, one association argued that the RET might advantage renewable technologies already in operation, as opposed to those at an early stage of development:

We are an emerging technology. Wind is a mature technology, so wind is ready to build tomorrow on any site where it can get its hands on turbines and a power purchase agreement. It also will be an early beneficiary of the national renewable energy target. In fact, one of our concerns about the operation of the renewable energy target is that, by the time we are ready to build projects at large scale and deliver large chunks of power, most of the incentives under that scheme will be taken up by existing technologies.¹²

9.17 The RET will promote the development of low emission technologies, and in doing so, could assist in meeting the CPRS target. In doing so, the committee regards the RET as playing an important role in promoting transition to a low carbon economy.

9 *White Paper*, p. 19-4.

10 Dr Michael Ottaviano, Carnegie Corporation, *Proof Committee Hansard*, 23 March 2009, p. 36.

11 Hydro Tasmania, *Submission 62*, p. 4

12 Ms Susan Jeanes, Australian Geothermal Energy Association, *Proof Committee Hansard*, 25 March 2009, p. 42.

Carbon capture and storage

9.18 The committee heard about two forms of Carbon capture and storage (CCS), namely geosequestration and biosequestration.¹³ Both forms could play a significant role in the reduction of carbon emissions. The government has labelled CCS as a 'foundation element' in the Government's climate change strategy¹⁴ and has provided support through the Low Emissions Technology Demonstration Fund. Professor Ross Garnaut noted the opportunities that CCS may offer:

It is not certain that renewables will be the low-cost form of low-emissions energy. If it were the case that geosequestration of carbon dioxide from fossil fuel combustion through carbon capture and storage turned out to be economically successful, then it may very well be that we will be a low-cost producer of energy and competitive in the production of energy intensive goods. We probably are the best located country on earth in relation to geosequestration opportunities, so if that is the way the world goes we are likely to be very competitive. We cannot be certain now which of all these technologies will turn out to be the successful ones, but we are pretty well placed across quite a wide range of them.¹⁵

9.19 However, the committee heard evidence that geosequestration of carbon is still in early stages of development:

Mr Rowley—We do have a reasonable amount of experience in carbon capture and storage. We are the largest carbon capturer in Australia at the moment, so far as I am aware. We captured about a million tonnes of CO₂ at Moomba, when we separated that CO₂ from the stream of sales gas. We have our own views on the costs of capturing carbon and also for storing gas on the ground. It is very dependent on geology and where the operations occur. We would share some of Griffin's concerns around that.

Senator JOYCE—Carbon sequestration, to the best of my knowledge, has not occurred anywhere yet, has it?

Mr Rowley—Certainly not on a commercial basis, but it is certainly occurring, particularly in the North Sea. The Norwegians are doing that ... but that is due to large incentives, or should I say disincentives, from the government for venting CO₂. Again, it is from the gas that has come out of the North Sea that they are basically reinjecting into aquifers.

Senator JOYCE—Is it commercially viable? Anything is possible, but is this commercially viable?

13 Geosequestration is defined as 'injection of carbon dioxide directly into underground geological formations'. Biosequestration is defined as 'the removal from the atmosphere and storage of greenhouse gases through biological processes, such as growing trees and practices that enhance soil carbon in agriculture. *Garnaut Review*, pp 609, 611.

14 *White Paper*, p. 19-4

15 Prof Ross Garnaut, *Proof Committee Hansard*, 23 March 2009, p. 56

Mr Rowley—Our view is that you would need a carbon cost north of \$100 a tonne to make it viable.¹⁶

9.20 The Committee does not expect that sequestration will provide a short term solution to climate change, or that the price imposed on carbon emissions by the scheme alone will be sufficient to see CCS adopted on a large scale in the immediate future.

9.21 Shell Australia proposed that additional government assistance be given to the development of CCS technology:

It is, however, becoming increasingly clear that deployment of CCS technology will not happen sufficiently quickly without an additional policy intervention, as a carbon price alone will not provide a sufficient incentive for the large scale commercialisation of CCS in the timeframe required... In order to accelerate the deployment of CCS, Shell recommends the government provides a greater level of support for CCS demonstration facilities in Australia.¹⁷

9.22 The National Farmers Federation noted the role that agriculture can play in the sequestration of carbon, including through the sequestration of carbon in soils:

When we are talking about agriculture we are talking about a biological system. We acknowledge there is an emissions element of our production system, but there is also a sequestration element. When you are talking about the ability to offset, if there was acknowledgement for the sequestration element that occurs through our production systems, there may be some scope to partially offset those additional costs, but that is not there right now.¹⁸

9.23 The Committee notes that the government has provided support for research into the potential for soil carbon, including biochar, as a means of sequestration of carbon. At this stage, the committee understands that there is doubt about how such approaches might be recognised internationally. The committee supports further investigation of this approach.

9.24 As with energy efficiency measures, the committee notes that there is already significant allocation of revenue from the sale of permits from the scheme. At this stage, the committee would not support the use of permit revenue to support research into CCS technology.

Expanded role for complementary measures

9.25 Several organisations appearing before the Committee opined that the CPRS on its own would not be effective for various reasons. As a consequence, additional

16 Mr Greg Rowley, Santos Ltd, *Proof Committee Hansard*, 24 March 2009,

17 Shell Australia Limited, *Submission 112*, p. 5.

18 National Farmers Federation, *Proof Committee Hansard*, 19 March 2009, p 11.

measures to the CPRS will be required to see significant cuts in emissions. The suggestion that a number of measures may need to be 'bolted onto' the CPRS is closely linked to concern about the cap and voluntary abatement activities.

9.26 For example, Mr Matthew Warren of the Clean Energy Council argued, 'the political and technical uncertainty over deployment of the CPRS makes the deployment of complementary measures even more important.'¹⁹

9.27 Professor Tim Flannery made a similar point:

...other legislative initiatives to go alongside the ETS, and they would include an increased focus on biological carbon and elimination of conventional coal burning, so a shift to CCS or to other technologies, within a reasonable time frame, and that if we do that we will be in a much better position to deal with this very significant threat.²⁰

Committee comment

9.28 As noted in previous chapters, the benefit of a cap and trade scheme is that, unlike a carbon tax, carbon emissions beyond that imposed by the cap will not be allowed. Assuming that the scheme is adequately enforced, total emissions are capped and liable entities are required by law to hold permits for all their emissions. If the cap is set at an appropriate level, the Committee does not see any significant problem with the adoption of measures (such as the Energy Efficient Homes package) which will assist the consumers make the transition to a low carbon economy within that cap.

Greater support for renewable energy

9.29 Other submitters noted that there are a range of climate change related policy objectives which may not be achieved as a result of the CPRS alone. While the CPRS will create incentives for increased investment in renewable energy and other abatement technologies, additional government investment in research, development and deployment of these technologies will also be necessary. Other forms of industry development assistance may also be required.

9.30 Several witnesses and submissions argued that the bills could provide further assistance to promote the development of renewable fuels (in addition to that provided by the RET and setting a price on carbon).

With regard to the allocation of funds raised by the CPRS, the main draft bill goes into considerable detail on how the sectors of the economy that produce greenhouse gases are to be compensated but provides no direction on how the emerging technologies will be assisted.²¹

19 Mr Matthew Warren, Clean Energy Council, *Proof Committee Hansard*, 24 March 2009, p. 61.

20 Prof. Tim Flannery, *Proof Committee Hansard*, 27 March 2009, p. 102.

21 Ms Susan Jeanes, Australian Geothermal Energy Association, *Proof Committee Hansard*, 25 March 2009, p. E39.

9.31 A common theme in such submissions was that the Climate Change Action Fund (see Chapter 6) could be expanded to include further funding for supporting the uptake of renewable energy:

The Federal Government estimates that in the first two years of the scheme the auctioning of permits could bring as much as \$11-12 billion dollars of revenue to the government. The way that the Government distributes the income that it receives from the auctioning of permits will have a significant impact on the rate and efficiency of the transition to a low carbon economy. We strongly urge that permit income be used to reduce energy demand through demand-side efficiency measures, to reduce the emission intensity of energy consumption and to increase the supply of low emission electricity production.²²

But the key advantage in the renewable energy industry is the security of supply. It is about distributed generation and the diversity of jobs that that brings with it across regions and all across Australia. And so there are some great opportunities, I think, to specifically target some projects into places that do need economic assistance in terms of the transition from a carbon economy. Does that mean in some cases picking winners? Well, kind of. I do not believe the government should pick a winner. But I do not have a problem with government attempting to pick a dozen winners all at once. That does not show favouritism; it shows a logical rollout.²³

9.32 Other approaches proposed to improve the take up of renewable technologies were feed in tariffs, although one witness noted that such schemes should not focus only on solar panels.²⁴

Renewable Energy Demonstration Programme

9.33 The Renewable Energy Demonstration Program (REDP) is a \$435 million competitive grants program designed to accelerate the commercialisation and deployment of new renewable energy technologies for power generation in Australia.

9.34 The program provides grants for eligible renewable energy power generation demonstration projects of up to one third of the eligible expenditure on the projects. The grants are expected to be in the range of \$50 million to \$100 million and is targeted at project proposals that are relatively mature and at the stage of commercial demonstration.²⁵

9.35 The committee commends the Government on the REDP and believes such programs will be crucial in fast tracking the successful commercialisation of renewable energy projects.

22 Energy Users Association of Australia, *Submission 74*, p. iii

23 Dr Ray Wills, Western Australian Renewable Energy Association, *Proof Committee Hansard*, 23 March 2009, pp. 46-47.

24 Dr Michael Ottaviano, Carnegie Corporation, *Proof Committee Hansard*, 23 March 2009, p 34.

²⁵ Department of Resources, Energy and Tourism.

Committee comment

9.36 The Committee believes that opportunities for further development in the renewable energy sector should be explored and supported by government, including the commercialisation of research and prototypes. The Committee notes that significant support is already being provided for this sector, including the introduction of an expanded RET and the Renewable Energy Demonstration Program.

Recommendation 5

9.37 The Committee recommends that the Government continues to seek ways to assist the commercial scale development of renewable energy sources and sequestration technology as a priority.

Chapter 10

Markets for carbon permits

Permits auctions and trading

10.1 The auctioning of permits should mean that permits are allocated to those who value them most and aid price discovery. Permits will be auctioned monthly, a compromise between weekly auctions which would give more frequent price information and quarterly or annual auctions which would provide more depth as there would be more bidders at each auction.¹ The Government is continuing to consult with industry over whether any deferred payment arrangements will be allowed, but any such arrangements will be limited. The first auction is expected in early 2010.² In addition to the monthly auctions for the current vintage, there will be annual 'advance auctions' of three future vintages. This is a balance between the view that auctioning long-distant permits gives investors a stake in the longevity and credibility of the scheme and concerns about complexity and potential lack of liquidity in auctions of distant vintages.³ The only restriction on participation in auctions will be lodging of a security deposit. The Government rejected some calls to prevent 'speculators' being able to bid, as it wants the deepest possible market with fair access to all.⁴

10.2 'Ascending clock' auctions will be employed. This works as follows:

...the auctioneer announces the current price. Bidders indicate the number of permits they are prepared to purchase at that price. If demand exceeds supply, the auctioneer raises the price in the next round and bidders resubmit their bids. This process continues until the number offered is equal to or greater than demand. Bidders then pay the price from the previous round.⁵

10.3 The 'ascending clock' auction provides information on the aggregate demand schedule. For the first couple of years, those receiving free permits will also be able to sell them as part of the auctions, resulting in 'double-sided auctions'. These will only be allowed for a limited period to avoid it hindering the development of a secondary

1 Strictly, the proposal is for twelve auctions per financial year; *CPRS Bill Commentary*, p 112.

2 The Government's aim is to hold at least one auction before July 2010; *CPRS Bill Commentary*, p 19.

3 *White Paper*, pp 9-17 to 9-21.

4 It also points out that in practice excluded entities could just arrange with eligible entities to bid for permits on their behalf; *White Paper* p 9-22.

5 *White Paper*, p 9-23.

market.⁶ Bidders will be restricted to a maximum purchase of 25 per cent of the permits sold at any auction. With there being 16 auctions (monthly for a year plus the advance auctions), this restricts purchases at any single auction to 1.6 per cent of total permits of a given vintage. As the largest single entity is expected to account for around 3½ per cent of emissions, it would be able to meet its requirements over three auctions.⁷

It is important that the permits are tradable. This should ensure that the emissions cap is produced with least cost to the Australian economy. Permits will be designated as 'financial products' so the market for them will come under the aegis of ASIC.

Upper limit on permit price

10.4 The ceiling will be \$40 a tonne, rising by 5 per cent a year in real terms, for the first five years. This will be implemented by the issuance of additional permits as required. Its use is controversial as it increases the risk that Australia will either not meet its emission reduction targets or taxpayers will be forced to incur an uncertain cost of buying international permits and makes it harder for the Australian scheme to be linked to overseas schemes.⁸

10.5 Dr Betz, an expert of European emissions trading, also believes the limit is too low:

...a price cap risks environmental integrity... It shifts the risk to the taxpayer ... The risk might be even greater if the potential is there that you can indirectly bank those credits into the future—what is currently allowed under the scheme and which cannot really be prevented. So you will have the circumstance of not having achieved your cap being imported into future periods. The proposed \$40 in the draft legislation, which is growing slightly, might also be too low because we have seen international carbon prices at around \$60 and we have seen high volatility. So having a price above \$40 internationally is not unlikely.⁹

Derivatives markets

It is anticipated that markets will develop, not just for the permits themselves, but derivatives markets as well, which should aid in 'price discovery', and so improve allocative efficiency.¹⁰ Already the Australian Stock Exchange is saying:

6 *White Paper*, p 9-27.

7 *White Paper*, p 9-28.

8 This view was put in submissions on the Green Paper by, for example, BP Australia and environmental groups; *White Paper*, pp 8-33, 34.

9 Dr Regina Betz, *Proof Committee Hansard*, 27 March 2009, p 117.

10 *White Paper*, p 8-1 to 8-3.

Once sufficient detail of the ETS is known, ASX will be able to introduce a futures market for emissions prior to the issuance of emission permits to help industry participants manage risk. Development is well under way.¹¹

Committee Comment

The Committee welcomes the development of derivatives markets but expects that they will be subject to appropriate prudential supervision.

International linkages

10.6 As noted above, climate change is a global problem requiring a global solution. A benefit normally attributed to emissions trading schemes is the scope they provide for international trade in abatement. This allows emissions reductions to be achieved at lower overall cost.

10.7 International linking also provides a mechanism for channelling carbon financing to developing countries. This has helped to promote developing country engagement on climate change, as well as their confidence and capacity to develop more cleanly.

10.8 Mr Paul Curnow, a partner in the global climate change practice of the international law firm of Baker and McKenzie told the committee:

Global warming is an international problem with global causes and consequences. One tonne of CO₂ emitted anywhere in the world has the same cumulative effect as another tonne emitted somewhere else. Similarly, one tonne of CO₂ reduced anywhere in the world has the same cumulative benefit as another tonne reduced anywhere else in the world.

This is why global action is imperative on climate change and imperative in the context of Australian implementing its own scheme.

Allowing linking between schemes is the way in which governments and businesses will be able to build up global action and, importantly, this linking of schemes allows the global community and Australia to reduce emissions most efficiently and at least cost.¹²

10.9 Professor Garnaut argues strongly in favour of international carbon trading:

It would be neither desirable nor feasible for each country separately to pursue national emissions-reduction targets. It would not be desirable because lower-cost abatement options would be forgone, and higher-cost options accepted. It would not be feasible, for there would be no financial

11 Rob Elstone, Chief Executive Officer, Australian Stock Exchange, cited in *Australian Financial Review*, 30 December 2008, p 29.

12 Mr Paul Curnow, Proof Committee Hansard, 27 March 2009, p, 16.

incentive for developing countries to participate in strong mitigation, and they would not do so. These are two fatal flaws.¹³

10.10 A contrary view was put by Professor McKibbin:

The reason you have international trade is, if your costs in this country are higher than costs abroad, you pay people in other countries to do the abatement and bring the permit to Australia. We can do the equivalent here by having the government, through a central bank of carbon, provide the short-term permit to cap the price and then, over time, adjust to reduce emissions in the future that were temporarily injected into the economy in the short term. I would rather do that domestically, through national institutions and national monitoring and enforcement, than do it through international institutions, which we do not even understand very well in terms of the CDM and other mechanisms and which are not run in our jurisdiction. We are allowing assets from offshore to affect the price of carbon in our economy, which can be advantageous but which can also be very disruptive. I think that is an element of uncertainty that we do not need. We can manage that, as we manage our domestic interest rates, independently of the shocks that are occurring in the rest of the world.¹⁴

10.11 The Government has identified development of international carbon markets as a strategic priority.

An effective global carbon market will play a key role in developing effective international solutions to climate change by fostering least cost global abatement. Contributing to a robust international carbon market should therefore be seen as a strategic priority for Australia.¹⁵

10.12 Unrestricted linking may also assist Australia to become a regional hub for carbon trading.

Use of international units

10.13 The CPRS will not restrict firms' use of Kyoto units to meet scheme obligations. This will have implications for the price of Australian carbon pollution permits and the overall cost of the scheme. With unrestricted linking, the price of an Australian permit will be set by international carbon markets. Australia, being a relatively small emitter, is likely to be a price taker; that is, Australia will have little impact on world prices for carbon.

10.14 Even with unrestricted international linking, most abatement will occur domestically as there are very significant low cost abatement opportunities in Australia.

13 Garnaut Review, p 217

14 Professor Warwick McKibbin, *Proof Committee Hansard*, 25 March 2009, p 98.

15 *Green Paper*, p, 219

...the Treasury modelling indicates that over half of emissions reductions occur domestically within Australia and not all of it is imported from overseas.¹⁶

Where would Australia end up in such a scheme? We are looking a long way forward to the middle of the century. That depends a lot on things we do not know about the possible success of biosequestration in Australia. If that is very successful, that may turn out to be a relatively low cost way of reducing emissions or absorbing emissions, and that might make us an exporter of permits.¹⁷

10.15 Evidence from the finance sector and industry was strongly supportive of the scope to purchase abatement internationally. For example:

International linking can reduce domestic abatement costs by opening up more opportunities for abatement, which may not be available domestically. It may also enhance price discovery through deeper and more liquid markets providing a closer estimate of an international abatement price.¹⁸

10.16 In the *White Paper*, the Government:

..acknowledges the overwhelming support of stakeholders for linking and recognises the benefits of linking in providing low-cost compliance options for liable entities and in supporting an efficient global response to climate change.¹⁹

10.17 This view was supported by Professor Garnaut:

I think international trading permits are going to be absolutely essential to get the participation of any of the developing countries.²⁰

10.18 As linking reduces the price of pollution permits, some renewable energy firms that stand to benefit from a higher domestic carbon price may be opposed to international carbon trading. On the other hand, international carbon trading creates market opportunities for such firms in developing countries. Cool NRG is an Australian renewables company delivering abatement projects in developing countries under the Kyoto Protocol's Clean Development Mechanism:

Cool nrg supports the international linking of the CPRS to the CDM as outlined in the legislation. The linking allows Australian companies to access bona fide and lowest cost emission reductions from developing

16 Dr Martin Parkinson, Secretary, Department of Climate Change, *Proof Committee Hansard*, 18 March 2009, p 13.

17 Professor Ross Garnaut, *Proof Committee Hansard*, 23 March 2009, pp 53-4.

18 Australian Chamber of Commerce and Industry, Submission 124, p, 13.

19 *White Paper*, Chapter 11, p, 3.

20 Professor Ross Garnaut, *Proof Committee Hansard*, 23 March 2009, p 54.

countries – reductions that contribute to sustainable development and the UN adaptation fund.²¹

10.19 The committee heard some criticisms of international linking. Dr Richard Deniss used familiar 'mercantilist' arguments against importation of permits:

By relying on importation of permits, we will literally be exporting jobs in the energy efficiency and abatement industry. There is an idea that it is somehow costless to the Australian economy to continue to pollute and just buy in lots of permits.

The fact is: if we instead worked harder to reduce emissions here in Australia and indeed did not have to import so many permits from other countries, by definition there would be far more jobs in the energy efficiency and abatement industries here in Australia. Importing permits is exactly the same thing as exporting jobs, an issue that does not seem to have been much considered.²²

10.20 Dr Betz, director of the University of New South Wales' Centre for Energy and Environmental Markets, commented:

In the Marrakesh Accords, for example, it states that domestic action shall thus constitute a significant element of the effort made by each party. So my question is: when Australia is allowing unlimited use of CDM and JI credits in their scheme, which is covering about 70 per cent of emissions, how can they demonstrate that they do something domestically? It might be interpreted by other countries that there is a lack of willingness by Australia to do its fair share of emissions reductions domestically.²³

10.21 The Department of Climate Change gave evidence that prohibiting the use of international units would be simple but would increase the carbon costs under the CPRS:

It is very easy to prohibit any imports of permits, but you have to understand that a consequence of that is that it drives up the cost of abatement in Australia quite significantly.²⁴

Credibility of international units

10.22 There is concern about the integrity of foreign schemes. A number of witnesses referred to these concerns:

21 Cool NRG, *Submission 52*, p, 1.

22 Dr Richard Deniss, The Australia Institute, *Proof Committee Hansard*, 25 March 2009, p, 76.

23 Dr Regina Betz, *Proof Committee Hansard*, 27 March 2009, p 117.

24 Dr Martin Parkinson, Secretary, Department of Climate Change, *Proof Committee Hansard*, 18 March 2009, p 13.

... clean development mechanism...there is a difficulty in reliably establishing that the claimed offset is in fact a reduction compared with what would have happened otherwise.²⁵

10.23 Parties to the Kyoto Protocol have gone to considerable effort to create administrative arrangements and technically sophisticated methodologies for establishing the credibility of credits created under the Clean Development Mechanism. Emissions estimation methodologies must be internationally approved and all abatement credited must be audited by an accredited, independent third party.

10.24 The committee recognises that efforts to improve the credibility of international units are ongoing. The committee notes the Government's conclusion in the *White Paper* that:

The use of Kyoto units in the Scheme is consistent with Australia's Kyoto Protocol obligations, and the Government considers that the Kyoto Protocol establishes a robust and credible framework for mitigation.²⁶

Sale of abatement

10.25 To reduce implementation risks, the export of Australian permits will not be allowed. When allowed, exports of permits to international markets and other countries will be achieved either:

- by allowing permit holders to convert a carbon pollution permit into a Kyoto unit for subsequent sale and transfer to international markets

or

- by allowing the direct transfer of permits, where a bilateral link with another country's Scheme is established and there is an agreement that a shadow transfer of international units will occur at the government level.

10.26 Export of pollution permits would only occur if the cost of abatement internationally were higher than that in Australia. Given the low-cost abatement opportunities likely to be available in developing countries, this situation seems unlikely. This restriction is, therefore, unlikely to have material affect on the carbon price in the CPRS.

25 Dr Frank Jutzo, *Proof Committee Hansard*, 19 March 2009, p 32.

26 *White Paper*, Chapter 11, p, 10.

Chapter 11

Alternative approaches to reducing emissions

The CPRS: a cap-and-trade approach

11.1 The Government's CPRS is a production-based cap and trade model. The production-based cap and trade model is often cited as the most common approach to emissions trading.

11.2 Under a cap and trade scheme, tradable permits are issued by the government which entitle the permit holder to emit a specified volume of greenhouse gases to the atmosphere (during a specified period). Some systems also allow 'banking' of permits for use in future compliance periods.

11.3 The specified volumes are a series of short- to medium-term targets reaching out to a longer term target, referred to as an 'emissions trajectory'. The duration of a cap or baseline is an important consideration. Too short a period may not provide adequate investor/market certainty; such certainty is desirable as it allows markets to develop a forward carbon price to guide investment decisions and encourage uptake in technology and its development over the long term. On the other hand, too long a period may provide certainty but reduce government's ability to make adjustments in response to, say, changes in climate change science or technology. Emissions reductions schemes may attempt to address this problem in various ways, such as by setting firm caps in early years of a scheme but a range for caps in later years.

11.4 Clearly, to achieve a reduction in greenhouse gas emissions, the total cap placed on emissions must be less than the emissions that would have been generated under a business as usual scenario. The market price for emissions permits must be high enough to provide an incentive to participants to reduce their emissions relative to business as usual projections. For example, too high a cap can result in over-supply and a low market price for emissions permits.

Alternative approaches

11.5 There are a number of alternative models to CPRS-like cap-and-trade emissions trading schemes that could potentially be used to restrain the emission of greenhouse gases. Among those presented to the Committee were;

- a) Carbon tax;
- b) McKibbin hybrid model;
- c) Baseline and credit (also known as the "intensity approach" and the "Canadian approach"); and

- d) Cap and trade based on consumption; and
- e) Regulatory approach.

11.6 Some of the factors relevant to assessing the worth or success of any proposed or operating emissions reduction scheme are:

- ability to deliver actual reductions in emissions;
- cost effectiveness;
- extent to which a scheme provides incentives for investment and performance improvement;
- flexibility to continually adapt to changes in climate change science/policy/technology;
- robustness of monitoring and verification systems for emissions;
- transparency; and
- fairness and equity.¹

(a) Carbon tax

11.7 A carbon tax is a tax levied on greenhouse gas emissions. The differences between a carbon tax and an ETS are often overstated. An ETS that gives rise to a carbon price of \$25 a tonne has essentially the same impact on emissions and on the economy as a carbon tax of \$25 a tonne if the coverage of the two schemes is the same.

Price certainty versus emissions certainty

11.8 The main advantage of a carbon tax is that it gives (at least in the short term) more certainty about the price impact. But it does this at the cost of less certainty about the volume of emissions. Hitting a medium-term target for emissions is likely to require adjustments to the carbon tax rate from time to time. This reduces the price certainty provided in the medium term. Views differ about the extent to which it would also be politically difficult to raise the carbon tax rate.

...an emissions trading scheme gives you certainty about how many emissions enter the atmosphere, whereas the carbon tax gives you certainty about price but does not give you certainty about the amount of emissions that enter the atmosphere, because that depends on the relationship between the carbon price and the responsiveness of the economy. That is really the

1 David Hodgkinson and Renee Garner, *Global climate change: Australian law and policy*, 2008, p 242.

fundamental difference between the carbon tax and the emissions trading scheme.²

11.9 There is a theoretical literature about whether certainty about prices or emissions volumes is more desirable:

The theory of prices versus quantities for pollution control (Weitzman 1974) shows that such uncertainty [about abatement costs] will invariably lead the policy to under- or overshoot the optimum. Imposing a quantitative target will lead to higher or lower marginal abatement costs than expected, while a given tax rate will lead to a greater or lesser abatement effort than expected. The resulting efficiency costs are thought to be lower under a price-based instrument for stock pollutants such as greenhouse gases, so getting the price wrong under a tax imposes smaller welfare losses than getting the quantity wrong under a quantity target.³

11.10 The Government's reasoning for preferring an emissions trading scheme over a carbon tax is that:

If the Government had full information about the relationship between carbon prices and the quantity of emissions reductions that such prices would induce, a carbon tax and an emissions trading scheme could deliver similar economic and environmental outcomes...The key benefit of an emissions trading scheme over a tax is that it secures the environmental objective by controlling the quantity of emissions directly. It is possible that emissions trading may provide greater long-term policy credibility, as the community can see the direct link between the policy instrument and the environmental objective. Australia's international commitments are likely to continue to be defined as quantitative targets, so this approach allows international obligations to be managed more effectively.⁴

11.11 As the Government put it:

Both a carbon tax and an emissions trading scheme would need to be adjusted over time to reflect new emissions targets as the international architecture matures and scientific understanding of the global mitigation effort improves.⁵

11.12 There may be desirable stabilising effects from the systems that involve more certainty about volumes:

...within a cap and trade system, demand for and price of permits can be expected to fall in response to any large increase in the price of fossil fuels.

2 Mr Blair Comley, Deputy Secretary, Department of Climate Change, *Proof Committee Hansard*, 18 March 2009, p 12.

3 *Garnaut Review*, p 196.

4 *White Paper*, pp 5-11, 5-12.

5 *White Paper*, p 5-12.

This would be to some extent stabilising, unlike the rigid application of a fixed carbon tax.⁶

Simplicity

11.13 Aside from short-term price certainty, a common argument for a carbon tax is that it is simpler and could therefore be implemented more quickly:

The simpler carbon tax would have lower transaction costs.⁷

A carbon tax is preferable to a carbon trading system because it is more efficient, effective, simple, flexible, and transparent.⁸

...it might be argued that a carbon tax has an air of justice or fairness — taxing those responsible for creating the harm. Emissions trading could mimic this effect but would do so in a less transparent manner.⁹

11.14 The Government rejects this argument, claiming that 'most of the implementation and administrative requirements apply equally to an emissions trading scheme and a carbon tax'.¹⁰

Revenue

11.15 It is also sometimes claimed that a carbon tax would raise more revenue and be less distorting:

A carbon tax is preferable to a carbon trading system ... a carbon tax has the added benefit of providing revenue which can be used to cut other taxes.¹¹

11.16 This argument is flawed as the revenue raised and the extent of distortions is a function of the coverage and exemptions in schemes, not the choice between an ETS and a carbon tax.¹²

International aspects

11.17 Some also see a common carbon tax as a better global aspiration than an international emissions trading scheme:

6 *Garnaut Review*, p 196.

7 *Garnaut Review*, p 196.

8 Mr John Humpheys, 'Exploring a carbon tax for Australia', *Centre for Independent Studies Policy monographs*, no 80, 2007, p ix.

9 Joshua Gans and John Quiggan, 'The practicalities of emissions trading', *Melbourne Review*, vol 3, no 2, November 2007, p 63.

10 *White Paper*, p 5-13.

11 Mr John Humpheys, 'Exploring a carbon tax for Australia', *Centre for Independent Studies Policy monographs*, no 80, 2007, p ix.

12 See, for example, Professor Ross Garnaut, *Proof Committee Hansard*, 23 March 2009, p 55.

Proponents of price-based emissions control have pointed out that a common global carbon tax or an agreement on an internationally harmonised price to apply in domestic permit trading schemes would avoid both questions of distribution between countries inherent in a cap and trade system, and the potentially destabilising effects of large-scale international financial flows.¹³

11.18 Probably the more common view is that a carbon tax is inferior to a cap-and-trade scheme because it does not offer scope for international trade in permits to allow abatement to occur where it is least costly.

Exemptions

11.19 A carbon tax is attracting support from some who see the CPRS as an excessively compromised form of emissions trading, with many industries being given free permits under complex rules. For example, exports could be exempted from a carbon tax, as they are from the GST, which may be simpler than the arrangements for shielding trade-exposed industries in the CPRS.

11.20 However, it is almost certain the same lobbyists who push for free permits for certain industries would be lobbying as hard for exemptions from a carbon tax for these industries. It may be that there is some political reason why it is easier to resist pressure for tax exemptions than for free permits, but the Committee has not heard it.

Committee comment

11.21 The Committee regards a carbon tax as sharing many of the features of an emissions trading scheme in reducing emissions by putting a price on carbon and raising revenue. However, the committee prefers an emissions trading scheme model, such as the CPRS, as it gives certainty about the maximum volume of emissions.

(b) McKibbin hybrid model

11.22 The McKibbin hybrid model involves a mix of long-term and annual permits. Governments would issue industry with 'books' of annual permits lasting for fifty to a hundred years. The total number of these long-term permits would be based on the long term emissions reduction target, for example an amount equivalent to 60 percent of Australia's 2000 emissions. These 'books' of annual permits would be traded in the market, providing a long term carbon price signal.

11.23 In addition, governments would sell to industry an unlimited number of annual permits at a fixed price. This aspect of the scheme is equivalent to a carbon tax.

11.24 The price of annual permits would be adjusted periodically, for example every five years. Eventually, the annual permit price and the price of long term permits will eventually converge.

11.25 Professor McKibbin argues that his design would achieve short term carbon price certainty as well as long term certainty as to the quantity of allowable emissions.

11.26 He draws an analogy with the way the Reserve Bank uses monetary policy tools to control the short-term interest rate and achieve an inflation target while the market sets long-term bond yields:

...this system should be run by an independent central bank of carbon not by a climate change department or by an Australian Treasury. An independent central bank of carbon should run a policy in a very similar way to the way the Reserve Bank runs monetary policy, where government sets the long-term goals and independent experts implement the policy. ... the short-term carbon price should be unambiguously fixed for five years at a time by something like a central bank of carbon.¹⁴

11.27 The most common criticism of the McKibbin hybrid model is its complexity:

It is a slightly complex model. I have heard Warwick speak to that model a couple of times now and I must admit I have not fully grabbed it.¹⁵

One of the recognised hallmarks of good policy is simplicity. The hybrid system is complex and many audiences have been left confused after being presented with the system.¹⁶

11.28 Professor Garnaut regards the basic feature of the McKibbin model as being the imposition of an upper limit on the price of permits in a cap and trade emissions trading scheme. He regards it as 'combining the disadvantages of both' emissions trading and a carbon tax, requiring the institutional and administrative apparatus of an emissions trading scheme but without giving certainty about emissions reductions.¹⁷

11.29 As with a carbon tax, emissions would be uncapped in the near term, making it difficult to achieve short to medium term emissions targets. The McKibbin hybrid scheme would also require governments to 'lock in' very long term targets. If the government subsequently wanted to reduce the number of long term permits (for example in response to new scientific evidence), it would need to buy these back from industry.

14 Professor Warwick McKibbin, *Proof Committee Hansard*, 25 March 2009, p 97.

15 Mr Rynne, *Select Committee on Fuel and Energy, Committee Hansard*, 20 February 2009 p 30.

16 Clive Hamilton and Frank Muller, 'Critique of the McKibbin-Wilcoxon hybrid emissions trading scheme', *Australia Institute Research Paper*, no 42, March 2007, p 7.

17 *Garnaut Review*, p 310.

11.30 It would be difficult for the market to price long term permits. The market would need to make predictions about the rate at which the government is likely to increase the price of annual permits, as well as the other market factors likely to impact on the supply and demand for carbon a long time into the future. This could result in volatile prices.

Committee comment

11.31 The committee views the McKibbin model as an interesting approach. However, it prefers to start with a more orthodox approach that can draw on experiences with similar schemes and be more readily linked with proposed schemes elsewhere. As noted when commenting on the carbon tax, the committee prefers a system which gives certainty about the maximum volume of emissions.

(c) Baseline and credit

11.32 Baseline and credit emissions trading systems are production based systems of emissions trading in which there is no explicit cap on emissions. Instead, participants are allowed to emit CO₂ according to a (usually historical and industry-specific) baseline level of emissions.

11.33 Where a participant in a baseline and credit scheme emits less than their baseline level (or allowance) of emissions, the unused part of the allowance forms an emissions reduction credit which is able to be banked for future compliance needs or else traded in the emissions market. This is what leads Garnaut to say such schemes 'effectively place the creation of permits in the hands of private parties (existing emitters) rather than the government'.¹⁸

11.34 A possible benefit of a baseline-and-credit scheme is that it involves less churning of funds than a cap-and-trade system.

11.35 A participant that exceeds their baseline level can purchase emissions reduction credits in the market to meet the shortfall in their allocated credits. Unlike cap-and-trade systems, in baseline and credit schemes credits are only issued where an emissions saving has been achieved; such credits are usually earned on a project-by-project basis. (A cap-and-trade model can be regarded as a baseline-and-credit system with a baseline of zero. Alternatively, a baseline-and-credit model can be thought of as like a cap-and-trade model with 100 per cent free permits to all existing polluters.¹⁹)

11.36 The baseline is usually expressed in terms of 'emissions intensity', which is a measure of carbon emitted for a given amount of production or revenue. The sum of

18 *Garnaut Review*, p 309.

19 Professor Ross Garnaut, *Proof Committee Hansard*, 23 March 2009, p 64.

all baselines for participants in the scheme amounts to a sort of implicit cap on emissions; although if total output is higher than expected, then so will be emissions.

The Canadian scheme is an emission intensity target, so you can never be sure—even though firms might be improving their emissions intensity—what quantity adjustment is going to occur in your economy.²⁰

11.37 Baseline and credit systems, by allowing credits to be generated from abatement activities, should create economic incentives for participants to invest in lower emissions technology or abatement activities to reduce their actual emissions.

11.38 Environmental outcomes become uncertain due to the difficulties of verifying and certifying emissions reductions, such as differences in or changes to the methodology used to set baselines, or double-counting problems associated with attributing credits to more than one emitter for a particular emissions reduction action. Such problems mean that baseline and credit schemes may carry far higher transactional costs than the cap-and-trade approach, which calls into question their cost effectiveness relative to environmental outcomes.

11.39 Baseline-and-credit schemes can work well when applied to a single industry, but are more problematic when applied across the economy.

11.40 The main problem appears to be setting the baselines. Firstly, it will be arbitrary deciding what is the relevant 'peer group'. Consider the case of power stations. If all those fuelled by coal are regarded as one group, then the users of black coal will earn credits while the users of brown coal will need to buy them. If users of black coal are distinguished from users of brown coal, both types can meet the baseline. But if all power stations are treated as a group, then users of both types of coal would need to buy credits from those running on hydro power.

11.41 Secondly, if the aim is to drive reductions in emissions rather than just keep them static, another set of arbitrary decisions need to be made about how much individual industries should be required to cut.

11.42 Baseline-and-credit schemes can also be criticised for rewarding existing heavy polluters, whereas the CPRS will over time move towards being more like a 'polluter pays' system once free permits are removed.

11.43 It has been claimed that the baseline-and-credit scheme has less impact on households. But this is a mixed blessing:

If you have a scheme that suppresses the price impact on households, which I think some have advocated that the Canadian scheme does, that has the

20 Dr Martin Parkinson, Secretary, Department of Climate Change, *Proof Committee Hansard*, 18 March 2009, p 22

effect of reducing the incentive for households to reduce... the net effect is that you push the cost of the scheme up.²¹

11.44 While less common than the cap and trade approach, there are some notable examples of baseline-and-credit systems in place. Two of the emissions reduction measures already operating under the Kyoto Protocol use such a system: the Clean Development Mechanism (CDM) and the Joint Initiative (JI) project. The CDM, for example, essentially allows developed countries to gain credits by investing in emissions-reduction projects in less developed countries. These credits can then be used to meet Kyoto targets.

11.45 In Australia, the NSW Greenhouse Gas Abatement Scheme (GGAS) is also an example of a baseline and credit scheme.²² The aim of the scheme is to reduce per capita greenhouse emissions associated with electricity consumption. In simple terms, it works by imposing a declining per capita greenhouse gas target on all electricity retailers, whose emissions reduction targets are based on relative market shares. Regulated entities can comply with their targets by achieving lower-emissions energy generation or through a range of offset activities. Examples of the latter are schemes which create NSW Greenhouse Gas Abatement certificates through ensuring households use low-energy light bulbs and low-flow shower heads. These certificates can be surrendered to comply with a reduction target, or else traded amongst scheme participants.²³

11.46 While the baseline and credit model has often been applied to individual industries, most work on its application to a national emissions reduction strategy has been done in Canada. However the Canadians view it as a transitional scheme before moving to cap-and-trade.

Committee comment

11.47 Schemes based on 'intensity', such as baseline and credit, share the disadvantage with the carbon tax and McKibbin hybrid model of not setting a firm cap on emissions. In addition, setting an appropriate baseline for each industry (and indeed defining what is a distinct industry) would be a difficult task, fraught with conceptual difficulties and subject to heavy lobbying by vested interests.

21 Dr Parkinson and Mr Comley, Department of Climate Change, *Proof Committee Hansard*, 18 March 2009, p 32.

22 The ACT introduced a scheme that mirrors the NSW GGAS in January 2005.

23 For an analysis of the NSW GGAS see Robert Passey, Iain MacGill and Hugh Outhred, 'The governance challenge for implementing effective market-based climate policies: a case study of the New South Wales Greenhouse Gas Reduction [sic] Scheme', *Energy Policy* 26 (2008), pp 3009-18.

(d) Emissions trading – cap and trade based on consumption

11.48 An alternative to a cap and trade scheme based on production is one based on consumption. Former Treasury and Access Economics economist Geoff Carmody suggests a better way of avoiding concerns about carbon leakage is to have an emissions trading scheme based on consumption rather than production.²⁴ The Carmody approach has been suggested as an alternative to the CPRS by the Australian Industry Greenhouse Network.²⁵

11.49 The consumption model means the cap is being applied to indirect emissions. Direct emissions result from activities at the source, such as those arising from the manufacture of a particular good. Indirect emissions are embedded in consumed goods, such as those arising from the electricity used to produce a good or product—these emissions occur at the point at which the electricity was created (as opposed to where it was consumed).

11.50 The Government has essentially two objections to this idea; administrative difficulty and international agreements:

The Government would need to design and implement a methodology that could measure carbon emissions ‘embodied’ in a range of products and which was flexible enough to be kept up-to-date to account for new products or production methods.²⁶

The design of the Australian scheme as a production-based emissions trading scheme is intended to ensure it is consistent with our international obligations...the international community, including Australia, agreed that production, rather than consumption, should be the basis for international greenhouse gas emissions accounting rules...Calling for a new approach globally would not be seen as a constructive contribution to international efforts to reach a global solution to climate change. The Government assesses it as unlikely that the international community will support a move toward a consumption-based approach.²⁷

11.51 Professor Garnaut also rejected this model, on essentially the same two grounds.²⁸

Committee comment

11.52 The committee agrees that there are practical difficulties in measuring the emissions embedded in goods and services and prefers the more common

24 Geoff Carmody, 'Effective climate change policy: the seven 'Cs'', *Geoff Carmody and Associates Policy Notes*, no. 1, July 2008.

25 *Submission 54*, p 3.

26 *White Paper*, p 3-4.

27 *White Paper*, p 3-4.

28 *Garnaut Review*, p 327.

production-based approach that can draw on experiences with similar schemes and be more readily linked with proposed schemes elsewhere.

e) 'Command and control' regulatory approaches

11.53 All alternative approaches considered in this chapter can be characterised as regulatory approaches, in that their establishment requires direct government intervention (in the form of legislation) and that participation would be required by law. This applies equally to the CPRS, a carbon tax, or other models discussed in this chapter.

11.54 However, discussion of possible approaches generally distinguishes between command-and-control regulations (for example, by limiting emissions and/or mandating the use of low-emission or no-emission energy sources) and more market based approaches, such as emissions trading. Mandatory emissions standards for cars are examples of the former.

11.55 Such approaches can be combined with tax incentives or payments to encourage reductions in emissions. An example would be purchase rebates or lower tax for more fuel-efficient cars. Areas particularly well suited to command and control style regulation includes some forms of pollution, such as dangerous chemicals or noise pollution.

11.56 Until recently, these approaches, combined with voluntary programmes, have been the primary method adopted in Australia (although mandatory market based approaches have been attempted at state level).

11.57 However, to craft a package of regulatory measures and incentives to bring down emissions to the government's proposed 2020 target level could prove challenging, as Mr Comley from the Department of Climate Change noted:

In principle, there is a broad range of policies that would be available to government to meet emissions targets. You could go down the part of a market based scheme—that is, either a CPRS style scheme or a carbon tax. If those had been rejected, other policies available would be mainly regulatory policies. These are the sorts of policies that to a large extent have been pursued to date in the climate change mitigation area. They could include things like imposing regulatory restrictions on large or significant projects or moving to more command-and-control measures that might limit or ban certain activities. Where any government or future government may go in that area is very much a set of policy questions. If the CPRS were not imposed, you would need to look at successively more restrictive regulatory measures to achieve any target, or you could do it on the outlay side.

To put that into context, the government has announced energy efficiency measures that were part of the stimulus package. These were estimated to make a contribution to reducing emissions by around five megatons a year. If you looked at the government's target of minus five per cent by 2020,

you would need policies that would deliver around 135 megatons of emission reductions. If you are looking at the minus 15 per cent target, it is more like minus 195 megatons. So it really would be a policy question, but with[out] a comprehensive CPRS you would need a very extensive suite of measures to achieve the sorts of reductions are being considered within the government's target range.²⁹

11.58 Relying solely on such approaches is regarded by many as less efficient than market-based measures. As Professor Garnaut noted:

Regulatory, or prescriptive, approaches to reducing emissions can be haphazard. They are inevitably informed by assessments of current and future mitigation opportunities by officials, based on expectations about the rate of technological development and the changing state of consumer preferences. Such policy mechanisms have difficulty in responding to the sometimes rapid but usually unpredictable evolution of technology and consumer preferences.³⁰

Committee comment

11.59 The committee's view is that such forms of regulation may have a role to play in mitigating climate change emissions. However, it seems likely that regulatory measures will most effective when operating as a complement to a price signal, rather than a substitute for one. This is discussed further in Chapter 9.

29 Mr Blair Comley, Department of Climate Change, *Proof Committee Hansard*, 30 March 2009, p 2

30 *Garnaut Review*, p 308.

Chapter 12

Governance Issues

12.1 The scheme will be administered by the Australian Climate Change Regulatory Authority, which will be established by the Australian Climate Change Regulatory Authority Bill.

12.2 Few submitters commented directly on the governance arrangements for the scheme, including the establishment or role of the Authority, and it received little discussion at hearings. Issues which attracted some attention were the need to ensure the independence of the scheme regulator; the qualifications of members of the Authority; and the need for review of decisions.

The Australian Climate Change Regulatory Authority

Establishment and powers

12.3 The ACCRA Bill exposure draft establishes the Authority as consisting of a Chair and two to four other members. The Chair of the Authority is a full-time position. Members are to be appointed by the Minister, with either 'substantial experience and knowledge' or 'significant standing' in one of the following fields:

- economics
- industry
- energy production and supply
- energy measurement and reporting
- greenhouse gas emissions measurement and reporting
- greenhouse gas abatement measures
- financial markets
- trading or environmental instruments.¹

12.4 The Authority will have the ability to engage public service staff and consultants, and to undertake a number of functions similar to other Government agencies, including entering into contracts on behalf of the Commonwealth. ACCRA will be subject to the *Financial Management and Accountability Act 1997*.

12.5 The ACCRA Bill exposure draft also outlines other processes, including decision making, provisions relating to the appointment of the Chair and members of the Authority by the Minister, secrecy and disclosure provisions, and annual reporting requirements.

1 ACCRA Bill Exposure Draft, clause 18

12.6 The Authority's principal function is to administer the Carbon Pollution Reduction Scheme. It will also take on functions related to the *National Greenhouse and Energy Reporting Act 2007* and the *Renewable Energy (Electricity) Act 2000*. The Consequential Amendments Bill will amend those acts to transfer statutory decisions and other functions (currently held by the Greenhouse and Energy Data Officer and the Renewable Energy Regulator, respectively) to the Authority. The Authority will assume these functions 28 days after Royal Assent to the CPRS Bills package.

12.7 The Government has decided to combine the functions of administering the scheme with administration of the other acts on the basis that it will improve regulatory outcomes, reduce the likelihood of conflicts or gaps between different regulators, to streamline reporting and surrender procedures, and to achieve economies of scale in administration.²

12.8 Part 3 of the ACCRA Bill sets out the Authority's powers and obligations in relation to secrecy. The Authority will have powers related to secrecy and imposes penalties for the inappropriate disclosure or use of protected information by an official of the Authority (clause 43 of the ACCRA Bill). 'Protected information' is defined as 'information obtained by a person in the person's capacity as an official of the Authority' and which 'relates to the affairs of a person other than the official of the Authority' (clause 4), and therefore after commencement of the Act will include information obtained by the Authority under the CPRS Bill and any other law administered by the Authority (i.e. the *National Greenhouse and Energy Reporting Act 2007* and the *Renewable Energy (Electricity) Act 2000*). However, existing disclosure provisions under the *National Greenhouse and Energy Reporting Act 2007* and *Renewable Energy (Electricity) Act 2000* continue in place in relation to information reported under those acts.

12.9 The Consequential Amendments Bill will repeal existing secrecy provisions in those Acts at the time of commencement (Schedule 1, Items 32 and 80), meaning all three Acts will be governed by a single set of secrecy provisions, those in the ACCRA Bill exposure draft.

12.10 Part 3 also sets provisions relating to disclosure of protected information. The Authority will have the power to provide information under certain circumstances to the Minister and Secretary, to Royal Commission, to nominated Commonwealth, state and territory government agencies, foreign governments and international climate change bodies and foreign governments, to certain financial bodies, or with the consent of the person to whom the information relates.

12.11 The Authority's information gathering and compliance monitoring powers in relation to the Scheme are set out in the CPRS Bill exposure draft (Parts 17 and 19).

2 *White Paper*, p. 16-8.

12.12 The Department of Climate Change has indicated the Authority will have approximately 300 staff.³ The Government has indicated that planning for the establishment of the Authority, including its educative role, is well underway:

The authority cannot be formally established until after the legislation has been passed, but we are already within the department effectively setting up a protoregulator so that it can be immediately established and hit the ground running. It will have a substantial information role with businesses. Certainly the model that we have in mind is that the regulator will take a constructive role with businesses and will help them through the needs of their compliance... The regulatory force at the start will very much be education and assistance to make sure that people understand the obligations of the scheme.⁴

12.13 Few submitters raised concerns about the proposed establishment or powers of the Authority.

Independence of the Authority

12.14 The Government states that its intention is to establish an independent regulator to administer the scheme 'within a limited and legislatively prescribed discretion':

Such an arrangement is expected to reduce the risk that the regulator's decisions are based on factors other than the Scheme's objectives, and should also contribute to efficient and effective administration.

This intent to establish an independent regulator is reflected in a number of elements in the draft bill, including the limited scope for Ministerial directions to the Authority and the limited grounds on which a member of the Authority may be removed from office.⁵

12.15 The Government has explained the divide between decisions be made at ministerial level and by the authority in the following terms:

Elected representatives (the parliament and the Government, minister) will be given responsibility for policy decisions with implications, and an independent regulator will be responsible essentially administrative or that involve individual cases.⁶

12.16 Under the draft ACCRA Bill, the Minister will have the power to give directions to the Authority 'in relation to the performance of its functions and the exercise of its powers (subclause 41(1)), but such directions 'must be of a general nature only' (subclause 41(2)). The Government states that this is consistent with

3 Mr Blair Comley, *Proof Committee Hansard*, 30 March 2009, p. 20.

4 Mr Blair Comley, Acting Secretary, Department of Climate Change, *Proof Committee Hansard*, 30 March 2009, p. 6.

5 Australian Climate Change Regulatory Authority Bill 2009 Exposure Draft, Commentary, p. 11

6 Department of Climate Change, *White Paper*, p. 16-3.

powers held in relation to other regulators, such as the Australian Securities and Investment Commission:

The policy intent of this provision is to ensure that the Authority is accountable to the Minister and acts consistently with Commonwealth Government policy, whilst not empowering the Minister to intervene in particular cases, for example the issue of Australian emissions units to a particular person.⁷

12.17 The ACCRA Bill will also provide that the Chair and members of the Authority may not be Commonwealth employees (clause 360) and may only have their appointment terminated by the Minister for reasons such as misbehaviour or physical or mental incapacity (clause 370). The ACCRA Bill also provides disclosure of interest provisions for members of the Authority (clauses 22-23).

12.18 Professor Warwick McKibbin stressed the need for an independent decision maker in relation to the scheme, calling for the establishment of a 'central bank of carbon':

...this system should be run by an independent central bank of carbon not by a climate change department or by an Australian Treasury. An independent central bank of carbon should run a policy in a very similar way to the way the Reserve Bank runs monetary policy, where government sets the long-term goals and independent experts implement the policy.⁸

12.19 However, the Government has opposed this suggestion, favouring instead that particular decisions relating to carbon price must remain within the purview of elected governments:

If you had a central Australian bank of carbon or something equivalent to it, you would have a genuine issue associated with what powers you would want to delegate to that bank. I think the analogy here is: when you set quantity targets in a cap and trade scheme or you set a carbon tax rate explicitly, that is very much akin to setting a tax rate in the rest of the political discussion. It would be very unusual to delegate that power to an independent body. To delegate that to a new institution would be a significant leap to take. That is a judgment you could make, but it is not typically the sort of decision that would be allocated to such a body. In the same way that a number of people have advocated an independent body to run fiscal policy and countercyclical policy, typically the decision is that that should rest with parliaments.⁹

12.20 The committee notes that the operation of the Authority will be a matter for independent review by expert advisory committees.

7 Australian Climate Change Regulatory Authority Bill 2009 Exposure Draft, Commentary, p. 13

8 Prof. Warwick McKibbin, *Proof Committee Hansard*, 25 March 2009, p. 97

9 Mr Blair Comley, Department of Climate Change, *Proof Committee Hansard*, 30 March 2009, p. 10.

Review of Decisions

12.21 The Australian Workers Union noted the need for some level of oversight of decisions made by ACCRA:

The Minister should, ultimately also retain powers to defer or suspend the application of the Scheme if circumstances warrant it on advice from the Australian Climate Change Regulatory Authority (ACCRA) or other relevant body such as the independent expert advisory group, or appeals panel referred to above. There may also be a role for the stakeholder committee charged with the oversight of ACCRA and for an independent Ombudsman.¹⁰

12.22 Part 25 of the CPRS Bill establishes provisions for independent review of the scheme by an expert advisory committee. The bill provides for the first review to be completed by 20 June 2014, with reviews to be conducted every five years after that. Review reports are to be tabled in Parliament. The Bill also provides powers for specific reviews to be undertaken on matters identified by the Minister.

12.23 The expert advisory committees are to be independent and make provision for public consultation. Committee members may have qualifications from a range of fields, including climate change science. Neither the Chair nor a majority of members of the committee may be employees of the Commonwealth. Governments will be required to respond to any recommendations made by an expert advisory panel within 6 months of receipt of a report.

12.24 A significant number of decisions of an administrative nature made by the Authority will be subject to review by the Administrative Appeals Tribunal (AAT). These are identified in clause 346 of the CPRS Bill. The CPRS Bill establishes that decisions made by delegates of the Authority may be subject to internal review, but that this step may be bypassed in the case of direct decisions by the Authority. Ministerial decisions are not subject to review by the AAT. The CPRS Bill does not exclude judicial review under the *Administrative Decisions (Judicial Review) Act 1977*.

12.25 In addition, a number of decisions made under the *National Greenhouse and Energy Reporting Act 2007* and the *Renewable Energy (Electricity) Act 2000* are subject to existing merits review provisions. These provisions will be amended by the Consequential Amendments Bill so that decisions made by the Authority under those Acts will continue to be subject to the existing merits review provisions.

12.26 The question of third party review rights was raised in at least one submission.

This table appears to ensure that most decisions against polluting entities are reviewable, but decisions in favour of them are not. This is an outrageous proposal, as is the exclusion of third parties from being able to

10 Australian Workers Union, *Submission 27*, p.10.

take civil or administrative action for breaches of the CPRS Act or against decisions made under the Act.

Third party prosecutions have made a significant contribution to environmental and social law in Australia, and given the immense importance of this Bill for the future of Australian society, it is vital that third party rights be established under any CPRS Act.¹¹

12.27 It is true that many environmental or social laws allow standing to third parties for judicial review (see for example 487 of the *Environmental Protection and Heritage Conservation Act 1999*). However, it is not clear to the committee which decisions under the CPRS bills would appropriately be covered by such an extension of third party appeal rights. The committee also notes that extension of appeal rights on judicial or merits grounds could have the consequence of introducing delays in the administration of the Act. This would appear to run counter to the government's goal to increase business certainty.

Qualification of members

12.28 The Commentary on the ACCRA Bill Exposure Draft noted the following in relation to qualification of members:

This list is similar to that for expert advisory committees established under the draft Carbon Pollution Reduction Scheme Bill 2009. In contrast to expert advisory committees, however, 'climate science' is not listed as a relevant field of knowledge for the Authority. This is because the Authority's focus is on administration and enforcement of the Scheme, rather than advising on emission reduction trajectories.¹²

12.29 Given the focus of the Authority on administrative, rather than policy, matters, the committee regards the qualifications of board members as appropriate.

Other Governance issues

Tax issues

12.30 The question of whether or not the CPRS was, in itself, a tax was raised at hearings. It appears that the status of the CPRS as a tax is not clear. The committee notes that the view of the government that it is not a tax:

The question of whether it is a tax is one that the government views as not a tax. There are a number of bills for an abundance of caution in case it is viewed as a tax. If that hypothetical situation were to occur then the government would have to look at the policy.¹³

11 Rising Tide Newcastle, *Submission 86*, p. 4.

12 ACCRA Bill Exposure Draft Commentary, p. 17

13 Mr Blair Comley, *Draft Committee Hansard*, 30 March 2009, p. E19

12.31 The committee notes the potential that the CPRS might be one day held to be a tax by a court, and that this is a rationale for charges being imposed by three separate charges bills.

12.32 A number of issues were raised in regard to the proposed amendments to various tax acts contained in Schedule 2 of the Consequential Amendments Bill. These include the GST treatment of permits under the scheme, the difference in treatment of permits provided to those receiving free permits as EITE assistance rather than as assistance in strongly affected industries, and issues relating to timing of tax liability, among other issues.

12.33 On the issue of GST treatment of permits under the proposed legislation, the Institute of Chartered Accountants (ICA), the Taxation Institute of Australia, Australian Bankers Association (ABA) and Australian Financial Market Association (AFMA) all raised concerns with the Government's proposal to apply normal GST rules on permit transactions. According to the Institute of Chartered Accountants, this approach would lead to uncertainty and complexity for business taxpayers, 'particularly in relation to exports, imports and derivatives trading of registered emissions units'.¹⁴ The ICA pointed out that New Zealand has adopted a zero rated model. The proposal to adopt a GST free model as per New Zealand was shared by the AFMA, which also argued a different approach would recognise that the GST is a consumer tax whilst the CPRS is a business-to-business market.¹⁵ The views of AFMA on the GST approach were supported by the Australian Bankers Association.¹⁶ The Taxation Institute of Australia also raised concerns about the GST treatment of permits.¹⁷

12.34 Concerns were also raised in relation to the treatment of permits provided to entities deemed to be EITEs or which were to receive them as strongly affected industries. The point was raised that free permits allocated to EITEs would be valued at zero for tax purposes if still held at year end (the 'no disadvantage rule'). However, free permits allocated to strongly affected industries do not attract this concession, so that year end balance will be taxed at market value.¹⁸ The ICA noted:

We do not believe it is equitable for SAI [strongly affected industries] receiving free permits which, by definition will together with EITE industries be the most exposed and most disadvantaged business taxpayers, to have substantial cash-flow disadvantages imposed on them.¹⁹

14 Institute of Chartered Accountants, *Submission 98*, p. 2

15 Australian Financial Markets Association, *Submission 114*, p. 9

16 Australian Bankers Association, *Submission 107*, p. 24

17 Taxation Institute of Australia, *Submission 125*, pp.1-2

18 Institute of Chartered Accountants, *Submission 98*, p. 3; Energy Supply Association of Australia, *Submission 21*, p. 11

19 Institute of Chartered Accountants, *Submission 98*, p. 3

12.35 The Government explained the difference between the tax treatment of the two types of free permit as follows:

Emissions-intensive trade-exposed industries are different from coal-fired electricity generators as they compete on the world market. The aim of the annual assistance is to minimise the impact of the scheme on EITE entities' decisions on whether to continue to produce in Australia. Coal-fired electricity generators are being provided with transitional assistance which is not expected to influence their production decisions. Free units issued to coal-fired electricity generators, if held at the end of the income year, are included in assessable income for that year, consistent with the approach to taxing industry assistance generally.²⁰

12.36 One further issue raised by the ICA was concern about the government's proposed 'claw-back' provisions in relation to deductions. Under this approach, if the cost of a permit is treated as a tax deduction at the time of purchase, and the permit is ultimately disposed of for reasons other than producing assessable income, the amount of the deduction is added to the permit holders income during the year of disposal. (Consequential Amendments Bill, Schedule 2, Item 19). The 'claw-back' approach is proposed by the government 'because of the evidentiary difficulty of determining the purpose of acquiring a unit and because it avoids complexities where a purpose changes before disposal.'²¹ However, presumably such difficulties will exist in determining the purpose for which a permit is disposed of.

12.37 Effectively, this measure will render the cost of purchasing a permit non-tax deductible if disposed of for non-business reasons. The Government argues that the proposed treatment is 'consistent with the non-deductibility of private or non-commercial liabilities for tax purposes.'²²

12.38 The ICA argues in relation to this measure:

The Institute believes it is important for the Government to provide further clarity around this issue to confirm that businesses (including those outside the CPRS) will continue to be entitled to tax deductions for the purchase of emissions units that are surrendered for purposes such as abatement (in respect of being a 'good corporate citizen')...all taxpayers that are carrying on a business (including taxpayers who may not be obliged to acquire permits such as those who voluntarily abate their emission under a carbon neutral strategy) should be allowed a tax deduction for the acquisition of emissions permits. Adopting this approach is considered desirable as it will encourage a broader population of business taxpayers to participate in the community's efforts in reducing Australia's carbon emissions.²³

20 Consequential Amendments Bill Commentary, p. 49.

21 Consequential Amendments Bill Commentary, p. 43.

22 *White Paper*, p. 14-16.

23 Institute of Chartered Accountants, *Submission 98*, p. 5

12.39 Clearly, expanding the number of tax payers who may receive a tax deduction would not be revenue neutral. However, there may be benefits in such an approach, including avoiding the need a 'claw back' mechanism.

12.40 Other issues raised in submissions included the suggestion that deductions for the cost of permits should be deductible in the tax year the obligation arises (and not when permits surrendered).²⁴

12.41 The various suggestions made in relation to tax provisions are highly technical and require careful evaluation to determine their impact on the scheme. The committee suggests that the Government carefully evaluate such proposals.

12.42 As a general principle, the committee endorses the ICA's view that tax arrangements surrounding the scheme should adhere to the principles of neutrality, fairness and simplicity, and in particular, that tax arrangements should be designed in a way that causes companies to do 'something because of the tax reasons and not because of the policy reasons for climate change abatement.'²⁵

Obligation Transfer Numbers

12.43 In the Green Paper, the Government noted that, whilst the logical point at which to impose scheme obligations was the point at which the emissions are physically produced, in some sectors this would not be appropriate. For example, in the case of transport the point of emissions could be many millions of cars.²⁶ However, the Green Paper also noted that in some sectors, there were advantages in large emitters retaining responsibility for managing their own emissions, in order to provide incentives for abatement.

12.44 The administrative solution proposed in the White Paper was the 'Obligation Transfer Number' (OTN). The CPRS Bill Commentary describes an OTN as allowing 'Scheme obligations to be transferred from upstream suppliers of fuels and synthetic greenhouse gases to intermediate suppliers and end users'.²⁷

12.45 The White Paper illustrates the operation of an OTN as follows:

- Entities would apply to the Authority for an OTN
- The entity quotes its OTN to upstream suppliers when it purchases fuel

24 Institute of Chartered Accountants, *Submission 98*, p. 4; Energy Supply Association of Australia, *Submission 21*, p. 12

25 Mr Roderick Henderson, Institute of Chartered Accountants, *Proof Committee Hansard*, 27 March 2009, p. E56.

26 Green Paper, July 2008, p. 97

27 Commentary on CPRS Bills, p. 29

- The upstream supplier reports to the Authority volumes of fuel supplied to entities that have quoted their OTN. They would only be liable for emissions from combustion of fuels supplied to entities that have not quoted an OTN.
- Entities report to the Authority volumes of fuel supplied to them under the OTN and directly manage permit liabilities associated with the use of this fuel (if any), except if this fuel is then re-supplied to another OTN holder
- OTNs could be used for any fuel that is purchased by the entity.²⁸

12.46 The *White Paper* explains that OTNs may be used on a voluntary basis in the following circumstances:

- Entities that use fossil fuels, including synthetic fuels, as feedstock in a chemical transformation or consume fossil fuel other than by combustion
- Entities undertaking solid fuel transformation
- Upstream suppliers of natural gas, liquefied natural gas, compressed natural gas, ethane, coal seam gas, underground coal gas and town gas that acquire gaseous fossil fuels from another entity to manufacture those gases
- Intermediate suppliers of fossil fuels (including coal washeries and distributors) and synthetic greenhouse gases
- Entities using fuel for international voyages or for other purposes that do not result in domestic emissions
- Large users of petroleum liquid fuels.²⁹

12.47 The use of OTNs will be mandatory for large users of fossil fuels other than petroleum liquid fuels, retailers of natural gas and other pipeline gases, and marketers of liquefied petroleum gas.

12.48 The incentive for voluntary quotation of an OTN is that it gives the opportunity to entities to directly manage their scheme liabilities. In other words, they will receive fuels without an additional cost passed on by suppliers to cover scheme liabilities, but will be able to seek alternative means of meeting their scheme obligations.

12.49 A significant amount of the bill will be devoted to the operation of OTNs. Establishment and use of OTNs are dealt with in Division 3 of Part 3 of the exposure draft of the CPRS Bill. Provisions relating to the effect of OTNs (for example, outlining the effect of quoting an OTN will have on determining an entity's liability) are outlined in several parts of the CPRS Bill, including discussion of determining emission liabilities and liable entities (e.g. Division 2 of Part 3).

28 *White Paper*, Box 6.5, p. 6-15

29 *White Paper*, p. 6-14

12.50 Those submissions which focussed on OTNs (e.g. the Plastics and Chemicals Industries Association (PACIA), Australian Institute of Petroleum (AIP), BP Australia, the Australian Petroleum Production and Exploration Association (APPEA) and Caltex) supported the mechanism. The committee heard opinions that that administrative solutions such as OTNs were 'innovative' which other governments could learn from,³⁰ would be a 'powerful way' to ensure pass through of carbon costs to the final cost of goods.³¹ However, in its submission CSR Limited recorded concerns about how the provisions on OTNs have been drafted, describing the provisions relating to OTNs as 'confusing and in some cases unworkable.'³²

12.51 Some submissions made some comments of a technical nature or requests for clarification in relation to the draft provisions. For example, PACIA called for mandatory quotation of OTNs in all cases where purchases of fuel occurs for feedstock purposes, reflecting their view that use of fuels for feedstock purposes can sequester rather than combust hydrocarbons.³³ BP noted its concern that a civil penalty applied in cases where a supplier provides fuel to a customer which has quoted an incorrect OTN (subclause 68(2)), suggesting instead that liability for the quotation of correct number lie with customer.³⁴ AIP noted that mandatory quotation of OTNs should become mandatory for large users of liquid fuels once necessary administrative arrangements are in place.³⁵ APPEA requested the bill should make clear that in the case of direct export of a fuel (such as LNG) to an overseas customer, that the overseas customer does not need to obtain and quote an OTN (reflecting that in some sectors exports may not occur via an intermediary).³⁶ Caltex also proposed refinements.³⁷

12.52 In addition, other detailed suggestions for improvement of particular provisions relating to OTNs were made in submissions. The committee notes that these comments are mostly technical in nature and do not detract from general support for the concept. These technical comments should not be an obstacle for supporting the proposal.

12.53 Comments such as those provided in submissions demonstrate the usefulness of releasing an exposure draft prior to introduction of the bills. The committee urges the government to examine closely suggestions regarding the OTN provisions with a view to clarifying the final bills where possible.

30 Mr Paul Curnow, *Proof Committee Hansard*, 27 March 2009, p 18

31 Mr Gregg Rowley, Santos Ltd, *Proof Committee Hansard*, 24 March 2009, p 23

32 CSR Limited, *Submission 65*, p. 4

33 Plastics and Chemicals Industries Association, *Submission 85*, p. 7.

34 BP Australia, *Submission 103*, p. 3

35 Australian Institute of Petroleum, *Submission 115*, p. 20

36 Australian Petroleum Production and Exploration Association, *Submission 111*, p. 14

37 Caltex Australia, *Submission 128*, p 3.

Chapter 13

Legal aspects

13.1 This chapter examines the legal issues that were raised in the course of the inquiry.

Contractual impediments to carbon cost pass-through

13.2 A number of stakeholders raised issues in relation to contractual impediments to carbon cost pass-through.

13.3 The Australian Pipeline Industry Association (APIA) expressed concern over the lack of a mechanism to enable carbon cost pass-through in respect of existing contracts.¹ APIA submitted that such a mechanism was necessary because many of its members were parties to long-term contracts that did not make provision for the structural changes, and hence increased costs to its members, arising from the introduction of the CPRS.²

13.4 APIA observed that many of its members would be liable entities under the CPRS as they produced CO₂-e emissions over the threshold of 25 000 tonnes annually. This was due to the amount of natural gas used to transport gas through extensive networks of pipelines by means of compression.³

13.5 Alternatives to this method of gas transportation were, in APIA's view, capital intensive and not necessarily an economic alternative to purchase of permits under the proposed CPRS.⁴

13.6 The APIA submission outlined the impediments to passing through carbon costs:

Many long-term contracts, and some recent contracts, in the gas transmission industry predate the fundamental policy shift reflected in the CPRS. Whilst the wording of these contracts in relation to change of law clauses or pass through of tax changes depends upon the particular contracts, many do not allow for costs associated with carbon constraints to be passed through to customers. These contracts can extend up to 15 or 20 years, which means affected gas transmission companies will bear this cost, with no compensation, for many years to come.⁵

1 Australian Pipeline Industry Association, *Submission 6*, p. 1.

2 Australian Pipeline Industry Association, *Submission 6*, p. 1.

3 Australian Pipeline Industry Association, *Submission 6*, p. 2.

4 Australian Pipeline Industry Association, *Submission 6*, p. 2.

5 Australian Pipeline Industry Association, *Submission 6*, p. 3.

13.7 In submissions on the government's policy papers, and to the committee, APIA proposed that the draft legislation be amended to include provisions requiring that 'the CPRS...be treated as a tax for the purpose of allocating costs under contractual obligations'.⁶

13.8 Santos Limited (SL) also raised the issue of carbon cost pass-through, in relation to its existing long-term contracts of supply of gas such as methane.⁷ Like APIA, Santos defined this issue as essentially a contractual problem. Mr Gregg Rowley, Group Executive, Clean Energy, advised:

Those long-term contracts often go back years in terms of when they were signed. The idea of an ETS, or carbon trading system, was not agreed on at that stage, so, unfortunately, in not all but a number of those long-term contracts, the wording is not right to allow the passing of those carbon costs through the system.⁸

13.9 The Santos submission proposes the following solution to remedy this perceived oversight in the design of the CPRS:

Santos strongly believes that a statutory pass-through provision, acting for a transitional period, needs to be inserted in the CPRS Bill to reinforce the key design of the CPRS that the costs of the scheme are passed through to the end users. To provide certainty for business on this matter the scope of the statutory pass-through provision should apply specifically to contracts where the:

- issue of carbon cost pass-through was not explicitly and effectively dealt with in the contract
- contract was entered into before 3rd June 2007
- contract is for a supply that has an associated carbon cost and occurs after the commencement of the CPRS; and
- contract is non-reviewable for carbon costs.⁹

13.10 Appearing before the committee, Santos disagreed with the response provided by the government in the White Paper, which rejected this approach on the grounds of constitutional issues, difficulty in assessing respective liabilities between parties to a contract and the potential for such pass-through clauses to act as disincentives for emissions abatement.¹⁰

6 Australian Pipeline Industry Association, *Submission 6*, p. 1.

7 The extracted methane contains CO₂, which is separated out and vented, thus attracting liability under the proposed CPRS.

8 *Proof Committee Hansard*, 24 March 2009, p 23.

9 Santos Limited, *Submission 81*, p. 2.

10 Mr Gregg Rowley, *Proof Committee Hansard*, 24 March 2009, p 23.

13.11 The Australian Coal Australian Association (ACA) submission highlighted carbon cost pass-through as an issue for coal mines supplying thermal coal for the domestic market, again due to long-term contracts inadequately drafted to deal with the issue of carbon cost pass-through. ACA recommended that the coal industry therefore be allowed access to EITE assistance. This issue is addressed in Chapter 6.

13.12 Griffin Energy (GE), a group with interests in the WA electricity generation and supply industry, was also concerned about contractual impediments to carbon cost pass through.

Committee comment

13.13 The committee observes that the issues raised in submissions and hearings on this issue have been identified and considered in detail in the consultations on the Green Paper and White Paper. The government declined to take the approaches recommended by stakeholders on the basis that renegotiation of contracts or new market entrants was a more likely and reliable means by which defective contracts could be remedied. In contrast, the approaches suggested could be complex, ineffective and carry a real risk of: exposing the government to claims for just terms compensation by virtue of section 51 (xxx1) of the Constitution.

13.14 The committee heard no evidence to convince it that the government's previously expressed position should be reconsidered.

13.15 The committee notes also that equity issues arise where it is proposed to intervene in contracts negotiated in recent years, which either failed to consider the potential for a carbon price or that were technically defective in creating terms to deal with the possibility. The committee considers it very likely that a significant number of the contracts in question failed to anticipate the introduction of emissions trading, and hence a carbon price, at a time when this was at the very least a reasonable prospect. It would be inappropriate for the government to intervene in order to make good any such failure.

13.16 Finally, the committee notes that the government has undertaken to monitor the progress of commercial contract negotiation and formation now that stakeholders are aware of the scheme design and intent with regard to carbon cost pass through. The CPRS White Paper states:

Based on current information, the Government will take no action with respect to contractual impediments other than as discussed in Chapter 7 in relation to the ability of firms to transfer obligations under certain circumstances. In 2009 the Government will continue to monitor the nature of contractual issues, including the scope for, and progress of, commercial negotiations, once stakeholders have had an opportunity to assess the exposure draft of the legislation.

The legislation will not contain any provisions designed to override contracts to allow for pass-through of carbon costs.¹¹

Regulation-making under the CPRS

13.17 A number of witnesses were concerned about the scheme's reliance on regulations. Mr Ralph Hillman, Executive Director, Australian Coal Association (ACA), advised:

The ACA...[is concerned that the] legislation does not address the principal policy elements of the proposed CPRS, leaving most of the important policy objectives and instruments to the explanatory memorandum and regulation.¹²

13.18 The Australian Petroleum Production and Exploration Association (APPEA) shared this concern over the potential scope of the regulations, and expressed support for a discrete inquiry into the issue.¹³

13.19 More particularly, Ms Aileen Murrell, Assistant Director, Chamber of Minerals and Energy of Western Australia, submitted:

...key sections of the draft legislation, such as part 8 relating to the Emissions-Intensive Trade-Exposed Assistance Program, contained little detail, leaving a substantial amount to be set out in the regulations not planned for release until June 2009.¹⁴

13.20 Mr Rowley, representing Santos, also raised this issue in relation to EITE assistance, cap limits and scheme coverage. Mr Rowley noted the importance of 'due time, consideration and consultation' in the formulation of the regulations.¹⁵

13.21 In response to the criticisms outlined, Mr Barry Sterland, Acting Deputy Secretary, Department of Climate Change (DCC) provided a comprehensive assurance of the range of consultations to be undertaken in formulating the CPRS regulations:

There is consultation, as I said, on the detail of the emissions-intensive trade-exposed. There will be consultation on some elements of the auction legislative instrument early and that consultation will be ongoing through the year. There will be a number of tranches of regulation later in the year, but by and large they are fulfilling and translating the policy that has been clearly enunciated in the white paper. The normal technical interchange that happens in any legislative program will happen. There will be consultation. There will exposure drafts, by and large, of things of interest. We will take

11 *White Paper*, Vol. 1, p. lxxxv.

12 Mr Ralph Hillman, *Proof Committee Hansard*, 25 March 2009, p 107.

13 *Proof Committee Hansard*, 24 March 2009, p. 10.

14 Ms Aileen Murrell, Chamber of Minerals and Energy of Western Australia, *Proof Committee Hansard*, 23 March 2009, p 2.

15 *Proof Committee Hansard*, 24 March 2009, p. 24.

submissions or feedback, and that will be incorporated in the regulations that are made. Ultimately, there is obviously potential for scrutiny in the parliament. So there are a significant amount of regulations to be made, but they are not surprising in their area, they have been well canvassed to date and there will be ongoing consultation on all elements of them.¹⁶

13.22 Responding to the concerns about the reliance on regulations, Mr Sterland observed that the White Paper and exposure draft of the Bill provided sufficient information and guidance on the likely detail of regulations:

The policy in the white paper is very clear, for example, about the way in which emissions-intensive trade-exposed industries are going to be treated. The regulations will implement that, so there is a very extensive process underway to translate that policy through to the regulations. But it is about translating the policy into the regulations, not changing it or bringing in new considerations. There are a substantial amount of regulations, to be sure, and they are outlined quite transparently in both the exposure draft and the white paper itself, which makes very clear the areas where regulations will be important: scheme caps, EITS and a whole range of determinations.¹⁷

Committee comment

13.23 The Committee notes that the commentary on the exposure draft of the Bill provides a direct justification for relying on regulations to define critical elements of the EITE assistance program:

The technical aspects of precisely defining emissions-intensive trade-exposed activities and relevant production units, and the need for flexibility to include new activities, make the program appropriate to locate within regulations rather than the bill itself.¹⁸

13.24 More generally, the committee acknowledges that the Bill requires the making of numerous regulations across all parts of the proposed legislative scheme; elements of the scheme will also be specified in the *National Greenhouse and Energy Reporting Regulations 2008*. The areas of the CPRS which are to be the subject of regulations include, for example, EITE assistance, national targets and scheme caps and gateways, thresholds for ascertaining liability of entities, values for calculating greenhouse gas emissions from certain processes, accounting rules and estimation methodology for greenhouse gas removals in relation to reforestation, and additions or changes to classes already specified in the CPRS legislation (such as types of 'eligible international emissions unit').

16 *Proof Committee Hansard*, 30 March 2009, p. 39-40.

17 *Proof Committee Hansard*, 30 March 2009, p. 39.

18 Department of Climate Change, *Carbon Pollution Reduction Scheme Bill 2009 Commentary*, p. 126-7.

13.25 However, the committee received no convincing evidence that the extent of regulation making is inappropriate to the administrative or regulatory requirements of the scheme. Indeed, the committee notes that extensive regulations are made under other Commonwealth legislation, such as that dealing with environment protection and biodiversity conservation.

13.26 In terms of consultation and the final scope and substance of the regulations, it is relevant to note that the Commonwealth *Legislative Instruments Act 2003* ensures that in Australia there is a comprehensive regime for the proper making and management of Commonwealth legislative instruments. The objects of this Act include:

- encouraging rule-makers to undertake appropriate consultation before making legislative instruments;
- encouraging high standards in the drafting of legislative instruments to promote their legal effectiveness, their clarity and their intelligibility to anticipated users;
- improving public access to legislative instruments;
- establishing improved mechanisms for parliamentary scrutiny of legislative instruments; and
- establishing mechanisms to ensure that legislative instruments are periodically reviewed and, if they no longer have a continuing purpose, repealed.¹⁹

13.27 The committee received evidence indicating that the development of the regulations is proceeding in accordance with legislative requirements and best practice, particularly with regard to consultation,²⁰ as indicated by the evidence of the DCC.

13.28 In the committee's view, the CPRS appropriately sets out both mandatory and discretionary elements that must or may be dealt with by the regulations. The regulations are not to be prescriptive of substantive aspects or general principles of the CPRS, but are appropriately limited to technical matters as well as issues of administration and detail, some of which may be subject to regular or even frequent change. Given the relatively limited experience of emissions trading both in Australia and throughout the world, the committee notes that there is a strong justification for the CPRS to have the scope and flexibility to change in response to changes in our understanding of regulatory best practice or relevant science. Further, regulations enable the executive to more easily adjust the scheme in the interests of supporting the

19 *Legislative Instruments Act 2003*, section 3.

20 See Dr Peter Burn, Associate Director Public Policy, Australian Industry Group, *Proof Committee Hansard*, 27 March 2009, p. 85; and Mr Lee White, General Manager, Institute of Chartered Accountants, *Proof Committee Hansard*, 27 March 2009, p. 55.

development of an effective global response to climate change, which is a central object of the CPRS legislation.²¹

13.29 Notwithstanding the need for flexibility, the making of regulations under the CPRS is adequately constrained by legislative requirements or mandatory considerations contained in the CPRS legislation. This should serve to provide further certainty in relation to the making of regulations.

Senator Annette Hurley

Chair

21 *Proof Committee Hansard*, 27 March 2009, p. 39.

Coalition Senators' Dissenting Report

1) Introduction

Coalition Senators subscribe to the position articulated by Rupert Murdoch that when it comes to carbon dioxide emissions, no matter what your personal views, “the planet deserves the benefit of the doubt.”¹

It is in the planet's and Australia's interests to reduce the world's, and Australia's, carbon dioxide emissions.

However, it is in no-one's interests for Australia to implement a flawed and bureaucratic emissions trading scheme which fails to make a measurable impact on reducing global atmospheric concentrations of carbon dioxide, while at the same time costing Australian jobs and industrial output to other parts of the world.

The so-called Carbon Pollution Reduction Scheme manifestly fails to achieve the joint aims of reducing emissions while protecting jobs.

The Government has rushed this flawed, bureaucratic and poorly detailed legislation before the Committee and is set to try and rush it through the Parliament, asking the Parliament to take them on trust, the bulk of the detail of the scheme, including shielding for emissions intensive, trade exposed industries, which will be delivered through regulation.

Labor want us to move ahead of the world, yet provide only six pages of legislation to try and cushion our emissions intensive, trade exposed industries; they have failed to model the legislation before this Committee.

Also the Government has failed to take account of the effects of the global recession, both in regard to the added risk on jobs imposing the CPRS places at this time, and the effect it has had on global emissions, which have slowed as a result and bought the world “breathing space.”

Finally, due to the unnecessary rush, there has been a lack of proper consideration of alternative carbon pollution reduction schemes, such as carbon taxes, baseline and credit schemes, hybrid schemes such as the McKibbin-Wilcoxon Hybrid Model, or indeed alternative carbon pollution reduction measures such as bio-char.

2) Rushed inquiry

The Government's timetable for the introduction of the Carbon Pollution Reduction Scheme is extraordinarily rushed, especially for a piece of legislation which represents the largest structural reform to the Australian economy in decades.

¹ Rupert Murdoch, ABC “AM”, 7th November 2006

The development of this legislation has been rushed by the Government and is set to be rushed into the Parliament without proper consideration.

The exposure draft of the Carbon Pollution Reduction Scheme legislation was released on the 10th March 2009, and referred to the Economics Committee for Inquiry on the 11th March 2009. Public hearings commenced just a week later, on the 18th March 2009, giving interested persons just one week – five working days – to consider the legislation.

Coalition Senators consider that this is a grossly insufficient period of time to allow interested and affected persons to properly consider the legislation and to provide considered evidence and views to the Committee.

It was therefore no surprise to Coalition Senators that a number of witnesses expressed grave concerns about the very tight timetable that the Government has allowed for this inquiry, a timetable which saw the absurd situation of witnesses giving evidence before they had had time to prepare written submissions.

For example, Ms Belinda Robinson from the Australian Petroleum Production and Exploration Association told the Committee:

*...APPEA is concerned about the very tight timetable allowed for submissions – nine working days – and hearings, most, including this one, held before submissions are due on a package of legislation and commentary that runs for over 700 pages.*²

And Mrs Aileen Murrell from the Chamber of Minerals and Energy of Western Australia, noted:

*This period of consultation, whilst greatly appreciated, is inadequate given the complexity of the proposed scheme and its potential ramifications on the Australian economy. The CME comments to the Senate committee inquiry will therefore be limited to general comments on the Carbon Pollution Reduction Scheme draft bill.*³

Even Professor Ross Garnaut, the author of the *Garnaut Report* commissioned by the Government, told the inquiry that he had not had sufficient time to consider the legislation:

*...I have not, because of my many day jobs, had the opportunity to carefully go through the legislation, so I am not present myself as an expert on the legislation. I was told to come nevertheless.*⁴

When even someone with as close an interest in the Carbon Pollution Reduction Scheme has not had the opportunity to examine the legislation, it is clear that the allowed timeframe is insufficient.

As a result, this inquiry at times descended into farce, often with hours of hearings going by with no direct examination of the contents of the legislation itself.

On top of this extraordinary rush, it quickly emerged during hearings that the exposure draft legislation for the Carbon Pollution Reduction Scheme is extraordinarily light on for genuine detail.

For example, perhaps the most controversial and significant element of the Bill, that relating to the Emissions Intensive Trade Exposed industries, comprises just six pages of legislation. Six!

² Committee Proof Hansard, 24th March 2009, p. E2

³ Committee Proof Hansard, 23rd March 2009, p. E2

⁴ Professor Ross Garnaut, Senate Proof Hansard, 23th March 2009, E53

Instead, the majority and substantive nature of the legislation will be enacted through regulation, should the Bill pass.

Indeed, the word “regulations” appears no less than 222 times in the substantive bill – that is, an average of over once for every two pages of legislation.

As Mrs Murrell told the Committee:

It should also be noted that key sections of the draft legislation, such as part 8 relating to the Emissions-Intensive Trade-Exposed Assistance Program, contained little detail, leaving a substantial amount to be set out in the regulations not planned for release until June 2009.⁵

Further, we are told in the Commentary to the exposure draft that

Other elements of the White Paper package which need to be implemented through legislation are expected to be introduced with the bills referred to above, although they are not being publicly exposed at the same time. This includes legislation to implement the household assistance package and a maritime levy on emissions from shipping services provided by vessels engaged in international voyages carrying domestic cargo and domestic passengers.⁶

Furthermore, Coalition Senators have been denied a clearer understanding of the aforementioned regulations as questions on notice put to the Department of Climate Change during the enquiry were not answered before the report was due.

Given that the household assistance package, along with the EITE provisions, is a key element of the CPRS, Coalition Senators are concerned that the Senate is being asked to deliberate on legislation which takes some \$11.5 billion out of the economy in its first year of operation, and which will dramatically increase electricity and gas prices for all Australians, and yet take on trust, the Government’s statement that it will subsequently introduce legislation which offsets some of these costs to the community.

Coalition Senators are extremely concerned that the Senate is being asked to essentially vote through a “blank cheque” for the Government which will enable them to detail the operation of the CPRS without the opportunity for fine-tuning and adjustment in the Parliament as is appropriate.

It is of concern to Coalition Senators that both rushed timeframes, and putting the detail in the regulations rather than the legislation, is becoming a pattern under this Government, with Coalition Senators on this committee having expressed similar concerns about another piece of legislation also considered recently by this Committee in November 2008, the Corporations Amendment (Short Selling) Bill 2008.

As the saying goes ‘the devil is in the detail’ and Coalition Senators believe that model regulations should be provided to the Committee for assessment.

3) The CPRS Scheme

⁵ Committee Proof Hansard, 23rd March 2009, p. E2

⁶ Carbon Pollution Reduction Scheme Bill 2009, Commentary, p. 13

The CPRS model of the emissions trading scheme is the Government's response to the Garnaut Report's prediction that unless carbon emissions are significantly reduced there will be a 4% increase in global temperatures.

According to the supporting documentation of the exposure draft, the objectives of the scheme are:

1. To meet Australia's obligations under the Kyoto protocol by reducing carbon emissions;
2. To support the development of an effective global response to climate change; and
3. To reduce Australia's carbon emissions to 60% below 2000 levels by 2050 and between 5% and 15% below 2000 levels by 2020.

The question Coalition Senators have sought to answer is whether these are reasonable objectives for a small country like Australia which produces only 1.4% of global carbon emissions or whether a more modest scheme, which concentrates on local reduction of carbon emissions, would be more appropriate and less costly to the Australian economy.

According to the Institute of Public Affairs (IPA):

"Over the past decade, Australia's economy has been buoyed up by being the quarry to the world's fastest growing economies. But notwithstanding our natural wealth, and economic reforms, we have struggled to grow at one third of the rate of less well placed countries like India and China. Moreover, the accumulation of regulatory imposts and threats, of which those on energy have increased most, is now contributing to recessionary warnings.

Australia has more to lose than almost any other country from the costs imposed by CO2 emission restraints. Cheap coal based electricity has been the bedrock on which much of our industrial development rests. Smelting industries in particular gravitated to Australia in the wake of the 1970s oil price hikes but low cost electricity has assisted the competitiveness of all our tradable goods industries. While we might speculate on the long term costs of global warming on Australia, the short term costs of increasing the price of electricity supplies are self evident.

*With only one per cent of world GDP, we are neither prominent among world nations nor particularly influential within world councils. And while Australia has many well qualified scientists few of these are considered to be world authorities on climate change. Accordingly, it is pure hubris for Australia to attempt to take the lead in abatement activity."*⁷

4) Assessment of the CPRS Model

The proposed Emissions Trading Scheme (ETS) is a so called 'Cap and Trade' model under which industry will be required to obtain permits, known as Australian Emissions Units (AEUs), from the Australian Climate Change Regulatory Authority.

While the ETS will apply to a variety of greenhouse gases listed in the Kyoto Protocol, including methane, nitrous oxide, sulphur hexafluoride, hydrofluorocarbons and perfluorocarbons, these gases account for roughly 24% of greenhouse emissions and CO2 the remaining 75%.

Notably, the Rudd / Wong CPRS proposal will not apply to all Australian Industry. In fact, only about 1000 firms, considered to be the largest emitters in the country, will be required to initially comply

⁷ Alan Moran, 2008, *Submission to the Green Paper on Australia's Carbon Pollution Reduction Scheme*, Institute of Public Affairs, September 9, p3.

with the scheme. It has been noted that the exclusion of petrol, for up to 3 years, reduces the coverage of the ETS by another 14%. In addition, agriculture will be excluded for 10 years and de-forestation will not be included to avoid 'practical difficulties'.

According to the background paper, the Government has not decided whether the Joint Petroleum Development Area and the Greater Sunrise Oil and Gas Field will be included in the Scheme. It is clear that the Scheme will have only restricted application in the Australian Economy and there is certainly little provision for individual Australians to have any recognition of contributions they may make to the reduction of emissions, for example, by installing solar powered hot water systems on their roofs or by having their homes designed according to principles of energy conservation.

Emissions credits (AEUs) will be treated as financial products and consequently will be regulated by ASIC. In due course, the ASX will introduce a futures market for emissions credits prior to the issue of permits, so it is said, to assist industry in managing risk.

The Government envisages linkages with similar trading schemes when established and in fact envisages Australia becoming a regional hub for carbon trading. With countries such as China, Japan, South Korea, and Indonesia, considered unlikely to establish ETSs in the near future, the concept of Australia becoming a carbon trading hub appears to be optimistic.

One of the features of the CPRS is that emitters will be able to purchase credits from other countries based on overseas mitigation programs such as forest plantations in Indonesia. Such credits will mean that Australian companies purchasing such credits will be able to produce a commensurate amount of carbon emissions above Australia's cap. Coalition Senators find it hard to understand how such arrangements can be seen as consistent with the reduction of world carbon emissions which is one of the 3 objectives of the CPRS.

5) **Alternative approaches**

Australia is a small country accounting for around 1% of global GDP and producing only 1.4% of world emissions. Coalition Senators believe that it is important to not lose sight of the fact that we live in a competitive world and while Australia does have some competitive advantages in attracting investment, such as political stability, a sound banking sector, reliable law and low sovereignty risk, these are only relative benefits. It would be unwise for Australia to significantly increase unilaterally the operating costs of industry in comparison to our competitors.

As stated in the Age, Mr Don Voelte, CEO of Woodside Petroleum, warned that:

*"the proposed emissions trading scheme would cost LNG projects between 15% and 30% of after-tax profit."*⁸

The Institute of Public Affairs has also expressed the view that it is unwise for Australia to overlook what a small player it is in the commercial affairs of the world and to imagine that adopting an ETS which imposes higher costs on industry will not put Australia at a competitive disadvantage.

Coalition Senators are of the view that any Australian ETS should be primarily concerned about encouraging reductions in carbon emissions in Australia without imposing undue increases in costs to

⁸ Mathew Murphy, 'Emissions scheme threatens LNG', *Age*, 25 September 2008, p2.

Australian industry and consumers which would respectively cause economic disadvantage and loss of jobs to industry and increase the cost of consumer goods and living costs for Australian citizens. Accordingly, Coalition Senators believe that alternatives to the proposed CPRS should be considered.

Coalition Senators believe that three alternative schemes should be evaluated with those being:

- A. A Carbon Tax;
- B. McKibbin-Wilcoxon Hybrid Model; and
- C. Emissions trading developed using the baseline and credit method, otherwise known as the Canadian Scheme.

5a) Carbon Tax

A Carbon Tax is a tax based on carbon emissions where emitters are charged / taxed a fixed amount per unit of carbon emitted. The price certainty which a Carbon Tax would provide is regarded as a significant advantage compared to the uncertainty which would prevail under the proposed auction of credits as outlined in the CPRS.

An argument used against the use of a Carbon Tax is that it would need to be periodically re-set, however Coalition Senators believe that this is an overstated problem and that the Carbon Tax for any forthcoming year could be included as an item in the May Budget along with most other taxes and any adjustments made to those taxes.

Senator EGGLESTON— Nobody disagrees that a global system is a great ideal, but many people think it will be a long time before it is implemented because the kind of countries we are dealing with, like Indonesia, India and Malaysia, are not going to have emissions trading schemes in the foreseeable future. So, whilst it is an ideal, it is not necessarily a very practical basis upon which to work. Some people have suggested that, in fact, a carbon tax would be a better approach and say that a carbon tax is preferable to a carbon trading system because it is more efficient, effective, simple, flexible, transparent and, more importantly, has the added benefit of providing revenue which could be used to cut other taxes, including domestic taxes. A revenue neutral carbon tax may have little or no economic cost to us in Australia. Economic cost is a big issue because it may translate into loss of jobs and have an adverse effect on our economy.⁹

Coalition Senators concur with the view expressed in the Garnuat Report that “a carbon tax would be better than a heavily compromised emissions trading scheme”.¹⁰

Most importantly however, Coalition Senators believe a Carbon Tax should be considered because it would specifically focus on addressing the need for reduction of emissions in Australia rather than overseas.

Whilst the CPRS holds grandiose overtones which promote the scheme as an example for the world to follow, Coalitions Senators cannot ignore that the CPRS represents a complicated emissions trading scheme which risks higher costs to our economy and disadvantages to our people.

⁹ Senator Alan Eggleston, *Proof Committee Hansard*, 24 March 2009, p26.

¹⁰ Ross Garnuat, 2008, *The Garnuat Climate Change Review: Final Report*, p299. Melbourne: Cambridge University Press.

Coalition Senators repeat the view expressed in the Garnaut Report that a Carbon Tax would be preferable to a heavily compromised emissions trading scheme which the CPRS, with all its uncertainties and presumptions, will almost undoubtedly prove to be.

5b) McKibbin-Wilcoxon Hybrid Model

Professor McKibbin gave compelling evidence to the CPRS Inquiry in Canberra. It was noted that he is an advisor to the US Government on climate change and co-director of the energy and climate economics project at the Brookings Institute in Washington. Under the McKibbin-Wilcoxon hybrid model, as explained by Professor McKibbin, large emitters would be allocated long term permits which would be tradeable, within Australia (and not internationally), for carbon credits as under the current CPRS model. As well the government would issue short term annual permits at a fixed price. McKibbin believes that this model would reduce the volatility and unpredictability of carbon prices associated with emissions trading and the CPRS in particular.

Professor McKibbin provided the Committee with a copy of an address he gave entitled “*Lessons for climate policy from monetary history*” and Coalition Senators include in this report the summary given in that address as the points made are extremely relevant to consideration of this issue:

“To sum up: climate change policy is a serious issue. Dealing with climate change uncertainty is what matters. Any effective policy will be a major change to the Australian economy. A new market has to be created. It is not a short-term carbon market. It is not a new tax. It is a long-term market in trading climate uncertainty, which is needed at the national and global level.

The second point is that there is still a great deal of uncertainty about where the world is heading, so if a Garnaut-type approach is taken, where you commit to a precise target or a range of targets on the off-chance that you would be able to trade your way out of it by buying cheap permits offshore, and the permit market does not develop offshore, what do you do? You may have locked yourself into an international agreement with no safety valve. Relying on the development of a global trading system without a safety valve domestically is a very risky policy.

The final point I want to make is that we need to get away from the idea that we know exactly where we want to go and that there are no trade-offs in getting there. That’s called religion. We have to deal with the trade-off between the environmental benefit of taking action, and the economic costs of getting there. If this is not acknowledged, international agreement will not occur, because it is over cost issues where the international negotiations are failing. Developing countries have bigger problems to deal with, from their own viewpoint, than climate change, but they are willing to be part of the international process if it is designed the right way.

Monetary history has a lot to teach policymakers about how to design effective climate policy at the national level within a cooperative global agreement. It is time to move in the direction of building a transparent, credible, national or regionally focussed policy framework, with flexibility to adjust in a clear way over time towards a global concentrations goal. The almost religious focus on targets and timetables regardless of costs is the biggest hurdle to overcome in the climate change policy debate. There are better ways to generate carbon prices than what is currently proposed. One such better approach has been the focus of this presentation.”¹¹

¹¹ Professor Warwick McKibbin, 2008, Dinner address: Lessons for climate policy from monetary history. In *Promoting Better Environmental Outcomes: Roundtable Proceedings*, Canberra, 2008, p226. Melbourne: Productivity Commission.

Coalition Senators are of the view that the stabilization of prices that the McKibbin-Wilcoxon Hybrid Model promises means that further evaluation of the McKibbin-Wilcoxon Hybrid Model is certainly justified. In addition, the McKibbin-Wilcoxon Hybrid Model, by not permitting international trading of credits, would have the desired effect of an Australian scheme focusing on the domestic price of carbon rather than Australia being drawn into the issues of unpredictability and uncertainties which will inevitably surround international carbon trading models.

5c) The Canadian Model – Baseline and Credit

The presentation by Frontier Economics in Melbourne made the point that since Australia is a small, open economy it is necessary to ensure that any scheme introduced to reduce carbon emissions needs to be economically efficient.

Frontier Economics pointed out that this is particularly the case if Australia is drawn into setting up any scheme ahead of competing nations.

Mr Price, Managing Director of Frontier Economics, made a strong case for consideration to be given to a “carrot and stick” approach, which he stated as having “*the key benefit [] that the absolute price effect through the economy is much smaller for exactly the same emissions reduction and exactly the same resource cost. So it has the same economic efficiency characteristics but the price effect is much smaller.*”¹²

The point was also made that the baseline and credit approach which he proposed would avoid what he described as the “*need to churn billions and billions of dollars of revenue*”¹³ as would be the inevitable outcome, as he stated, of the CPRS system proposed under the Rudd / Wong plan.

Another point of concern which the Canadian model addresses is the negative impact the proposed CPRS will have on complementary programs and voluntary actions. As explained by Mr Price:

“the way the CPRS works is that if complementary measures are put in place by other state governments, or if voluntary actions are undertaken by consumers, all that does is leave additional emissions that are allowed to be produced by industry. It undermines the incentive for voluntary action and undermines the effectiveness of complementary measures that governments put in place at the federal, state and local levels because the way these schemes work is that it is a target that is consistent through time, irrespective of the economic conditions. It provides investors with a great deal of certainty. It maintains the task for producers and consumers to continue to reduce emissions through time. It does not give them a let-up if the economy goes back a little bit. It still keeps the pressure on reducing emissions through time and it does not undermine the incentive for voluntary action or complementary schemes.”¹⁴

Coalition Senators are of the view that voluntary action and complementary schemes should not be rendered ineffectual in the overall plan to reduce carbon emissions. Many people, whose votes were influenced by the Labor Government’s promised action on carbon emissions, would be greatly discouraged if the proposed CPRS disempowered them, allowing for emitters to benefit from their voluntary actions rather than the environment.

¹² Daniel Price, *Proof Committee Hansard*, 24 March 2009, p70.

¹³ Daniel Price, *Proof Committee Hansard*, 24 March 2009, p72.

¹⁴ Daniel Price, *Proof Committee Hansard*, 24 March 2009, p72.

Frontier Economics also made the point that the CPRS scheme inadvertently benefits higher emitters and removes the incentive for those higher emitters to reduce their emissions:

“the CPRS creates some perverse impacts in that it tends to reward higher emitters in the compensation arrangement than lower emitters and in fact discourages high emitters from reducing their emissions.”¹⁵

Coalition Senators are concerned about this possibility and took note of Mr Price’s comments regarding the need for a stable price for carbon:

“Because the emissions task is constant through time under the scheme we are promoting, carbon prices will be far more stable through time. We spend a lot of time with investors in the energy sector in particular and the one thing they like is stable commodity prices or prices against which they can decide their investments. The last speaker I heard talked about the European emissions price rising and collapsing rapidly according to what happened in the regulatory arrangements. You will see the same thing with the CPRS through the course of re-establishing the so-called gateways. Prices will rise and collapse as you come close to those gateways. It will create lot of price instability. Price instability makes it very difficult for investors to make long-lived infrastructure investments. This type of arrangement provides much more stable prices.”¹⁶

Mr Price concluded by making the point that a Canadian style cap and credit scheme would probably produce a relatively lower cost of electricity and thus a lessened impact through the general macro-economy. Mr Price stated that he believed the cost savings if this approach was applied just to electricity would be *“...in the order of \$300 billion to \$400 billion cheaper than the CPRS.”¹⁷*

The baseline and credit or intensity scheme model, which Frontier Economics promoted at the hearings, was said to be *“...a scheme design which is more dominant around the world and more prominent in Australia in terms of operations.”* It was further claimed by Frontier Economics that *“it received virtually no attention in the course of any analysis that Professor Garnaut undertook.”¹⁸*

Coalition Senators are of the view that intensity schemes should be given further consideration as a possible model for an Australian ETS in view of the clear economic benefits such a scheme is said to offer.

6) Underlying assumptions

The Rudd / Wong CPRS scheme depends for its success on three underlying assumptions. These are firstly, that there will be an international market established for carbon trading and that most countries in the world, including Australia’s major trading partners, will introduce ETSs. The second assumption is that the process of accounting for the volume of permits traded internationally will be valid and can be relied upon as financial documents in good standing and thirdly, that the MRET target of 20% of Australia’s power being provided by renewable energy is achievable.

¹⁵ Daniel Price, *Proof Committee Hansard*, 24 March 2009, p72.

¹⁶ Daniel Price, *Proof Committee Hansard*, 24 March 2009, p72-3.

¹⁷ Daniel Price, *Proof Committee Hansard*, 24 March 2009, p73.

¹⁸ Daniel Price, *Proof Committee Hansard*, 24 March 2009, p81.

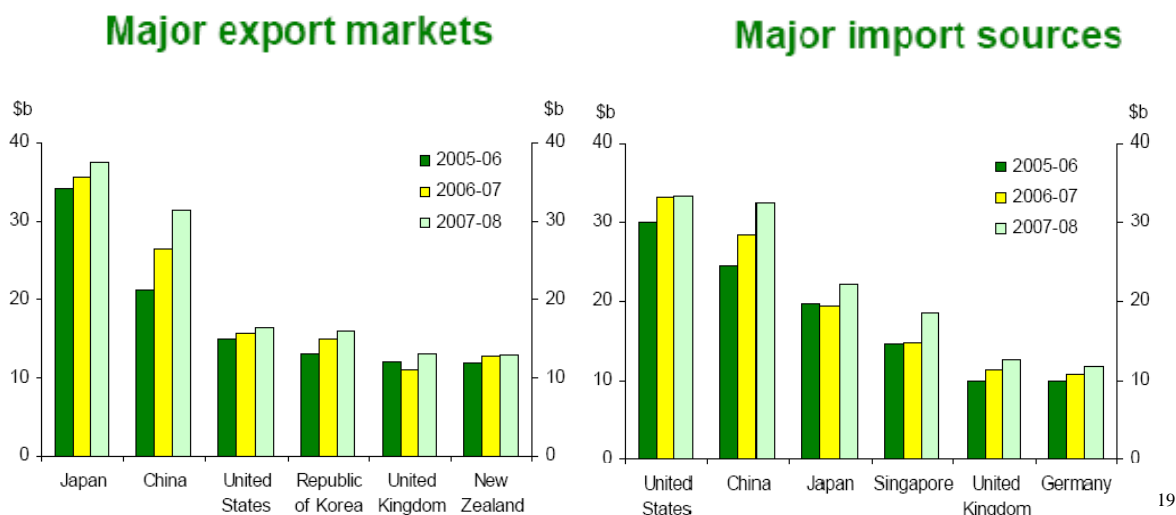
Regrettably there is doubt about all of these assumptions being realized.

The establishment of an international carbon market

The Rudd / Wong CPRS depends heavily on the establishment of an international carbon market enabling countries with ETSs to trade in carbon in which Australia would participate. In fact, the existence of an international market for carbon credits is integral to reducing the cost burden of an ETS on Australia as trading in international credits is expected to put downward pressure on the price of permits by enabling the purchasers of permits to buy them where they are cheapest.

For a carbon market to have any meaning Australia's major trading partners would have to be involved, otherwise Australia would find that the added cost of an ETS would put Australia at a competitive disadvantage.

Australia's major trading partners are now in East Asia, including China, Japan, Korea and Singapore, while the USA, the UK, and Germany remain significant trading partners as shown in the graphs below.



Of the above countries, the UK and Germany, as members of the European Union, are participants in their ETS and New Zealand has established its own ETS.

The patterns of world economic power and trade are changing as is demonstrated by the growth of the Chinese economy and in considering future patterns, India must also be recognised as being a growing economic power with which Australia will become increasingly engaged in future years.

Alan Moran, in an article entitled "Climate Change: China's approach" referring to the 2008 White Paper issued by the Chinese Government, said:

"In a notable turn, the White Paper shifted the policy priority to adaptation. This is a recognition that China (and therefore others in the developing world that embark on a rapid growth path) will

¹⁹ Department of Foreign Affairs & Trade, 2008, *Composition of Trade 2007-08*. Canberra: Commonwealth of Australia.

not initiate serious abatement measures at least until Western levels of emissions are reached. And in this respect the White Paper discusses cumulative levels of emissions which would justify China out-emitting Western countries on the basis of the past levels of emissions. A corollary is that the sort of CO₂-e levels of emissions said to be required to stabilise the warming effect will not be reached.”

In a similar review article on Japan, entitled “Japan and Global Warming Policies”, written in November 2008, Alan Moran wrote:

“Other sources confirmed that Japan is taking a de facto approach that involves no action of a substantive nature. Japanese industry is very concerned to combat measures that would add to its costs and retard growth. It also takes the view that it is highly efficient already and points out that the Japanese use less energy than others domestically due to the smallness of their houses, a matter which called forth deprecating comment from the western media not long ago. Even so, the policy approach followed is not consistent with the 3-4 tonnes per capita average global emission levels that would be required if CO₂ levels are to be stabilised at the 550 ppm level.”

On the likelihood of Japan introducing an ETS, Alan Moran wrote:

“Japan will participate in all international matters and contribute to carbon savings but is not considered at all likely to introduce a tax or ETS that involves any disciplines on industry.”²⁰

With respect to the USA establishing an ETS, Tim Wilson claimed in his March 2009 paper already referred to above, that:

“the US has made it clear that it will not participate in a post-Kyoto agreement without the involvement of developing countries. And despite postulations by President Obama, the US will not be in a position to make significant cuts to its emissions. Obama’s recently appointed Special Envoy on Climate Change, Todd Stern, said that the 25 to 40 per cent emissions reductions committed to in the Bali Road Map were “not possible” for the United States. And his comments have been echoed by the head of the Intergovernmental Panel on Climate Change, Rajendra Pachauri, who said recently that President Obama would face a “revolution” if he committed to deep cuts in emissions.”²¹

From this it would seem that there are reasonable grounds for doubt that an international ETS market involving many of Australia’s major trading partners will be established in the foreseeable future.

Reliability of Carbon Permits as Financial Instruments

In his previously mentioned article, Tim Wilson also raised questions about whether the volume of permits traded internationally will be valued appropriately and could be relied upon as financial documents in good standing:

“Carbon markets operate essentially the same as a normal financial market. The value of a financial product is diminished the more are issued, or the credibility of the equity to underwrite the financial product is uncertain. If a carbon permit is traded at a certain price it is essential that

²⁰ Alan Moran, 2008, ‘Japan and Global Warming Policies’, Institute of Public Affairs Occasional Paper, November 2008.

²¹ Tim Wilson, 2009, ‘Australia’s delinked and non-compliant Emissions Trading Scheme’, Institute of Public Affairs Occasional Paper, March 2009, p15.

“the value of the credit will be maintained”. If the government issues too many permits, or cannot substantiate the equivalent carbon emissions for the permit, it loses value. And with the loss of value goes the credibility and certainty provided in the market, the incentive to invest and the credibility for linking markets. Bowen lays out the conditions for, an efficient and effective global emissions trading market as:

- *Having efficient rules and administrative arrangements (including monitoring, enforcement and penalties).*
- *Including all major suppliers of, and demand for, permits.*
- *Ensuring that supply and demand for permits delivers a price on carbon that is enough to encourage abatement, yet not so high as to dramatically reduce growth.*
- *Delivering certainty.*

Similar conclusions followed from an EU simulated exercise on emissions trading, and the Government’s White paper.”²²

Wilson adds:

“Yet currently most of the infrastructure necessary to provide certainty doesn’t exist in countries, including developed countries. In Australia the Federal Government is still collecting initial data of Australia’s emissions from the private sector. And Australia is significantly more advanced than most other countries.

That would mean establishing government infrastructure in all participating countries to be able to monitor, account and enforce their emissions; and have credible permits equivalent to their emissions sufficient that investors want to buy those permits. As Peterson argues “permit trading can only be an efficient instrument if emission and permit trade are monitored and accounted appropriately and if compliance is enforced”.

But without such regimes the certainty of each country’s emissions are questionable. The Kyoto Protocol requires Annex 1 countries to have a “national system for the estimation of anthropogenic emissions by sources and removals by sinks of all greenhouse gases”. Considering the serious economic transactions taken on the basis of national reporting of their emissions and the subsequent volume and value of permits, estimations provide limited certainty to investors.”²³

This conclusion, in turn, raises the question of whether Australia’s carbon reduction program should be designed to be linked into an international emissions trading scheme or whether it would be more practical and prudent for an economically small nation like Australia, contributing just 1.4% of world emissions, to develop a more simple program concentrating on reducing domestic emissions, such as a Carbon Tax.

Renewable Energy

A key underlying presumption of the CPRS is that renewable energy will provide an increasing contribution to base load power needs and an MRET of 20% has been set for 2020 which will require around 12 gigawatts of power to be generated from renewable sources.

²² Tim Wilson, 2009, ‘Australia’s delinked and non-compliant Emissions Trading Scheme’, Institute of Public Affairs Occasional Paper, March 2009, p10.

²³ Tim Wilson, 2009, ‘Australia’s delinked and non-compliant Emissions Trading Scheme’, Institute of Public Affairs Occasional Paper, March 2009, p11.

The view has been expressed that the Renewable Energy Industry will be the principle beneficiary of the CPRS were it to be introduced, in the sense that the Renewable Energy Industry will be the recipient of large amounts of funding in the hope of breakthroughs in the output and efficiency of renewable energy mechanisms. However the reality is that Australia is not well endowed with cheap renewable energy sources such as hydro-power. Unlike Norway and Switzerland, Australia does not have large snow covered mountain ranges capable of delivering large amounts of hydro-power.

Instead, with our principle hydro-power sites in the Snowy Mountains and Tasmania plus small units in locations such as Kununurra in the Ord Dam, hydro-power accounts for only 5% of Australia's power supply. The next most important source of renewable energy is wind power with wind farms located chiefly in Southern Victoria, Tasmania and the South and Mid-west coasts of Western Australia.

Wind power is regrettably inconsistent in power deliver due to fluctuations in the flow of wind and is never expected to provide much more than 10% of Australia's renewable energy and even then at a high cost.

Solar power is obviously the most abundant source of renewable energy available in Australia but although much research over many years has gone into developing the technology so far, there is currently no possibility of solar cells providing base load power for Australian power grids.

Other possibilities are harnessing tide and wave movements to produce power, but so far the technology for these forms of power have not progressed sufficiently to be considered a viable source of base load energy. Similarly while research into energy production from geothermal sources is being carried out, there is a long way to go before geothermal energy can become a source of cheap base load power.

Given this the inclusion of a target of 20% of Australia's power to be generated from renewable sources seems unlikely to be achievable, at least within the time frames under consideration and probably not for many years.

Again, the Coalition Senators are disturbed that yet another of the key underlying presumptions of the CPRS appears to be optimistic to say the least, if not unrealistic in fact.

7) Treasury Modelling

Coalition Senators continue to be frustrated by the fact that the Government has been unable to produce any economic modelling to justify its claims about the likely effect of the CPRS upon jobs and upon the environment.

While the Government continues to claim that it has done modelling, the reality of the matter is that the Treasury modelling referred to does not specifically model the CPRS legislation.

While Treasury did model a number of scenarios, including a five% cut (the minimum under this legislation) that modelling was based on a number of premises; those being, a global agreement to reduce carbon dioxide emissions being in place by 2010, China signing up in 2015, and India in 2020.

However, the CPRS legislates a minimum five percent cut irrespective of what happens in the rest of the world – irrespective of whether global agreement is reached in Copenhagen later this year,

irrespective of whether China comes on board, irrespective of whether India comes on board, irrespective even of whether the US comes on board.

On top of this, the Government concedes that the Treasury modelling cited in explanation of the CPRS does not take into account the global economic crisis.

The model used by the Treasury in doing their modelling – the general equilibrium model – assumes that there will be a seamless adjustment in the labour market between one area and fails to take account of the inevitable massive short and medium term dislocation as a result of the employment changes the CPRS will inevitably bring about.

As the Acting Secretary of the Department of Climate Change, Mr Blair Comley, told the Committee:

Mr Comley - "If you have a full employment closure of a CGE model then essentially you have assumed that the labour released in one area, if there is a change in the relative growth rates of a sector, will be absorbed elsewhere." ²⁴

Coalition Senators understand the real world to be different to the CGE model used by Treasury, and that while short to medium term job losses and social dislocation can be explained and "absorbed" elsewhere in Treasury's modelling, this will not be the case in real world.

Concerns about the accuracy of the Treasury modelling are not only held by Coalition Senators and affected industry, but even by the social services sector.

As Tony Westmore, of the Australian Council of Social Services, told the Committee:

"We are very concerned that the Treasury modelling may be wrong, that provisions that are in place may be inadequate..."²⁵

Coalition Senators are therefore of the view that until the Government produces modelling of its proposed legislation, which, amongst other things, takes into account the current global recession, it is virtually impossible to make a considered judgement of the effect of the CPRS upon the economy and upon jobs. Coalition Senators note that despite an absence of Government modelling, various industry groups have presented evidence illustrating the potential of the CPRS to have significant impacts.

8) Effects of a recession

There has been much debate in the public arena, and indeed evidence to this inquiry, regarding whether a recession is the right or wrong time to be moving ahead with such a significant structural change to the economy.

Both sides of these arguments were encapsulated by Professor Ross Garnaut, who stated:

Is it a good or a bad time in a recession to introduce mitigation measures? It is a very good time to introduce support for new low-emissions technologies because the opportunity cost of labour

²⁴ Committee Proof Hansard, 30 March 2009, E27

²⁵ Committee Proof Hansard, 23 March 2009, E26

*and capital is low.... So I think now is a very good time for a big emphasis on public support for research, development and commercialisation of the new technologies.*²⁶

However, Professor Garnaut also noted:

*On carbon pricing, there is a reason to be somewhat cautious about putting an extra cost on some firms while the recession continues because of financial fragility during recession.*²⁷

Coalition Senators agree with both of these statements. Now is a very good time to be investing in new, low emissions technologies and research. But it is a very risky time to be putting an extra cost impost on firms already under significant financial pressure.

Further, while distressed about the current state of the world and Australian economy, which is being made worse by the Rudd Government's actions, Coalition Senators note that the recession does provide some breathing space in terms of time to address carbon dioxide levels.

Indeed, it is axiomatic that as industrial output falls, so too will emissions.

This point is conceded by the Government themselves; noting that Australia's level of emissions fell in 1990 in conjunction with Paul Keating's "recession we had to have" and did not return to 1990 levels until 1997.

While it is impossible to quantify exactly how much of this fall was due to the fall in industrial output in the recession, as opposed to contributors such as changes to land-clearing regimes, there is no doubt that the recession did slow emissions output.

Senator Abetz: Are you saying that the recession had any impact on the reduction?

*Dr Gruen: Undoubtedly the recession would have had some impact.*²⁸

This view was supported by Professor Ross Garnaut, who while not advocating for a delay in passing the legislation, did state:

*Clearly, the deep global recession is pulling emissions well below what they otherwise would have been. Emissions may have actually fallen in the September quarter and since...my best guess is that if the world was not doing anything about mitigation this would put back the level of emissions of the world by two or three years. **That is equivalent to a pause in emissions for two or three years.***²⁹ [emphasis added]

Unfortunately, more elaborate consideration of this issue has been limited by the Department of Climate Change's failure to provide Coalition Senators with answers to their questions in time to be included in this report.

Coalition Senators are therefore strongly of the view that this evidence supports our argument that it is better to take a bit of extra time, and to get the emissions reduction mechanisms right, rather than rush a scheme into place which is ill-considered, flawed, bureaucratic and which won't achieve the stated outcomes.

²⁶ Committee Proof Hansard, 23 March 2009, E65

²⁷ Committee Proof Hansard, 23 March 2009, E 65

²⁸ Committee Proof Hansard, 25 March 2009, E8

²⁹ Committee Proof Hansard, 23 March 2009, E60

We should use the “breathing space” provided by the current global circumstances wisely.

9) CPRS and the WA Electricity Market

Griffin Energy, in their submission to the inquiry into the exposure draft of the CPRS, made the point that the Western Australian Electricity Market, in which gas power generation is dominant, suffers discrimination because the Treasury modelling uses the same competitive spot market assumptions made for the Eastern States Electricity Market in its assessment of the need for ESAS assistance.

In fact however the WA Electricity Market is very different to that of the Eastern States Electricity Market in that WA has a high dependency for electricity generation on gas from the North West Shelf being carried to the South West in the Dampier to Bunbury pipeline, and this will continue to be the case even if renewable replace coal.

Griffin Energy point out that there is a historic price competition between gas and black coal in the Western Electricity Market and state that WA’s long term security of supply will likely be compromised by the current CPRS settings.

Griffin points out that the so call National (i.e. Eastern States) Electricity Market is based on a competitive spot market into which all generators supply electricity whereas the Western Electricity Market is based on bilateral contracts.

In the selling model the price of electricity is locked in for the length of contracts and there is no capacity in the Western Electricity Market to pass through to consumers the increasing price of carbon which the generators will bear over 15 years. By contrast in the National Electricity Market Model, based on competitive spot prices, the additional cost of carbon over 15 years will be passed through via the market clearing price.

Griffin states that the Western Electricity Market requires a separate ESAS formula with an emissions intensity cut off limit of 0.75tCO₂e.

Griffin suggests that this can be achieved by amendments to part 9, division 2 with a separate section 176A in the legislation which allocates WEM assistance to eligible assets and that there should be a separate section 182A to deal with the annual assistance factor applicable to the Western Electricity Market which will apply a consistency design methodology to both the WEM and NEM based on the relative proportions and intensities of each market.

Given the fact that the Western Electricity Market will be based increasingly on gas and renewable energy while the Eastern Market will remain coal based, the Coalition Senators request Treasury to recognise that different circumstances apply in WA and implement Griffin’s suggestions.

10) CPRS and its impact on agriculture

The Government’s decision to avoid addressing Australian agriculture within the context of a Carbon Pollution Reduction Scheme (CPRS) until 2015 is alarming. Agriculture contributes 16% of Australia’s emissions and the Senate Committee’s report on the proposed introduction of the scheme acknowledges that after stationary energy, agriculture is a leading CO₂e emitter. Yet the report and proposed legislation has deferred any policy decisions for the agricultural sector until at least 2013.

Subsequently, there is insufficient policy debate on the impact the CPRS will have upon agriculture and the regional economy.

This section of the dissenting report aims to readdress the considerable short-coming of the majority report by highlighting significant problems and issues raised in a series of independent reports which conclude that a CPRS will have a dire impact on the agricultural sector. This section of the dissenting report also expresses its concern that, particularly within a rural and regional context, the CPRS is a policy which is more akin to international “grandstanding” than sound policy for the economic or social well-being of all Australians. This report commends the work of the Australian Farm Institute, the Centre for International Economics and the Australian Bureau of Agricultural and Resource Economics, each having made a contribution to better understanding the impact of a CPRS on agriculture.

This report shares the concerns of the Australian Farm Institute that a CPRS and associated carbon trading will cause a decline in agricultural output but fail to produce any benefits in terms of global greenhouse emissions.³⁰ This report agrees with the Australian Farm Institutes’ hypothesis that if a CPRS and associated emission trading scheme were introduced, agricultural production in Australia would be cut by \$2.4 billion a year by 2020 and \$10.9 billion a year by 2030.

The CPRS will negatively impact farm enterprises in two ways; firstly, the indirect rises in costs associated with farm inputs, secondly, after 2015 farms are financially liable for emissions attributed to their farming enterprise.

There is no doubt that the CPRS will increase the price of fuel and electricity. In the agriculture sector this will be a rise in a range of production costs. Contracts for cropping, pasture chemicals and fertilisers will increase by 5%.³¹ ABARE also acknowledges an increase in production costs of 2.4 per cent across industries. It argues those costs are relatively small because of the range of assistance being offered by Government. ABARE highlight that there will be fuel credits for the first three years of the scheme and assistance in the price paid for fertilisers and chemicals.³² This report, however, views the government assistance as an artificial subsidy funded by the taxpayer to support an overambitious greenhouse policy. Speculatively, there is also a concern about how our major trading partners and WTO may interpret this kind of assistance given a climate of greater trade liberalisation and a reduction in agricultural subsidies. Another perspective of the rise in costs and international trade is the impact it will have on Australia’s competitiveness. Agricultural exporters in South America, Asia and Eastern Europe will not be subject to the same rises in input costs.

This report shares the view of the Australian Farm Institute that if farmers are made to pay for emissions it has attributed after 2015 farm cash margins will suffer. Modelling suggests that a broadacre farm can expect severely reduced incomes in 2016.³³ Even if farms are declared Emissions Intensive and Trade Exposed farmers can expect a reduction of up to 25%.³⁴

When viewing the impact of the CPRS in terms of a cost/benefit analysis for the agricultural industry it becomes clearly apparent that for the billions of dollars lost in production and export we gain little

³⁰ Keogh, M & Thompson, A, Preliminary modelling of the farm-level impacts of the Australian greenhouse emissions trading scheme, Australian Farm Institute, September 2008.

³¹ *ibid*, 8

³² Ford, M, *et al*, Issues Insight, Agriculture and the carbon pollution Reduction Scheme: Economic Issues and implications, ABARE, March 2009.

³³ Keogh, M & Thompson *op.cit*, 2008.

³⁴ *ibid*

in the global reduction of carbon pollution. The Coalition is of the opinion that the introduction of the CPRS is detrimental to competitiveness in agricultural trade, the sustainability of farming and food security. From an agricultural perspective and the perspective of those rural and regional areas based on the agricultural economies the risk is too great for the small reward.

From an agricultural perspective there are a number of other policy incentives which could be incorporated to reduce carbon emissions in the sector. The funds spent on compensating the agricultural industry could be best directed toward increases in research and development which will improve farm productivity and develop sound emissions mitigation technologies.

The absence of any clear plan for the agriculture sector in developing the CPRS and its legislation is of a great concern to the Coalition considering the impact it will have upon producers. It demonstrates a city-centric perspective that ignores the important role agriculture plays in Australia's national economy. Subsequently, from a rural and regional perspective, which bases itself upon a robust agricultural economy, this legislation cannot be presented to Parliament.

11) Emissions Intensive, Trade Exposed (EITE) industries

Unless there is meaningful global action, Coalition Senators are in absolutely no doubt that should the CPRS be implemented as proposed, not only will Australian jobs be exported to nations without emissions trading or a carbon tax, so to will emissions.

Indeed, this view has been acknowledged by the Minister herself.³⁵

We have already expressed our serious concerns about the lack of detail in the legislation setting out support for emissions intensive trade exposed industries (just six pages), and that the Senate is being asked to take on trust what the Government will regulate in this space.

While initially eligible EITE industries will get either 90% or 60% free permits, Coalition Senators are also concerned that because of the 1.3% so-called "carbon dividend" that over time the value of these permits will be eroded and that Australian industry will suffer a death of a thousand cuts.

As the President of the ACTU, Ms Sharan Burrow told the Committee:

The 1.3 per cent reduction, which of course came down from four per cent in the original paper, is something that as a blanket piece probably needs further consideration. There will be some industries that will struggle to make that 1.3 per cent, but others, including some of the largest companies, will do it much more easily.³⁶

Coalition Senators are also doubtful of claims put to the Committee that the likelihood of so-called "carbon leakage" is overstated. While the Department of Climate Change claims that there is "very little" evidence of carbon leakage in Europe as a result of their emissions trading scheme, this is hardly surprising given that virtually all emissions intensive, trade exposed industry is exempted from the European scheme.

³⁵ Penny Wong, *Sydney Morning Herald*, 23rd February 2009

³⁶ Proof Committee Hansard, 24th March 2009, p. E84

As to the Treasury's modelling which claims there is "little evidence of carbon leakage"³⁷, this claim means nothing given that the Treasury did not actually model the CPRS as it stands – that is, Australian action irrespective of global action.

In defending the charge that the CPRS in isolation will lead to businesses going offshore, witnesses resorted to school-boy style debating tactics:

*Mr Cameron – "... I am unimpressed by the idea that businesses move from one jurisdiction to another because a modest price of carbon is imposed by a government in the public interest. I would very much like to see the farewell speech of the business leader to his or her staff saying, 'We're leaving the country to set up offshore because we cannot carry the obligations to reduce our emissions within this jurisdiction. We are going to carry on polluting and thereby creating risk to your fellow citizens. By the way, you're losing your jobs too.' I just do not regard that as a plausible argument and I would very much like to see the CEOs make that speech and then wave them goodbye at the airport."*³⁸

While one may agree or disagree with Mr Cameron's comments, as Senator Bushby pointed out³⁹, this simplistic answer does not address the fact that Australian-made goods will be disadvantaged against those produced without the impost of a carbon price.

It also fails to take account of the very real likelihood of business – rather than closing an existing operation – simply deciding against further investment in Australia and instead investing in countries without a carbon price.

It is for these reasons that Coalition Senators again express their serious concern about Australia imposing a carbon price on our industry, through the CRPS, before the rest of the world has signed up to a similar scheme.

12) A tax or not a tax?

Coalition Senators are extremely concerned that, even at this stage, with the Exposure Draft legislation being considered by this committee, the Government is unclear as to whether the CPRS is a tax or not.

Reflecting this uncertainty, the Government has even introduced three additional "technical" bills "in case" at some time in the future the emissions units under the CPRS are considered a tax.

*Three of the draft bills are technical bills, in case the charge for Australian emissions units issued as the result of an auction or fixed charge is, at some time in the future, considered to be taxation.*⁴⁰

When asked directly, the head of Treasury's macroeconomic group, Dr David Gruen, simply said he did not know.

Senator Abetz: "My question is this: is the CPRS a tax or is it not a tax"?

Dr Gruen: "I simply do not know what the legal status of it is."

Even proclaiming:

³⁷ *Australia's Low Pollution Future*, p xiv

³⁸ Mr James Cameron, *Climate Change Capital*, Committee Proof Hansard, 19th March 2009, p. E 25

³⁹ Senator David Bushby, *Climate Change Capital*, Committee Proof Hansard, 19th March 2009, p. E 25

⁴⁰ Commentary, p. 12

Dr Gruen: "I am not sure we are the right people to ask".⁴¹

It is astounding that a senior Treasury official would not only not know the answer to this question, but suggest that Treasury should not be expected to know. Whether or not the CPRS is a tax has serious, complex and potentially costly financial implications for affected parties, which one would expect Treasury to have considered.

In regard to whether or not the CPRS is a tax, Coalition Senators make note that once again, their capacity to scrutinise the CPRS has been limited by the Department of Climate Change not providing responses to written questions on notice in time for inclusion in this report. These are basic questions and the failure to answer them proves that the entire CPRS process is rushed and flawed.

Notwithstanding the Government's confusion, Coalition Senators consider that given that the CPRS looks like a tax, smells like a tax and talks like a tax, it is a tax.

13) Conclusion: The need for global action

Everybody, even Minister Wong, agrees that without meaningful global action to reduce carbon emissions, any action taken by Australia in isolation (or relative isolation) to reduce carbon emissions would have no impact on total global emissions while costing Australian jobs.

Minister Wong: "There is no point in putting a cost on carbon pollution in Australia if it simply results in jobs and emissions being exported to countries that do not yet face a carbon price.

*To overlook the perverse environmental outcome that would result from emissions simply being exported to other nations is environmentally irresponsible, and disingenuous in the extreme."*⁴²

Therefore, central to the debate about whether Australia should introduce the CPRS at this time is the issue of whether Australia is leading the world; and whether, if so, Australia should be leading the world, irrespective of actions the rest of the world may or may not take.

On the one hand, the Government claims that Australia, in implementing the CPRS, is acting in concert with the rest of the world:

*Dr Parkinson: "...I think it is seriously misleading to pretend that Australia is somehow ahead of the rest of the developed countries."*⁴³

However, on the other hand, the Government admits that very few countries have actually committed to real action. As noted by Dr Parkinson, Secretary for the Department of Climate Change:

*"Setting a cap on most of your national emissions means that you have a guaranteed way of meeting your national objectives. Without a cap, targets are only ever aspirational."*⁴⁴

He then went on to note:

"Few countries have announced specific quantitative commitments to medium-term targets."
[emphasis added]⁴⁵

⁴¹ Committee Proof Hansard, 25th March 2009, E6

⁴² Penny Wong, *Sydney Morning Herald*, 23rd February 2009

⁴³ Committee Proof Hansard, 18th March 2009, p. E5

⁴⁴ Committee Proof Hansard, 18th March 2009, p. E5

Coalition Senators have noted that the reality is that only very few countries actually have emissions trading schemes in place, namely, the European Union (where the scheme has been roundly criticised for failing to deliver CO2 reduction outcomes) and New Zealand.

It is the view of Coalition Senators that it is foolhardy in the extreme to actually legislate to commence an emissions trading scheme without knowing what may be decided at this year's critical Copenhagen Conference.

While it may be the view of the Government that to do so would provide "leadership", there was no evidence presented to this inquiry that if Australia were to legislate the CPRS as proposed it will somehow force key developing nations to come on board.

It compromises Australia's negotiating position and puts at risks thousands of Australian jobs by locking us into a scheme when it is possible that the rest of the world may say, at this time of economic uncertainty, that action should be delayed.

Accordingly, Coalition Senators recommend that the exposure draft Carbon Pollution Reduction Scheme not be presented to Parliament, and that the Government go back to the drawing board before presenting a properly modelled and considered plan to the Parliament which reflects the outcomes of this year's Copenhagen climate change meeting and the best interests of Australia.

**Senator Alan Eggleston
Deputy Chair**

Senator David Bushby

Senator Barnaby Joyce

Senator the Hon. Eric Abetz

Minority Report by Senator Nick Xenophon

1. Background: nature of the problem that we are trying to solve

- 1.1 Anthropogenic climate change presents us with the most pressing and complex policy problem that we have faced. It is pressing because the window of opportunity in which we have to take the sort of abatement action needed to avoid irreversible, dangerous and potentially catastrophic climate change is small; and, on the basis of the findings from last month's conference in Copenhagen, is getting smaller. It is complex because it has all the features that policy, whether at a global or national level, usually struggles to deal with. These include the fact that abatement has large upfront costs, with benefits that accrue in a relatively distant future and with some degree of uncertainty; the need to provide for the development aspirations of poorer countries and the emissions trajectories entailed by these; the uneven spread across the globe of net benefits from abatement; and the potential for 'free rider' issues created by the fact that no one country stands to gain from abatement efforts in the absence of concerted action. These last two issues create what Professor Garnaut has accurately characterised as a diabolical prisoner's dilemma problem.¹
- 1.2 This overall context must inform the design of an emission trading scheme in a country like Australia with its small, open economy. There is a sensible policy case, as well as a strong ethical one, for Australia to take early emissions reduction action in order to break the potential deadlock created by the prisoner's dilemma and uphold the sort of global co-operative agreement required to address global climate change. We need to be clear that the brutally honest position is this: in the short to medium term the success of our domestic policy (indeed, of all advanced countries) will be a function of the ability to get all countries (notably the large emitting developing countries) on board, without which there will be no prospect of addressing climate change.²

¹ Garnaut, R., *The Garnaut Climate Change Review: Final Report*, (2008) Commonwealth of Australia, pp287-290

² The imperative of global action, particularly for poorer countries, is underlined by David Wheeler in *"Another Inconvenient Truth: A Carbon-Intensive South Faces Environmental Disaster, No Matter What the North Does"*, Center for Global Development, Working Paper Number 134, December 2007. Wheeler's modelling suggests that even if rich countries emissions were reduced to zero, current emissions trends in poor countries would still place the world on course for serious climate change impacts.

- 1.3 In taking such action, Australia needs to adopt a scheme that is credible internationally and sustainable domestically. International credibility will be to large extent a function of the abatement targets Australia sets for itself. Domestic policy sustainability is to a large extent a function of adjustment costs, particularly in the short to medium term when there are likely to be significant gaps in emission reductions efforts globally. Policy sustainability has an economic dimension – imposing large adjustment costs on the economy with no prospect of incremental global abatement gain is simply not an efficient economic proposition. And this impacts on the political dimension of policy sustainability by eroding support for emissions reduction, particularly in a time of economic uncertainty.

2. **What are the policy issues that should govern the design of a carbon pollution reduction programme?**
 - 2.1 Given this particular background, what are the particular issues to consider as important in designing a carbon reduction programme?
 - 2.2 Clearly the overarching goal is **environmental** – the abatement of greenhouse gas emissions. This is largely contingent on establishing the appropriate incentives to bring about substitution in production and consumption from emissions intensive goods and services to ones that are less so, and to prompt behavioural changes in consumers and producers. Abatement will, fundamentally, be investment driven. Firms will need to invest in a variety of activities – whether in R&D, in implementing new process or selling different goods and services – as they respond to changes in input costs, relative prices and changes in consumer demand.
 - 2.3 The second set of issues consists of **adjustment issues**, which impact directly on the issue of domestic policy sustainability discussed previously. Adjustment issues range from the income effects on households stemming from the introduction of a price on carbon, to the impact on asset values of what the government has called 'strongly affected' firms. Issues related to carbon leakage and the loss of competitiveness are adjustment issues that relate directly to the global nature of the abatement task and the prospect that, in the short to medium term, countries like Australia will be implementing emission reductions ahead of others.
 - 2.4 **Carbon leakage and competitiveness** cut to the heart of both the economic and political dimensions of sustainability. While the political is often emphasised, it is important to underscore the economic efficiency aspects of both these issues

too. Carbon leakage is a net cost to the global economy – it imposes adjustment costs with little or no return in terms of global abatement. Competitiveness losses can also be a global cost (and not just specific to Australia) as well. This will arise if carbon reduction schemes cause the relocation of activity away from Australia, when that activity would have been located in Australia had there been a concerted global effort to reduce emissions. The implication is that the introduction of a price of carbon in some countries but not in others will cause a distortion to the global allocation of production along lines of comparative advantage.

- 2.5 The third set of issues consists of **governance issues**. These include the potential for policy capture. Capture could manifest itself in a number of ways including: manipulation of the scheme parameters and its implementation; or manipulation of some other area of government policy (such as trade policy) in response to the effects (or supposed effects) of the carbon pollution reduction scheme.
- 2.6 Given these policy issues, a carbon pollution reduction scheme will be judged on the grounds of whether it is:
- effective in managing these different concerns, and any trade- offs between them;
 - efficient in managing these concerns at least cost;
 - ethical in terms of managing various equity and distributional issues that are raised by these concerns.

3. Critique of the CPRS and government approach

3.1 A weak target

- 3.1.1 Against this backdrop is a critique of the government's approach as set out in the CPRS. Perhaps the most commonly heard criticism of the scheme is the overall target range of 5-15% that has been set. That target range is largely a reflection of the adjustment costs that may be expected, but also of the peculiarly high cost nature of the scheme that has been chosen. In respect of the former, it is likely that the government's own modelling has understated the costs, in the short to medium term, of adjusting to a carbon price. This in turn is a reflection of the fact that the type of Computable General Equilibrium (CGE) model uses a full employment rule as its closure rule - that is, the economy is always at or near full employment levels, and responds to a shock almost immediately. In other words,

for example, retrenched workers in the Pilbarra or in Newcastle become insurance agents in Melbourne or Sydney overnight. Clearly, this is unrealistic, and while the full employment rule and its consequent results can be a useful guide to what happens in the long term, it simply assumes away some of the most pressing policy problems in the short term. Indeed, it is quite likely that the Government is aware of the limitations of its modelling and has thus chosen a cautious approach as a consequence.

3.1.2 Setting aside issues of modelling, concerns regarding adjustments costs are also warranted on account of the high cost nature of the cap and trade mechanism within the CPRS, as compared to alternatives. This point is explained in further detail below when intensity-based approaches are discussed. The main issue is that the cap and trade approach essentially acts as a penalty-only mechanism: it penalises all emitters as a function of their emissions intensity, but offers no direct reward to firms that cut emissions.

3.1.3 If we marry the high cost aspect of the scheme design to concerns about adjustment that may not be captured in the modelling, then a relatively modest target range is a predictable outcome. It does, however, raise the question as to whether a more ambitious target could be adopted if an alternative scheme design were available that would be more attractive in managing adjustment concerns because the scheme has lower cost properties. This would be desirable from an environmental perspective, and in terms of sending a more credible signal internationally (recalling here that the overarching objective sought through the early implementation of a carbon reduction scheme is to sustain a co-operative international agreement).

3.2 Not one but many schemes

3.2.1 The CPRS is a combination of several mechanisms and initiatives. Ostensibly, its central feature is a cap and trade mechanism, though it would be more appropriate to refer to it as a “quasi-cap and trade” mechanism. Under a standard cap and trade scheme, the quantity of emissions is fixed and the cost of emissions (i.e. the price of permits) is allowed to vary. In the case of the CPRS, this fixed quantitative restriction is relaxed. If the permit price reaches a certain level (\$40 per tonne), the government will issue an unlimited number of permits – as Richard Denniss put it in a recent presentation, the government will start printing permits as if it were the central bank of Zimbabwe printing cash.³ The price cap, as well as banking and borrowing provisions and gateway provisions

³ Parliamentary Library Vital Issues Seminar, “Carbon tax and emissions trading”, 17 March 2009, audio available at: <http://www.aph.gov.au/library/pubs/vis/index.htm>

that provide flexibility for the government to adjust the overall targets in the light of prevailing circumstances reflect a concern on the part of the government both to cap the overall costs of the scheme, and to limit volatility in prices. This in turn is motivated by a concern regarding the adjustment impact of permit price rising to higher than expected levels, and an acknowledgement that untrammelled volatility in permit prices is undesirable because of the investment uncertainty this generates.

3.2.2 **Mitigating the transitional adjustment impact** of emissions trading also provides a central motivation for revenue recycling, which under the CPRS would be undertaken through transfers to households and through tax offsets on transport. The transfers are mainly motivated on equity grounds, and specifically to offset the regressive income effect that the introduction of emissions trading can have through various channels (such as higher electricity prices).

3.2.3 **The proposals for emission-intensive, trade exposed (EITE) industries** differ significantly from other approaches to managing transitional issues. The method of permit allocation, which is tied to production and linked to an emissions intensity benchmark has strong affinities with the intensity based approach discussed below. The main difference, as we shall see, is that while with normal intensity based approaches, activities receive a net subsidy to the extent that they emit lower than a specified benchmark, under the EITES proposals activities will receive shielding (i.e. an implicit production subsidy) to the extent that their emissions intensity exceeds a certain benchmark. It is important to emphasise that under a cap and trade scheme, attempts to address competitiveness issues and carbon leakage by shielding firms from the cost of emissions must necessarily take the form of either a cash subsidy tied to production or a free permit allocation tied to production. An approach based on the former was recommended by Professor Garnaut, while the CPRS chose the latter route. Some of the drawbacks with the particular approach chosen by the CPRS are discussed below, but at this juncture the important point to note is that the proposals for the EITES involve a scheme that runs along qualitatively different lines to the central cap and trade mechanism.

3.2.4 The CPRS also includes as yet undeveloped proposals regarding **energy efficiency**. This is almost certainly likely to mirror “white certificate” schemes elsewhere and follow a baseline and credit approach, which again is substantially different to the cap and trade mechanism contemplated for the emissions trading proper.

3.2.5 Though not part of the CPRS itself, the proposed **MRET** will also follow a baseline and credit approach, in keeping with green certificate schemes found in other jurisdictions.

4. Commentary on the complexity of the CPRS

4.1 The CPRS is therefore a complex assemblage of different mechanisms. To some extent, all proposals for carbon reduction in a small open economy like Australia will have a degree of complexity. This simply stems from the wider, global context in which such schemes are implemented. Inevitably, reconciling the imperative for credible early action and domestic policy sustainability – through the management of adjustment issues – leads to multiple policy concerns and hence the need for multiple objectives. This is all the more true if the core of the reduction scheme is a particularly high cost proposal, as embodied by the CPRS. The critique that may be offered of the CPRS is that it selects instruments that are ill suited to the wider policy context in which they are implemented, and to managing the policy concerns that stem from this.

5. Drawbacks of the CPRS vis a vis objectives sought

5.1 Environmental objectives

5.1.1 The CPRS does not perform well even on the one issue where it is often touted as having a clear advantage over other approaches – namely in providing certainty in the quantity of emissions reduction. For reasons already explained, the various safety valves included in the scheme preclude it from offering such certainty; or at least, what certainty there is exists only up to a certain point in circumstances when the demand for abatement exceeds projections. In this respect, the cap and trade proposal is not substantially different to an intensity based approach or a tax, both of which allow for flexibility in emissions if the demand for abatement exceeds projections.

5.1.2 Moreover, the flexibility in the quantity of abatement under the CPRS is asymmetric – the cap loosens after a certain point on the upside when demand for abatement exceeds projections, but does not tighten if the demand for abatement undershoots projections (due to lower than expected emissions growth resulting, for instance, from economic growth that is lower than trend levels or because unanticipated abatement having taken place e.g. through household initiatives). This is the much publicised issue of "additionality" that has been given a considerable degree of attention, and which means that under the current

CPRS, the billions of dollars injected into funding insulation would lead to no additional abatement, but would rather shift the overall contribution made to abatement from large emitters to households. The issue of additionality is not unique to the CPRS, but arises in all cap and trade schemes where targets are weak. Indeed, this has led to calls for governments to intervene by putting a floor on carbon prices through periodic revisions of the overall cap – a form of intervention that is tantamount to converting the scheme into an intensity based approach.

5.1.3 In contrast to the CPRS proposal, intensity based measures and carbon taxes lead to a tightening of the cap when emissions undershoot expectations. This allows for a greater degree of smoothness in the carbon price which in turn will provide a better basis for investment decisions including green industries and cleaner energy production. Indeed, the CPRS seems to have captured the worst of all worlds: it is a high costs scheme that, in attempting to contain those costs does away with the feature (certainty in reductions) touted as its greatest asset. Moreover, the asymmetrical nature of this modification removes any possibility of additionality abatement, a feature that has prompted calls for governments to intervene through target revisions.

5.2 EITES

5.2.1 There are several drawbacks to the approach used to handle EITES. Generally speaking, the government is correct to avoid using border measures such as tariffs and border tax adjustments, as these would be complex to administer, inefficient, and almost certainly in contravention of global trade rules. The use of production subsidies would also be litigious from a WTO perspective to the extent that they are specific to certain firms and contingent on export performance and/or on the use of domestic inputs. The CPRS has got around that problem, on paper at least, by making its system of subsidies (“shielding”) contingent on emissions intensity but this in turn raises other problems.

5.2.2 For a start, the granting of subsidies subject whether to an activity is in excess of a certain emissions threshold is perverse from an abatement view-point. Granted, the CPRS legislation does away with the problem that might have existed under the Green Paper proposals, namely that firms might be penalised if they cut emissions because they would drop below the threshold at which shielding was triggered. However, the proposals still mean that those firms that have been relatively efficient prior to the cut off date for measuring the emissions intensity thresholds are not rewarded for their efforts, which can have adverse dynamic efficiency consequences going forward.

5.2.3 A second issue is that the decision to selectively shield more emissions intensive firms or activities increases pressure on those less intensive trade exposed ones that are not shielded. This is not simply because they do not receive the financial benefit subsidies. A more fundamental issue is that for these firms, the shielding approach acts very much like a real exchange rate appreciation that is imposed specifically on them. To see this, consider that the introduction of a price on carbon will inevitably increase the price of non-tradables relative to tradables (that is, the real exchange rate will appreciate). This is because tradable sectors are able to pass on the costs of the carbon price to a much greater extent than non-tradables given that the latter are essentially price takers. The introduction of shielding essentially carves out a sector of the tradables sector – the more emissions intensive – and protects them from the effects of this appreciation. But this simply means that the competitive impact of the price of carbon will fall more heavily on less emissions intensive activities. In particular, there will tend to be a shift in resources and factors of production away from these sectors to shielded sectors and to non tradables. In this manner, the shielding approach is as much a tax on less emissions intensive activities as it is a subsidy to the more emissions intensive ones. In effect this creates disincentives for resource allocation towards activities that should on balance be promoted. Moreover, it is entirely possible that the disadvantaged sectors will seek relief through other avenues of policy, such as trade policy. This in turn can create further distortions that accentuate economic costs, and create trade tensions that pose an obstacle to securing the type of co-operation required to sustain a global agreement on climate change mitigation.

5.3 Governance issues

5.3.1 The administration of adjustment assistance through transfers, and more generally, the administration of permit revenues, raise a number of governance issues. For a start, the fact that revenues are required to mitigate the regressive impacts of the scheme on income distribution means that at least some of the double dividend (which could have been reaped through the use of permit revenue to cut distortionary taxes on labour and investment) will be foregone. Secondly, the administration of such transfers in a manner that does not affect consumption decisions is likely to be, at the least, problematic. A more general issue is that the large amounts of cash that will transit through government coffers raise all manner of possibilities for wasteful recycling. The modelling of scheme effects implicitly assumed that all recycling is done perfectly efficiently, and without creating any costs through distortions. This is unlikely to be the case. Indeed, experiences with government spending over the last few years

suggest that governments are particularly bad at identifying socially optimal forms of spending.

6. Summary observations on the CPRS

- 6.1 In sum, the CPRS as it stands is ill equipped to initiate sustainable domestic reform in the realm of climate change policy. In particular, it presents a high cost approach to reform that creates various transitional adjustment issues. These have not been fully addressed in the economic modelling, and to the extent that they have been countenanced, have led to a variety of adjunct measures that (i) undermine the scheme's own aspirations to provide certainty in emissions reductions (ii) add various layers of complexity, notably through approaches to EITES and the recycling of auction revenues, that are conducive to serious economic distortions and problematic governance issues.
- 6.2 There is significant scope to build on the work done to date and improve the current design of the scheme. The Select Committee on Climate Policy should shed further light on alternative approaches.

NICK XENOPHON

Independent Senator for South Australia

Inquiry into the exposure draft legislation to implement the Carbon Pollution Reduction Scheme

Australian Greens Minority Report

The Greens will withhold substantive comment on the CPRS legislation until we have had the opportunity to consider evidence presented to the ongoing Senate Select Committee on Climate Policy inquiry. Nonetheless, we flag five significant concerns.

1. The 2020 emission targets of 5-15 per cent below 2000 levels are much too weak to fairly contribute to the global task of preventing dangerous climate change – the only reason to adopt an emissions trading scheme in the first place.
2. The high level of compensation to the emission intensive trade exposed industries and coal-fired generators, which is largely based on maintaining their profitability, is unjustified and counter-productive.
3. Given the obvious inadequacies of both the emission targets and the industry compensation regime, and the urgency of the climate challenge, the length of time before these errors can be corrected is too long.
4. The weakness of the target, the compensation to industry and the widely-perceived problem of lack of additionality for voluntary action would dramatically undermine public support and action for emissions reduction efforts.
5. The absence of any restriction on the extent to which emission reduction obligations can be met through the purchase of foreign permits diminishes the incentive to restructure domestically.

Taken together, the Greens view is that the CPRS as currently proposed is not designed to drive the transition to a zero carbon economy, but rather is intended to maintain the profitability of existing fossil fuel based industries. As it stands, the legislation would actively prevent the kind of emissions reductions Australia needs to achieve in order to play an equitable role in the global effort to prevent climate catastrophe.

In passing we also offer the following observation. The most fundamental questions for Australian climate policy are:

1. By how much does the world need to reduce greenhouse gas emissions to avoid dangerous climate change, and;
2. To contribute fairly to that goal, by how much does Australia need to reduce its greenhouse gas emissions?

This inquiry did not investigate this first key question at all, but instead took the science as presented in the CPRS White Paper as final. The Greens do not accept this because a substantial body of scientific evidence has accumulated since the last report of the

Intergovernmental Panel on Climate Change which suggests that the Government's most ambitious goal of stabilising atmospheric greenhouse gases at 450 parts per million is dangerously weak.

On the second key question, the Committee report is biased. While it repeats the Government's argument that emission cuts of between 5-15 per cent below 2000 are fair because Australia has a high population growth rate (so our per capita percentage cuts would be comparable to other wealthy nations), there is no discussion of alternative methods to determine fair burden sharing between nations. For example, the evidence presented to the Committee by Dr Paul Twomey from the Centre for Energy and Environmental Markets, University of New South Wales should have been discussed in the report. Dr Twomey comments included:

"...a couple of months ago the European Commission's major document as we approach Copenhagen, called *Towards a Comprehensive Climate Change Agreement in Copenhagen*, analysed four metrics: GDP per capita, the emissions per GDP, early actions and population growth. They applied these to all developed countries across the world. So for the overall 30 per cent reductions of developed countries which is the global deal that Europe is aiming for, the reductions of Australia—which was combined with New Zealand in the statistics and calculations—by these four indicators that I mentioned would have been 34 per cent, 37 per cent, 48 per cent and six per cent—the last being the population growth adjustment. Evenly weighted on these four metrics, Australia and New Zealand would come out at minus 38. This is compared to the minus 15 which is the maximum that we would be going for."

and;

".. there is no obvious best choice of what is right. It clearly involves the difficult task of weighing up values and ethical principles. In practice, what we are likely to find and do find is that countries tend to focus on those indicators that favour them requiring less reductions. For this reason, it may be expected that some sort of averaging of these many measures would be used in the negotiation process, like in the EU paper."

Senator Christine Milne

APPENDIX 1

Submissions Received

Submission Number	Submitter
1	Professor Joshua Gans
2	Form Letters - Various Submitters
3	Olivier La Mer Adair
4	Alix Turner
5	Dr Gideon Polya
6	Australian Pipeline Industry Association
7	Mr Tom Worthington
8	CRC for Rail Innovation
9	Association of Tourist Railways Queensland (ATRQ)
10	CONFIDENTIAL
11	Griffin Energy
12	Department of the Environment, Climate Change, Energy and Water
13	CITIC Pacific Mining Management Pty Ltd
14	Cement Industry Federation
15	Ian McGregor, University of Technology, Sydney (UTS)
16	Dr Chloe Mason
17	Mr Des Moore
18	Mr Klaus Webber
19	Dr David Tranter OAM
20	Mr Andrew Farran
21	Energy Supply Association of Australia
22	Mr David Kault
23	Quintessence
24	Dr Judith Ajani, Fenner School of Environment and Society, The Australian National University
25	Dr Geoffrey Davies, Research School of Earth Sciences, The Australian National University
26	Climate Action Canberra
27	Australian Workers' Union
28	Carbon Sense Coalition
29	Mr Gerard De Ruyter
30	Australian Geothermal Energy Association
31	Mr David Bath
32	Mr Ian Dunlop
33	Mr Barry Brook and Mr Tim Kelly
34	Dr Andrew Glikson, Research School of Earth Science and School of Archaeology and Anthropology, The Australian National University
35	Locals Into Victoria's Environment
36	Australian Plantation Products and Paper Industry Council
37	Housing Industry Association
38	Australian Ethical Investment
39	Energy Networks Association
40	Chevron Australia

41	WA Farmers Federation
42	Ms Jane Gilchrist
43	CCIWA
44	Alcoa Australia Rolled Products
45	Mr William Kininmonth
46	Leighton Holdings
47	Resources Law International
48	Mr Iain Murchland
49	Parramatta Climate Action Network
50	Australian Landfill Owners Association (ALOA)
51	Alstrom Power Systems
52	Cool nrg
53	ABB Grain
54	Australian Industry Greenhouse Network (AIGN)
55	Dr Peter Wood
56	Refrigerants Australia
57	ALCOA
58	ASCIANO LIMITED
59	Australian Aluminium Council
60	Uniting Church in Australia
61	Airconditioning and Refrigeration Equipment Manufacturers Association (AREMA)
62	Hydro Tasmania
63	Rio Tinto
64	CONFIDENTIAL
65	CSR Limited
66	BlueScope & OneSteel
67	CONFIDENTIAL
68	ConocoPhillips
69	Minerals Council of Australia
70	Australian Food and Grocery Council (AFGC)
71	DomGas Alliance
72	InterGen Australia
73	Australian Rail Association
74	Energy Users Association of Australia (EUAA)
75	Cement Australia
76	Westpac
77	Greening Australia
78	Ms Penelope Bassett-Scarfe
79	Total Environment Centre
80	Australian Retailers Association
81	Santos Ltd
82	Greenfleet
83	Transpacific Industries Group Ltd
84	Mr David Hamilton
85	Plastics and Chemicals Industries Association (PACIA)
86	Rising Tide Newcastle
87	Business Council of Australia (BCA)
88	CONFIDENTIAL
89	Renewable Fuels Australia (RFA)
90	Australian Industry Group
91	National Generators Forum

92	Ms Margaret Dingle
93	CHOICE
94	Institute of Public Affairs (IPA)
95	Woodside Energy Ltd.
96	Investor Group on Climate Change
97	Engineers Australia
98	Institute of Chartered Accountants (ICA)
99	Institute of Public Affairs (IPA)
100	Catholic Health Australia
101	CONFIDENTIAL
102	Mr Richard Clark
103	BP Australia
104	Chamber of Commerce and Industry Queensland (CCIQ)
105	The Climate Institute
106	Australian Coal Association (ACA)
107	Australian Bankers' Association (ABA)
108	Climate Emergency Network
109	Darebin Climate Action Now
110	CO2 Australia Limited
111	Australian Petroleum Production & Exploration Association (APPEA)
112	The Shell Company of Australia Limited
113	Origin Energy
114	Australian Financial Markets Association (AFMA)
115	Australian Institute of Petroleum Ltd
116	Voluntary Carbon Markets Association (VCMA)
117	Grain Growers Association (GGA)
118	Geelong Manufacturing Council
119	Mr Tom Quirk
120	Mr Philip Clark
121	Mr Mark Lewis
122	Dandenong Ranges Renewable Energy Association
123	Energy Networks Association (ENA)
124	Australian Chamber of Commerce and Industry (ACCI)
125	Taxation Institute of Australia
126	Professor R.M. Carter, James Cook University
127	Families Fighting Climate Change
128	Caltex Australia
129	Chamber of Minerals and Energy of WA (CMEWA)
130	Dr Bob Such MP
131	CONFIDENTIAL
132	Mr Tom Quirk
133	FS Hesper
134	Mr Simon Corbell, MLA
135	Genesse & Wyoming
136	Mr Chris Reilly
137	Freehills
138	Chamber of Commerce and Industry Western Australia
139	The Fair Farming Association
140	Mr Robert Stringer
141	Australian Conservation Foundation
142	Environment Business Australia

Additional Information Received

- Received on 3 April 2009, from Hydro Tasmania. Answers to Questions taken on Notice on Tuesday 24 March 2009;
- Received on 8 April 2009, from CSIRO. Answers to Questions taken on Notice on Wednesday 25 March 2009;
- Received on 9 April 2009, from AGL. Answers to Questions taken on Notice;
- Received on 9 April 2009, from Clean Energy Council. Answers to Questions taken on Notice on Tuesday 24 March 2009.

TABLED DOCUMENTS

- **23 March 2009, PERTH WA:**
 - WA Sustainable Energy Association Inc, Media Release and Information;
 - Carnegie Corporation Ltd, PowerPoint presentation.
- **24 March 2009, MELBOURNE VIC:**
 - Mr Danny Price, Frontier Economics. '*Alternative approaches to carbon reduction schemes*', PowerPoint Presentation.
- **25 March 2009, CANBERRA ACT:**
 - Australian Coal Association, '*Emissions Trading – risks to jobs, regional economies and investment in the Australian Coal Industry*' PowerPoint presentation;
 - CSIRO, '*Climate Change: the latest science*', PowerPoint presentation;
 - CSIRO, '*Growing the Green Collar Economy*', Paper;
 - CSIRO, '*Green Jobs: Towards decent work in a sustainable, low-carbon world*', report;
 - CSIRO, '*The science of climate change*' brochure.
- **27 March 2009, SYDNEY NSW:**
 - Mr John Connor, The Climate Institute. '*Clearing the Air*', policy report;
 - Dr Regina Betz, Dr Iain McGill and Dr Paul Twomey, Centre for Energy and Environmental Markets at the University of NSW. Notes for introductory statement;
 - Mr Tony Trujillo, World Wildlife Fund. Additional information;
 - Mr Tony Trujillo, World Wildlife Fund '*Industrial constraints and dislocations to significant emissions reductions by 2050*' report.

APPENDIX 2

Public Hearings and Witnesses

CANBERRA, WEDNESDAY 18 MARCH 2009

- COMLEY, Mr Blair Robert, Deputy Secretary,
Department of Climate Change
- PARKINSON, Dr Martin Lee, Secretary,
Department of Climate Change
- SAKELLARIS, Mr Tas, Assistant Secretary,
Legislation and Governance Branch, Department of Climate Change
- STERLAND, Mr Barry, First Assistant Secretary,
Emissions Trading Division, Department of Climate Change

CANBERRA, THURSDAY 19 MARCH 2009

- CAMERON, Mr James, Vice Chairman and Executive Director,
Climate Change Capital
- FARGHER, Mr Ben, Chief Executive Officer,
National Farmers' Federation
- JOTZO, Dr Frank
- McELHONE, Mr Charles, Manager,
Economics and Trade, National Farmers' Federation

PERTH, MONDAY 23 MARCH 2009

- CREMIN, Mr Shane, General Manager,
Policy and Strategy, Griffin Energy
- GARNAUT, Professor Ross
- HOWARD-SMITH, Mr Reg, Chief Executive,
Chamber of Minerals and Energy of Western Australia
- LYONS, Ms Elizabeth Anne (Libby), Manager,
Government Relations and Public Policy, Alcoa of Australia
- McAULIFFE, Mr Timothy, Manager,
Environment and Sustainable Development, Alcoa of Australia
- MURRELL, Mrs Aileen, Assistant Director,
Chamber of Minerals and Energy of Western Australia
- OTTAVIANO, Dr Michael Edward, Managing Director,
Carnegie Corporation
- TRUMBLE, Mr Wayne, Executive General Manager,
Griffin Energy
- WESTMORE, Mr Tony, Senior Policy Officer,
Electricity, Australian Council of Social Service
- WILLS, Dr Ray, Chief Executive Officer,
Western Australian Sustainable Energy Association

MELBOURNE, TUESDAY 24 MARCH 2009

- BURROW, Ms Sharan, President,
Australian Council of Trade Unions
- CATCHPOLE, Mr Andrew, General Manager,
Communications and External Relations, Hydro Tasmania
- CONCANNON, Mr Anthony, Chairman,
Energy Supply Association of Australia
- HARRIS, Mr Matt, Consultant,
Frontier Economics
- O'CONNOR, Mr Simon, Economic Adviser,
Australian Conservation Foundation
- PASCOE, Mr Owen, Climate Change Campaigner,
Australian Conservation Foundation

- PRICE, Mr Daniel, Managing Director,
Frontier Economics
- RITOSSA, Ms Demitra Kerry, Corporate Lawyer,
Santos Limited
- ROBINSON, Ms Belinda,
Australian Petroleum Production and Exploration Association
- ROWLEY, Mr Gregg, Group Executive, Clean Energy,
Santos Limited
- SAVAGE, Ms Clare, Chief Executive Officer,
Energy Supply Association of Australia
- SMITH, Ms Susan Jane, Principal Climate Change Adviser,
Santos Limited
- WAIN, Mr Colin, Policy Analyst,
Strategic Policy, Communications and External Relations, Hydro Tasmania
- WARREN, Mr Mathew, Chief Executive Officer,
Clean Energy Council

CANBERRA, WEDNESDAY 25 MARCH 2009

- BEASLEY, Mr Burt L, Director,
Technology, Australian Coal Association
- DENNISS, Dr Richard, Executive Director,
Australia Institute
- DENVIR, Mr Patrick, General Manager,
Consulting, Energetics Pty Ltd
- GRUEN, Dr David William, Executive Director,
Macroeconomic Group, Treasury
- HAMILTON, Professor Clive Charles
- HILLMAN, Mr Ralph, Executive Director,
Australian Coal Association
- JEANES, Ms Susan Barbara, Chief Executive,
Australian Geothermal Energy Association
- McBEATH, Mr James Hamilton Stewart, Investment Analyst,
Infrastructure Investments, Colonial First State Global Asset Management
- McCLUSKEY, Ms Amanda, Head,
Sustainability and Responsible Investment, Colonial First State Global Asset
Management

- McKIBBIN, Professor Warwick James
- MORRIS, Mr Peter, Director, Economics, Australian Coal Association
- PEARCE, Mr David, Executive Director, Centre for International Economics
- QUINN, Ms Meghan, Manager, Climate Change Modelling Unit, Industry, Environment and Defence Division and Fiscal Group, Treasury
- REYNOLDS, Ms Anna, Principal Consultant, Government Policy, Energetics Pty Ltd
- SCHANDL, Dr Heinz, Senior Science Leader, CSIRO Sustainable Ecosystems
- SIBLEY, Mr Jon, ACT Regional Manager, Energetics Pty Ltd
- TEUBNER, Mr Jonathan Peter, Business Development Manager, Australian Geothermal Energy Association
- WALKER, Dr Daniel, Acting Chief, CSIRO Sustainable Ecosystems

SYDNEY, FRIDAY 27 MARCH 2009

- BETZ, Dr Regina Annette, Joint Director, Centre for Energy and Environmental Markets, University of New South Wales
- BURN, Dr Peter, Associate Director Public Policy, Australian Industry Group
- CONNOR, Mr John, Chief Executive Officer, Climate Institute
- CURNOW, Mr Paul Henry
- FLANNERY, Professor Timothy Fridtjof,
- GIBBS, Mr Steve, Director, Government and Industry Liaison, Investor Group on Climate Change
- HENDERSON, Mr Roderick Boyd, Representative of the ICAA Emissions Trading Scheme Tax Committee, Institute of Chartered Accountants in Australia
- HERD, Ms Emma Louise, Director Emissions and Environment, Westpac

- MacGILL, Dr Iain Ferguson, Joint Director (Engineering),
Centre for Energy and Environmental Markets, University of New South Wales
- NELSON, Mr Tim, Head of Carbon Analysis and Government Affairs,
AGL Energy
- PEGAN, Mr Frank George, Chairperson,
Investor Group on Climate Change⁸⁶
- ROUSEL, Mr Geoff, Executive Director,
Global Head Commodities, Carbon and Energy, Westpac
- SIMSHAUSER, Dr Paul, Chief Economist and Group General Manager
Corporate Affairs,
AGL Energy
- TONI, Mr Paul, Program Leader Sustainable Development,
World Wildlife Fund
- TRUJILLO, Mr Anthony, Economic Policy Officer,
World Wildlife Fund
- TWOMEY, Dr Paul Joseph, Research Fellow,
Centre for Energy and Environmental Markets, University of New South Wales
- WHITE, Mr Lee, General Manager Standards and Public Affairs,
Institute of Chartered Accountants in Australia

CANBERRA, MONDAY 30 MARCH 2009

- COMLEY, Mr Blair Robert, Acting Secretary,
Department of Climate Change
- SAKELLARIS, Mr Tas, Assistant Secretary,
Legal and Governance Branch, Department of Climate Change
- STERLAND, Mr Barry, Acting Deputy Secretary,
Department of Climate Change

