Chapter 2

International and Domestic Context and Policy Options

Introduction

2.1 Chapter 2 provides background to the report and discusses the government's stated objectives regarding the Carbon Pollution Reduction Scheme (CPRS). It also examines the various policy options for achieving emissions reductions, the international and economic context surrounding the possible introduction of the CPRS and issues of energy security in Australia.

2.2 This chapter considers the CPRS in light of the government's stated environmental objectives. The committee has received a substantial body of evidence indicating that the CPRS does not effectively address the environmental challenge of reducing global greenhouse gas emissions, when what is needed is global action to reduce emissions. The committee notes there is, as yet, little evidence of an international agreement, and it is highly unlikely that the majority of Australia's main trade competitors will adopt a price on carbon.

2.3 The committee has also received evidence that if Australia focuses on its domestic emissions without taking a global approach to reducing emissions, there is a significant risk that approaches which will allow Australia to make the most effective contribution to reduce global emissions will be overlooked. Witnesses have noted that Australia must ensure that any action taken domestically does not worsen the global situation.

2.4 The committee notes that there is broad agreement that appropriate action must be taken to protect the environment. However, many witnesses have questioned whether the CPRS as currently proposed is the appropriate mechanism to address the environmental challenge that Australia and the rest of the world face. This chapter examines in some detail the various other policy options which exist to achieve emissions reductions.

Australian Government objective

Environmental objective

2.5 In the *Carbon Pollution Reduction Scheme: Australia's Low Pollution Future – White Paper* (the White Paper), the government recognises the Intergovernmental Panel on Climate Change's conclusion that the evidence of global warming is

'unequivocal' and that it is likely that the rise in global temperatures since the 1950's has been induced by human activity.[1]

2.6 The government states that it accepts the finding of the *Garnaut Climate Change Review: Final Report*, that a stabilisation of atmospheric concentrations of greenhouse gases around 450 parts per million of carbon dioxide equivalent is in Australia's interests, and also accepts the judgement that global agreement on reductions of this proportion is unlikely in the near future.[2]

2.7 The government further states that:

> Australia's international climate change objective is to contribute to a comprehensive global solution that will slow and ultimately reduce global greenhouse gas emissions to avert dangerous climate change. Australia has committed to playing its full and fair part in meeting that goal. In determining Australia's role, our domestic and international actions are both important.[3]

2.8 The government has defined 'playing its full and fair part' by setting targets for domestic emission reductions:

> Australia's medium-term target range represents a minimum unconditional commitment to reduce Australia's emissions by 5 per cent below 2000 levels by 2020. It sets Australia on an immediate course to stop the growth of, and then reduce, our emissions by 60 per cent on 2000 levels by 2050. Should countries reach a global deal that includes commitments by all major economies (including key developing countries) to substantially restrain emissions and by all developed countries to take on comparable emissions reductions targets, Australia has committed to reduce emissions by up to 15 per cent below 2000 levels by 2020.[4]

2.9 The government further states that should effective global agreement emerge involving commitments from both developed and developing countries which are consistent with long term stabilisation of atmospheric concentrations of 450 parts per million of carbon dioxide equivalent or lower, Australia will establish appropriate post-2020 targets to contribute to more ambitious global action.[5]

2.10 The committee notes the evidence it has received which indicates that an effective global agreement is highly unlikely, as discussed later in this chapter.

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1 Australian Government, *Carbon Pollution Reduction Scheme: Australia's Low Pollution Future – White Paper (White Paper)*, December 2008, p. 2.1.

2 Australian Government, *White Paper*, December 2008, p. 3.2.

3 Australian Government, *White Paper*, December 2008, p. 3.1.

4 Australian Government, *White Paper*, December 2008, p. 3.2.

5 Australian Government, *White Paper*, December 2008, pp 3.2 and 4.1.

2.11 The committee notes that while the government has stated that Australia's objective is to contribute to a global solution, the government did not set a global emissions reduction target, only a domestic target. The committee is of the view that this approach may be counterproductive given that it will penalise industries that would do well under a global scheme and have the capacity to contribute to the reduction of global emissions.

2.12 Evidence presented to the committee questions whether the CPRS will effectively achieve the government's stated environmental objective. While this is initially addressed later in this chapter, more substantive discussion of this issue occurs in chapter 3.

Climate change policy

2.13 The Australian Government's climate change policy has been formulated on the basis of three 'pillars':

- Reducing Australia's carbon pollution;
- Adapting to unavoidable climate change; and
- Helping to shape a global solution.[6]

Reducing Australia's carbon pollution

2.14 As articulated in the White Paper, the government intends that Australia will meet its emission reduction objectives through a carbon pollution reduction strategy consisting of four elements:

- The Carbon Pollution Reduction Scheme (as the primary mechanism);
- The expanded Renewable Energy Target;
- Investment in renewables and carbon capture and storage; and
- Action on energy efficiency.[7]

2.15 The committee notes that the government's proposals regarding each element of this strategy have been criticised by various experts and witnesses throughout this inquiry.

Adapting to unavoidable climate change

2.16 In the White Paper the government states that some climate change impacts are unavoidable, and could pose significant risk to assets, investments, environments, communities and regional economies.[8]

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6 Australian Government, *White Paper*, December 2008, p. xv.

7 Australian Government, *White Paper*, December 2008, p. 1.8.

8 Australian Government, *White Paper*, December 2008, pp 1.10-1.11.

2.17 A National Climate Change Adaptation Framework has been developed by federal, state and territory governments to enable an effective response to climate change and to outline the action that needs to be taken. Under this framework, the National Climate Change Adaptation Facility and the Commonwealth Scientific and Research Organisation (CSIRO) Climate Change Adaptation Flagship have been established 'to drive development and implementation of national research plans to address key knowledge gaps constraining adaptation action'.[9]

Helping to shape a global solution

2.18 The government has noted that climate change is a global issue that consequently must be addressed on a global scale. The White Paper states that a global framework to reduce global emissions is important to protect the Australian climate and economy from the impacts of climate change. Therefore a key objective for Australia is to increase the number of countries willing to commit to action on climate change.[10]

2.19 The government has been involved for many years in a series of international initiatives which contribute to global action on emissions reduction. These include the Asia-Pacific Partnership on Clean Development and Climate, the International Forest Carbon Initiative, international cooperation on clean energy technology, the International Climate Change Initiative, and the Global Carbon Capture and Storage Initiative.[11]

2.20 The White Paper argues that actions taken domestically will support Australia's ability to 'secure the participation of all countries, both developed and developing, in global efforts to reduce emissions.'[12]

2.21 The committee agrees with the government's objective articulated in the White Paper that a global framework to reduce global emissions is important to protect both the Australian climate and the economy.

2.22 The committee is concerned that insufficient progress has been made in achieving such a global framework.

2.23 The committee notes that as discussed in more detail in the next section of this chapter, there has been little in the way of binding international commitment to reduce emissions to date, particularly amongst Australia's main trade competitors.

2.24 The committee considers that precipitous action by Australia without an appropriate global framework will damage the Australian economy and jobs, without

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9 Australian Government, *White Paper*, December 2008, pp xxiv and 1.11.

10 Australian Government, *White Paper*, December 2008, pp xxiv-xxv and 1.12-1.13.

11 Australian Government, *White Paper*, December 2008, pp xxiv-xxv, 1.12-1.13 and 3.7.

12 Australian Government, *White Paper*, December 2008, pp xxiv-xxv and 1.12-1.13.

the prospect of a beneficial environmental outcome by reducing global greenhouse gas emissions. The committee is of the view that such an outcome as a result of the Australian experience would make global participation less and not more likely.

International context

Need for a global solution

2.25 The overwhelming majority of the evidence received by the committee indicated there is wide consensus that reducing greenhouse gas emissions is a global issue which must be addressed by a global solution.

2.26 Professor Warwick McKibbin, an economist of significant standing in Australia, and a witness whom the committee found to be exceptionally informative and helpful, succinctly articulated the argument:

> The problem is that the environmental effectiveness is not an Australian issue, it is a global issue, but the cost is an Australian issue…We need a system where the global outcome environmentally is beneficial, and us cutting with no one else cutting does not deliver anything.[13]

2.27 ExxonMobil Australia set out the premise of the argument clearly in its submission:

> It is important to understand that mitigating global carbon dioxide (CO2) emissions growth requires participation of the major developing economies in any policy response. The scope and scale of the emissions challenge can not be met by Australia acting alone given our small contribution to global emissions (i.e. Australia's CO2 emissions from fossil fuel combustion were ~1.4% of the world's total in 2005 and this share is forecast to decline.)[14]

2.28 This was echoed by BP Australia, which noted 'Australian emissions are 1½ per cent of the total, so action in Australia by itself is not going to greatly impact the world.'[15]

2.29 In his report to the committee, Dr Brian Fisher of Concept Economics noted:

> If Australia were to eliminate entirely its emissions it would make no dent in the problem in a world where Australia's annual emissions constitute less than either the United States or China emits in a month.
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> In other words, Australia's actions alone have no discernable impact on the environmental objective. The only effective response to climate change is a global one that engages all major emitters.[16]

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13 Professor Warwick McKibbin, *Committee Hansard*, 19 February 2009, p. 67.

14 ExxonMobil Australia, *Submission 66*, p. 2.

15 Mr Mark Proegler, Director, Environmental Policy, BP Australia, *Committee Hansard*, 17 February 2009, p. 43.

2.30 As stated by Mr Owen Pascoe, Climate Change Campaigner for the Australian Conservation Foundation (ACF):

> …it is in Australia's national interest to see an effective international agreement on climate change that protects the Australian economy as well as Australia's natural icons, such as the Great Barrier Reef and the Murray-Darling Basin…in terms of protecting the environment global emission reductions is what is important.[17]

2.31 Professor Anthony Owen, of the Curtin University of Technology noted that without a global scheme in place, the cost of reducing emissions will be significantly higher:

> Clearly only Kyoto protocol ratifiers are obliged to take action. So I think you will see a price that is quite significantly above what would otherwise be in place if it were a global trading system. The developed countries of the world are carrying the burden for emissions of the developing countries…The cost will be higher in Australia than it would otherwise be if the entire world was involved.[18]

2.32 Some submitters demonstrated their endorsement of a global solution by noting support for linking Australia's trading scheme with other international schemes.[19]

2.33 Mr Stephen Gale, Regional Director Climate Change, Futureworld National Centre for Appropriate Technology, effectively summarised what Australia's priority should be, noting, 'We need to achieve a reduction in global greenhouse gas emissions while also safeguarding the quality of life within Australia.'[20]

Likelihood of a global solution

2.34 Many witnesses told the committee they believe it is unlikely that other countries will take action on climate change to the same extent as proposed by the Australian Government and implement comparable schemes. Professor Owen noted, 'Ultimately, the Holy Grail is to have an international market for carbon, but I suspect that that is quite some time off.'[21]

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16 Dr Brian Fisher, Concept Economics, *A Peer Review of the Treasury Modelling of the Economic Impacts of Reducing Emissions*, 30 January 2009, p. 25.

17 Mr Owen Pascoe, Climate Change Campaigner, Australian Conservation Foundation, *Committee Hansard*, 2 February 2009, pp 78 and 81.

18 Professor Anthony Owen, Energy Economics, Curtin University of Technology (CUT), *Committee Hansard*, 17 November 2008, p. 43.

19 BP Australia, *Submission 68*, p. 11; ExxonMobil Australia, *Submission 66*, p. 9.

20 Mr Stephen Gale, Regional Director Climate Change, Futureworld National Centre for Appropriate Technology, *Committee Hansard*, 1 April 2009, p. 6.

21 Professor Anthony Owen, CUT, *Committee Hansard*, 17 November 2008, p. 41.

2.35 As Dr Fisher noted:

> Basically, to solve the climate change problem we need to engage every major emitter on the planet…Nobody really, honestly, believes that the governance arrangements will be in place for countries, even in middle-income or low-income developing countries, to put in place something like an emissions trading scheme where a tonne of carbon emitted in Africa equals a tonne of carbon in Australia.[22]

2.36 Dr Fisher added:

> …under what I believe is a practical view of the world, where it will take a long time indeed to get other countries involved in this process, particularly our Asian trading partners, our world prices will remain basically on what modellers would call the reference case. We will not be able to pass on the cost of these things. That cost will be imposed on Australian exporters and those industries will become smaller as a consequence.[23]

2.37 Professor McKibbin added to the debate:

> We are far too optimistic if we think Copenhagen is a solution. Kyoto was supposed to be a solution, Bonn was supposed to be a solution, Bali was supposed to be a solution—the problem is countries are negotiating the wrong policy…No country that is growing quickly will commit to a target in 2020 or 2030 if they do not know what it will cost. Hence, all the countries that are growing quickly have not taken on binding caps. And they are the ones that you need to have policies. So we are undermining ourselves by perpetuating this negotiating strategy and implementing policy in this country which does not address the fundamental problem at the global level.[24]

2.38 Mr Andrew Richards, Executive Manager of Government and Corporate Affairs, Pacific Hydro explained to the committee, that while many countries may not be implementing emissions trading schemes (ETS), they are taking action to reduce emissions in different ways:

> One of the things that we do notice, being an international player, is that no matter what the jurisdiction—whether it be Latin America, Europe, the United States—one thing they all have in common is they are doing a hell of a lot on domestic policy, particularly domestic energy policy, to start to change the way they do things. In the United States you have close to 30 states that have some form of feed-in tariff or mandatory renewable energy target in place. In China you have huge incentives to install renewable energy. India is the same. Obviously, right across Europe they have similar mechanisms to ours here in the MRET. So even though a lot of these countries are not participating in global emissions trading, they are doing a

22 Dr Brian Fisher, *Committee Hansard*, 2 April 2009, pp 51 and 54.

23 Dr Fisher, *Committee Hansard*, 2 April 2009, p. 58.

24 Professor McKibbin, *Committee Hansard*, 19 February 2009, p. 78.

> lot to prepare their economy, and specifically their energy sector, to be able to deal with it sometime in the future in a meaningful way.[25]

2.39 Some countries have adopted or are considering adopting a variety of different measures to reduce emissions. However many, especially Australia's key trading competitors, have not taken significant action to date.

Australia's key competitors

2.40 While Australia is the world's largest coal exporter overall, and the largest exporter of coking coal in particular, its major competitors in the industry are Indonesia and Russia. Indonesia is the largest exporter of steam coal (also known as thermal coal) and its exports are increasing. Russian coal exports are also very competitive and Russia is looking to expand its export capacity.[26]

2.41 In the natural gas market, Russia, Canada and Norway are the leading exporters. Australia directly competes with Qatar, Malaysia, Indonesia and Algeria for a share of the world liquid natural gas (LNG) trade. It is expected that exports from Africa, the Middle East and Russia will grow significantly over the next two decades.[27]

2.42 Australia's major trading partners also include: China, Japan, the United States, the Republic of Korea, Singapore, the United Kingdom, New Zealand, Thailand, Germany, India, Taiwan, Vietnam, France, Italy, United Arab Emirates, Netherlands, Papua New Guinea, Hong Kong, South Africa, Canada, Saudi Arabia, and Switzerland.[28]

2.43 The section below outlines the type of action that is being taken by Europe, the United States of America, Canada, New Zealand and Japan. While Australia competes with some of these countries, it is important to note that the action they are taking, or considering taking, is very different to that proposed for Australia with the CPRS. The report then goes on to outline the action being taken by some of our major competitors including China, Russia, Malaysia, Indonesia, Qatar, Vietnam and Nigeria. Many of these countries are taking little or no action to reduce their emissions and are certainly not considering imposing a price on carbon. As discussed in chapter 5, Australian trade exposed industries are particularly vulnerable under a carbon cost, given that the majority of our competitors do not face any carbon cost.

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25 Mr Andrew Richards, Executive Manager, Government and Corporate Affairs, Pacific Hydro, *Committee Hansard*, 2 April 2009, p. 44.

26 International Energy Agency, *Coal Information (2008 edition)*, Organisation for Economic Cooperation and Development (OECD)/ International Energy Agency (IEA), 2008, p. I/17; IEA, *World Energy Outlook 2008*, IEA/OECD, 2008, pp 119-121.

27 IEA, *Natural Gas Information (2008 edition)*, OECD/IEA, 2008, pp II.20 and II.39; IEA, *World Energy Outlook 2008*, IEA/OECD, 2008, pp 131-134.

28 Department of Foreign Affairs and Trade, *Composition of Trade 2007-08*, November 2008, pp 8-9.

Countries considering emissions trading

2.44 The committee observes that while the countries below have either implemented or are considering implementing emissions trading schemes, their schemes all differ significantly from the CPRS proposed by the Australian Government.

2.45 The committee notes concerns raised in chapter 3 of this report that the CPRS is more ambitious and complex than any other scheme currently in place or under consideration anywhere else in the world.

Europe

2.46 The committee notes that the United Kingdom, Germany, France and Italy, which are all participants in the European Union emissions trading scheme (EU ETS), are major trading partners of Australia.

2.47 The EU ETS is currently the largest cap and trade scheme in operation. The scheme was established in 2003 and was launched on 1 January 2005.[29]

2.48 The first stage ran from 2005 to 2007, and at least 95 per cent of emission permits were distributed free of charge.[30] In addition, more permits were allocated than actual emissions, which meant that essentially all emissions remained cost free, though in theory a fine was to be applied for every tonne of carbon dioxide (CO_2) emitted over the prescribed emissions limit.

2.49 This first phase covered a variety of power generation and metals and minerals processing facilities, but did not cover transport, construction, waste processing, agriculture or some industrial plants. The second stage of the scheme commenced on 1 January 2008.[31]

2.50 The EU ETS has been characterised as a 'learning by doing' exercise, and a number of lessons were noted by the European Commission after the first phase. One of the main problems with the first phase of the EU ETS arose from the over-allocation of permits.[32] The oversupply of permits, combined with the fact that permits had a defined end point, meant that the value of permits plunged. The oversupply of permits was the result of a series of factors:

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29 Leslie Nielson, *The European Emissions Trading System – lessons for Australia*, Parliamentary Library Research Paper, no. 3, 2007-08, 20 August 2008, pp 3-4.

30 Leslie Nielson, *The European Emissions Trading System – lessons for Australia*, Parliamentary Library Research Paper, no. 3, 2007-08, 20 August 2008, pp 4-6.

31 Leslie Nielson, *The European Emissions Trading System – lessons for Australia*, Parliamentary Library Research Paper, no. 3, 2007-08, 20 August 2008, pp 4-6.

32 Leslie Nielson, *The European Emissions Trading System – lessons for Australia*, Parliamentary Library Research Paper, no. 3, 2007-08, 20 August 2008, pp 6–7, 9-12 and 14-15,

- Every country produced its own national emission permits allocation plan, but each country used different methods to estimate emissions, and the plans of a number of countries featured increases in permitted emissions. This resulted in an overall allocation target of 3 to 9 per cent above pre-2005 emissions levels.
- In most countries, facilities that closed during the first trading period had to forfeit their permits, and these had to be disposed of by the end of 2007, adding to the general oversupply of permits.
- The emission permit allocation plans for several countries were approved after the first trading period commenced, adding to the existing pool of permits.[33]

2.51 The European Commission intends to alter the scheme's design over the long term, to auction a larger share of permits and extend coverage to a number of new industries, among other changes.[34]

2.52 Importantly, under the European scheme, trade exposed, export competing industries will continue to be allocated 100 per cent free permits until 2020.[35]

2.53 Economic modelling of the impact of the EU ETS on European industries has indicated how industries were expected to be affected by the introduction of the scheme. The modelling assumed an average carbon price of €20 per tonne of CO_2, and an increase of €10 per megawatt hour in the generation of electricity. The results are summarised in the following table:

33 Leslie Nielson, *The European Emissions Trading System – lessons for Australia*, Parliamentary Library Research Paper, no. 3, 2007-08, 20 August 2008, pp 4-7.

34 Leslie Nielson, *The European Emissions Trading System – lessons for Australia*, Parliamentary Library Research Paper, no. 3, 2007-08, 20 August 2008, pp 15-16.

35 Brendan Pearson, Deputy Chief Executive, Minerals Council of Australia, http://www.minerals.org.au/__data/assets/pdf_file/0012/33222/Op-ed_ETS_07-01-09.pdf (accessed 7 May 2009).

Table 2.1 EU ETS projected cost increases by industry and likely increase in consumer costs

Industry	Cost increase of production	Likely increase in consumer cost
Power Generation Coal	Increase by €10 per MWh	Increase of less than €10?
Power Generation Nuclear	Increased profitability	Increase of less than €10?
Steel Basic Oxygen Furnace	Increase by 17.3%	Increase by 6%
Industry	**Cost increase of production**	**Likely increase in consumer cost**
Steel Electric Arc Furnace	Increase by 2.9%	66% of costs may be passed to consumer
Chemical Paper Pulp Processing	Increase by 0.3 to 1.0%	50% additional costs passed to consumer
Recovered Fibre Paper Pulp Processing	Increase by 1.9%	Unknown
Mechanical Paper Pulp Processing	Increase by 3 to 6%	Unknown
Cement Production	Increase by 36.5%	Uncertain due to import competition
Petroleum Refining	Increase by 20.5%	Increase by 1%
Primary Aluminium	Increase by 11.4%	Uncertain due to import competition
Secondary Aluminium	Increase by 0.5%	Uncertain due to import competition

Leslie Nielson, *The European Emissions Trading System – lessons for Australia*, Parliamentary Library Research Paper, no. 3, 2007-08, 20 August 2008, p. 13.

2.54 The table indicates that most of the industry sectors listed are limited in their ability to pass on the full cost of the EU ETS to customers, thereby reducing their profitability. The bulk of the cost increases appear to stem from increased power costs.[36]

2.55 While early economic modelling indicates that the impact of the first phase on the competitiveness of European industry was minimal, which is not unexpected given the amount of free permits issued, those sectors exposed to international competition may be more severely impacted in subsequent trading periods depending on the design of the scheme. As explained in paragraph 2.52, trade exposed industries in Europe will be significantly assisted by the continued allocation of free permits until other countries begin to implement their own emissions trading schemes. Further, these results occurred with an oversupply of permits, and during a period of strong economic growth and equally strong demand for metals, power and processed minerals. The committee notes that 'Robust economic conditions have a way of hiding any competitive problems.'[37]

2.56 The committee notes that the EU ETS is not as comprehensive as that proposed for Australia, and given the high allocation of permits to European emitters,

36 Leslie Nielson, *The European Emissions Trading System – lessons for Australia*, Parliamentary Library Research Paper, no. 3, 2007-08, 20 August 2008, p. 13.

37 Leslie Nielson, *The European Emissions Trading System – lessons for Australia*, Parliamentary Library Research Paper, no. 3, 2007-08, 20 August 2008, pp 13-14.

Australian industry is likely to be at a disadvantage with respect to carbon costs when competing against European countries.

United States of America

2.57 The United States remains one of Australia's significant trading partners.

2.58 Currently, the United States (US) runs a nation wide cap and trade ETS called the Acid Rain Program, which covers sulphur dioxide and nitrogen oxides. The scheme includes the electric power generators and others who wish to opt in. This ETS actually provided the model for the EU ETS and has achieved significant reductions in sulphur dioxide and nitrogen oxide emissions.[38]

2.59 There are also a series of proposed voluntary and mandatory emissions trading schemes across a number of US states, some of which are being implemented in conjunction with Canadian provinces. These schemes include the Regional Greenhouse Gas Initiative, Midwestern Greenhouse Gas Accord, and the Western Climate Initiative.[39] According to the Centre for International Economics the North American schemes are focussed on an alternative cap and trade scheme configuration, to facilitate transitional arrangements, involving an 'output based allocation' approach. An 'output based' approach is also the basis of the proposed Canadian scheme. [40] See paragraph 2.66.

2.60 Dr Fisher noted in his report to the committee that any potential scheme in the US is likely to be more supportive of its industries:

> Any prospective scheme that may emerge in the United States in coming years is also likely to have significantly more generous EITE assistance provisions than Australia's ETS. For example, the Lieberman-Warner Bill (defeated in Congress in 2008) proposed a phase-in of 24.5 per cent auctioning in 2012, rising to 58.75 per cent by 2032 and then remaining at that level until 2050.
>
> In addition, it is virtually assured that any politically viable bill to introduce a cap-and-trade scheme in the United States must include provisions for border measures against countries not subject to an emissions constraint. The Lieberman-Warner Bill, for example, would have required the President to determine what countries had not taken comparable action to limit GHG emissions and for importers of covered goods from those countries to buy international reserve allowances. Some form of border measure was supported by both Presidential candidates prior to the

38 Leslie Nielson, *Emissions– who is trading what?*, Parliamentary Library Background Note, 15 August 2008, http://www.aph.gov.au/Library/pubs/BN/2008-09/emissions.htm (accessed 15 April 2009).

39 See Leslie Nielson, *Emissions– who is trading what?*, Parliamentary Library Background Note, 15 August 2008, http://www.aph.gov.au/Library/pubs/BN/2008-09/emissions.htm (accessed 15 April 2009).

40 Centre for International Economics, *Review of the proposed CPRS*, April 2009, pp 14 and 88.

> November 2008 election. This then would raise serious questions in the WTO and potential disruption to trade.[41]

2.61 The committee notes that the 'stimulus package' developed by the Obama Administration had domestic protectionist overtones protecting US domestic industry from imports. The committee notes that the United States Administration is moving down a more protectionist path while the Australian Government's proposed CPRS will make imports into Australia more competitive and reduce the competitive position of Australian made products.

2.62 The committee is concerned that the CPRS, together with the more protectionist approach taken by the United States Government, will disadvantage Australian business.

Canada

2.63 Canada is a leading LNG exporter and is one of Australia's major trading partners.

2.64 In 2006 Canada gave notice of its intention to develop a greenhouse gas ETS, modelled on a baseline and credit approach. The government will propose intensity based targets which will be applicable from 2010. Canada's target is to reduce total greenhouse gas (GHG) emissions by 20 per cent of 2006 levels by 2020.[42]

2.65 Subject to various industry specific thresholds, the proposed scheme will cover the following industries: power generation, oil and gas, pulp and paper, iron and steel, smelting and refining, cement, lime, potash and chemicals and fertilisers.[43]

2.66 The proposed Canadian scheme is based on an 'alternative permit allocation approach within a cap and trade scheme termed "output based allocation"'.[44] The Centre for International Economics described this approach as one in which:

> …firms are provided with free permits according to current output and an assigned emissions intensity (which could be based on business as usual historical intensity or, potentially, a particular target intensity). The emissions intensity is pre-determined (although may vary over time).

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41 Dr Brian Fisher, Concept Economics, *A Peer Review of the Treasury Modelling of the Economic Impacts of Reducing Emissions*, 30 January 2009, p. 27.

42 Parliamentary Library, *Canadian emissions trading scheme*, Climate Change Web Publication, http://www.aph.gov.au/Library/Pubs/ClimateChange/governance/foreign/canadian.htm (accessed 16 April 2009).

43 Parliamentary Library, *Canadian emissions trading scheme*, Climate Change Web Publication, http://www.aph.gov.au/Library/Pubs/ClimateChange/governance/foreign/canadian.htm (accessed 16 April 2009).

44 Centre for International Economics, *Review of the proposed CPRS*, April 2009, p. 69.

> Effectively, firms only pay for emissions that are above the assigned emissions intensity. Also, effectively, firms that achieved (ex post) better than the assigned intensity will have permits available to sell.[45]

2.67 The Centre for International Economics has argued that output based allocation 'leads to a greater tendency towards emission rate reduction…This means a lower price increase, but a greater cost of achieving a given level of emissions reduction.[46]

2.68 The Canadian government has also proposed the introduction of a number of complementary measures, including mandatory carbon capture and storage for specific new facilities, a Technology Fund to invest in emissions reduction projects, and an emissions offsets scheme.[47]

2.69 Alberta has implemented its own emissions intensity based trading scheme and several provinces are intending to participate in various emissions trading schemes with some Northern American states, as discussed in paragraph 2.59.[48]

2.70 The committee notes that the proposed Canadian scheme is not as comprehensive as that proposed for Australia and this may be detrimental to the competitiveness of Australian industry.

New Zealand

2.71 New Zealand is one of Australia's major export markets, with principal exports including refined and crude petroleum, and aluminium.[49]

2.72 Legislation establishing an ETS in New Zealand came into force in September 2008, however the new New Zealand Government has announced a full review of the scheme design.[50]

2.73 The legislation as passed provides for the scheme to be phased in across sectors between 2008 and 2013. Industries covered by that scheme include transport, forestry, industrial process, liquid fuels, agriculture, stationary energy, synthetic gases

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45 Centre for International Economics, *Review of the proposed CPRS*, April 2009, p. 88.

46 Centre for International Economics, *Review of the proposed CPRS*, April 2009, p. 88.

47 Parliamentary Library, *Canadian emissions trading scheme*, Climate Change Web Publication, http://www.aph.gov.au/Library/Pubs/ClimateChange/governance/foreign/canadian.htm (accessed 16 April 2009).

48 Parliamentary Library, *Canadian emissions trading scheme*, Climate Change Web Publication, http://www.aph.gov.au/Library/Pubs/ClimateChange/governance/foreign/canadian.htm (accessed 16 April 2009).

49 Department of Foreign Affairs and Trade, *Composition of Trade 2007-08*, November 2008, pp 5 and 223-224.

50 Australian Government, *White Paper*, December 2008, p. xviii.

and waste. Transitional assistance is intended to be provided to forestry, industry, fishing, agriculture and to households.[51]

2.74 The committee notes the New Zealand scheme is currently under review and therefore may change significantly, affecting the extent to which it and the CPRS would have competitive implications for Australia.

2.75 The New Zealand review is currently considering a number of issues, including the 'prospects for an international agreement on climate change' post Kyoto, the development of a 'high quality, quantified regulatory impact analysis' to identify the net benefits or costs to New Zealand of any policy action, 'the impact on the New Zealand economy and New Zealand households of any climate change policies, having regard to the weak state of the economy, the need to safeguard New Zealand's international competitiveness, the position of trade exposed industries', 'the timing of the introduction of any New Zealand measures, with particular reference to the outcome of the December 2009 Copenhagen meeting, the position of the United States' and 'the relative merits of an emissions trading scheme or a tax on carbon or energy as a New Zealand response to climate change'.[52]

2.76 The committee also notes the phased approach to implementing the New Zealand scheme which is likely to disadvantage Australian industries until the New Zealand scheme is fully implemented.

Japan

2.77 Japan is also one of Australia's major export markets, with principal exports including coal, refined and crude petroleum, and aluminium.[53]

2.78 Japan is currently running a voluntary ETS on a cap and trade basis and is working on its own mandatory ETS.[54]

2.79 The committee notes the comments of Dr Alan Moran:

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51 New Zealand's Climate Change Solutions, *Implementing the emissions trading scheme*, 15 September 2008, http://www.climatechange.govt.nz/emissions-trading-scheme/implementing/index.html (accessed 16 April 2009).

52 Terms of Reference of New Zealand Select Committee undertaking the Emissions Trading Scheme Review, http://www.parliament.nz/en-NZ/PB/SC/Details/EmissionsTrading/9/b/e/00SCETS_TOR_1-Terms-of-reference-of-the-Emissions-Trading-Scheme-Review.htm (accessed 6 May 2009).

53 Department of Foreign Affairs and Trade, *Composition of Trade 2007-08*, November 2008, pp 200-201.

54 Leslie Nielson, *Emissions– who is trading what?*, Parliamentary Library Background Note, 15 August 2008, http://www.aph.gov.au/Library/pubs/BN/2008-09/emissions.htm (accessed 15 April 2009).

> 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.[55]

2.80 The committee notes that the CPRS is likely to cause an increase in the production costs of the products Australia exports to Japan, reducing Australia's competitive position.

Countries not considering emissions trading

2.81 The committee notes that only those countries listed above are considering adopting a price on carbon, however, many of Australia's key trade partners and competitors are not.

2.82 While the countries discussed below, who are major trade competitors with Australia in various industries, have implemented various climate change policies, as has Australia, they are not considering action which would significantly impact on their industries, and any future such action remains unlikely.

2.83 The committee is concerned that the introduction of the CPRS as currently proposed, in the absence of more substantial action by Australia's trading partners and key competitors, will severely damage Australia's international trade competitiveness and as a result the Australian economy and jobs.

China

2.84 China remains one of Australia's major export markets, with principal exports including coal, crude petroleum and aluminium.[56]

2.85 China is also a major trade competitor in aluminium and cement. China is the world's largest exporter of cement and accounts for about one third of global production of aluminium. Notably, most of China's aluminium production is supplied by coal-fired electricity, in contrast to the cleaner energy employed by Australian aluminium producers.[57]

2.86 China released its National Climate Change Program in June 2007, in which it outlined a series of domestic activities it planned to undertake to mitigate GHG emissions and adapt to climate change. The program rejects the imposition of mandatory limits on emissions, though goals under the program include: reducing

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55 Alan Moran, *Japan and Global Warming Policies*, Occasional Paper, Institute of Public Affairs, November 2008, http://ipa.org.au/sectors/energy/publication/1447/japan-and-global-warming-policies (accessed 29 April 2009).

56 Department of Foreign Affairs and Trade, *Composition of Trade 2007-08*, November 2008, p. 154.

57 Dr Brian Fisher, Concept Economics, *A Peer Review of the Treasury Modelling of the Economic Impacts of Reducing Emissions*, 30 January 2009, pp 29-30.

energy intensity by 20 per cent by 2010, more than doubling renewable energy use by 2020, improving efficiency standards, and significantly, expanding power generated by nuclear and gas as well as renewable sources to displace the use of coal-fired power.[58]

2.87 Programs which have been implemented to date include an economy wide efficiency target, a renewable energy law mandating 16 per cent of energy use is to come from renewable sources by 2020, national building codes which specify energy saving design standards, energy efficiency standards for appliances, fuel economy standards and closing inefficient industrial facilities. China also actively participates in the Clean Development Mechanism (CDM), and accounts for more than 40 per cent of the global emission credits from CDM projects.[59]

2.88 A tentative outline for a domestic ETS was released by the central bank in June 2008, however, the introduction of a national scheme is highly unlikely in the near future.[60]

India

2.89 India imports coal and crude petroleum from Australia, and is one of Australia's major trading partners.[61]

2.90 India, like China, has reportedly rejected the application of mandatory emissions limits, however, like China, a number of policies to potentially reduce GHG emissions have been introduced. Measures which have been implemented include: increasing renewable energy to 10 per cent of electricity generation capacity, incentives for solar and wind power generation, closing inefficient coal fired generation, expanding the nuclear power industry, establishing an energy efficient building code for commercial buildings and conversion of public transport and taxis to compressed natural gas.[62]

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58 Leslie Nielson, *Climate change policy: Brazil, China, India and Russia*, Parliamentary Library Background Note, 25 February 2009, http://www.aph.gov.au/Library/pubs/BN/2008-09/ClimateChange.htm (accessed 11 March 2009).

59 Leslie Nielson, *Climate change policy: Brazil, China, India and Russia*, Parliamentary Library Background Note, 25 February 2009, http://www.aph.gov.au/Library/pubs/BN/2008-09/ClimateChange.htm (accessed 11 March 2009).

60 Leslie Nielson, *Climate change policy: Brazil, China, India and Russia*, Parliamentary Library Background Note, 25 February 2009, http://www.aph.gov.au/Library/pubs/BN/2008-09/ClimateChange.htm (accessed 11 March 2009).

61 Department of Foreign Affairs and Trade, *Composition of Trade 2007-08*, November 2008, pp 8 and 186-187.

62 Leslie Nielson, *Climate change policy: Brazil, China, India and Russia*, Parliamentary Library Background Note, 25 February 2009, http://www.aph.gov.au/Library/pubs/BN/2008-09/ClimateChange.htm (accessed 11 March 2009).

2.91 The committee notes that the introduction of an ETS in India is highly unlikely in the near future.

Brazil

2.92 Australia exports coal to Brazil, and Brazil is one of Australia's largest competitors in the export of beef.[63] Brazil also competes in the world aluminium market.[64]

2.93 Brazil is the world's largest producer and consumer of ethanol, and has a Mandatory Biodiesel Requirement policy in place. In addition it has identified the Kyoto Protocol's CDM as the main avenue for international cooperation on climate change.[65]

2.94 Further the country sources about 45 per cent of its electricity from renewable sources and has a Programme of Incentives for Alternative Electricity sources which provides incentives and subsidies.[66]

Russia

2.95 Russia has ratified the Kyoto Protocol, and its target by 2012 is to equal its emissions in 1990. However, between 1990 and 2002, Russia's greenhouse gas emissions fell significantly due to the economic contraction after the end of the Soviet Union. Consequently, Russia will have no difficulty in meeting its commitment without taking any specific action to mitigate emissions.[67]

2.96 Implementation of domestic policies addressing climate change has been limited, but Russia has put in place some policies encouraging energy efficiency.[68]

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63 Department of Foreign Affairs and Trade, *Composition of Trade 2007-08*, November 2008, p. 142; Australian Bureau of Agricultural and Resource Economics, *Commodity Statistical Bulletin 2008*.

64 Australian Bureau of Agricultural and Resource Economics, *Australian Commodity Statistics 2008*, Australian Government, 2008, Table 241, p. 243.

65 Leslie Nielson, *Climate change policy: Brazil, China, India and Russia*, Parliamentary Library Background Note, 25 February 2009, http://www.aph.gov.au/Library/pubs/BN/2008-09/ClimateChange.htm (accessed 11 March 2009).

66 Leslie Nielson, *Climate change policy: Brazil, China, India and Russia*, Parliamentary Library Background Note, 25 February 2009, http://www.aph.gov.au/Library/pubs/BN/2008-09/ClimateChange.htm (accessed 11 March 2009).

67 Leslie Nielson, *Climate change policy: Brazil, China, India and Russia*, Parliamentary Library Background Note, 25 February 2009, http://www.aph.gov.au/Library/pubs/BN/2008-09/ClimateChange.htm (accessed 11 March 2009).

68 Leslie Nielson, *Climate change policy: Brazil, China, India and Russia*, Parliamentary Library Background Note, 25 February 2009, http://www.aph.gov.au/Library/pubs/BN/2008-09/ClimateChange.htm (accessed 11 March 2009).

2.97 The committee notes that Russia is a major exporter of coal and natural gas. Russia is the world's third largest net exporter of coal, and its exports are very competitive, with expansions of export capacity currently being planned.[69] Russia is also the world's largest exporter of aluminium.[70]

2.98 The committee considers that if Australia imposes a cost on its export industries through the CPRS, it is clear that countries such as Russia with such competitive exports, would quickly take Australia's place in the international export market.

Other key competitor countries

2.99 The committee notes that while Australia's other key trade competitors in the natural gas, coal and alumina industries, namely, Indonesia, Malaysia, Qatar, Vietnam and Nigeria, are parties to the Kyoto Protocol they are not bound to emissions targets. These countries have implemented varying degrees of climate change policy but, importantly, are not intending to implement an ETS of any sort in the near future.

2.100 Having considered the actions of all of the above countries, the committee notes that it is abundantly clear that a global solution is highly unlikely in the foreseeable future.

2.101 The committee considers that if Australia implements the CPRS in the absence of an appropriate global framework it will unduly expose its export industries, causing untold harm to the Australian economy and jobs.

The effect of Australia 'going it alone'

2.102 A substantial number of witnesses and submitters expressed concern that if Australia implemented the CPRS without any comparative action on a global scale, it would be detrimental to Australia's international competitiveness as a nation, and would not significantly contribute to a reduction in global greenhouse gas emissions – in fact, the effect of Australia 'going it alone' could be an increase in global greenhouse gas emissions.

2.103 In questioning the Department of Climate Change, the committee endeavoured to understand how Australia's national emissions target would relate to a reduction in global emissions:

> CHAIR—The government has set a target in terms of domestic emissions, but have you set a target in terms of what this reduction in national emissions should contribute to the reduction in global greenhouse gas emissions?

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69 International Energy Agency, *World Energy Outlook 2008*, 2008, pp 131-134.

70 Australian Bureau of Agricultural and Resource Economics, *Australian Commodity Statistics 2008*, 2008, p. 243.

> Mr Sterland—No. That is not set in the paper…The policy rationale is that Australia will set a national target and it seeks to contribute to global efforts to reduce emissions through its national commitments.
>
> CHAIR—But we do not actually have a target as to how much, through our contribution, we want to reduce global greenhouse gas emissions?
>
> Mr Sterland—I think the Australian government, consistent with international practice, sets its target in terms of its national emissions reduction.
>
> CHAIR—But the environmental challenge is not to reduce emissions in Australia as much as to reduce emissions around the world, is it not?
>
> Mr Sterland—Exactly, and the more significant issue is how Australia's national efforts can contribute to the creation or the development of or be part of a global solution to this. Everyone has always recognised that that is the main game.[71]

2.104 Ms Meghan Quinn, Manager of the Climate Change Modelling Division in the Department of the Treasury, further noted that:

> In the white paper the government set out that the overall environmental objective for Australia is that it would be in Australia's interests to have global emissions of 450 parts per million or lower.[72]

2.105 The committee notes that the government has not clearly set out how and by how much the proposed CPRS will contribute to a reduction in global greenhouse gas emissions. No targets have been set as to how the proposed Australian CPRS will contribute to a reduction in global greenhouse gas emissions.

2.106 The committee is concerned that the lack of global focus in the government's greenhouse gas emission reduction targets through the proposed CPRS is completely inconsistent with the stated importance of a 'global solution'.

2.107 The committee considers that the lack of global focus on greenhouse gas emissions in the proposed CPRS will have negative flow-on consequences both for the environment as well as the Australian economy and jobs.

2.108 As discussed in chapter 5, there is significant risk of industries moving offshore if there is not comparative global action on emissions reduction. This concern was raised by many witnesses, including Mr Andrew Canion, Senior Adviser, Industry Policy, Chamber of Commerce and Industry of Western Australia:

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71 Senator Mathias Cormann, Chair of the Senate Select Committee on Fuel and Energy, and Mr Barry Sterland, Acting Deputy Secretary, Department of Climate Change, *Committee Hansard*, 2 April 2009, p. 65.

72 Ms Meghan Quinn, Manager, Climate Change Modelling Division, Department of the Treasury, *Committee Hansard*, 2 April 2009, p. 66.

> For Australia to go alone, and if there were no equivalent schemes anywhere else, there would be a much stronger incentive for industry to relocate offshore—over the long term as well.[73]

2.109 Professor Owen explained that if Australia's industries relocated offshore, this would lead to increased emissions offshore, also known as 'carbon leakage':

> I do not think Australia, with such a small percentage of the world's emissions, can really dominate…It really is up to the international community and, in particular, the world's large emitters to come forward with a policy which addresses that issue. It is a serious issue, of course, leakage. If Australia drives offshore some of its energy-intensive industries, they may well create more emissions offshore than they would have with the same output in Australia.[74]

2.110 Ms Quinn of the Department of the Treasury stated:

> The modelling that was undertaken by the Australian Treasury found very little evidence of emissions going up in other countries as a result of abatement in Australia.[75]

2.111 However, the committee notes that the modelling undertaken and published by the Department of the Treasury was not of the effects of the CPRS in its current form. If the Department of the Treasury has modelled the effects of the CPRS in its current form, none of that important information has been publicly released so far. Furthermore, the Treasury was instructed by government to model only based on the not very realistic assumption that relevant global action would be taken. This is discussed further in chapter 4.

2.112 In his report to the committee, Dr Fisher noted:

> Over 80 per cent of Australia's exports go to countries that are unlikely to be subject to a carbon constraint in the near term. Around 75 per cent of Australia's imports come from similar countries. Notably, these figures are significantly higher than developed countries in Europe given high levels of intra-EU trade. For example, the relevant figures for the United Kingdom are roughly 40 per cent. This suggests, in turn, that competitiveness and carbon leakage problems may be more significant for Australia's EITE sector than for emissions-intensive industries in many other developed countries.
>
> Notwithstanding modifications in the White Paper, the Government's proposed ETS looks set to impose greater competitiveness imposts on

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73 Mr Andrew Canion, Senior Adviser, Industry Policy, Chamber of Commerce and Industry of Western Australia, *Committee Hansard*, 17 November 2008, p. 12.

74 Professor Owen, CUT, *Committee Hansard*, 17 November 2008, p. 41.

75 Ms Quinn, Department of the Treasury, *Committee Hansard*, 2 April 2009, p. 67.

> Australian EITE industries than will apply under any other current or proposed scheme, including the European ETS.[76]

2.113 Many witnesses informed the committee that there are industries in Australia which perform more efficiently than their counterparts overseas, or which displace higher emission products overseas. This is examined in greater detail in chapter 5.

2.114 Witnesses noted that it is important to recognise that the production of these products in Australia contributes to the reduction of global greenhouse gas emissions.[77] Shell Australia noted LNG as an example of such a product:

> These projects can also make a very large contribution to reducing global CO2-e emissions by displacing higher emission fossil fuels, such as coal, in the countries to which Australia exports.[78]

2.115 When questioned by the committee, both the Australian Aluminium Council and BlueScope Steel agreed that lost production in Australia will actually lead to increased global greenhouse gas emissions. Mr Noel Cornish, the Chief Executive of BlueScope Steel stated, 'we would see the loss of manufacturing industry and the loss of jobs in Australia for no global greenhouse gas improvement.'[79]

2.116 Mr David Pearce, the Executive Director of Centre for International Economics further noted, 'if we are effectively imposing taxes on our export industries for no environmental gain it is not a sensible thing to do.'[80]

2.117 Mr Daniel Price, the Managing Director of Frontier Economics, argued that:

> …it may actually be efficient, from an environmental point of view, to increase emissions in Australia…because we can do things so much more efficiently and convert raw energy into electrical energy so much more efficiently than other countries, it may be far more sensible to have an increase in emissions.[81]

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76 Dr Brian Fisher, Concept Economics, *A Peer Review of the Treasury Modelling of the Economic Impacts of Reducing Emissions*, 30 January 2009, p. 26.

77 See Australian Petroleum Production and Exploration Association, *Committee Hansard*, 19 November 2008; Cement Industry Federation, *Committee Hansard*, 19 November 2008; Australian Aluminium Council, *Committee Hansard*, 19 November 2008; Chevron Australia, *Committee Hansard*, 18 February 2009; BlueScope Steel, *Committee Hansard*, 1 April 2009; Cement Australia, *Committee Hansard*, 7 April 2009.

78 Shell Australia, *Submission 60*, p. 9.

79 Mr Michael Ison, Acting Executive Director, Australian Aluminium Council, *Committee Hansard*, 19 November 2008, p. 38; Mr Noel Cornish, Chief Executive, BlueScope Steel, *Committee Hansard*, 1 April 2009, p. 32.

80 Mr David Pearce, Executive Director, Centre for International Economics (CIE), *Committee Hansard*, 2 April 2009, p. 32.

81 Mr Daniel Price, Managing Director, Frontier Economics, *Committee Hansard*, 2 April 2009, p. 23.

2.118 Chevron Australia further added:

> …the Australian government should give due consideration to how the decisions it makes in Australia will impact on global greenhouse emissions, not just Australia's emissions.[82]

2.119 The committee was presented with evidence from a significant number of witnesses noting that Australia's competitiveness will be significantly disadvantaged if Australia implements the CPRS without comparative international action. These issues are also explored in chapter 5.

2.120 The Australian Petroleum Production and Exploration Association explained:

> Australia is the only producer of LNG supplying the Asia-Pacific region that would have a price on carbon. Our competitors are Nigeria, Algeria, Qatar, Trinidad, Tobago, Indonesia and Malaysia. They are competitors. While we would dearly love them to come to the table to address climate change by imposing a similar price of carbon, the realistic expectation is that that is still a long way away. At the moment, our having a price on carbon and their not, and their not being obliged to, of course gives them a very strong competitive advantage against us.
>
> Secondly, there is India and China and the customer countries. I do not think anyone knows when they are going to impose a price on carbon, or whether in fact there will end up being a Kyoto-style agreement at any point.
>
> Maybe it will be a series of unilateral decisions, perhaps defined through bilateral or other multilateral agreements. There is a whole range of mechanisms on which a global price on carbon could be delivered. But there are no signs that any of those countries, particularly our competitors, will do anything soon.[83]

2.121 Dr Fisher further noted that in terms of the cement industry:

> Major sources of imports include Japan, Indonesia and Taiwan, while developing countries in the Asia-Pacific region that are unlikely to impose a carbon constraint in the medium term have accounted for most of the growth in global capacity in recent years. China is the world's largest exporter approaching 40 per cent of global exports of cement. Industry estimates put excess capacity in the Asia-Pacific at more than 200 Mt (equivalent to more than 20 times Australian consumption). This indicates a serious risk to jobs and investment under an ETS, especially given countries

82 Mr John Torkington, Senior Adviser on Climate Change Policy, Chevron Australia, *Committee Hansard*, 18 February 2009, p. 23.

83 Ms Belinda Robinson, Chief Executive, Australian Petroleum Production and Exploration Association, *Committee Hansard*, 19 November 2008, p. 29.

> such as China, Indonesia, Thailand, Malaysia and Vietnam are unlikely to embrace emission pricing in the foreseeable future.[84]

2.122 The Minerals Council of Australia (MCA) stated:

> …we want to make a contribution to climate change but it requires a global protocol to be effective and the design of our scheme must take that into account. That is the most important point.
>
> …
>
> There is absolutely no point in having the adverse impact whereby we set out on something that is overly ambitious and it becomes apparent to anybody looking across our shores that we have taken the risk of tanking our economy with the prospect of trying to actually do something meaningful. Australia's emissions are small as a proportion of the global emissions. That is not a platform for doing nothing. It is a platform for understanding our proportionate responsibilities and where we fit in the global scheme…If you have a price of carbon and you even have the technologies but you have no global protocol, then you have not negated the loss of international competitiveness to Australian firms and businesses.[85]

Committee comment

2.123 The committee notes that the CPRS as currently proposed will constrain any growth in domestic emissions (and related economic growth) by imposing a price on carbon. This constraint is imposed irrespective of the overall impact on global emissions.

2.124 Specifically, the committee notes the constraints to be imposed on economic activities that can help reduce overall global greenhouse gas emissions because of related (though lower) increases in emissions in Australia.

2.125 The committee also notes that constraints on domestic emissions will be imposed on economic activities in Australia even where related levels of emissions are world's best practice and lower than those from comparable industries overseas. Any ensuing transfer of economic activity or economic growth to less environmentally friendly industries in jurisdictions not imposing a price on carbon will have a negative impact on global greenhouse gas emissions.

2.126 The committee further received evidence from a number of businesses and industries which have already made significant cuts in carbon emissions in recent years and decades, without any realistic capacity for further cuts in the short to

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84 Dr Brian Fisher, Concept Economics, *A Peer Review of the Treasury Modelling of the Economic Impacts of Reducing Emissions*, 30 January 2009, p. 30.

85 Mr Peter Coates, Chairman, and Mr Mitchell Hooke, Chief Executive, Minerals Council of Australia (MCA), *Committee Hansard*, 8 December 2008, pp 4-5.

medium term.[86] For those businesses and industries, which have done the right thing by the environment for some time, the CPRS as proposed is nothing more than an unavoidable additional tax burden. In contrast, those businesses or industries which did not make such an effort will potentially be better off after 'catching up' on emissions reductions following the implementation of the scheme as proposed.

2.127 The committee considers these to be some of the key flaws in the CPRS in the current form as proposed by the government.

2.128 The committee considers that:

(a) where it helps reduce global greenhouse gas emissions, growth in domestic emissions as a result of growth in economic activity should be encouraged not constrained by any Australian emissions trading scheme;

(b) where Australian businesses operate at world's best environmental practice in terms of their level of domestic emissions, they should not be disadvantaged compared to their overseas competitors as a result of any Australian emissions trading scheme. Rather, such businesses should be encouraged to grow further, in Australia;

(c) businesses with a demonstrated track record of best practice environmentally should not be worse off under any Australian ETS than those who did not make similar efforts in recent years.

Policy options

Emissions trading

2.129 While the committee heard many criticisms of the design of the current CPRS, a significant number of witnesses noted they supported emissions trading as the best mechanism for reducing carbon emissions.

2.130 Support for emissions trading was noted on the basis that it drives low cost abatement:

> …the real benefit of schemes like emissions trading is that they can potentially deliver the lowest cost abatement to the economy, and that has to be the policy incentive. That is behind our support for the emissions-trading scheme as the preferred policy response…you can have an emissions trading scheme that provides the economic incentive to reduce greenhouse gas emissions without the additional cost burden…[87]

2.131 This was echoed by the Energy Supply Association of Australia (ESAA):

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86 See evidence from Cement Industry Federation, *Committee Hansard*, 19 November 2008, p. 97; Australian Aluminium Council, *Committee Hansard*, 8 December 2008, pp 29, 34 and 37; Hydro Aluminium Kurri Kurri, *Submission 78*, [p. 3].

87 Mr Torkington, Chevron Australia, *Committee Hansard*, 18 February 2009, pp 28-29.

> When we first came up with a policy position of supporting an emissions trading scheme, we considered various models, including a baseline-and-credit scheme, including a tax on emissions, including an emissions trading scheme. It was the view of our association that the least-cost way of delivering greenhouse gas abatement was through an emissions trading scheme.[88]

2.132 BP Australia stated that 'a trading system will provide that incentive to actually invest in technologies which will result in abatement.'[89]

2.133 The ESAA also noted that an ETS 'assists investor confidence.'[90] This was supported by Australian Industry Greenhouse Network (AIGN) which stated:

> One of the key reasons why industry is interested and indeed supports a well-designed emissions trading scheme is that it gives you the possibility of creating a forward price. When you are making an investment in any of these areas—electricity generators, LNG plants or whatever—typically, they are talking about 20- or 30-year investment horizons that are bankable. Twenty years is probably the shortest time that a bank will give you money to invest $3 billion or whatever in the case of a generator—$20 billion now for LNG plants. What you are trying to do is get this forward price from the market to enable you to make better decisions on your investment. It does not give you certainty; it gives you a framework to manage that uncertainty.[91]

2.134 Some witnesses referred to the benefit of implementing an ETS as it is applicable at a global level:

> …where emissions trading shows a clear advantage is that it can be imposed globally on a much easier basis than taxation can be harmonised across the world, because you are looking at a fixed emissions figure which must be complied with for various nations according to their allocation…[92]

2.135 Mr Price noted that there is no need to adopt an ETS in Australia just because that is what is being favoured internationally:

> A lot of people think that you have to have the same scheme design to create an international trading platform for permits. It is not true at all. …the fact that America, or any other country, adopts a particular scheme should not mean that we should naturally follow the same scheme for the purposes of being consistent. That seems quite ridiculous. In fact, I would

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88 Ms Clare Savage, Acting Chief Executive Officer, Energy Supply Association of Australia (ESAA), *Committee Hansard*, 2 February 2009, p. 26.

89 Mr Proegler, BP Australia, *Committee Hansard*, 17 February 2009, p. 47.

90 Ms Savage, ESAA, *Committee Hansard*, 2 February 2009, p. 15.

91 Mr Michael Hitchens, Chief Executive Officer, Australian Industry Greenhouse Network (AIGN), *Committee Hansard*, 2 February 2009, p. 36.

92 Professor Owen, CUT, *Committee Hansard*, 17 November 2008, p. 41.

> be very surprised if it would be economically efficient for countries around the world to have exactly the same scheme. In fact it is more likely to be the case that different scheme designs will produce a more efficient outcome, depending upon the nature of your emissions problems.[93]

2.136 Other witnesses added that previous examples have demonstrated that an ETS can work. For example, Dr Raymond Wills, the Chief Executive Officer of the Western Australian Sustainable Energy Association stated:

> We know that an ETS can work. The very first emissions-trading scheme in the world was a sulphur dioxide market in the USA, which led to the reduction of sulphur dioxide production in the US about eight years ahead of target. So we know an ETS can work, if it is properly implemented, with appropriate market rules.[94]

2.137 The committee asked BP Australia about the internal ETS it ran in the 1990's. Mr Mark Proegler, the Director of Environmental Policy explained what BP learnt from the experience:

> The key insight was innovation, I think, which probably is the foundation of our support for trading. We set the caps. We found results we did not expect in terms of ways of reducing emissions.[95]

2.138 Professor McKibbin, informed the committee that an important benefit of an ETS is that you can set the emissions target, but noted that the environmental benefit of this approach is limited by the available science:

> The beauty of a carbon trading system is that you get exactly the emissions outcome that you want. That is the whole purpose of it: you set a cap and the market finds the price. The problem is we do not know what the cap should be. The science is only telling us what the concentrations might look like in 50 years, which is the sum of the emissions between now and then. It does not tell us what the emissions should be in the world this year, nor does it tell us what Australia's emissions should be this year, but that is the basis of cap and trade, so that is why people prefer cap and trade if they start with the idea that we know the environmental outcome.[96]

2.139 The committee also heard evidence from the National Farmers Federation, Professor McKibbin and the Australian Farm Institute noting that an ETS was not an appropriate mechanism for the inclusion of agriculture,[97] and that a baseline and credit approach would be more suitable, because it would:

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93 Mr Price, Frontier Economics, *Committee Hansard,* 2 April 2009, p. 22.

94 Dr Raymond Wills, Chief Executive Officer, Western Australian Sustainable Energy Association (WASEA), *Committee Hansard,* 17 November 2008, p. 51.

95 Mr Proegler, BP Australia, *Committee Hansard,* 17 February 2009, p. 49.

96 Professor McKibbin, *Committee Hansard,* 19 February 2009, p. 66.

97 See the National Farmers Federation, *Committee Hansard*, 19 November 2008, p. 11; Professor McKibbin, *Committee Hansard*, 19 February 2009, pp 74-75.

> …actually create an incentive for the sector to look to ways to reduce emissions; to find technologies, to find farm management systems to implement strategies that actually reduce its emissions.[98]

2.140 The MCA effectively summarised the debate:

> The MCA supports the introduction of an emissions trading scheme as part of an integrated policy approach which includes (1) a global protocol involving commitment from all major emitters, (2) the development and deployment of low-emission technologies and (3) a measured transition to an emissions trading scheme, with the resultant cost burdens comparable with schemes being developed by our competitors.[99]

Carbon tax

2.141 The committee also heard arguments for and against a carbon tax as an alternative approach.

2.142 Professor Owen explained the difference between an ETS and a carbon tax to the committee:

> With emissions trading, you fix the level of emissions and the market determines the price…With the tax system, you fix the tax, and the market determines what the level of emissions will be. In theory, they are identical; in practice, they can be very different.[100]

2.143 Professor Owen explained that he favoured taxation over emissions trading, as a tax system can be implemented through existing structures, and will not be bureaucratically burdensome or involve a high compliance cost. However, he stated a carbon tax is more difficult to apply globally, as 'with taxation you are not looking at a fixed emissions figure, and of course taxes can be circumvented by hidden subsidies and so on.'[101]

2.144 Professor McKibbin outlined the benefits and disadvantages of a tax system:

> The beauty of a tax is that you know what the price is, so you know what it is going to cost the economy. The problem is that you do not know what emissions will be for a given tax until you do it. Secondly, one of the advantages of a tax is that the revenue goes to the government; one of the disadvantages of a tax is the revenue goes to a government. Whether it is seen as an advantage of disadvantage depends on our political persuasion. My view is that that revenue does not need to go to the government. It

98 Mr Michael Keogh, Executive Director, Australian Farm Institute, *Committee Hansard*, 19 February 2009, p. 39.

99 Mr Coates, MCA, *Committee Hansard*, 8 December 2008, p. 2.

100 Professor Owen, CUT, *Committee Hansard*, 17 November 2008, p. 44.

101 Professor Owen, CUT, *Committee Hansard*, 17 November 2008, pp 41 and 44-45.

should go to those who innovate. You do not need the government in there doing the innovation.[102]

2.145 Mr Price further explained the implications of a carbon tax:

> The alternative way of doing it is through a carbon tax, and a carbon tax does more or less exactly the same thing as a Carbon Pollution Reduction Scheme design does, except that it certainly does not get the benefits that come from trading emissions. I cannot really trade my tax. So it will probably lead to an outcome more slowly than an emissions trading scheme and probably at a higher cost. In terms of that view, I am supportive of the government's position on a tax. I think it is quite often a misguided belief that tax will somehow result in a more certain outcome for investors, but I think that is an illusion. The reason I say it is an illusion is that what policymakers want is a reduction in greenhouse gases; they do not want to raise costs for businesses for its own sake. You can be absolutely sure that whatever the tax is, you will get that tax wrong. It will have to be adjusted over time to achieve a certain emissions target. So this illusion that a fixed tax will provide more certainty will not be the case. The tax will get constantly changed to achieve an emissions target.[103]

Intensity based scheme

2.146 Mr Price advocated an intensity based scheme, and explained how this would operate:

> The way that works is that it does exactly the same thing that a tax and a cap and trade tries to do in that it changes the relative economics of high and low emissions. Instead of charging for every tonne of emission, it charges for every tonne of emission over a particular benchmark. You can think of it as a benchmark being created in terms of an international best practice benchmark—anyone above that benchmark gets charged and anyone below that benchmark actually gets rewarded. It is not just a stick scheme; there are rewards in it. There is positive inducement rather than a negative inducement. That leads to very different outcomes in terms of prices. If I do not charge for every tonne of emission but rather only charge for emissions over a baseline, which is a non-zero baseline, then clearly I am not paying as much for emissions…We do not want to charge for emissions just for the sake of charging for emissions; we want to charge for emissions to switch the relative economics of high and low activity. This will certainly achieve it. No-one has ever questioned that.[104]

2.147 Mr Price noted that Frontier Economics had undertaken modelling which demonstrated that an intensity approach would allow deeper emission reductions with

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102 Professor McKibbin, *Committee Hansard,* 19 February 2009, p. 65.

103 Mr Price, Frontier Economics, *Committee Hansard,* 2 April 2009, p. 12.

104 Mr Price, Frontier Economics, *Committee Hansard,* 2 April 2009, p. 12.

a lesser economic cost than the current proposed CPRS, which involves distortional compensation measures:

> The only thing we changed was the scheme design. We ended up with a result that was $300 to $400 billion cheaper—that is, by not using the government's compensation package and instead using the price mechanism to compensate itself, if you like, using the intensity based scheme. That tells you that already the government's compensation package and the way they allocated that money have distorted the economy by $300 to $400 billion over that modelling period.[105]

2.148 The Australian Academy of Technological Sciences and Engineering also argued for a system where permits are required only to the extent that an entity is not meeting best practice, whereby the scheme includes:

> …free permits to any company of the thousand companies that are liable in this area if they are meeting world's best energy efficiency practice and that they pay for any shortcoming over that energy efficiency level.[106]

2.149 Complementary to the point made by Mr Price regarding incentives, the Australian Industry Greenhouse Network and BlueScope Steel argued that the scheme that Australia adopts should include incentives rather than being based on 'sticks' or penalties alone.[107]

McKibbin-Wilcoxen Hybrid

2.150 The committee heard evidence from Professor McKibbin who, together with Associate Professor Peter Wilcoxen, developed the McKibbin-Wilcoxen Hybrid Model. Professor McKibbin described how a hybrid scheme would work:

> …you would specify a target of very deep cuts, so you would say emissions today will be 10 per cent below what they currently are and disappearing by 2100. That is not the target you ultimately hit; that is just what Australia pledges. The second part of the commitment is that we will try and hit that target up to the point that the price is no higher than the world price. If the price of carbon in the world is $10, then for the next five years we will not charge more than $10 a tonne for carbon. How do you square up those two objectives? You allow the central bank of carbon to put as many annual permits in the system this year above the allocation so that the price is never exceeded. That is a way of actually having a lot of emissions in the economy at a given price; it is just that industry has got two-thirds of the

105 Mr Price, Frontier Economics, *Committee Hansard,* 2 April 2009, p. 21.

106 Mr Peter Laver, Vice President and Fellow, Australian Academy of Technological Sciences and Engineering, *Committee Hansard,* 17 February 2009, p. 13.

107 Mr Hitchens, (AIGN), *Committee Hansard,* 2 February 2009, p. 37; Mr Alan Thomas, General Manager Engineering, Technology and Environment, BlueScope Steel, *Committee Hansard,* 1 April 2009, p. 33.

> allocation and the central bank of carbon has one third of the allocation. It is a way of managing the cost and still committing to that long-term target.
>
> If the world then says, 'We are going to cut and we are having $30 a tonne in our market; what are you doing Australia?' we can say, 'Okay, the central bank of carbon will no longer intervene until the price hits $30 a tonne.' Emissions in the Australian economy will go do [sic] down relative to what they would have been, but we will probably still be above our target, because we are very carbon efficient in our energy use in this country. The idea is to have a mechanism that you can use in the international commitment but which still drives domestic investment so people can see what is happening in Australia, and they can use those long-term carbon assets as hedges against their investment risk, either on fossil fuel intensive technologies or renewable technologies, because that is an asset that they can use as a perfect hedge to their long-term investments.[108]

2.151 Professor McKibbin further explained that a hybrid scheme would recognise additional emission reduction efforts and reward abatement:

> If you bring in a complementary measure, what happens is that the price remains the same but the central bank of carbon has to sell fewer permits this year to maintain the same price. So instead of the revenue going to the central bank of carbon it goes to the person who reduced the emissions. So if it is an energy efficiency program, that program gets rewarded the revenue from the abatement but you still get the same price in the economy but much deeper cuts. That is the absolute advantage of a price approach and that is built into the hybrid up to the threshold where you are above the deep cuts target.[109]

Need to assess alternative options

2.152 Mr David Pearce expressed concern that there is not enough known about the potential implications of any of these policies:

> I do not think that we currently have a sufficient quantitative understanding of the short-term challenges and implications either of the CPRS or of the various realistic alternatives that could be put in its place…quantitative regulatory impact analysis is a very powerful way of improving our understanding of different policies and potentially increasing community wide support for an appropriate way forward on mitigation policy.[110]

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108 Professor McKibbin, *Committee Hansard,* 19 February 2009, p. 66.

109 Professor McKibbin, *Committee Hansard,* 19 February 2009, p. 78.

110 Mr Pearce, CIE, *Committee Hansard,* 2 April 2009, p. 25.

Economic context

Australia's economy

2.153 The committee heard evidence to the effect that, as Australia is a small, open economy and is subject to world prices, it is very difficult for Australian producers to pass on any additional cost imposed by an ETS. Dr Fisher gave the following example:

> We export something of the order of 60 per cent of our beef, so effectively we are in a situation where the domestic beef prices are influenced by the international beef price. If we attempted to jack up domestic beef prices to recover this from domestic consumers then we would see imports…But in the final analysis for most of our products we are seeing international prices reflected in the Australian economy, so we cannot pass these costs on.[111]

2.154 Witnesses informed the committee that Australia is a 'price taker' in various industries. Mr Cornish of BlueScope Steel told the committee:

> While Australia is a competitive place to make steel, being one of the few countries with high-quality iron ore and metallurgical coal, it is a small producer in global standards. Australia produces about 0.6 per cent of global steel production. Accordingly, we are largely price takers in global and domestic markets.[112]

2.155 Mr Peter Morris, the Director, Economic Policy at the Australian Coal Association, further added that in terms of the coal industry, Australia is also a 'price taker':

> …we are a commodity industry—that is, over the course of a commodity cycle, which could be seven, eight or 10 years, where the price does fluctuate, we are essentially a price taker. We take the price on international markets.[113]

2.156 Mr Pearce further added:

> …resource based exports are very important in the Australian economy, although I should point out that we also have significant service exports: tourism, education and other things, which will probably be less affected. But I think the core of your proposition is that if Australia imposes a cost on these important resource industries that is not similarly imposed in our partner countries we then incur a cost that they do not or, alternatively, our reductions in emissions do not come about as efficiently or as cost-effectively as they could. I agree.[114]

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111 Dr Fisher, *Committee Hansard*, 2 April 2009, p. 58.

112 Mr Noel Cornish, Chief Executive, BlueScope Steel, *Committee Hansard*, 1 April 2009, p. 28.

113 Mr Peter Morris, Director, Economic Policy, Australian Coal Association, *Committee Hansard*, 2 February 2009, p. 61.

114 Mr Pearce, CIE, *Committee Hansard*, 2 April 2009, p. 31.

2.157 Some witnesses, like Dr Wills, supported the government's argument that the Australian economy would benefit from action on climate change:

> …tackling this issue diversifies our economy and allows us to develop industries that we can then export to the world as part of that process.[115]

2.158 Dr Wills emphasised this point, referring to a statement by the BP Chief Economist:

> The chief economist for BP earlier this year stated that, if Australia positions itself well in an ETS, it will position Australia's economy well to take advantage of it. I do not differ from that view. I believe that, if we build a system that works well, not only will it then be echoed by other places around the world but it will give us a fundamentally better understanding of that system that will then allow us to make use of that in a global market.[116]

2.159 However, Mr Price told the committee that the CPRS could in fact have the opposite effect:

> I think it is crucially important for such a small, open economy, if it is going down the line of an emissions trading scheme, to have one that does not undermine the economy because, if that is the outcome, it will give emissions trading the world over a very bad reputation.[117]
>
> …[the CPRS] will reduce emissions in Australia, but the broader concern is that because it is so clunky and it will come at such high cost that it will allow other people to be able to point to an Australian failure as a reason for not doing reforms in their own country.[118]

Global financial crisis

2.160 In the White Paper, the government stated:

> The world is currently experiencing a financial and economic crisis that has created a climate of uncertainty. Despite the challenges we face today, the global financial crisis has not diminished the risks of climate change, or the need to take decisive and responsible action now…The global financial crisis, does however, highlight the need for a prudent and balanced approach to delivering the Carbon Pollution Reduction Scheme.[119]

2.161 The committee notes that while the government states it recognises the severity of the current economic situation, it has failed to take the changed global economic environment into account when designing the CPRS or modelling its

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115 Dr Wills, WASEA, *Committee Hansard,* 17 November 2008, p 53.

116 Dr Wills, WASEA, *Committee Hansard,* 17 November 2008, p 53.

117 Mr Price, Frontier Economics, *Committee Hansard,* 2 April 2009, p. 11.

118 Mr Price, Frontier Economics, *Committee Hansard,* 2 April 2009, p. 24.

119 Australian Government, *White Paper*, December 2008, p. xvi.

economic impact. The committee heard a great deal of criticism of the government's failure to take the global financial crisis (GFC) into account, and this is discussed in detail in chapter 4.

2.162 The Australian Workers' Union (AWU) was one of many organisations who raised concerns about the omission of the GFC from the Treasury modelling. Mr Paul Howes, the National Secretary of the AWU stated that there is a need for further Treasury modelling, 'The reality is that [inaudible] modelling was done previously and we are living in a whole different world now.'[120]

2.163 The committee notes that the government, not unpredictably, argues that introducing the CPRS will be beneficial in the current 'uncertain' environment:

> In these uncertain times, there is a strong imperative to provide certainty to industries on future climate change policy so that investment and other business decisions can be made in the full knowledge of future policy settings.[121]

2.164 This argument was effectively countered by the witnesses at the receiving end of the current economic downturn, who informed the committee that the GFC was impacting the ability of businesses, and sometimes entire sectors, to obtain credit.[122] The Energy Networks Association (ENA) further commented that for the electricity generation sector:

> …the convergence of CPRS implementation with the current global financial crisis have meant energy network businesses face a less certain business environment than at any time in the past 20 years.[123]

2.165 A multitude of witnesses raised serious concerns about the impact the GFC will have on the ability of business to cope with the additional cost imposed as a result of the CPRS as proposed. Many witnesses called for the GFC to be taken into account in the design of the CPRS.

2.166 The MCA explained how falling demand for commodities has led to falling prices, already resulting in job losses, even before the implementation of any ETS. For these reasons the MCA argued that the GFC should be taken into account in the design of the CPRS, citing a need for a 'slow, measured approach.'[124] Mr Mitchell Hooke, Chief Executive of the MCA further explained 'that is not to be misconstrued as an argument for doing nothing and for delay. It is an argument for getting the

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120 Mr Paul Howes, National Secretary, Australian Workers' Union (AWU), *Committee Hansard*, 2 February 2009, p. 73.

121 Australian Government, *White Paper*, December 2008, p. xvi.

122 Ms Savage, ESAA, *Committee Hansard*, 2 February 2009, p. 29.

123 Mr Andrew Blyth, Chief Executive Officer, Energy Networks Association (ENA), *Committee Hansard*, 2 February 2009, p. 44.

124 Mr Hooke, MCA, *Committee Hansard*, 8 December 2008, p. 11. See also pages 3-11.

framework right'[125] The MCA further argued that the CPRS is inflexible and ill suited to adjusting to sudden changes in the economy.[126]

2.167 BlueScope Steel explained to the committee that the GFC has had a very significant impact on their production levels. Mr Cornish stated:

> Because the markets have been so poor since October, we have substantially pulled back our production in order to try to match our production to a very thin market. So right now our production has pulled back substantially in reaction to the global financial crisis.[127]

2.168 Mr Cornish explained that the GFC makes it even more difficult for BlueScope Steel to bear the additional costs imposed as a result of the CPRS:

> Our ability to be able to sell our product profitably in Australia, when we have imports coming in from producers that do not have a carbon tax, will be made more difficult and our ability to sell our steel overseas—half the production of the Port Kembla steelworks is exported—bearing a tax that none of our competitors have, particularly in this global financial crisis where margins are nonexistent, will also be more difficult.[128]

2.169 Councillor George Creed, Mayor of the Gladstone Regional Council, informed the committee that for the people of the Gladstone region:

> ..the crisis is on. I think there were another 45 jobs lost yesterday up at the Rio Tinto expansion. At this stage there are certainly hundreds and probably thousands of people who have lost their jobs.[129]

2.170 The committee received some evidence to the effect that as the GFC is a short term factor, it will not greatly affect the decisions of organisations. Chevron Australia explained that while the GFC adds complications in the consideration of investment decisions, all of its projects are long term investments, and a long term view of the economics is generally taken.[130]

2.171 The Australian Chamber of Commerce and Industry noted that while the GFC may be a short term issue:

> It certainly adds pressure to business because, as I indicated, business is under pressure with declining sales, and profitability being squeezed, so adding anything to the cost side of a business operation at the moment, or

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125 Mr Hooke, MCA, *Committee Hansard*, 8 December 2008, p. 11.

126 Mr Coates, MCA, *Committee Hansard*, 8 December 2008, p. 3.

127 Mr Cornish, BlueScope Steel, *Committee Hansard*, 1 April 2009, p. 35.

128 Mr Cornish, BlueScope Steel, *Committee Hansard*, 1 April 2009, p. 35.

129 Councillor George Creed, Mayor, Gladstone Regional Council, *Committee Hansard*, 7 April 2009, p. 23.

130 Mr Peter Eggleston, External Affairs Manager, Chevron Australia, *Committee Hansard*, 18 February 2009, pp 25-26.

> even the expectation of that, makes business wonder how it will be able to cope with that potential cost impact, and that is on the basis of declining business and consumer confidence attributable to the global financial crisis.
>
> …
>
> In the meantime, Australian business has to compete and export, and profitability margins are becoming a lot tighter, so we certainly do not want to see a scheme imposed that makes that transition any more difficult than it will otherwise be. That is why we are very much supportive of a so-called slow or soft start, especially before competitor countries have not necessarily adopted the same scheme.[131]

2.172 The AWU made it quite clear that the GFC has impacted severely on industry in Australia:

> We are now confronting a crisis in the steel sector and in the aluminium sector, and it is a crisis that in our thinking is unprecedented. As long as we have been making steel here in Australia, since 1921, we have never had a situation as bad.[132]
>
> When I am going around the country at the moment (inaudible) looking at aluminium refineries that have ramped down their capacity in New South Wales (inaudible) and you hear about large-scale construction jobs in Queensland being built with Indian steel and Brazilian aluminium…[133]

2.173 Mr Stuart Ritchie, the National Sustainability Manager of Cement Australia explained the impact the GFC has had on demand for cement:

> We have certainly seen a significant decrease in demand across our business as a whole. Currently, one kiln in our New South Wales plant at Kandos has been closed, and we estimate that it will be closed for 12 months. That is something that I have not seen in my 13 years in the industry; so we are certainly seeing an impact. My understanding is that the sales downturn at the moment is of the order of 15 to 20 per cent.[134]

2.174 The Chief Executive of BlueScope Steel informed the committee that the GFC has already had a dramatic impact on employment in the steel industry:

> …this global crisis has been extremely severe in steel, as it has been in other parts of the world and other industries in Australia. As a result, we have had a circumstance where several hundred contractors have been removed from their daily activities at the steelwork in their role of supporting the steelwork's operations. We have had many areas of our plant

131 Mr Gregory Evans, Director, Economics, Australian Chamber of Commerce and Industry, *Committee Hansard*, 8 December 2008, pp 66 and 64.

132 Mr Howes, AWU, *Committee Hansard*, 2 February 2009, p. 72.

133 Mr Howes, AWU, *Committee Hansard*, 2 February 2009, p. 76.

134 Mr Stuart Ritchie, National Sustainability Manager, Cement Australia, *Committee Hansard*, 7 April 2009, p. 6.

> shut down for long periods of time over Christmas and in the Easter period, with employees using up all their annual leave and making inroads into their long service leave. We have had some small amount of retrenchments at this stage, but the aim is to try and effectively hold on to as many employees as possible. But the bottom line is that it is a pretty tough environment; the sense is that it looks like it might be getting tougher… those several hundred contractors have a big impact on the local economy through the indirect employment affect, and we have many people on leave while we try to hold on to the workforce as long as we can.[135]

2.175 Mr Cornish further explained the business environment that industries now have to work in:

> These are very, very difficult times for most businesses in Australia today. The international market, of which we are a large exporter, is very, very weak, prices are at very low levels and domestic demand is very soft. So we are basically working really hard in order to make sure we get through this crisis. I do not believe that we have any capacity from next year to take on a tax that would not apply to all our competitors in the global marketplace…[136]

2.176 As discussed in chapter 7, the committee also heard evidence from the Australian Coal Association regarding the impact of the GFC on jobs in the coal mining industry, which at that time was 3000 declared redundancies.[137]

2.177 In a last minute development the government acknowledged the impact of the GFC by announcing a number of changes to the proposed CPRS on 4 May 2009. However the government is yet to commit to any Treasury modelling of the impact of the proposed CPRS on the economy and jobs in the context of the current global economic downturn.

Energy Security

Australia's energy supply

2.178 Australia is fortunate to be rich in energy resources.

> Australia is one of the few developed countries to be a significant exporter of energy. It is the largest exporter of coal and one of the largest exporters of liquefied natural gas (LNG). More than three-quarters of black coal produced in Australia is exported. Uranium exports are also significant, accounting for 34% of Australia‘s energy exports. Around 53% of Australia‘s consumption of crude oil and LPG is met by domestic

135 Mr Cornish, BlueScope Steel, *Committee Hansard*, 1 April 2009, p. 30.

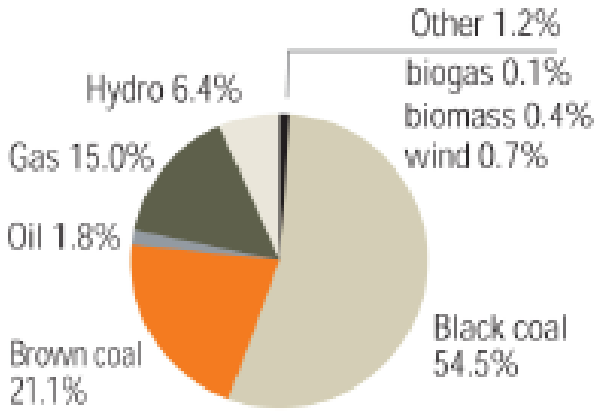
136 Mr Cornish, BlueScope Steel, *Committee Hansard*, 1 April 2009, p. 30.

137 Mr Ralph Hillman, Executive Director, Australian Coal Association, *Committee Hansard*, 2 April 2009, p. 3.

production. Australia is a net importer of crude oil and petroleum products, but a net exporter of LPG.[138]

2.179 Figure 1 shows that the majority of Australia's electricity, some 75.6 per cent is generated from coal, while 15 per cent is from gas with renewables making up a small share.

Figure 2.1 Shares in Australian electricity generation by fuel, 2005-06



Australian Bureau of Agricultural and Resource Economics, *Energy in Australia 2008*, 2008, p. 40.[139]

2.180 Electricity is supplied to the majority of the east coast of Australia via the National Electricity Market (NEM), which is an integrated eastern states grid. An important distinction in Australia's energy supply is that Western Australia is not connected to the NEM which has implications for energy security for Western Australia.

2.181 The stationary energy sector in Western Australia is extensively reliant on gas. The Western Australia Department of Treasury and Finance explained to the committee:

> Thirty-five per cent of our stationary energy is derived from coal compared to 89 per cent in New South Wales and the ACT. We do not have one fully integrated grid, unlike under the National Electricity Market. We have a number of pipelines and one integrated grid, which is the South West Integrated System...And we have what is called the North West Integrated System, which supplies energy to the north-west of the state, but the term 'integrated system' is probably a bit optimistic. It is not integrated; it is a piecemeal system. So we do not have in any form a fully integrated system supplying energy to Western Australians.[140]

138 Advice provided by the Parliamentary Library.

139 This excludes solar, wave and geothermal.

140 Ms Amy Lomas, Assistant Director, Emissions Trading Unit, Department of Treasury and Finance, Western Australia, *Committee Hansard*, 17 November 2008, p. 113.

Energy security in Australia

2.182 The committee received considerable evidence from submitters and witnesses regarding the importance of energy security to the Australian economy and standard of living. The Australian Council of Social Service for example, stated that 'we regard energy as an essential service. For all but very few Australians, reliable and affordable electricity or gas supply is a fundamental to life as we know it.'[141] Similarly, the ESAA stated that 'Secure, reliable and competitively priced energy is essential to the effective functioning of all aspects of modern economies.'[142]

2.183 The National Generators Forum also highlighted the importance of electricity stating:

> Electricity generation is an integral input to virtually all production and consumption activities in the economy. It is responsible for about 35 per cent of national emissions and will initially represent about 50 per cent of the scheme's coverage.[143]

2.184 One of the common themes of the evidence received by the committee in relation to energy security was the importance of a variety of energy sources. For example, Mr Howes from the AWU expressed the view that 'I believe it is important when we are addressing the energy security of the nation that we put all options on the table.'[144] As discussed in chapter 9, the committee received evidence arguing that nuclear power should be included in the mix of Australia's energy sources.

2.185 Mr Graham Armstrong from the National Institute of Economic and Industry Research argued that adding renewables to the energy mix increases security.[145] ResourcesLaw International supported this argument, stating 'energy source diversity is the bedrock of robust energy systems'[146]

2.186 Witnesses also communicated the capital intensity of electricity generation and supply and the need for investor certainty. Some witnesses, including the ENA highlighted the need for significant investment in infrastructure to ensure energy supply.[147]

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141 Mr Tony Westmore, Senior Policy Officer (Electricity), Australian Council of Social Service, *Committee Hansard*, 19 February 2009, p. 2.

142 Energy Supply Association of Australia (ESAA), *Submission 74*, p. 1.

143 Mr John Boshier, Executive Director, National Generators Forum, *Committee Hansard*, 2 February 2009, pp 2-3.

144 Mr Howes, AWU, *Committee Hansard*, 2 February 2009, p. 73.

145 Mr Graham Armstrong, Associate Consultant, National Institute of Economic and Industry Research, *Committee Hansard*, 17 February 2009, p. 23.

146 ResourcesLaw International, S*ubmission 79*, p. 4.

147 Mr Blyth, ENA, *Committee Hansard*, 2 February 2009, p. 44.

2.187 The committee received evidence about the impact of the CPRS on energy security, including the negative impact on investment in energy infrastructure at a time when additional investment is needed. Chapter 6 explores this evidence.

Energy security in Western Australia

2.188 As stated above, Western Australia has particular issues when considering energy security. Griffin Energy outlined the issues faced by Western Australia:

> There is an additional aspect specific to the Western Australian context that should be highlighted. The Western Australian electricity market is an energy island—that is, not interconnected to any other electricity system. As such, the WA market needs to be self-sufficient when managing its long-term system security. The WA market is also characterised by a high reliance on gas relative to other Australian jurisdictions. The gas used to generate electricity is sourced primarily from fields 1,600 kilometres away and connected to the southwest by a single pipeline. These fields are mostly controlled by international oil and gas majors, with a predominant focus on the export LNG market. At issue is that the WA electricity market is already exposed to significant security of supply risk, evidenced just last year by both the Varanus Island explosion in June and the North West Shelf joint venture supply interruption in January.[148]

2.189 Dr Paul Simshauser, a Director of the National Generators Forum, in considering energy security issues in Western Australia, stated 'There is no doubt that keeping system security in Western Australia is a much tougher proposition because of its geographic isolation.'[149]

2.190 As further discussed in chapter 6, the committee received evidence that the CPRS does not adequately address Western Australian energy security issues.

Role of renewable energy in meeting Australia's energy supply needs

2.191 As discussed in chapter 9, the committee received evidence that the CPRS will not provide the incentive necessary to generate sufficient investment in the low emissions technology required to reduce emissions.

2.192 While the purpose of the CPRS is to meet an overall emissions target efficiently and effectively, the evidence presented in chapter 9 suggests that the CPRS has not met this purpose with respect to renewable energy.

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148 Mr Shane Cremin, Market Development Manager, Griffin Energy, *Committee Hansard*, 18 February 2009, p. 3.

149 Dr Paul Simshauser, Director, National Generators Forum, *Committee Hansard*, 2 February 2009, p. 7.

2.193 Further, the committee received a significant amount of evidence regarding the difficulties associated with relying on renewable sources for energy, particularly due to the intermittent nature of many renewable energy sources.

2.194 Western Power noted that while wind energy would be the most likely renewable energy to be integrated into its system, a problem remains in the inability to store the energy produced by wind.[150]

> The challenge with something like wind turbines is that what often is ignored in the cost is that you actually have to balance the wind that it is not always producing, so you need some storage mechanism or some alternate mechanism to go with it.
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> In Western Australia currently we have to use gas turbines. So the gas turbines follow the wind up and down to balance it, to keep the output there, which means they are running inefficiently and costing a whole lot more than they would otherwise do if the wind was not there. So you actually bring in a whole lot of extra costs that you would not otherwise have. That is why you need a good storage mechanism like a hydro scheme or something, or batteries or other options.
>
> …
>
> …coal-fired power stations are not designed to ramp up and down to meet load…If we start turning them on and off, they will fail. They are not designed to do that. The other source of generation we have is combined cycle gas turbines, which are also not designed to go up and down. So we have a large chunk of our generation that cannot go up and down. If we then start putting in lots of wind that does go up and down, whether we like it or not, the challenge is that we either have to turn it off for 50 per cent of the time, damage our generation, start turning other generation off or start putting much less economic generation on.[151]

2.195 Western Power informed the committee of technologies being developed to address the intermittency issue, 'There are things such as what we are calling the smart grid, which is load-generation control, to try to balance that as the wind output goes up and down.'[152]

2.196 Mr Paul Graham a Theme Leader in Energy Futures at the CSIRO explained a possible storage method for solar thermal power:

> …a relatively simple method of storing. You are not storing electricity; essentially you are storing heat, and heat is easier to store than is storing

150 Mr Phil Southwell, General Manager, Strategy and Corporate Affairs, Western Power, *Committee Hansard,* 17 November 2008, pp 25 and 30.

151 Mr Southwell, Western Power, *Committee Hansard,* 17 November 2008, pp 27 and 30.

152 Mr Southwell, Western Power, *Committee Hansard,* 17 November 2008, p. 31.

> electricity. I understand that it is much closer than is anything else to being able to be a genuine low-cost storage option for solar thermal power…[153]

2.197 Dr Michael Ottaviano, Managing Director of the Carnegie Corporation explained to the committee that wave energy can also provide a 'zero emission baseload form of renewable energy'.[154] Dr Ottaviano pointed out that wave energy is consistent, is typically located close to load sources, as 80 per cent of Australians live within 100 kilometres of the coast line, and is abundantly available.[155]

> The waves will actually never go on and off. The waves are always there. Your power supply will increase and decrease with the swell of the wave height, and you will know that two or three days in advance, so you can manage that easily. The other advantage we have got is that if there is no demand you can in fact just bleed the water back through the circuit and back out to the ocean and not generate power.[156]

2.198 The CSIRO noted that the potential for geothermal hot fractured rocks to provide large scale baseload renewable power has been widely discussed, though it has not yet been commercially demonstrated.[157]

2.199 Western Power advised the committee of the difficulties associated with integrating renewable energy sources into the transmission network:

> If we are looking at wind, for example, which is currently considered to be the most viable renewable, generally the wind tends to be where there is no power system and where there is no load.[158]

2.200 This was supported by Mr Andrew Blyth, Chief Executive Officer of ENA who stated:

> If we do not have that network infrastructure there, we just cannot transport that new energy source to homes and businesses…you might have a wind farm where it is windy, but people do not live there. It has to travel vast distances—thousands of kilometres sometimes. The research that we would like to do in that area is about reducing the loss of that electricity power between point A and point B.[159]

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153 Mr Paul Graham, Theme Leader, Energy Futures, Commonwealth Scientific and Industrial Research Organisation (CSIRO), *Committee Hansard,* 19 November 2008, p. 20.

154 Dr Michael Ottaviano, Managing Director, Carnegie Corporation, *Committee Hansard,* 17 November 2008, p. 64.

155 Dr Ottaviano, Carnegie Corporation, *Committee Hansard,* 17 November 2008, p. 63.

156 Dr Ottaviano, Carnegie Corporation, *Committee Hansard,* 17 November 2008, p. 70.

157 Mr Graham, CSIRO, *Committee Hansard,* 19 November 2008, p. 19.

158 Mr Southwell, Western Power, *Committee Hansard,* 17 November 2008, p. 27.

159 Mr Blyth, ENA, *Committee Hansard,* 2 February 2009, p. 50.

2.201 Western Power further noted consumers will be paying higher prices for energy without a renewable option for a number of years, due to the long lead times required to build transmission lines, particularly if they have to extend to remote locations where the wind power is generated.[160]

Committee comment

2.202 The committee is of the view that the priority in addressing climate change needs to be to reduce global emissions. Therefore the reduction of global emissions should be the central aim in any Australian action.

2.203 The committee is of the view that more work needs to be done to formulate a more appropriate way for Australia to contribute to reducing global carbon emissions. It is more important to get the design of any scheme adopted by Australia right than rushing to chase arbitrary political deadlines. It is the view of the committee that the government needs to go back to the drawing board with the objective of finding the best, most cost efficient approach to reducing global greenhouse gas emissions while not putting any undue pressure on Australia's economy and jobs, or putting Australia's energy security at risk.

2.204 The committee considers that it would be beneficial for a quantitative comparison of possible alternative policies to be undertaken.

2.205 The committee notes the impact of the global financial crisis on industry and is of the view that it needs to be taken into account in the design of any Australian scheme.

Recommendation 1

2.206 The committee recommends that the government reconsider its proposed approach to how Australia can best contribute to a reduction in global greenhouse gas emissions.

Recommendation 2

2.207 The committee recommends that any Australian emissions trading scheme be designed such that it encourages:

- **(a) economic activity and growth in Australia which helps reduce overall <u>global</u> greenhouse gas emissions, even if it means an increase in domestic emissions;**
- **(b) Australian businesses operating at world's best environmental practice in terms of their level of domestic emissions, rather than to disadvantage them compared to any less environmentally friendly overseas competitors.**

160 Mr Southwell, Western Power, *Committee Hansard*, 17 November 2008, pp 34-35.

Recommendation 3

2.208 The committee recommends that the government assess and more properly explain publicly the advantages and disadvantages of all the policy and design options aimed at reducing global greenhouse gas emissions that have been raised so far.

Recommendation 4

2.209 In particular, the committee recommends that before any Australian emissions trading scheme is implemented, the government demonstrates much more clearly than it has so far, how it will be:

- **(a) environmentally effective – that is how it will help reduce global emissions;**
- **(b) economically responsible – that is it will not put more Australian jobs at risk for no environmental gain; and**
- **(c) mindful of Australia's energy needs into the future – that it will not put Australia's energy security at risk.**